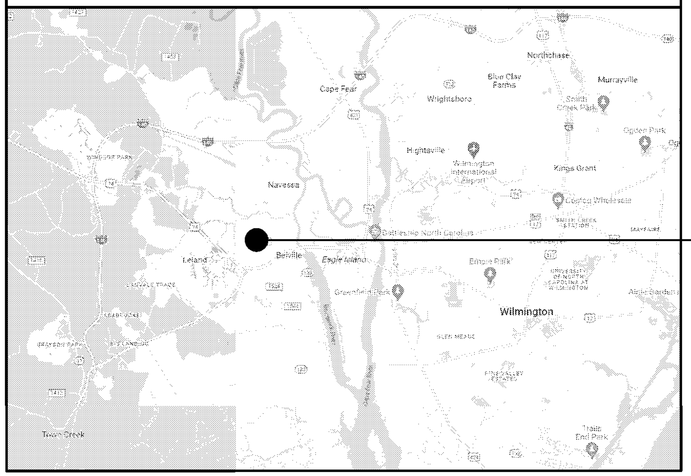
Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings
February 23, 2024

SITE LOCATION MAP



Abbreviations

A.C.T. - ACOUSTICAL CEILING TILE
ADJ. - ADJUSTABLE
A.F.F. - ABOVE FINISHED FLOOR
ALUM. - ALUMINUM
AHU. - AIR HANDLING UNIT
BLDG. - BUILDING
B.O.S.-BOTTOM OF STEEL
B.R.-BACKER ROD
C.J. - CONTROL JOINT
C.M.U. - CONCRETE MASONRY UNIT
CONC. - CONCRETE
C.O. - CLEAN OUT
CONT. - CONTINUOUS
CP - CONCRETE PIPE
C.L. - CENTER LINE
DIA. - DIAMETER
DIM. - DIMENSION
D.S. - DOWN SPOUT
E.C. - ELECTRICAL CONTRACTOR
E.J. - EXPANSION JOINT
ELEV. - ELEVATION
EQ. - EQUAL
EQUIP. - EQUIPMENT
EXIST. - EXISTING
EXP. JT. - EXPANSION JOINT
F.F.E.-FINISH FLOOR ELEVATION
GALV. - GALVANIZED
GA. - GAUGE
G.C. - GENERAL CONTRACTOR
GWB-GYPSUM WALL BOARD
HT. - HEIGHT
INSUL. - INSULATION
INV. - INVERT
JT. - JOINT
MAS.-MASONRY
MAX. - MAXIMUM
MECH. - MECHANICAL
MFG. - MANUFACTURER
MIN. - MINIMUM
NOM. - NOMINAL
O.C. - ON CENTER
PERF. - PERFORATED
HPL.-HIGH PRESSURE LAMINATE
PLYWD.-PLYWOOD
P.S.I. - POUNDS PER SQUARE INCH
R - RADIUS
R/A - RETURN AIR
R.A.G. - RETURN AIR GRILL
R.C.P. - REINFORCED CONCRETE PIPE
RD. - ROOF DRAIN
REINF. - REINFORCEMENT
REQ'D. - REQUIRED
R.O. - ROUGH OPENING
S/A - SUPPLY AIR
S.S. - STAINLESS STEEL
T.O.M.-TOP OF MASONRY
STRUCT.-STRUCTURAL
T.O.S.-TOP OF STEEL
TR'TD-TREATED
TYP. - TYPICAL
V.B.-VAPOR BARRIER
V.C.T.-VINYL COMPOSITE TILE
VERT. - VERTICAL
W/ - WITH
@ - AT, AROUND, REGARDING

Symbols Legend

DRAWING TITLE
2 / A1 — Drawing Title / Scale
INDICATES DRAWING #
INDICATES SHEET WHERE DRAWING IS SHOWN

BUILDING SECTION REFERENCE
1 / A1.0
INDICATES SECTION #
INDICATES SHEET WHERE DRAWING IS SHOWN

WALL SECTION REFERENCE
3-A4.0
INDICATES SHEET WHERE SECTION IS SHOWN
INDICATES SECTION #

ELEVATION REFERENCE
2-A1.4
INDICATES SHEET WHERE ELEVATION IS SHOWN
INDICATES ELEVATION #

PLAN DETAIL REFERENCE
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100 DOOR # 100 ROOM #
A WINDOW TYPE
VERTICAL ELEVATION ABOVE REFERENCE POINT

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NORTH CAROLINA REGISTERED SEAL 34231 2-23-24 ENGINEER JERRY L. WILLIAMS

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Cover

Rev.	Date	Notes

G1.0

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

Name of Project: Leland Town Hall Addition & Renovations
Address: 102 Town Hall Drive Leland, NC — Zip Code: 28451
Owner/Authorized Agent: Sawyer Sherwood & Associate, PC — Phone # (910) 762-0892
E-Mail: jenny@s2a3.com
Owned By: City
Code Enforcement Jurisdiction: City

CONTACT:

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	Sawyer Sherwood & Associate, PC	Jenny L. Williams	14231	(910) 762-0892	jenny@s2a3.com
Civil	McGill Associates, PA	Alex D. Lapinsky	042192	(910)755-5872	alex.lapinsky@mcgillassociates.com
Electrical	CBHF Engineers	Allen Cribb	023311	(910) 791-4000	acribb@cbhfengineers.com
Fire Alarm	CBHF Engineers	Allen Cribb	023311	(910) 791-4000	acribb@cbhfengineers.com
Plumbing	CBHF Engineers	Troy O. Grady	043801	(910) 791-4000	tgrady@cbhfengineers.com
Mechanical	CBHF Engineers	Troy O. Grady	043801	(910) 791-4000	tgrady@cbhfengineers.com
Sprinkler-Standpipe	Performance Based Fire Protection Engineering, PLLC				
		David E. Stacy	046319	(919) 600-7780	dstacy@pbfpe.com
Structural	Woods Engineering	Adam L. Sisk	041563	(910)343-8007	adam@woodseng.com
Retaining Walls >5' High	_____	_____	_____	(___)_____	_____
Other	_____	_____	_____	(___)_____	_____

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

2018 NC BUILDING CODE: Addition

2018 NC EXISTING BUILDING CODE: Alteration Level II — Select one — Select one
CONSTRUCTED: (date) 2013 — **CURRENT OCCUPANCY(S)** (Ch. 3): Business
RENOVATED: (date) N/A — **PROPOSED OCCUPANCY(S)** (Ch. 3): Business

RISK CATEGORY (Table 1604.5): **Current:** IV — **Proposed:** IV

BASIC BUILDING DATA
Construction Type: II-B
Sprinklers: Yes NFPA 13
Standpipes: No
Primary Fire District: No — **Flood Hazard Area:** No
Special Inspections Required: Yes – See spec section 014533 Special Inspections for Schedule of Special Inspections

Gross Building Area Table

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
3rd Floor			
2nd Floor	21,602	10,530	32,132
Mezzanine			
1st Floor	22,410	10,708	33,118
Basement			
TOTAL			65,522

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/_____* REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses	>30	0 HR					
Bearing Walls							
Exterior							
North		0 HR					
East		0 HR					
West		0 HR					
South		0 HR					
Interior		0 HR					
Nonbearing Walls and Partitions Exterior walls							
North		0 HR					
East		0 HR					
West		0 HR					
South		0 HR					
Interior walls and partitions							
Floor Construction Including supporting beams and joists		0 HR					
Floor Ceiling Assembly		0 HR					
Columns Supportiet Floors		0 HR					
Roof Construction, including supporting beams and joists		0 HR					
Roof Ceiling Assembly		0 HR					
Columns Supporting Roof		0 HR					
Shaft Enclosures - Exit							
Shaft Enclosures - Other							
Corridor Separation		0 HR					
Occupancy/Fire Barrire Separation (First Responders Equipment Room)		2 HR	2 HR	G3.1	U419, U415, & D898		
Parts/Fire Wall Separation		N/A					
Smoke Barrier Separation		N/A					
Smoke Partition		N/A					
Tenant/Dwelling Unit/ Sleeping Unit Separation		N/A					
Incidental Use Separation		0 HR					
Atrium Separation		1 HR	1 HR	G3.1	U419		

* Indicate section number permitting reduction

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

USE		WATERCLOSETS MALE	WATERCLOSETS FEMALE	WATERCLOSETS UNISEX	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	LAVATORIES UNISEX	SHOWERS /TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
SPACE	EXIST'G	10	12	2	4	12	12	2	4	6	6
	NEW	2	6	-	4	4	4	-	-	2	2
	REQ'D	7	7	-	-	5	5	-	-	6	

SPECIAL APPROVALS

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

Department of Insurance

ENERGY SUMMARY

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

Existing building envelope complies with code: Yes (The remainder of this section is not applicable)

Exempt Building: No — Provide code or statutory reference:

Climate Zone: 3A

Method of Compliance: Energy Code - Prescriptive
(If "Other" specify source here)_____

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly)
Description of assembly: Standing seam metal panel, 4 ½" extruded polyisocyanurate, structural metal decking, air cavity, suspended ceiling system
U-Value of total assembly: 0.037 provided – 0.039 required
R-Value of insulation: R28.1
Skylights in each assembly: N/A

Exterior Walls (each assembly)
Description of assembly: CMU or Brick veneer, air cavity, 2" mineral wool insulation board, 5/8" exterior sheathing, 6" batt insulation, 6" metal studs, 5/8" GWB
U-Value of total assembly: 0.033 provided – 0.064 required
R-Value of insulation: R19+R8 = 27

Description of assembly: Stucco System, 2" mineral wool insulation board, 5/8" exterior sheathing, 6" batt insulation, 6" metal studs, 5/8" GWB
U-Value of total assembly: 0.033 provided – 0.064 required
R-Value of insulation: R19+R8 = 27

Openings (windows or doors with glazing)
U-Value of assembly: 0.209
Solar heat gain coefficient: 0.17
Projection Factor: N/A
Door R-Values: 0.68

ALLOWABLE AREA ***Existing condition is not being altered.***

Primary Occupancy Classification(s): Business Assembly - A-3
Accessory Occupancy Classification(s): Storage S-1
Incidental Uses (Table 509): _____
Special Uses (Chapter 4 – List Code Sections): _____
Special Provisions: (Chapter 5 – List Code Sections): _____
Mixed Occupancy: Yes Separation: 0 Hr. – Assembly A-3 Exception: Non-Separated Use (508.3)

Select one:
Actual Area of Occupancy A / *Allowable Area of Occupancy A* + *Actual Area of Occupancy B* / *Allowable Area of Occupancy B* ≤ 1
_____ + _____ + ... = _____ ≤ 1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2[4] AREA	(C) AREA PER FRONTAGE INCREASE[1,5]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED[2,3]
1	Business	33,118	69,000		
2	Business & Assembly A-3	32,132	69,000		

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

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE [1]
Building Height in Feet (Table 504.3) [2]	75'-0"	41'-1 ½"	
Building Height in Stories (Table 504.4) [3]	4	2	

[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.

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
30'-0" or greater	Unprotected, Sprinklered	No Limit	N/A

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: Yes
Exit Signs: Yes
Fire Alarm: Yes
Smoke Detection Systems: Yes
Carbon Monoxide Detection: No

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: ***G2.0 & G2.1***

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

ACCESSIBLE DWELLING UNITS
(SECTION 1107) ***NOT APPLICABLE TO THIS PROJECT***

ACCESSIBLE PARKING
(SECTION 1106)

See Civil Drawings.

Walls below grade (each assembly)
Description of assembly: N/A

Floors over unconditioned space (each assembly)
Description of assembly: Carpet tile with fiber pad, 3 1/2" concrete, 3" structural metal decking, 6" mineral wool insulation board, metal furring, metal soffit panel
U-Value of total assembly: 0.032 provided – 0.032 required
R-Value of insulation: R30

Floors slab on grade
Description of assembly: 4" concrete
U-Value of total assembly: 0.24
R-Value of insulation: N/A
Horizontal/vertical requirement: No requirement
slab heated: N/A

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

See Structural Drawings.

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

MECHANICAL SUMMARY

See Mechanical Drawings.

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

ELECTRICAL SUMMARY

See Electrical Drawings.

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NORTH CAROLINA REGISTERED SEAL 14231 2-23-24 ARCHITECT JENNY L. WILLIAMS

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Appendix B

Rev.	Date	Notes

G1.1

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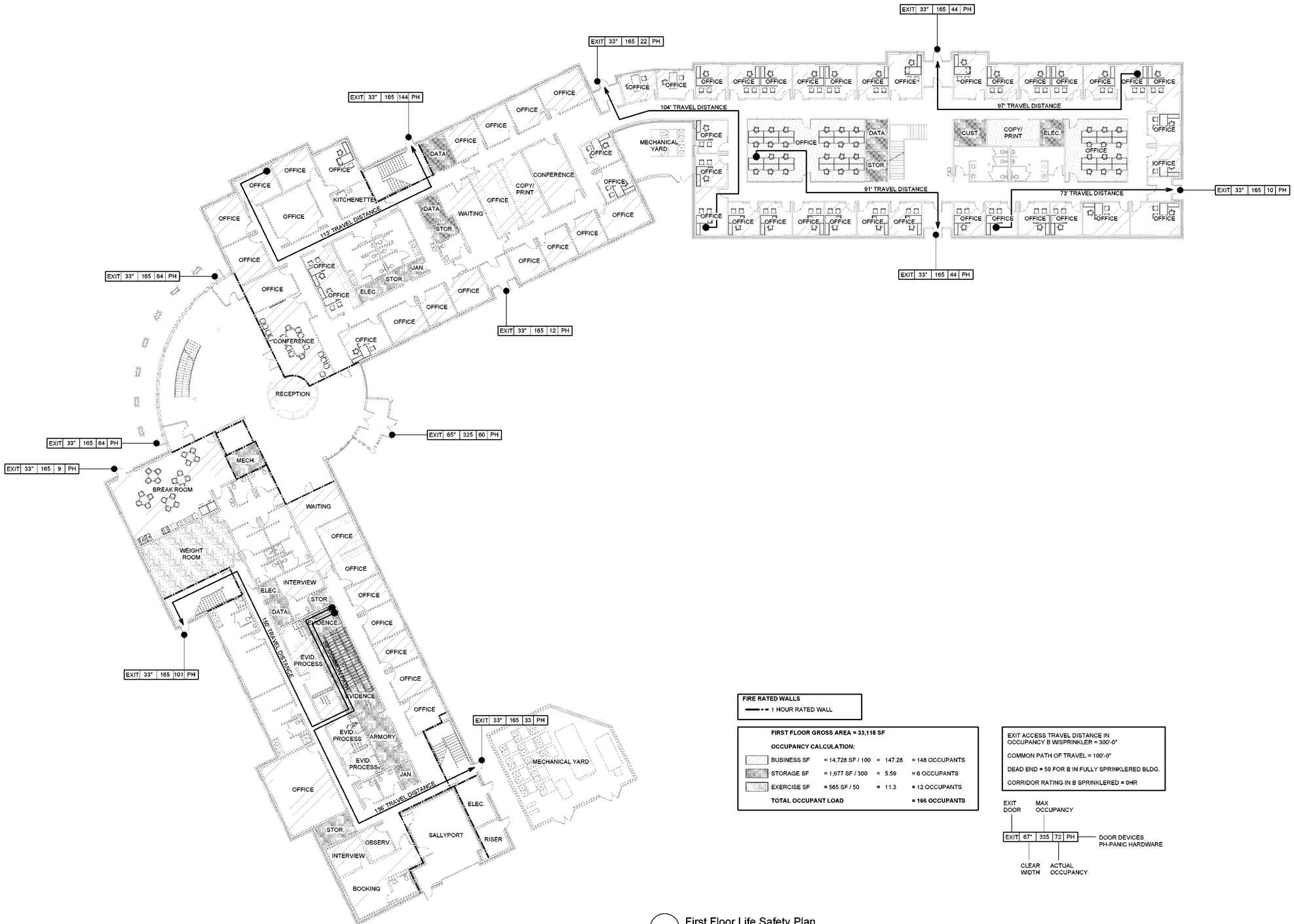

1 First Floor Life Safety Plan
Scale: 1/16" = 1'-0"

FIRE RATED WALLS
1 HOUR RATED WALL

FIRST FLOOR GROSS AREA = 33,118 SF

OCCUPANCY CALCULATION:

BUSINESS SF	= 14,728 SF / 100	= 147.28	= 148 OCCUPANTS
STORAGE SF	= 1,677 SF / 300	= 5.59	= 6 OCCUPANTS
EXERCISE SF	= 565 SF / 50	= 11.3	= 12 OCCUPANTS
TOTAL OCCUPANT LOAD			**= 166 OCCUPANTS**

EXIT ACCESS TRAVEL DISTANCE IN OCCUPANCY B W/SPRINKLER = 300'-0"

COMMON PATH OF TRAVEL = 100'-0"

DEAD END = 50 FOR B IN FULLY SPRINKLERED BLDG.

CORRIDOR RATING IN B SPRINKLERED = 0HR

EXIT DOOR | MAX OCCUPANCY

EXIT | 67" | 335 | 72 | PH — DOOR DEVICES PH-PANIC HARDWARE

CLEAR WIDTH | ACTUAL OCCUPANCY

Plan North

North

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NORTH CAROLINA REGISTERED SEAL 14231 2-23-24 ARCHITECT JENNY L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
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Construction Drawings

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First Floor Life Safety Plan

Rev.	Date	Notes

G2.0

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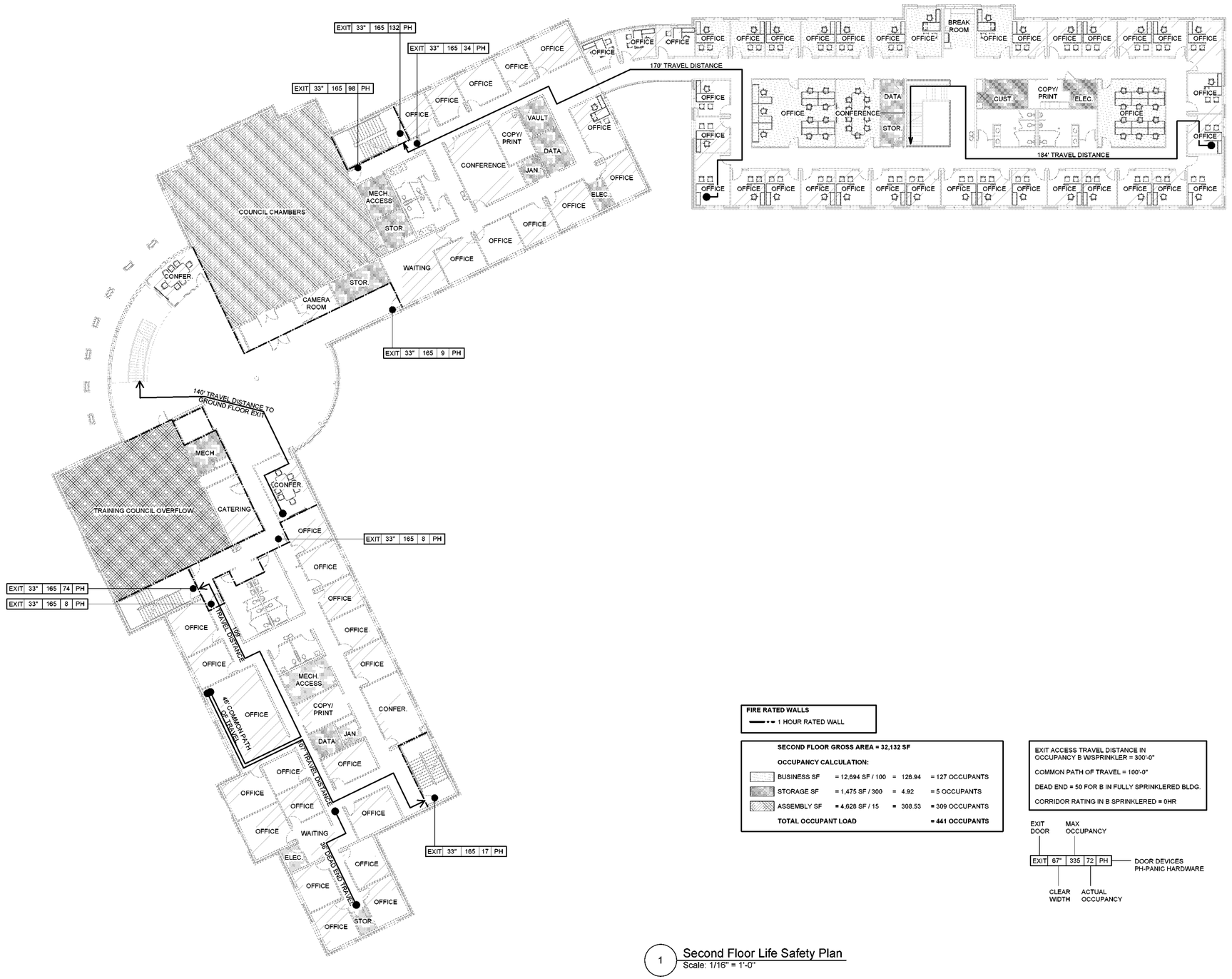

FIRE RATED WALLS

1 HOUR RATED WALL

SECOND FLOOR GROSS AREA = 32,132 SF

OCCUPANCY CALCULATION:

BUSINESS SF	= 12,694 SF / 100	= 126.94	= 127 OCCUPANTS
STORAGE SF	= 1,475 SF / 300	= 4.92	= 5 OCCUPANTS
ASSEMBLY SF	= 4,628 SF / 15	= 308.53	= 309 OCCUPANTS
TOTAL OCCUPANT LOAD			= 441 OCCUPANTS

EXIT ACCESS TRAVEL DISTANCE IN OCCUPANCY B W/SPRINKLER = 300'-0"

COMMON PATH OF TRAVEL = 100'-0"

DEAD END = 50 FOR B IN FULLY SPRINKLERED BLDG.

CORRIDOR RATING IN B SPRINKLERED = 0HR

EXIT DOOR — MAX OCCUPANCY

EXIT 67" 335 72 PH — DOOR DEVICES PH-PANIC HARDWARE

CLEAR WIDTH — ACTUAL OCCUPANCY

1 Second Floor Life Safety Plan
Scale: 1/16" = 1'-0"

Plan North

North

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Second Floor Life Safety Plan

Rev.	Date	Notes

G2.1

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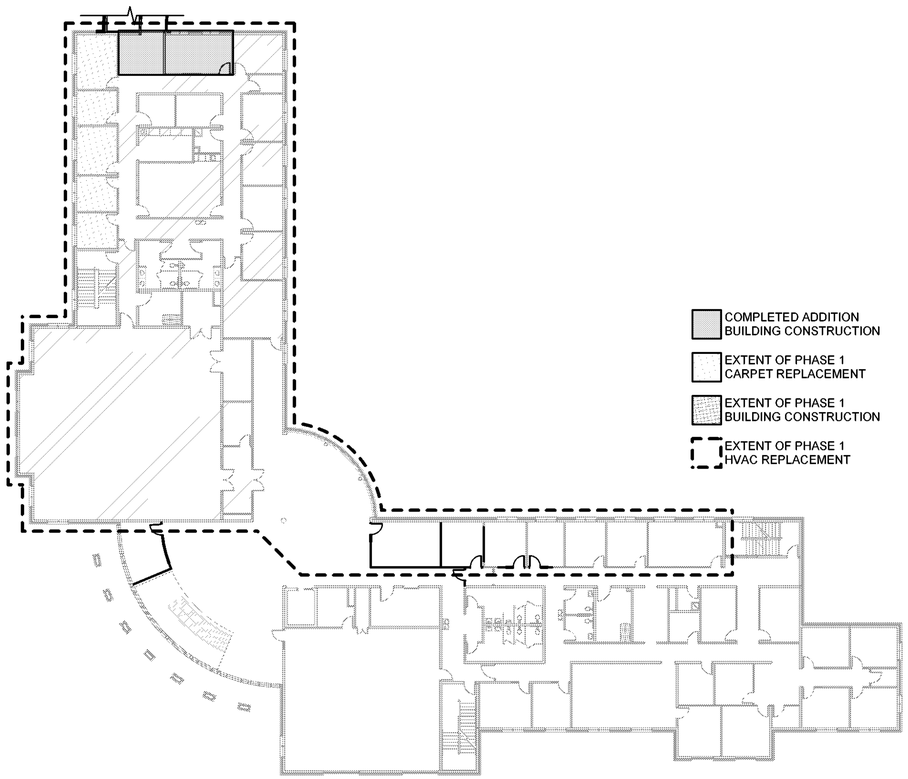
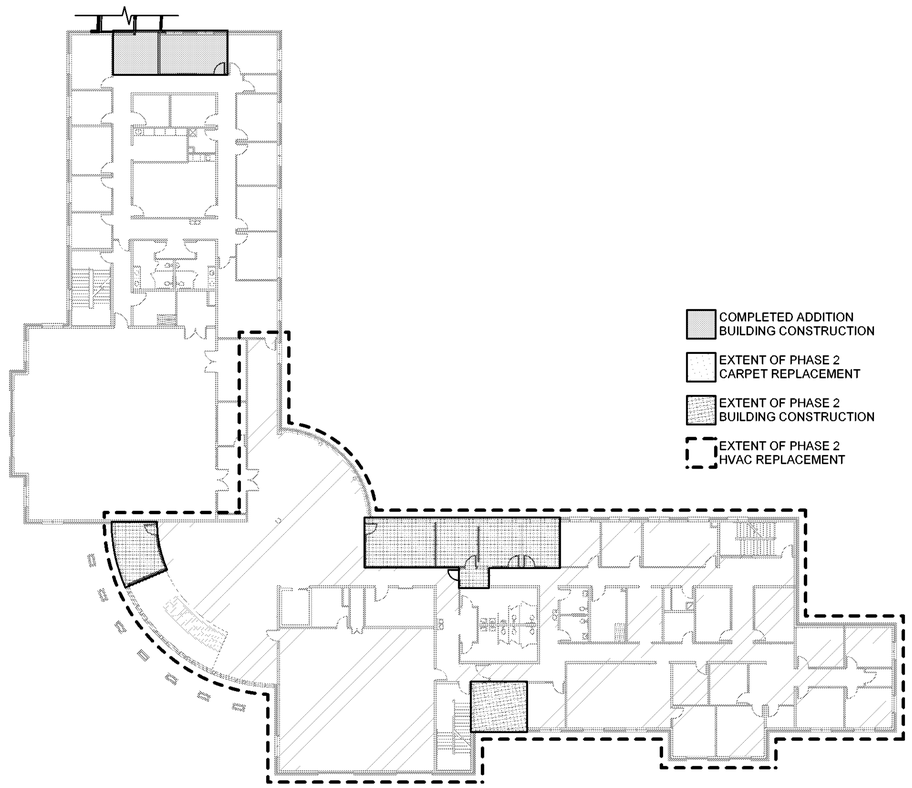
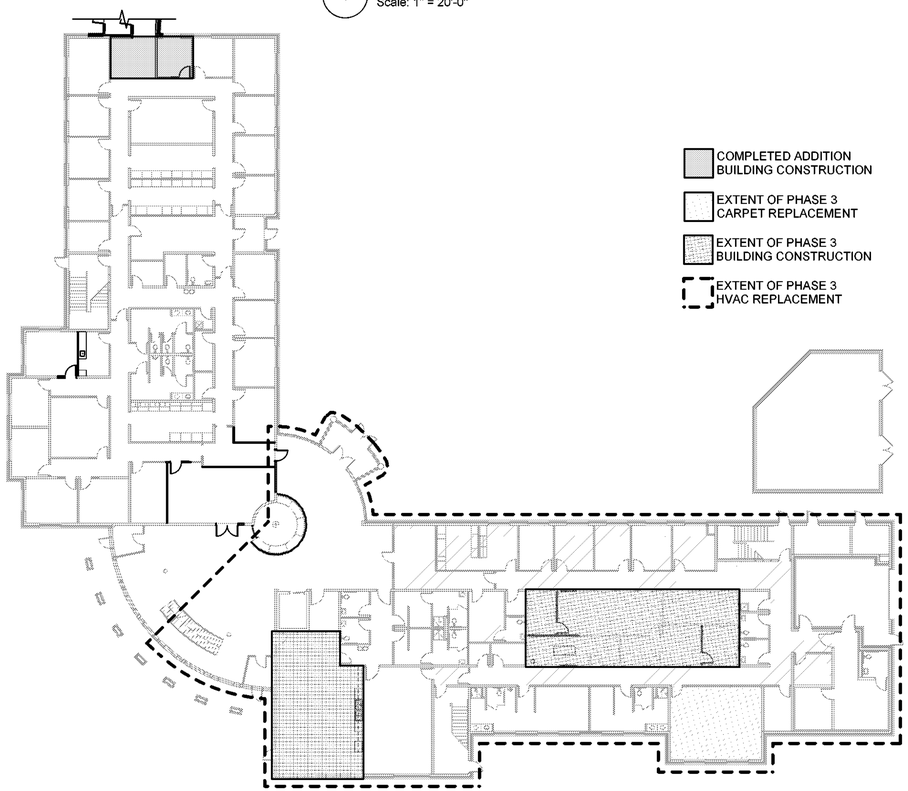


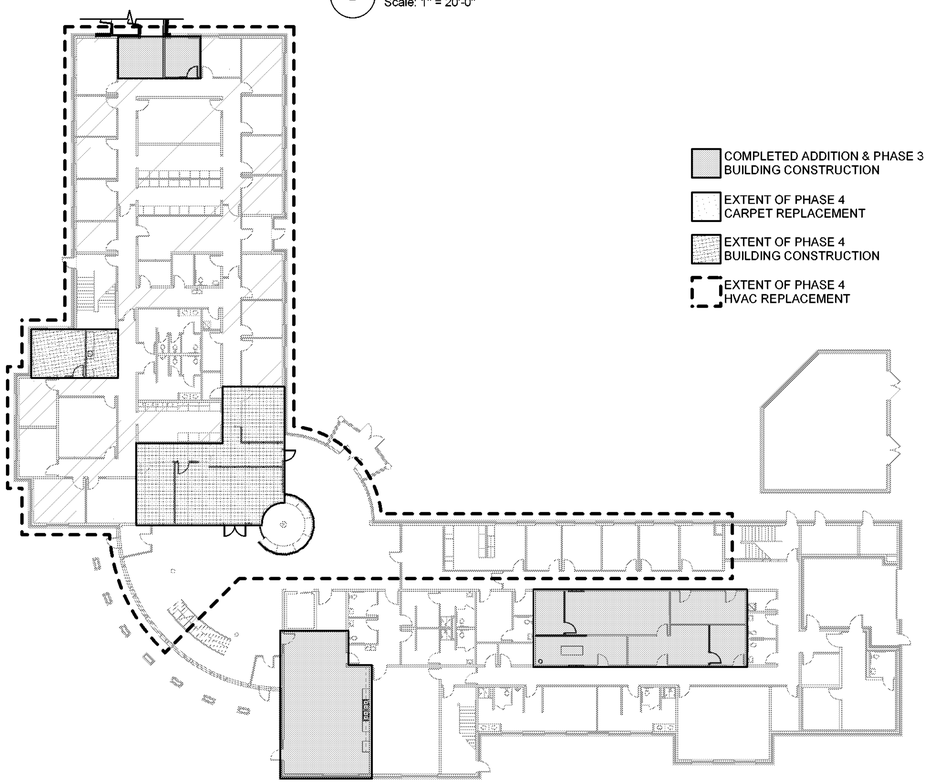
1 Phase 1 - Second Floor Renovation Plan
Scale: 1" = 20'-0"



2 Phase 2 - Second Floor Renovation Plan
Scale: 1" = 20'-0"



3 Phase 3 - First Floor Renovation Plan
Scale: 1" = 20'-0"



4 Phase 4 - First Floor Renovation Plan
Scale: 1" = 20'-0"

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NORTH CAROLINA REGISTERED SEAL 34331 2-23-24 ARCHITECT JERRY L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Renovations Phasing Plans

Rev.	Date	Notes

G3.0

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Design No. D898

October 04, 2019

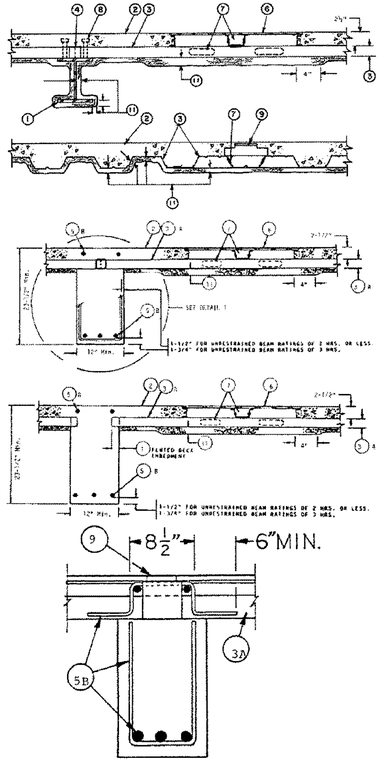
Restrained Assembly Ratings — 1, 1-1/2, 2 and 3 Hr. (See Items 3A, 5B and 11)

Unrestrained Assembly Ratings — 1, 1-1/2, 2 and 3 Hr. (See Items 3A, 5B and 11)

Unrestrained Beam Ratings — 1, 1-1/2, 2 and 3 Hr. (See Items 3A, 5B 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, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

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



1. **Beam —** W8X21 min size. As an alternate to steel beams, cast in place reinforced concrete beams or girders designed in accordance with the provisions of the Building Code Requirements for Reinforced Concrete (ACI 318-89), may be used as supports for the 3 in. deep floor units (See Item 3A).
Min width and depth of concrete beams shall be 12 and 23-1/2 in., respectively.

Fluted steel floor units shall be embedded in the concrete beams a min of 0.0139 times the clear span of 1-1/2 in., whichever is greater. The cellular units may be continuous or with a butted end joint centered over the concrete beam. For continuous floor spans, negative moment reinforcement for the slabs is required over the supporting beams.

2. **Normal Weight or Lightweight Aggregate Concrete —** Normal weight concrete, carbonate or siliceous aggregate, 150 (+ or -3) pcf unit weight, 3000 psi compressive strength, vibrated. Lightweight concrete, expanded shale, clay or slate aggregate by rotary kiln method, 113 (+2, -5) pcf unit weight, 3000 psi compressive strength, vibrated.

3. **Steel Floor and Form Units* —** Composite 2 or 3 in. deep galv units. Min gauges are 22 MSG for fluted and 20/20 MSG for cellular. For spans with trench headers the allowable loading shall be based on noncomposite design. The following combination of units may be used: (1)All fluted; (2)All 24, 30 or 36 in. wide cellular; (3)Any blend of fluted and 24, 30 or 36 in. wide cellular. Spacing of welds attaching units to supports shall not exceed 12 in. OC. Adjacent units welded or screwed together with 1 in. long No. 10 self-tapping, self-drilling steel screws, max 48 in. OC along side joints.
ADC STEEL DECK, DIV OF ADC PROFILES L L C — 36 in. wide Types 2WH-36, 2WHS-36, 3WAH-36, 3WH-36, 3WA-36. All units may be galvanized or Prime Shield. Non-cellular decks may be vented designated with a "V" suffix to the product name.

CANAM STEEL CORP — 36 in. wide Type P-3623 and 24 in wide Type P-2432 composite.

DECK WEST INC — 36 in. wide Type 2-DW or 3-DW.

H H ROBERTSON — QL Types 24 or 36 in. wide 2 or 3 in. 99, AKX, WKX; 24 or 30 in. wide, 3 in. QL-GKX.
NEW MILLENNIUM BUILDING SYSTEMS L L C — Type 1.5CD, 2.0CD, or 3.0CD. Units may be phos/painted or galvanized.

STEEL MASTERS INTERNATIONAL DEPENDABLE STEEL — 36 in. wide Types 2WH-36, 3WH-36. Units may be phos/painted or galvanized.

VIERCO DECKING INC - A NUCOR CO — FORMLOK™ deck types P, B, BR, PLN3, N3, P, N, N, PLW2, W2, PLW3, W3. Units are min 24 in. wide and may be galvanized or phos/pid. Units may be cellular with the suffix "CD" added to the product name, respectively. All non-cellular deck may be vented or non-vented.

VULCRAFT, DIV OF NUCOR CORP — 24 or 36 in. wide Type 2VL1, 3VL1, 2VLP or 3VLP. Types 2VL1, 3VL1 units may be phos/pid.

WIREMOLD CO — 24 in. wide Type WDR2 or -3. Type SB-200 or -300 fluted units, respectively.

Alternate Construction — Noncomposite units of the same type listed above may be used provided allowable loading is calculated on the basis of noncomposite design.

3A. **Steel Floor and Form Units* —** (for use with cast in place concrete beams) — Composite 3 in. deep galv units. Fluted units may be uncoated. Min gauges are 20 MSGFor fluted and 20/20 MSG for cellular. The ratio of blended units shall not exceed one 24 in. wide cellular unit to 36 in. wide fluted unit for the cast in place concrete frame buildings.
DECK WEST INC — 36 in. wide Type 3-DW; units may be welded or fastened together with No. 10 self-drilling, self-tapping steel screws 60 in. OC. The length of the screws shall be sufficient to fully penetrate adjacent floor units.

H H ROBERTSON — QL Types 24 or 36 in. wide 3 in. 99, 24 or 30 in. wide 3 in. QL-GKX, QL-GKX-A, units may be welded or fastened together with No. 10 self-drilling, self-tapping steel screws 60 in. OC. The length of the screws shall be sufficient to fully penetrate adjacent floor units.

4. **Joint Cover —** 2 in. wide pressure-sensitive cloth tape applied following the contour of the steel floor units.

5. **Fiber Reinforcement* —** (Not Shown) — Engineered synthetic fibers added to concrete mix to control shrinkage cracks in concrete. Fibers added to concrete mix at rate of 1.5 lb of fiber for each cu yard of concrete.
SYNTHETIC INDUSTRIES INC — Type FM 1.5.

5A. **Welded Wire Fabric —** (Not Shown) — As an alternate to or in addition to the fiber reinforcement (Item 5), 6 by 6 - W1.4XW1.4 welded wire fabric embedded in concrete at concrete topping middepth.

5B. **Reinforcement —** Deformed bars of grade 60 steel, for use in floors supported by reinforced concrete beams or girders. Min size No. 3 bars for use as negative reinforcement or vertical stirrups for beams, girders or slabs. Min No. 5 bars for use as positive reinforcement for beams or girders. Min net concrete cover on the beam or girder bottom reinforcements, shall be 1-1/2 in. for Restrained Assembly Ratings up to 3 Hr and Unrestrained Assembly and Beam Ratings up to 2 Hr. For 3 Hr Unrestrained Assembly and Beam Ratings, 1-3/4 in. cover is required. When continuous cellular units intersect the supporting concrete beams (interrupting the beam stirrups), short pieces of additional stirrups shall be placed in the top part of the beam above the units.

NOT USED

6. **Trench Header —** Max 36 in. wide trench header (Bearing the UL Listing Mark) without the bottom pan may be used. The allowable superimposed load for spans with a bottomless trench header shall be based on noncomposite design. A separate U-shaped galv steel channel (min 18 MSG), serving as the power compartment, is welded or riveted to the floor units at the trench locations. The side rails, consisting of extruded aluminum screeds secured to galv steel channels (min 18 MSG), are positioned on the floor units, aligned, and welded or riveted to the floor units. Cell closers which conform to the contour of the floor units, placed along the sides of the desired trench header location and welded to the floor units. Steel cover plates, 1/4 in. thick, shall be secured to the side rails, in bottomless trench headers wider than 18 in., overlapping edges of units at each side joint of the steel floor units shall be welded together with a 1 in. long weld near the trench header centerline. For QL-GKX-24 or -30 cellular floor units only a separate KEB-PTS (UL Listed) power transition sleeve is secured to power compartment with one rivet or screw. The use of the bottomless trench header requires the use of steel studs with discs (Item 10) and additional thickness of protection material underneath the trench header. (See Item 11).

7. **Access Openings —** As required, with grommets

8. **Shear-Connector Studs —** (Optional) — Studs, 3/4 in. diam, headed type or equivalent per AISC specifications. Welded to the top flange of beam through the steel floor units. Min 1/2 in. concrete cover over studs.

9. **Electrical Inserts —** Preset and after set electrical inserts Classified as **Outlet Boxes and Fittings Classified for Fire Resistance** unless specified otherwise for a particular preset electrical insert type, the spacing of the preset electrical inserts shall be not less than 24 in. on center along cellular steel floor units with not more than one preset electrical insert in each 4 sq ft. of floor area. The required thickness of Spray-Applied Fire Resistive Materials on the steel floor units with inserts shall be sprayed the entire length and width of the units between supports and shall extend beyond the edge of inserts onto adjacent floor units for a min horizontal width of 12 in.
(1) **Robertson, H, H, Inserts.**

(Tapmate II, II-EA, II-FN, II-EAFN; Series KEB)

Installed per accompanying installation instructions over factory-punched holes in 24 or 36 in. wide Types QL-AKX, -WKX steel floor units. The holes cut in insert cover for passage of wires shall be no more than 1/8 in. larger diam than the wire. For abandonment of Tapmate inserts, see installation instructions. The Tapmat II-FN insert may use KEB-HP-1 outlet box fittings in lieu of the KEB-PC flush cover fittings. The required Spray-Applied Fire Resistive Materials thicknesses on steel floor units with inserts are tabulated below.

(Under Tapmate II or II-EA Inserts)

Restrained & Unrestrained Assembly Rating Hr	Floor Unit Depth In.	Concrete Type	Min Mtl Thkns In.
1	3	NW or LW	1/2
1	2	NW	9/16
1	2	LW	5/8
1-1/2	2 or 3	NW	11/16
1-1/2	3	LW	3/4
1-1/2	2	LW	7/8
2	2 or 3	NW	7/8
2	3	LW	15/16
2	2	LW	1-1/16
3	3	NW	13/16
3	2	NW	1-1/4
3	3	LW	1-3/8
3	2	LW	1-1/2

1-1/2	2 or 3	NW	1/2
2	2 or 3	NW	5/8
(S126R Fittings)			
1	2 or 3	NW	1/2
1-1/2	2 or 3	NW	11/16
2	2 or 3	NW	13/16

Restrained Assembly Rating Hr	Floor Unit Depth In.	Concrete Type	Min Mtl Thkns In.
(S165B Fittings)			
1	2 or 3	NW	3/8
1-1/2	2 or 3	NW	3/8
2	2 or 3	NW	1/2
(S166B Fittings)			
1	2 or 3	NW	1/2
1-1/2	2 or 3	NW	11/16
2	2 or 3	NW	13/16

WIREMOLD CO — Type FF Series Inserts: Type FAMM-II, RAKM, RAKM-S, S165B, S260C, S35CC, S37BB, S37BC or S37CC service fittings or Type S3AMB* abandonement plate. Type 427 Series Inserts. Type S125B, S126B, S165B or S166B service fittings.

10. **Steel Studs With Discs —** (Not Shown) — The stud consists of 12 SWG steel wire with one end welded to a 1-3/16 in. diam 28 MSG (0.020 in. thick) galv steel disc. The length of studs shall be 3/16 in. less than the thickness of the Spray-Applied Fire Resistive Materials. The ends of studs opposite the discs shall be welded to the cellular floor units beneath the bottomless trench header. The total number of studs shall average at least one stud per each 236 in. sq. of cellular floor units beneath the bottomless trench header. The distance between the outer rows of studs and the side edges of the bottomless trench header shall not exceed 4 in. The spacing between the rows shall not exceed 22 in. The spacing between studs in each row shall not exceed 24 in.

11. **Spray-Applied Fire Resistive Materials* —** Applied to wetted steel surfaces which are free of dirt, oil and loose scale by spraying with water to the final thicknesses shown in the table below. The use of adhesive is required beneath bottomless trench header and cellular floor units. Min avg density of 13 pcf with min ind density of 11 pcf for Types FC or DF. For method of density determination refer to Design Information Section.
When fluted steel floor units are used, the area between the steel deck and the beam's top flange shall be sprayed. Min avg density of 13 pcf with min ind density of 11 pcf for Types FC or DF. For method of density determination refer to Design Information Section.

The thicknesses of Spray-Applied Fire Resistive Materials required on the steel beam for the various Unrestrained Beam Ratings are shown below:

Restrained Assembly Rating Hr	Concrete (Type) NW or LW	Min Required Unrestrained Beam Rating Hr	Min Mtl Thkns on Beam In.
1, 1-1/2 or 2	NW or LW	1	1/2
3	NW or LW	1-1/2	7/8
---	NW or LW	2	1-1/8
---	NW	3	1-3/8
---	LW	3	1-1/2

The thicknesses of Spray-Applied Fire Resistive Materials required on the steel floor units in the general floor area (without electrical inserts and away from bottomless trench header) are shown below:

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Steel Floor Unit Depth In.	Concrete Type	Min Mtl Thkns In. Cresta	Valley	Flat Plate
2	2	2 or 3	NW or LW	3/8	3/8	3/8
3	3	2	NW	13/16	3/4	5/8
3	3	3	NW	5/8	5/8	5/8
3	3	2	LW	9/16	9/16	1/2
3	3	3	LW	9/16	9/16	3/8

The thicknesses of Spray-Applied Fire Resistive Materials required on the steel floor units beneath the "bottomless" trench header are shown in the following table. The required Spray-Applied Fire Resistive Materials thickness shall be applied in conjunction with stud pins with discs (Item 10) and shall extend a min of 4 in. beyond both sides of the "bottomless" trench header.

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Steel Floor Unit Depth In.	Concrete Type	Min Mtl Thkns In. Crests	Valley	Flat Plate
1	1#	2 or 3	NW or LW	1-3/16	1	1
1-1/2	1-1/2#	2 or 3	NW or LW	1-1/2	1-1/4	1-1/4
2	2#	2 or 3	NW or LW	1-3/4	1-5/8	1-5/8
3	3#	2 or 3	NW or LW	2-1/4	2-1/8	2-1/8

#Unrestrained Assembly Rating cannot exceed Unrestrained Beam Rating. Min Unrestrained Beam Rating required with 3 Hr. Restrained Assembly Rating is 1-1/2 Hr.

PROMAT INC — Types FC and DF

NOT USED

12. **Underfloor Electrical Box —** (Optional) — When normal weight concrete is used over Type QL-GKX floor units, a specially insulated electrical outlet box may be secured to the underside of the power cell of the QL-GKX floor unit either directly below or adjacent to a Tapmate IV electrical insert (S, H or M-M activation modes) with either the flip lid plastic cover (KEC PCs, 4 & -5 components) or the Deluxe Cover (KEO-NAC type). The components required for installation of the underfloor electrical box are:

A. **Outlet Box —** UL Listed 4 by 4 by 2-1/8 in. outlet box formed of 14 gauge galv steel with a 4-11/16 by 4-11/16 in. flat steel cover plate with a 1/2 in. diam knockout and two steel connector screws with 0.125 in. thick steel washers. A 2-1/2 in. diameter hole is to be hole-sawed in the center of the outlet box backside and two 9/32 in. diam holes are to be drilled in the backside of the box, centered on the 2-1/2 in. diameter hole and spaced 4-7/8 in. center to center.

B. **Bolts —** Two 1/4-20 by 2-5/8 in. long steel studs with steel acorn nuts (inside power cell) and steel hex nuts (inside outlet box).

C. **Gypsum Board* —** 5/8 in. thick, cut to 8 by 8 in. square with a 2 in. diameter hole at its center.
See **Gypsum Board** (CKNX) category for names of manufacturers.

D. **Batts and Blankets* —** Min. 1-1/2 in. thick, 6 pcf density mineral wool batts.
See **Batts and Blankets** (BZJZ) category for names of manufacturers.

E. **Steel Wire —** Min 16 SWG steel wire.

F. **Flexible Steel Conduit —** UL Listed, 1/2 in. diam, length as required, secured to knockout of outlet box cover with standard end connector.
The insulated underfloor electrical box assembly shall be installed in accordance with the "Tapmate IV-UB" installation instructions supplied by Robertson, A United Dominion Co. When installed as specified, floors provided with the "Tapmate IV-UB" installed underfloor electrical box assembly have hourly fire ratings equal to those shown for the Tapmate IV-H, IV-M-M or IV-S electrical inserts with equal thicknesses of Spray-Applied Fire Resistive Materials.

*** 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 2019-10-04

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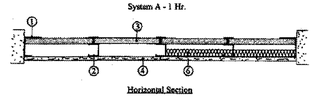
Design No. U415

Nonbearing Wall Ratings—1 or 2 Hr

System A - 1 Hr.

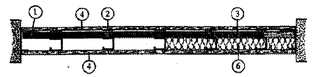


Horizontal Section

System B - 2 Hr.

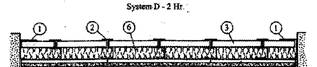
Horizontal Section

System C - 2 Hr.



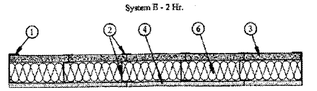
Horizontal Section

System D - 2 Hr.



Horizontal Section

System E - 2 Hr.



Horizontal Section

1. **Floor, Side and Ceiling Runners**—"J"—shaped runner, min 2-1/2 in. deep, with unequal legs of 1 in. and 2 in., fabricated from min 24 MSG 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.
2. **Steel Studs**—"C-H"—shaped studs, min 2-1/2 in. deep, fabricated from min 25 MSG galv steel. Cut to lengths 3/8 to 1/2 in. less than floor-to-ceiling height and spaced 24 in. or 600 mm OC.
2A. **Steel Studs**—(Not Shown)—"E"—shaped studs installed in place of "C-H"—shaped studs (Item 2) and to secure the closure liner panels at the ends of walls. Fabricated from min 25 MSG galv steel, min 2-1/2 in. deep, 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 in. less than floor to ceiling heights. Sill and lintel of opening formed with "J"—shaped runners (Item 1) secured to "E"—shaped studs with angle clips and steel screws.
3. **Wallboard, Gypsum*—**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"—shaped section of "C-H" studs. Free edge of end panels attached to long leg of "J"— runners with 1-5/8 in. long Type S self-drilling, self-tapping bugle head 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.
Canadian Gypsum Company —Type SLX
United States Gypsum Co. —Type SLX
Yeso Panamericano S.A. de C.V. —Type SLX
4. **Wallboard, Gypsum*—**

Systems A & D

Gypsum panels, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S self-drilling, self-tapping bugle head steel screws spaced 12 in. (24 in. OC in System D).
Canadian Gypsum Company —Types AR, C, IP-X1, IP-X2, SCX, SHX, WRC, WRX
United States Gypsum Co. —Types AR, C, IP-X1, IP-X2, SCX, SHX, WRC, WRX
Yeso Panamericano S.A. de C.V. —Types AR, C, IP-X1, IP-X2, SCX, SHX, WRC, WRX

System B

Gypsum panels, 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 self-drilling, self-tapping bugle head steel screws spaced 24 in. OC. Outer or face layer attached to studs with 1-5/8 in. long Type S self-drilling, self-tapping bugle head steel screws spaced 12 in. Joints between inner and outer layers staggered a min of 12 in. when applied horizontally. Joints centered over studs and staggered 24 in. when applied vertically.
Canadian Gypsum Company —1/2 in. Type C, IP-X2 or WRC; 5/8 in. Types AR, C, IP-X1, IP-X2, SCX, SHX, WRC, WRX
United States Gypsum Co. —1/2 in. Types C, IP-X2 or WRC; 5/8 in. Types AR, C, IP-X1, IP-X2, SCX, SHX, WRC, WRX
Yeso Panamericano S.A. de C.V. —1/2 in. Types C, IP-X2 or WRC; 5/8 in. Types AR, C, IP-X1, IP-X2, SCX, SHX, WRC, WRX

System C

Gypsum panels, 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 self-drilling, self-tapping bugle head steel screws spaced 12 in. OC.
Canadian Gypsum Company —1/2 in. Type C, IP-X2; 5/8 in. Types AR, C, IP-X1, IP-X2, SCX, SHX, WRC, WRX
United States Gypsum Co. —1/2 in. Types C, IP-X2; 5/8 in. Types AR, C, IP-X1, IP-X2, SCX, SHX, WRC, WRX
Yeso Panamericano S.A. de C.V. —1/2 in. Types C, IP-X2; 5/8 in. Types AR, C, IP-X1, IP-X2, SCX, SHX, WRC, WRX

System E

Gypsum panels, nom 3/4 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, secured with 1-1/4 in. long Type S self-drilling, self-tapping steel screws spaced 8 in. OC along the perimeter and 12 in. OC in the field. Screws along side joints offset 4 in.
Canadian Gypsum Company —ULTRACODE or Type IP-X3
United States Gypsum Co. —ULTRACODE or Type IP-X3
Yeso Panamericano S.A. de C.V. —ULTRACODE or Type IP-X3
5. **Joint Tape and Compound—**(Not Shown)

Systems A, B, C & E

Joints between outer layers of Gypsum Wallboard (Item 4) covered with paper tape and joint compound. Exposed screw heads covered with joint compound.
6. **Batts and Blankets*—**

Systems A, B & C

(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 D & E

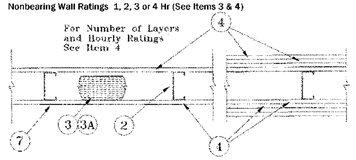
Min 1-1/2 in. (System D) or 3 in. (System E) thick mineral wool batts, friction fitted between the studs and floor and ceiling runners.
ThermaFiber LLC —Type SAFB
7. **Cementitious Backer Units*—**(System D)—Nom 1/2 or 5/8 in. thick panels, square edge, attached to studs over gypsum wallboard with 1-5/8 in. long, Type S, corrosion resistant, wafer-head steel screws spaced 8 in. OC. Alternate panel attachment for 20 gauge or heavier studs, 1-5/8 in. long, Type S-12, corrosion resistant steel screws spaced 8 in. OC. 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. —DUROCK Exterior Cement Board, DUROCK Cement Board or DUROCK WMB (Water Managed Board).
8. **Laminating Adhesive*—**(Optional, Not Shown)—Used to bond outer layer of Cementitious Backer Units (Item 7) to inner layers of Gypsum Wallboard (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.

*Bearing the UL Classification Marking

Design No. U419

October 27, 2005

Nonbearing Wall Ratings 1, 2, 3 or 4 Hr (See Items 3 & 4)



1. **Floor and Ceiling Runners** (Not shown) Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min width to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max.
2. **Steel Studs** Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min width as indicated under Item 4, min 1-1/4 in. flanges and 1/4 in. return, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.
3. **Batts and Blankets*** (Required as indicated under Item 4) Mineral wool batts, friction fitted between studs and runners. Min nom thickness as indicated under Item 4. See **Batts and Blankets (BKNV or BZJZ) Categories** for names of Classified companies.
3A. **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.
4. **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. The thickness and number of layers for the 1 hr. 2 hr, 3 hr and 4 hr ratings are as follows:

Wallboard Protection on Each Side of Wall

Rating	Min Stud Depth	No. of Layers & Thkns of Panel	Min Thkns of Insulation (Item 3)
1	3 1/2	1 layer, 5/8 in. thick	Optional
1	2 1/2	1 layer, 1/2 in. thick	1 1/2 in.
1	1 5/8	1 layer, 3/4 in. thick	Optional
2	1 5/8	2 layer, 1/2 in. thick	Optional
2	1 5/8	2 layers, 5/8 in. thick	Optional
2	3 1/2	1 layer, 3/4 in. thick	3 in.
3	1 5/8	3 layer, 1/2 in. thick	Optional
3	1 5/8	2 layers, 3/4 in. thick	Optional
3	1 5/8	3 layers, 5/8 in. thick	Optional
4	1 5/8	4 layers, 5/8 in. thick	Optional
4	1 5/8	4 layers, 1/2 in. thick	Optional
4	2 1/2	2 layer, 3/4 in. thick	2 in.

CANADIAN GYPSUM COMPANY 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, WRX or WRC; 3/4 in. thick Types IP-X3 or ULTRACODE
UNITED STATES GYPSUM CO 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type SCX, SHX, WRX, IP-X1, AR, C, WRC, FRX-G, IP-AR, IP-X2, IPC-AR ; 3/4 in. thick Types IP-X3 or 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 6B, 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 3) 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 5. 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 5.
4A. **Gypsum Board*** (As an alternate to Item 4) 5/8 in. thick, 2 ft. wide, tongue and groove edge, applied horizontally as the outer layer to one side of the assembly.
Secured as described in Item 5. Joint covering (Item 7) not required.
CANADIAN GYPSUM COMPANY Type SHX.
UNITED STATES GYPSUM CO Type SHX.
USG MEXICO S A DE C V Type SHX.
5. **Fasteners** (Not shown) Type S or S-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 6). **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. OvvvvC in the field when panels are applied 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 first 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.
6. **Furring Channels** (Optional, not shown, for single or double layer systems) Resilient furring channels fabricated from min 25 MSG corros-on-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 4A.
6A. **Steel Framing Members (Not Shown)*** (Optional on one or both sides, not shown, for single or double layer systems) As an alternate to Item 6, 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 5. Not for use with Item 4A.
b. **Steel Framing Members*** Used to attach furring channels (Item 6Aa) 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.
PAC INTERNATIONAL INC Type RSIC-1.
6B. **Steel Framing Members (Optional, Not Shown)*** As an alternate to Item 6, 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 4. Two layers of gypsum board attached to furring channels as described in Item 4. Not for use with Item 4A.
b. **Steel Framing Members*** Used to attach furring channels (Item 6Ba) to one side of studs (Item 2) only. Clips spaced 48 in. 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
7. **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.
8. **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.
9. **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
*Bearing the UL Classification Mark

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NORTH CAROLINA REGISTERED Jerry L. Williams SEAL 14231 2-28-24 ARCHITECT JERRY L. WILLIAMS

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

UL Assemblies

Rev.	Date	Notes

G3.1

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ABBREVIATIONS

@	AT
ABC	AGGREGATE BASE COURSE
AC	ACRE
A.D.	ALGEBRAIC DIFFERENCE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	AREA LIGHT
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
ASSY.	ASSEMBLY
BC	BOTTOM OF CURB
B-B	BACK TO BACK
BEAR.	BEARING
BLDG.	BUILDING
BOC	BACK OF CURB
BOT.	BOTTOM
℄	CENTERLINE
CABC	CRUSHED AGGREGATE BASE COURSE
CB	CATCH BASIN
CC	CENTER TO CENTER
CF	CUBIC FEET
CFM	CUBIC FEET PER MINUTE
C&G	CURB AND GUTTER
CH	CHORD
CI	CURB INLET
CL	CLASS
CNST	CONSTRUCTION
CO	CLEANOUT
CO.	COMPANY
COL	COLUMN
CONC.	CONCRETE
CONN	CONNECTION
CPP	CORRUGATED PLASTIC PIPE
CSP	CORRUGATED STEEL PIPE
CULV.	CULVERT
°	DEGREE(S)
△	DELTA ANGLE
ø / DIA.	DIAMETER
DP	DEPTH / DEEP
DB	DEED BOOK
Dc	DEGREE OF CURVATURE
DET	DETAIL
DI	DROP INLET
DIP	DUCTILE IRON PIPE
DN	DOWN
D/W	DRIVEWAY
DWG(S).	DRAWING(S)
E	EAST
EA.	EACH
EL/ELEV	ELEVATION
ELEC.	ELECTRICAL
EOP	EDGE OF PAVEMENT
ESMT	EASEMENT
EX/EXIST	EXISTING
FD	FLOOR DRAIN
FES	FLARED END SECTION
FFE	FINISHED FLOOR ELEVATION
FH	FIRE HYDRANT
FHA	FIRE HYDRANT ASSEMBLY
FI	FLOW INDICATOR
FLEX.	FLEXIBLE
FL	FLOW LINE
FM	FORCE MAIN
FO	FIBER OPTIC CABLE
FOP	FIBER OPTIC POST
FOSC	FIBER OPTIC SIGNAL CABLE
FOC	FACE OF CURB
FT	FEET
FUT	FUTURE
GA	GAUGE
GAL.	GALLON
GALV.	GALVANIZED
GEN	GENERATOR
G/L	GUTTER LINE
GV	GATE VALVE
GW	GUY WIRE/ANCHOR
HC	HANDICAP
HD	HEAVY DUTY
HDPE	HIGH DENSITY POLYETHYLENE PIPE (SMOOTH WALL INTERIOR)
HEX.	HEXAGONAL
HOR(IZ).	HORIZONTAL
HP	HIGH POINT
HWL	HIGH WATER LEVEL
HWY.	HIGHWAY
ICV	IRRIGATION CONTROL VALVE
ID	INSIDE DIAMETER
IN(S)	INCH(ES)
INV.	INVERT
JB	JUNCTION BOX
K	CURVE COEFFICIENT
L	LENGTH
LB(S)	POUND(S)
LD	LIGHT DUTY
LF	LINEAR FEET
LG	LONG
LP	LIGHT POLE
LT	LEFT
LWL	LOW WATER LEVEL

MAX.	MAXIMUM
MECH.	MECHANICAL
MFR.	MANUFACTURER
MH	MANHOLE
MIN.	MINIMUM
MI	MILE
# / NO.	NUMBER
N	NORTH
NCDEQ/LQS	NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY/LAND QUALITY SECTION
NCDOT	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N/F	NOW OR FORMERLY
N.I.C.	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER(S)
OD	OUTSIDE DIAMETER
OHE	OVERHEAD ELECTRIC
OPNG	OPENING
(10)	PARKING SPACE NUMBER
PB	PLAT BOOK
PC	POINT OF CURVATURE
PERM.	PERMANENT
PG	PAGE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE (——— – ———)
PROP.	PROPOSED
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PT	POINT
PVC	POLYVINYL CHLORIDE
P.V.C.	POINT OF VERTICAL CURVATURE
P.V.I.	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
P.V.T.	POINT OF VERTICAL TANGENCY
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REQ'D.	REQUIRED
RJ	RESTRAINED JOINT
RR	RAILROAD
RT	RIGHT
R/W	RIGHT-OF-WAY
S	SOUTH
SAN	SANITARY
SCH	SCHEDULE
SDMH	STORM DRAIN MANHOLE
SEC	SECONDS
SECT.	SECTION
SED.	SEDIMENT
SEW	SEWER
SF	SQUARE FEET
SHT. / SH.	SHEET
SP	SERVICE POLE
SPEC.	SPECIFICATION
SQ.	SQUARE
SR	STATE ROAD
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSMH	SANITARY SEWER MANHOLE
STA.	STATION
STD.	STANDARD
STL	STEEL
S/W	SIDEWALK
TC	TOP OF CURB
TEL.	TELEPHONE
TEMP.	TEMPORARY
TK	THICK
T/	TOP OF
T.O.	TOP OF...
TP	TELEPHONE PEDESTAL
T/S	TOP OF SLAB
TST	TEMPORARY SEDIMENT TRAP
T/W	TOP OF WALL
TYP.	TYPICAL
U/G	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UV	ULTRAVIOLET
V	VALVE
VC	VERTICAL CURVE
VERT.	VERTICAL
W	WIDTH
W	WEST
W/	WITH
WD	WIDE
W/L	WATER LINE
WM	WATER METER
WSE	WATER SURFACE ELEVATION
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
YD	YARD
YI	YARD INLET
YH	YARD HYDRANT

GENERAL NOTES

FOR THE PURPOSE OF THE FOLLOWING NOTES:
- "CONTRACTOR" REFERS TO GENERAL CONTRACTOR
- "OWNER" REFERS TO TOWN OF LELAND, NC OR ITS AUTHORIZED AGENTS
- "ENGINEER" REFERS TO MCGILL ASSOCIATES

1. DO NOT SCALE DRAWINGS.
2. THE CONTRACTOR SHALL ATTEND AN ON-SITE PRECONSTRUCTION CONFERENCE WITH THE OWNER'S REPRESENTATIVE(S) AND THE ENGINEER PRIOR TO BEGINNING WORK.
3. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL PERMITS, CODES, REGULATIONS, AND ORDINANCES.
4. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SITE SAFETY ASSOCIATED WITH THE WORK RELATED TO THIS PROJECT AND FOR COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL HEALTH AND SAFETY LAWS, CODES, REGULATIONS, AND ORDINANCES INCLUDING BUT NOT LIMITED TO THOSE CURRENTLY MANDATED BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
5. THIS PLAN IS NOT INTENDED AS A SUBSTITUTE FOR THE PERSONAL INVESTIGATION, INDEPENDENT INTERPRETATION, AND JUDGEMENT OF THE CONTRACTOR.
6. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND LOCATIONS PRIOR TO BEGINNING WORK, AND IMMEDIATELY NOTIFY THE OWNER AND ENGINEER IN THE EVENT THERE ARE ANY DISCREPANCIES BETWEEN SUCH CONDITIONS AND THOSE SHOWN ON THE PLANS AND SPECIFICATIONS.
7. ALL TIE-INS SHALL BE SCHEDULED AND COORDINATED WITH THE ENGINEER AND LOCAL AUTHORITY AT LEAST 48 HOURS PRIOR TO MAKING THE CONNECTION.
8. THE CONTRACTOR SHALL KEEP THE ENGINEER INFORMED RELATIVE TO THE PROGRESS OF THE CONSTRUCTION. THE ENGINEER SHALL OBSERVE CONSTRUCTION ACTIVITIES AS REQUIRED BY NORTH CAROLINA GENERAL STATUTES 130A – 317. FAILURE OF THE CONTRACTOR TO KEEP THE ENGINEER INFORMED MAY REQUIRE UNCOVERING OF WORK TO VERIFY COMPLIANCE WITH PLANS AND SPECIFICATIONS. ANY COST ASSOCIATED WITH UNCOVERING WORK AND/OR VERIFYING COMPLIANCE SHALL BE BORNE BY THE CONTRACTOR.
9. ABSOLUTELY NO WORK SHALL BE PERFORMED ON PRIVATE PROPERTY BEYOND ANY AREA FOR WHICH EASEMENTS EXIST OR ARE TO BE PROVIDED BY THE OWNER FOR THE PURPOSES OF THIS PROJECT. THE CONTRACTOR SHALL NOT DISTURB ADJACENT PROPERTIES DURING CONSTRUCTION WITHOUT THE PRIOR WRITTEN APPROVAL OF THE OWNERS OF SAID PROPERTIES.
10. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING THE ENGINEER WITH A SET OF RECORD (AS-BUILT) DRAWINGS. THESE DRAWINGS SHALL AT A MINIMUM SHOW THE FINAL LOCATION OF ALL CONSTRUCTED FACILITIES.
11. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH OVERHEAD UTILITY OWNER WHEN WORKING NEAR POLES AND IS RESPONSIBLE FOR ALL WORK ASSOCIATED WITH BRACING AND SUPPORTING THE POLES DURING CONSTRUCTION.
12. THIS PLAN DOES NOT GUARANTEE THE EXISTANCE OF UNDERGROUND UTILITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION, SIZE, AND TYPE OF ALL UNDERGROUND UTILITIES PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RELOCATION (AS DIRECTED BY THE ENGINEER) OF ANY CONFLICTING UNDERGROUND UTILITIES, IF REQUIRED AT NOT ADDITIONAL COST TO THE OWNER. IT IS ADVISABLE THE CONTRACTOR VISIST THE SITE PRIOR TO BIDDING AND BECOME FAMILIAR WITH THE SITE AND ANY POTENTIAL CONFLICTS.
13. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ALL DAMAGE CAUSED BY HIS OPERATIONS TO EXISTING UTILITIES AND FACILITIES WHICH ARE NOT INCLUDED AS PART OF THE INTENDED WORK. DAMAGED UTILITIES AND FACILITIES SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR, TO THE SATISFACTION OF THE OWNERS' REPRESENTATIVE, AT NO ADDITIONAL COST TO THE OWNER.
14. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION OPERATIONS WITH ANY AND ALL OTHER CONSTRUCTION ACTIVITIES WHICH MAY BE OCCURRING SIMULTANEOUSLY ON THE SITE. LACK OF COORDINATION ON THE CONTRACTOR'S PART RESULTING IN EXTRA WORK OR SCHEDULE DELAYS SHALL NOT CONSTITUTE A CHANGE ORDER.
15. THE CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO THE NORMAL WORKING HOURS. THE CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXEMPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
16. ALL WORK WITHIN NCDOT RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
17. THE CONTRACTOR SHALL CONTROL ALL "DUST" BY PERIODIC WATERING AND SHALL PROVIDE ACCESS AT ALL TIMES FOR PROPERTY OWNERS WITHIN THE PROJECT AREA AND FOR EMERGENCY VEHICLES. ALL OPEN DITCHES AND HAZARDOUS AREAS SHALL BE CLEARLY MARKED IN ACCORDANCE WITH THE SPECIFICATIONS.
18. CONTRACTOR SHALL REPAIR ALL DISTURBED AREAS TO EQUAL OR BETTER CONDITIONS UNLESS OTHERWISE NOTED.
19. CONTRACTOR IS REQUIRED TO ENGAGE A QUALIFIED INDEPENDENT GEOTECHNICAL ENGINEERING TESTING AGENCY LICENSED IN THE STATE OF NORTH CAROLINA TO PERFORM FIELD QUALITY CONTROL TESTING. TESTING AGENCY AND OR THE CONTRACTOR MUST PROVIDE THE OWNER WITH TWO COPIES OF ALL TESTING REPORTS. CONTRACTOR SHALL ENSURE COMPLIANCE WITH THE GEOTECHNICAL ENGINEERING REPORT BY ECS SOUTHEAST LLP TITLED "LELAND TOWN HALL ADDITION" DATED FEBRUARY 22, 2023 THROUGHOUT ALL PHASES OF CONSTRUCTION.
20. UNLESS OTHERWISE STATED, ALL FILL AREAS SHALL BE CONSTRUCTED IN LAYERS OF 8" MAXIMUM THICKNESS, WITH WATER ADDED OR SOIL CONDITIONED TO THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE GEOTECHNICAL ENGINEER AND COMPACTED WITH A SHEEP'S FOOT ROLLER TO A COMPACTION EQUAL TO OR GREATER THAN 95% (100% IN THE TOP 2' OF THE SUB GRADE BELOW ROADWAYS AND PARKING LOTS) OF THE DENSITY OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH THE STANDARD PROCTOR METHOD OF MOISTURE-DENSITY RELATIONSHIP TEST, ASTM D698 OR AASHTO-99 UNLESS SPECIFIED IN OTHER SPECIFICATIONS.
21. ENTIRE AREA TO BE GRADED SHALL BE CLEARED AND GRUBBED. NO FILL SHALL BE PLACED ON ANY AREA NOT CLEARED AND GRUBBED.
22. ALL SOIL EROSION CONTROL MEASURES REQUIRED BY THE GRADING PLAN SHALL BE PERFORMED PRIOR TO GRADING, CLEARING OR GRUBBING. ALL EROSION CONTROL DEVICES SUCH AS SILT FENCES, ETC., SHALL BE MAINTAINED IN WORKABLE CONDITION FOR THE LIFE OF THE PROJECT AND SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT ONLY ON THE ENGINEER'S APPROVAL. PAYMENT SHALL BE CONSIDERED INCIDENTAL TO CLEARING AND GRUBBING. IF DURING THE LIFE OF THE PROJECT, A STORM CAUSES SOIL EROSION WHICH CHANGES FINISH GRADES OR CREATES "GULLIES" AND "WASHED AREAS", THESE SHALL BE REPAIRED AT NO EXTRA COST, AND ALL SILT WASHED OFF OF THE PROJECT SITE ONTO ADJACENT PROPERTY SHALL BE REMOVED AS DIRECTED BY THE ENGINEER AT NO EXTRA COST. THE CONTRACTOR SHALL ADHERE TO ANY APPROVED EROSION CONTROL PLANS WHETHER INDICATED IN THE CONSTRUCTION PLANS OR UNDER SEPARATE COVER.
23. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ADJUSTMENT OF ALL UTILITY SURFACE ACCESSES WHETHER HE PERFORMS THE WORK OR A UTILITY COMPANY PERFORMS THE WORK.
24. ALL AREAS WHERE THERE IS EXPOSED DIRT SHALL BE SEEDED, FERTILIZED AND MULCHED ACCORDING TO THE SPECIFICATIONS. THE FINISHED SURFACE SHALL BE TO GRADE AND SMOOTH, FREE OF ALL ROCKS LARGER THAN 3", EQUIPMENT TRACKS, DIRT CLODS, BUMPS, RIDGES AND GOUGES PRIOR TO SEEDING; THE SURFACE SHALL BE LOOSENED TO A DEPTH OF ±4"-6" TO ACCEPT SEED. THE CONTRACTOR SHALL NOT PROCEED WITH SEEDING OPERATIONS WITHOUT FIRST OBTAINING THE ENGINEER'S APPROVAL OF THE GRADED SURFACE. ALL SEEDING SHALL BE PERFORMED BY A MECHANICAL "HYDRO-SEEDER". HAND SEEDING SHALL BE AUTHORIZED ON AN AREA BY AREA APPROVAL BY THE ENGINEER. DISTURBED AREAS SHOULD THEN BE MATTED WITH SHORT-TERM PHOTODEGRADABLE EROSION CONTROL MATTING.
25. WHERE SPECIFIED, STORM DRAIN PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) CONFORMING TO AASHTO M-170, AS CONTAINED IN NCDOT STANDARD SPECIFICATION 1032-9 FOR WALL TYPE.
26. WHERE SPECIFIED, ALL STORM DRAIN PIPE SHALL BE CORRUGATED HIGH DENSITY POLYETHYLENE PIPE (HDPE). SMOOTH WALL INTERIOR, CONFORMING WITH AASHTO DESIGNATION M294 AND M252, WITH WATER TIGHT JOINTS, BACKFILLED WITH # 57 WASHED STONE UP TO MIN. 6" OVER THE TOP OF THE PIPE.
27. CONTRACTOR SHALL VERIFY ALL ELEVATIONS BEFORE INSTALLATION OF FACILITIES.
28. INLETS CAST-IN-PLACE SHALL CONFORM TO THE REQUIREMENTS OF NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES (LATEST EDITION) ARTICLES 840-1 THROUGH 840-3. CURB INLET SHALL CONFORM TO NCDOT STANDARD DETAILS 840.02 THROUGH 840.04. DROP INLETS SHALL CONFORM TO STANDARD DETAIL 840.14. JUNCTION BOXES SHALL CONFORM TO STANDARD DETAIL 840.31.
29. CURB INLET FRAME, GRATE AND HOOD SHALL BE NEENAH R-3233D, PRODUCTS BY DEWEY BROS., U.S. FOUNDRY OR EQUAL. DROP INLET FRAME AND GRATE SHALL BE NEENAH R-3339A OR EQUAL FIELD INLET COVER SHALL CONFORM TO NCDOT STANDARD DETAIL 840.04, OPENING FACING UPSTREAM.
30. CONCRETE AND MASONRY SHALL MEET THE REQUIREMENTS OF APPROPRIATE SECTION OF NCDOT STANDARD SPECIFICATIONS FOR ROAD AND STRUCTURES (LATEST EDITION). CONCRETE SHALL BE CLASS A OR B, 4000 PSI MINIMUM, MEETING THE REQUIREMENTS OF SECTION 1000, CONSTRUCTED IN ACCORDANCE WITH SECTION 825. MASONRY SHALL MEET THE REQUIREMENTS OF SECTION 1040, CONSTRUCTED IN ACCORDANCE WITH SECTION 830 AND/OR 834.
31. ALL STORM AND SANITARY SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT AND SHALL HAVE TRAFFIC BEARING RING AND COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISHED GRADE. LIDS SHALL BE LABELED ACCORDINGLY.
32. DURING CONSTRUCTION ALL FIRE HYDRANTS ARE TO REMAIN ACCESSIBLE.
33. CONTRACTOR TO PROVIDE ALL AS-BUILT INFORMATION FOR THE PARKING LOT AND STORMWATER INFRASTRUCTURE. AS-BUILTS SHALL BE PROVIDED IN A GIS SHAPEFILE FORMAT TO THE OWNER FOLLOWING CONSTRUCTION. REFERENCE THE AS-BUILT DRAWINGS REQUIREMENT ON THE TOWN OF LELAND'S WEBSITE AT:
    HTTPS://WWW.TOWNOFLELAND.COM/PUBLIC-SERVICES/STORMWATER MANAGEMENT &
    HTTPS://WWW.TOWNOFLELAND.COM/PUBLIC-SERVICES/STREETS

GENERAL UTILITY NOTES

1. THE APPROXIMATE LOCATION OF ALL KNOWN UNDERGROUND UTILITIES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE TRUE LOCATION PRIOR TO COMMENCING WORK. IN THE EVENT A CONFLICT OR POTENTIAL CONFLICT IS IDENTIFIED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
2. THE CONTRACTOR SHALL COORDINATE ALL WORK AFFECTING UTILITIES WITH THE RESPECTIVE UTILITY COMPANY OWNER. ALL DETAILS OF CONSTRUCTION AND/OR RELOCATION SHALL BE APPROVED BY THE UTILITY OWNERS AND OTHER APPROVING AGENCIES, IF REQUIRED.
3. PROTECTION OF EXISTING STRUCTURES DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
4. ALL UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH BRUNSWICK REGIONAL WATER AND SEWER H2GO WATER DISTRIBUTION AND WASTEWATER COLLECTION AND DUKE ENERGY PROGRESS CONSTRUCTION STANDARDS.
5. RELATION BETWEEN WATER MAINS AND SEWER LINES:

A. HORIZONTAL AND VERTICAL SEPARATION:

1.) WATERLINES SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SEWER LINE. THE DISTANCE SHALL BE MEASURED FROM EDGE TO EDGE. IF AN OBSTRUCTION PROHIBITS A 10-FOOT SEPARATION, THE CONTRACTOR SHALL CONTACT THE ENGINEER. INSTALLATION OF THE WATER MAIN CLOSER TO A SEWER LINE IS ALLOWED PROVIDED THAT THE WATER MAIN IS IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER AND AT AN ELEVATION SO THE BOTTOM OF THE WATER MAIN IS AT LEAST 18-INCHES ABOVE THE TOP OF THE SEWER.

2.) IF IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS DESCRIBED ABOVE OR ANY TIME THE SEWER IS OVER THE WATER MAIN, BOTH THE WATER MAIN AND SEWER LINE MUST BE CONSTRUCTED OF FERROUS PIPE COMPLYING WITH PUBLIC WATER SUPPLY DESIGN STANDARDS AND PRESSURE TESTED TO 150 PSI (MINIMUM) TO ASSURE WATERTIGHTNESS BEFORE BACKFILLING.

B. CROSSINGS

1.) FOR WATER MAINS CROSSING UNDER SEWER LINES: LINES SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18-INCHES BETWEEN THE OUTSIDE EDGE OF THE WATER MAIN AND THE OUTSIDE EDGE OF THE SEWER LINE. THE CROSSING SHALL BE ARRANGED SO THAT ONE 20-FOOT SECTION OF WATERLINE SHALL BE CENTERED AT THE CROSSING. ONE OF THE FOLLOWING METHODS MUST THEN BE UTILIZED AS DIRECTED BY THE ENGINEER:

I.) THE SEWER SHALL BE DESIGNED AND CONSTRUCTED OF FERROUS PIPE AND SHALL BE PRESSURE TESTED AT 150 PSI TO ASSURE WATERTIGHTNESS PRIOR TO BACKFILLING OR,

II.) EITHER THE WATER MAIN OR SEWER LINE MAY BE ENCASED IN A WATERTIGHT CARRIER PIPE WHICH EXTENDS 10-FEET BEYOND BOTH SIDES OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATER MAIN. THE CARRIER PIPE SHALL BE OF A MATERIAL APPROVED BY THE REGULATORY AGENCY FOR USE IN WATER MAIN CONSTRUCTION.

2.) FOR WATER MAINS CROSSING OVER A SEWER LINE: LINES SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18-INCHES BETWEEN THE OUTSIDE EDGE OF THE WATER MAIN AND THE OUTSIDE EDGE OF THE SEWER. IN AN 18-INCH MINIMUM VERTICAL SEPARATION CANNOT BE MET, THEN THE WATERLINE SHALL BE CONSTRUCTED OF A FERROUS MATERIAL WITH ONE 20-FOOT SECTION OF PIPE CENTERED AT THE CROSSING. ONE OF THE CROSSING CONSTRUCTION METHODS ABOVE: 6.B.1.)I) OR II) SHALL BE UTILIZED.

UTILITY PROVIDERS

NATURAL GAS:	N/A	
TELEPHONE:	SPECTRUM	844-909-1256
CABLE TELEVISION / INTERNET:	SPECTRUM	844-909-1256
ELECTRIC:	DUKE ENERGY PROGRESS	800-452-2777
WATER:	BRUNSWICK REGIONAL WATER & SEWER (H2GO)	910-371-9949
SEWER:	BRUNSWICK REGIONAL WATER & SEWER (H2GO)	910-371-9949

NOTE:
AN EFFORT HAS BEEN MADE TO LOCATE AND SHOW APPROXIMATE LOCATION OF EXISTING UNDERGROUND UTILITY LINES. ALL BURIED UTILITIES ARE NOT NECESSARILY SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITIES AND VERIFY LOCATION OF SUCH, PRIOR TO START OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PRESERVE ALL UTILITY SERVICES.

CAUTION NOTE TO CONTRACTOR

FIRE APPARATUS ROADS AND WATER SHALL BE IN PLACE AND FUNCTIONING BEFORE COMBUSTIBLE MATERIALS ARE PLACED ON THE PROPERTY.

SITEWORK SHEET INDEX

SHEET NUMBER	SHEET TITLE
C-001	ABBREVIATIONS AND GENERAL NOTES
ECP-101	EXISTING CONDITIONS SURVEY
ECP-101A	EXISTING CONDITIONS PLAN
ES-101	EROSION AND SEDIMENTATION CONTROL PLAN
ES-102	EROSION AND SEDIMENTATION CONTROL NOTES
ES-103	EROSION AND SEDIMENTATION CONTROL DETAILS
D-101	DEMOLITION PLAN
D-101A	DEMOLITION PLAN
C-101	SITE PLAN
C-101A	SITE PLAN
C-102	GRADING AND DRAINAGE PLAN
C-103	UTILITY PLAN
C-103A	EXISTING IRRIGATION SYSTEM AS-BUILTS
C-104	LANDSCAPE PLAN
C-105	SITE DETAILS
C-106	SITE DETAILS
24-0033B	SITE LIGHTING ARRANGEMENT

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SIGNED AND DATED:
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Alex D. Lapinsky Date: 2024.03.05 14:29:41-05'00'

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NORTH CAROLINA PROFESSIONAL SEAL 042192 ENGINEER ALEXANDER D. LAPINSKY

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Issue Date: February 12, 2024

Abbreviations and General Notes

Rev.	Date	Notes

C-001

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LIMIT OF WORK FOR ACCESS DRIVE MILLING AND ASPHALT OVERLAY. NEATLY SAW CUT AND REMOVE EXISTING PAVEMENT STARTING AT CURB AND GUTTER TANGENT POINT. OVERLAY ACCESS DRIVE TO SAW CUT POINT JOINT BETWEEN NEW AND EXISTING ASPHALT TO BE A BUTT JOINT WITH A FLUSH SURFACE TO FACILITATE A SMOOTH VEHICLE RIDING SURFACE AT JOINT.

24" VERTICAL CURB AND GUTTER (TYP.) PLACE EXPANSION JOINT BETWEEN NEW AND EXISTING CURB AND GUTTER

STOP SIGN TO REMAIN

CONCRETE SIDEWALK MATCH EXISTING SIDEWALK WIDTH. PLACE EXPANSION JOINT BETWEEN NEW AND EXISTING SIDEWALK.

ACCESS DRIVE
MILL OFF 2" OF EXISTING ASPHALT SURFACE AND OVERLAY WITH 2" OF ASPHALT SURFACE COURSE S9.5B FINISHED GRADE OF ASPHALT OVERLAY TO MATCH EXISTING ACCESS DRIVE GRADES. CONTRACTOR TO ENSURE POSITIVE DRAINAGE IN ALL DIRECTIONS ACROSS ACCESS DRIVE WITH NO AREAS OF PONDING.

6' WIDE CONCRETE SIDEWALK (TYP.)

24" VERTICAL CURB AND GUTTER (TYP.) PLACE EXPANSION JOINT BETWEEN NEW AND EXISTING CURB AND GUTTER

CROSSWALK (TYP.)

CURB RAMP WITH RED DETECTABLE WARNING DOMES

CONCRETE SIDEWALK CONSTRUCT EXPANSION JOINT BETWEEN NEW AND EXISTING SIDEWALK AND ALONG CURB AND GUTTER

6' WIDE CONCRETE SIDEWALK CENTERED ON DOOR. MATCH FINISHED FLOOR ELEVATION AT DOOR AND EXISTING SIDEWALK ELEVATION.

BIKE RACK

6' WIDE CONCRETE SIDEWALK CENTERED ON DOOR. MATCH FINISHED FLOOR ELEVATION AT DOOR AND EXISTING SIDEWALK ELEVATION AT CONNECTION POINT. PROVIDE EXPANSION JOINT AT BUILDING AND EXISTING SIDEWALK.

24" VERTICAL CURB AND GUTTER AND SIDEWALK (TYP.) PLACE EXPANSION JOINT BETWEEN NEW AND EXISTING CURB AND GUTTER AND SIDEWALK.

BUILDING FINISH FLOOR ELEVATION = 22.11

CONCRETE SIDEWALK CONSTRUCT EXPANSION JOINT BETWEEN NEW AND EXISTING SIDEWALK AND ALONG CURB AND GUTTER

CONCRETE PAD WITHIN ENCLOSURE REFER TO ARCHITECTURAL PLANS

BUILDING ADDITION REFER TO ARCHITECTURAL PLANS

MILL AND OVERLAY EXISTING ACCESS DRIVE TO SAW CUT JOINT (REFER TO DEMOLITION PLAN) JOINT BETWEEN NEW AND EXISTING ASPHALT TO BE A BUTT JOINT WITH A FLUSH SURFACE TO FACILITATE A SMOOTH VEHICLE RIDING SURFACE AT JOINT

24" VERTICAL CURB AND GUTTER (TYP.) PLACE EXPANSION JOINT BETWEEN NEW AND EXISTING CURB AND GUTTER. POUR PERVIOUS CONCRETE TO REPAIR AREA ALONG EDGE OF NEW CURB AND GUTTER. PLACE EXPANSION JOINT BETWEEN EXISTING AND NEW CONCRETE. RESTRIPE PARKING STALL TO MATCH EXISTING STRIPES.

CONSTRUCT EXPANSION JOINT BETWEEN NEW AND EXISTING SIDEWALK (TYP.)

6' WIDE CONCRETE SIDEWALK CENTERED ON DOOR. MATCH FINISHED FLOOR ELEVATION AT MECHANICAL YARD AND EXISTING SIDEWALK ELEVATION AT CONNECTION POINT. PROVIDE EXPANSION JOINT AT BUILDING AND EXISTING SIDEWALK.

CAUTION NOTE TO CONTRACTOR

FIRE APPARATUS ROADS AND WATER SHALL BE IN PLACE AND FUNCTIONING BEFORE COMBUSTIBLE MATERIALS ARE PLACED ON THE PROPERTY.

TREE PROTECTION
28"LIVE OAK

24" VERTICAL CURB AND GUTTER (TYP.)

12" WIDE CONCRETE RIBBON CURB

END CURB AND GUTTER WITH A CURB AND GUTTER TERMINUS END SECTION (TYP.)

ASPHALT PAVEMENT

CURB RAMP WITH RED DETECTABLE WARNING DOMES

6' WIDE CONCRETE SIDEWALK (TYP.)

9' x 18' PERVIOUS CONCRETE PARKING STALLS (TYP.)

12" WIDE CONCRETE RIBBON CURB

END CURB AND GUTTER WITH A CURB AND GUTTER TERMINUS END SECTION (TYP.)

12" WIDE CONCRETE RIBBON CURB TYPICAL AT ALL PERVIOUS CONCRETE PARKING STALLS

SINGLE SOLID WHITE TRAFFIC PAINT LINES 4" WIDE TYPICAL ALL PARKING STALLS UNLESS NOTED OTHERWISE

MILL AND OVERLAY ACCESS DRIVE TO SAW CUT JOINT (REFER TO DEMOLITION PLAN) JOINT BETWEEN NEW AND EXISTING ASPHALT TO BE A BUTT JOINT WITH A FLUSH SURFACE TO FACILITATE A SMOOTH VEHICLE RIDING SURFACE AT JOINT

CONSTRUCT EXPANSION JOINT BETWEEN NEW AND EXISTING CURB AND GUTTER

CONCRETE FLUME

LIGHT FIXTURE (TYP. SEE SHEET 24-0033B)

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GRAPHIC SCALE 20 0 10 20 40 — DIVISION VALUE = 20 FEET

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NORTH CAROLINA PROFESSIONAL SEAL 042192 ENGINEER ALEXANDER D. LAPINSKY

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Issue Date: February 12, 2024

Site Plan

Rev.	Date	Notes

C-101

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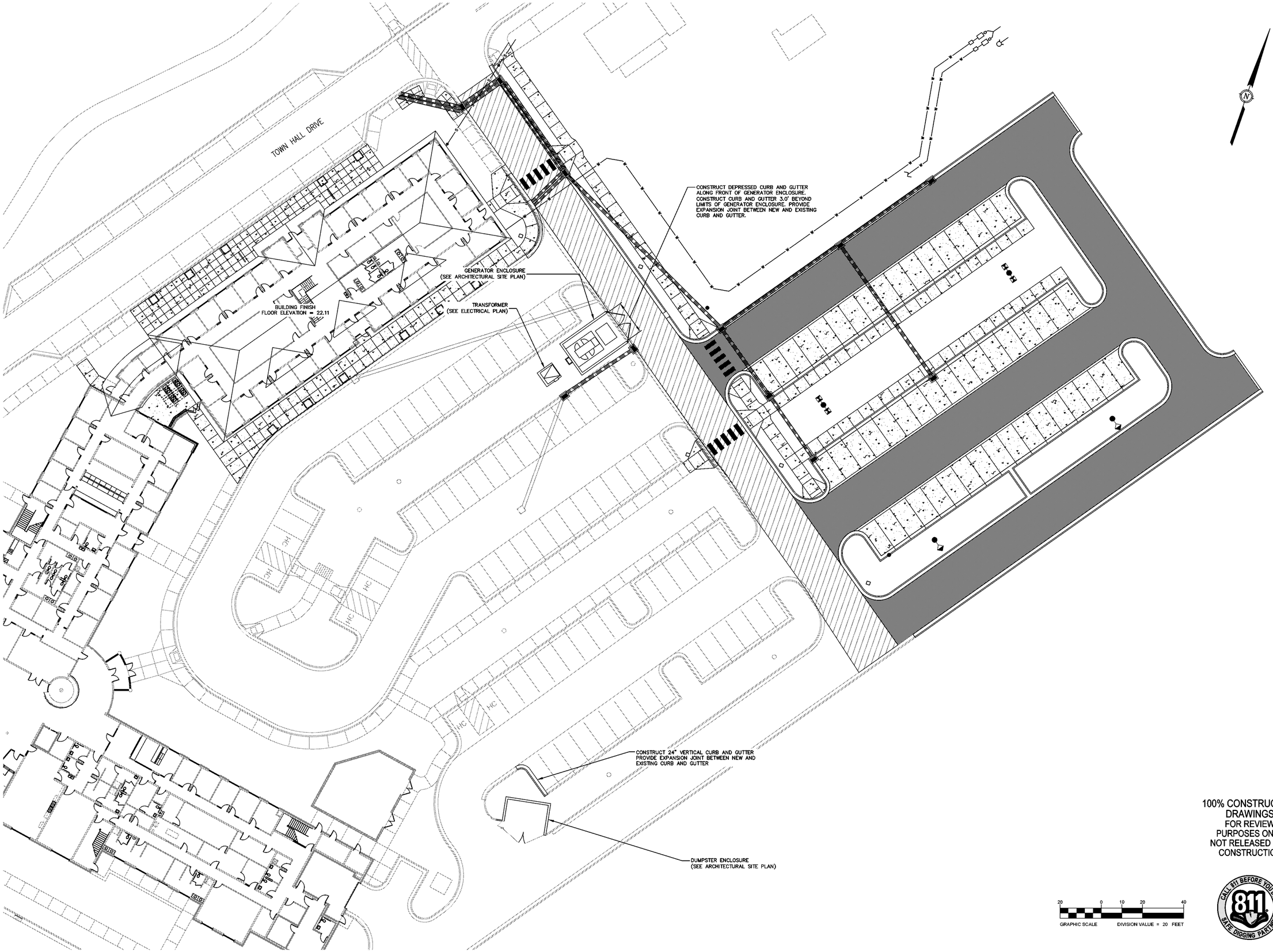

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NORTH CAROLINA PROFESSIONAL SEAL 042192 ENGINEER ALEXANDER D. LAPINSKY

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Issue Date: February 12, 2024

Site Plan

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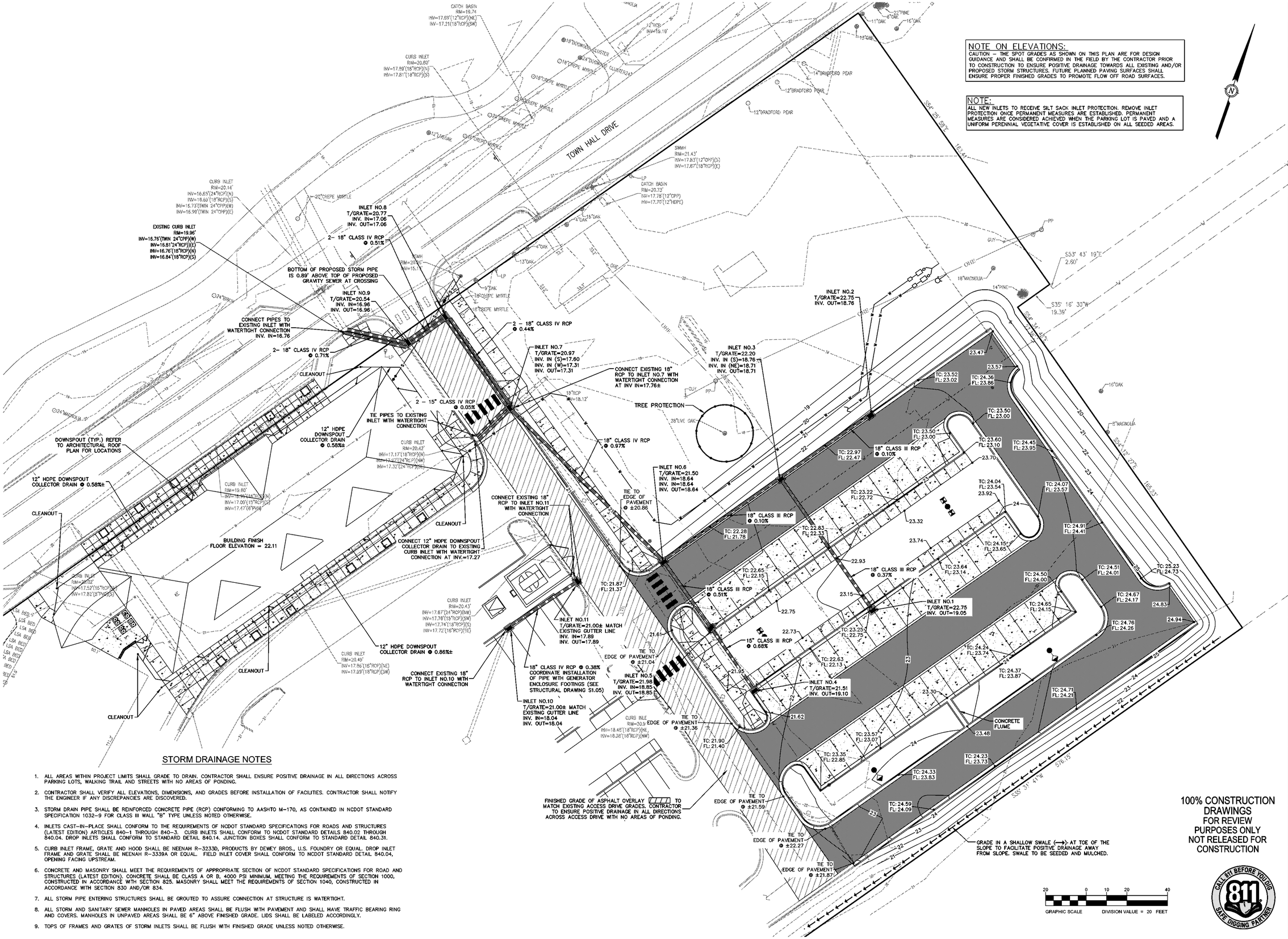

NOTE ON ELEVATIONS:

CAUTION -- THE SPOT GRADES AS SHOWN ON THIS PLAN ARE FOR DESIGN GUIDANCE AND SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION TO ENSURE POSITIVE DRAINAGE TOWARDS ALL EXISTING AND/OR PROPOSED STORM STRUCTURES. FUTURE PLANNED PAVING SURFACES SHALL ENSURE PROPER FINISHED GRADES TO PROMOTE FLOW OFF ROAD SURFACES.

NOTE:

ALL NEW INLETS TO RECEIVE SILT SACK INLET PROTECTION. REMOVE INLET PROTECTION ONCE PERMANENT MEASURES ARE ESTABLISHED. PERMANENT MEASURES ARE CONSIDERED ACHIEVED WHEN THE PARKING LOT IS PAVED AND A UNIFORM PERENNIAL VEGETATIVE COVER IS ESTABLISHED ON ALL SEEDED AREAS.

STORM DRAINAGE NOTES

1. ALL AREAS WITHIN PROJECT LIMITS SHALL GRADE TO DRAIN. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE IN ALL DIRECTIONS ACROSS PARKING LOTS, WALKING TRAIL AND STREETS WITH NO AREAS OF PONDING.
2. CONTRACTOR SHALL VERIFY ALL ELEVATIONS, DIMENSIONS, AND GRADES BEFORE INSTALLATION OF FACILITIES. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES ARE DISCOVERED.
3. STORM DRAIN PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) CONFORMING TO AASHTO M-170, AS CONTAINED IN NCDOT STANDARD SPECIFICATION 1032-9 FOR CLASS III WALL "B" TYPE UNLESS NOTED OTHERWISE.
4. INLETS CAST-IN-PLACE SHALL CONFORM TO THE REQUIREMENTS OF NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES (LATEST EDITION) ARTICLES 840-1 THROUGH 840-3. CURB INLETS SHALL CONFORM TO NCDOT STANDARD DETAILS 840.02 THROUGH 840.04. DROP INLETS SHALL CONFORM TO STANDARD DETAIL 840.14. JUNCTION BOXES SHALL CONFORM TO STANDARD DETAIL 840.31.
5. CURB INLET FRAME, GRATE AND HOOD SHALL BE NEENAH R-3233D, PRODUCTS BY DEWEY BROS., U.S. FOUNDRY OR EQUAL. DROP INLET FRAME AND GRATE SHALL BE NEENAH R-3339A OR EQUAL. FIELD INLET COVER SHALL CONFORM TO NCDOT STANDARD DETAIL 840.04, OPENING FACING UPSTREAM.
6. CONCRETE AND MASONRY SHALL MEET THE REQUIREMENTS OF APPROPRIATE SECTION OF NCDOT STANDARD SPECIFICATIONS FOR ROAD AND STRUCTURES (LATEST EDITION). CONCRETE SHALL BE CLASS A OR B, 4000 PSI MINIMUM, MEETING THE REQUIREMENTS OF SECTION 1000, CONSTRUCTED IN ACCORDANCE WITH SECTION 825. MASONRY SHALL MEET THE REQUIREMENTS OF SECTION 1040, CONSTRUCTED IN ACCORDANCE WITH SECTION 830 AND/OR 834.
7. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
8. ALL STORM AND SANITARY SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT AND SHALL HAVE TRAFFIC BEARING RING AND COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISHED GRADE. LIDS SHALL BE LABELED ACCORDINGLY.
9. TOPS OF FRAMES AND GRATES OF STORM INLETS SHALL BE FLUSH WITH FINISHED GRADE UNLESS NOTED OTHERWISE.

100% CONSTRUCTION DRAWINGS FOR REVIEW PURPOSES ONLY NOT RELEASED FOR CONSTRUCTION

GRAPHIC SCALE 20 0 10 20 40 — DIVISION VALUE = 20 FEET

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SIGNED AND DATED:
Digitally signed by Alex D. Lapinsky
Date: 2024.05.05 14:34:17-05'00'

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NORTH CAROLINA PROFESSIONAL SEAL 042102 ENGINEER ALEXANDER D. LAPINSKY

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Issue Date: February 12, 2024

Grading and Drainage Plan

Rev.	Date	Notes

C-102

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PARKING LOT LIGHTING CONDUIT REQUIREMENTS

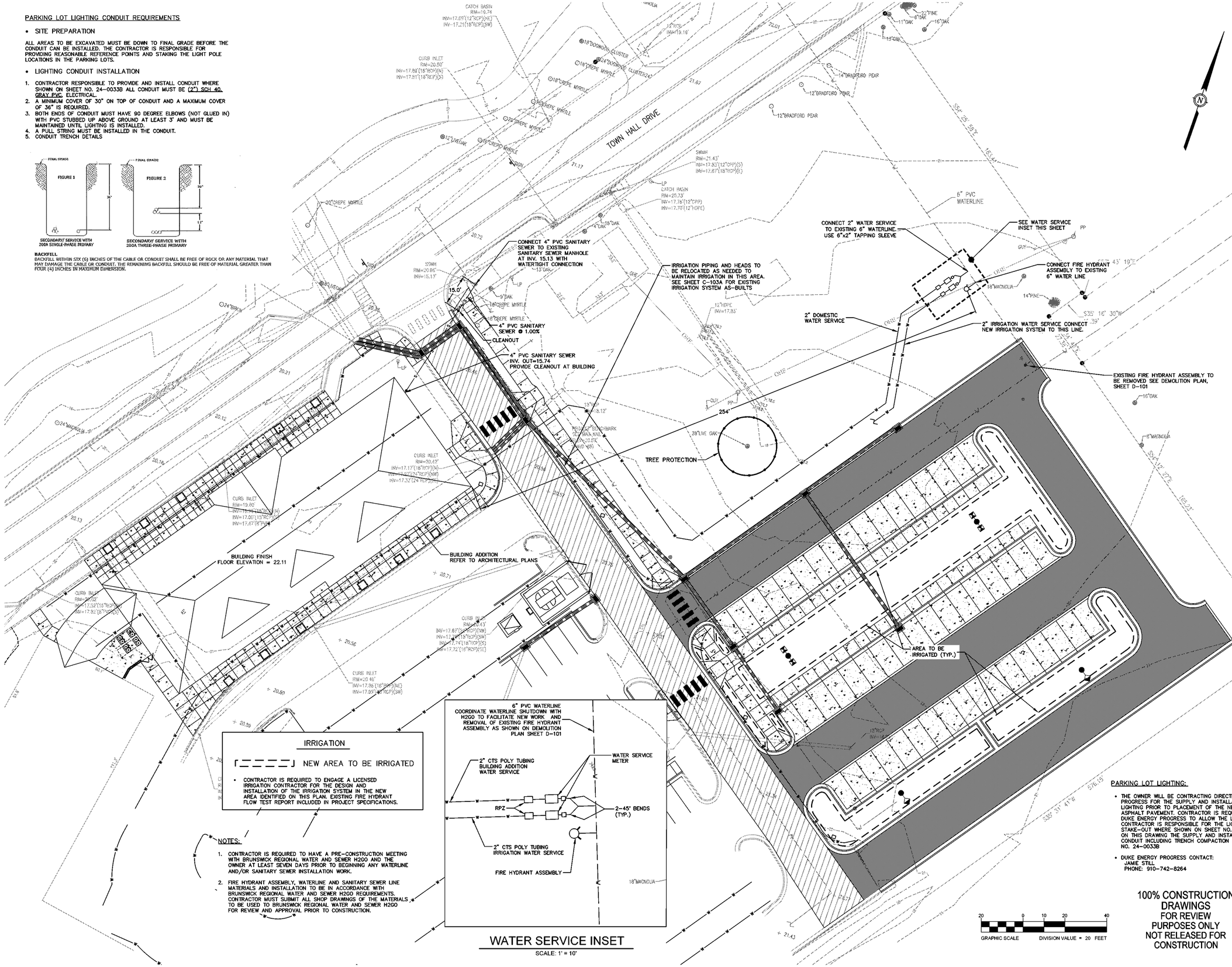
- SITE PREPARATION

ALL AREAS TO BE EXCAVATED MUST BE DOWN TO FINAL GRADE BEFORE THE CONDUIT CAN BE INSTALLED. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING REASONABLE REFERENCE POINTS AND STAKING THE LIGHT POLE LOCATIONS IN THE PARKING LOTS.

- LIGHTING CONDUIT INSTALLATION

1. CONTRACTOR RESPONSIBLE TO PROVIDE AND INSTALL CONDUIT WHERE SHOWN ON SHEET NO. 24-0033B ALL CONDUIT MUST BE (2") SCH 40, GRAY PVC, ELECTRICAL.
2. A MINIMUM COVER OF 30" ON TOP OF CONDUIT AND A MAXIMUM COVER OF 36" IS REQUIRED.
3. BOTH ENDS OF CONDUIT MUST HAVE 90 DEGREE ELBOWS (NOT GLUED IN) WITH PVC STUBBED UP ABOVE GROUND AT LEAST 3' AND MUST BE MAINTAINED UNTIL LIGHTING IS INSTALLED.
4. A PULL STRING MUST BE INSTALLED IN THE CONDUIT.
5. CONDUIT TRENCH DETAILS

BACKFILL
BACKFILL WITHIN SIX (6) INCHES OF THE CABLE OR CONDUIT SHALL BE FREE OF ROCK OR ANY MATERIAL THAT MAY DAMAGE THE CABLE OR CONDUIT. THE REMAINING BACKFILL SHOULD BE FREE OF MATERIAL GREATER THAN FOUR (4) INCHES IN MAXIMUM DIMENSION.



IRRIGATION

NEW AREA TO BE IRRIGATED

- CONTRACTOR IS REQUIRED TO ENGAGE A LICENSED IRRIGATION CONTRACTOR FOR THE DESIGN AND INSTALLATION OF THE IRRIGATION SYSTEM IN THE NEW AREA IDENTIFIED ON THIS PLAN. EXISTING FIRE HYDRANT FLOW TEST REPORT INCLUDED IN PROJECT SPECIFICATIONS.

NOTES:

1. CONTRACTOR IS REQUIRED TO HAVE A PRE-CONSTRUCTION MEETING WITH BRUNSWICK REGIONAL WATER AND SEWER H2GO AND THE OWNER AT LEAST SEVEN DAYS PRIOR TO BEGINNING ANY WATERLINE AND/OR SANITARY SEWER INSTALLATION WORK.
2. FIRE HYDRANT ASSEMBLY, WATERLINE AND SANITARY SEWER LINE MATERIALS AND INSTALLATION TO BE IN ACCORDANCE WITH BRUNSWICK REGIONAL WATER AND SEWER H2GO REQUIREMENTS. CONTRACTOR MUST SUBMIT ALL SHOP DRAWINGS OF THE MATERIALS TO BE USED TO BRUNSWICK REGIONAL WATER AND SEWER H2GO FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

WATER SERVICE INSET
SCALE: 1" = 10'

PARKING LOT LIGHTING:

- THE OWNER WILL BE CONTRACTING DIRECTLY WITH DUKE ENERGY PROGRESS FOR THE SUPPLY AND INSTALLATION OF PARKING LOT LIGHTING PRIOR TO PLACEMENT OF THE NEW STONE SUBBASE AND ASPHALT PAVEMENT. CONTRACTOR IS REQUIRED TO COORDINATE WITH DUKE ENERGY PROGRESS TO ALLOW THE LIGHTING INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR THE LIGHT POLE LOCATION STAKE-OUT WHERE SHOWN ON SHEET NO. 24-0033B AND AS SPECIFIED ON THIS DRAWING THE SUPPLY AND INSTALLATION OF THE LIGHTING CONDUIT INCLUDING TRENCH COMPACTION WHERE ALSO SHOWN ON SHEET NO. 24-0033B
- DUKE ENERGY PROGRESS CONTACT:
  JAMIE STILL
  PHONE: 910-742-8264

20 0 10 20 40
GRAPHIC SCALE DIVISION VALUE = 20 FEET

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Alex D. Lapinsky Date: 2024.03.05 14:34:55-05'00'

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NORTH CAROLINA PROFESSIONAL SEAL 042192 ENGINEER ALEXANDER D. LAPINSKY

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Issue Date: February 12, 2024

Utility Plan

Rev.	Date	Notes

C-103

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EXISTING IRRIGATION SYSTEM AS-BUILTS
AS PROVIDED BY THE TOWN OF LELAND
FOR INFORMATION ONLY

C-103A

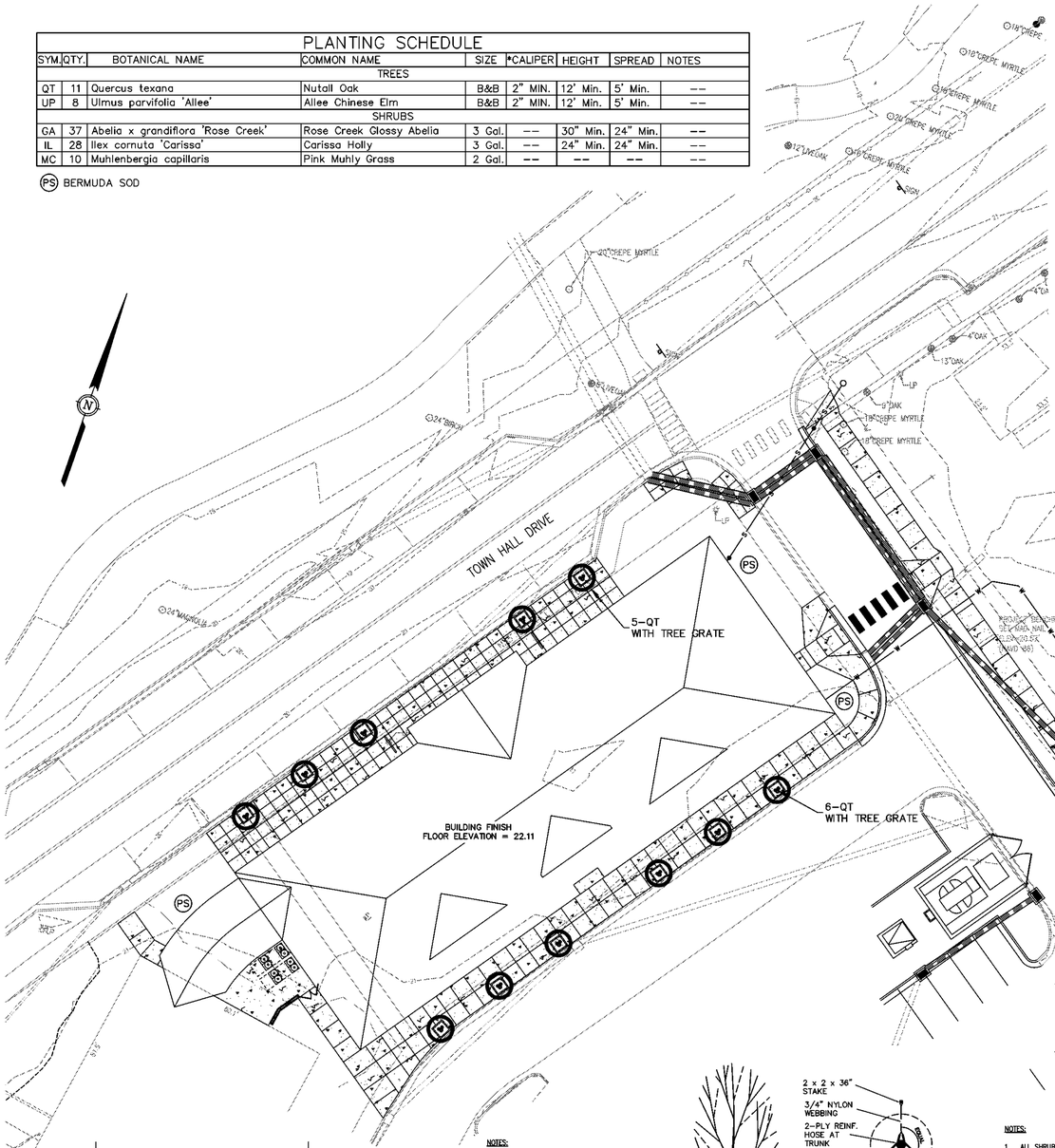
PLANTING SCHEDULE

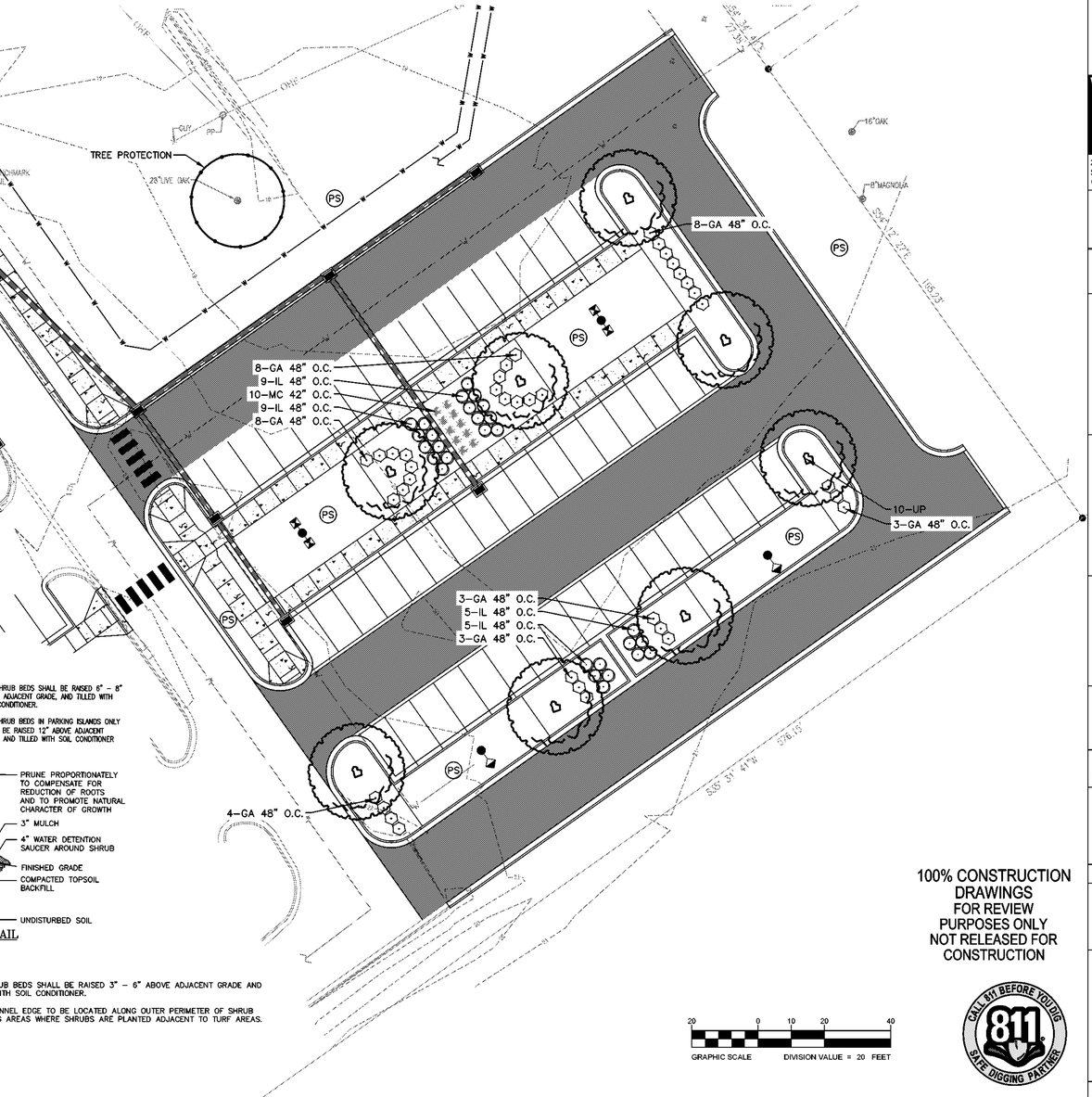
SYM.	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	*CALIPER	HEIGHT	SPREAD	NOTES
			TREES					
QT	11	Quercus texana	Nutall Oak	B&B	2" MIN.	12' Min.	5' Min.	--
UP	8	Ulmus parvifolia 'Allee'	Allee Chinese Elm	B&B	2" MIN.	12' Min.	5' Min.	--
			SHRUBS					
GA	37	Abelia x grandiflora 'Rose Creek'	Rose Creek Glossy Abelia	3 Gal.	--	30" Min.	24" Min.	--
IL	28	Ilex cornuta 'Carissa'	Carissa Holly	3 Gal.	--	24" Min.	24" Min.	--
MC	10	Muhlenbergia capillaris	Pink Muhly Grass	2 Gal.	--	--	--	--

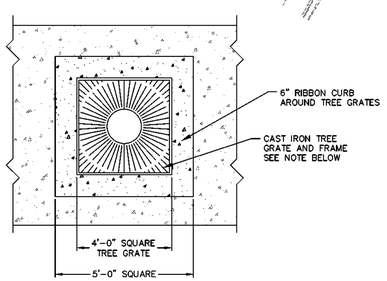
(PS) BERMUDA SOD

GENERAL NOTES:

1. LANDSCAPE CONTRACTOR TO VISIT THE SITE AND ACCEPT THE CONDITIONS PRIOR TO BIDDING AND PLANT MATERIAL INSTALLATION.
2. LANDSCAPE CONTRACTOR TO VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY PLANT MATERIAL. UTILITY LINES SHOWN ON DRAWINGS ARE FOR GENERAL REFERENCE AND MAY NOT BE ALL INCLUSIVE.
3. LANDSCAPE CONTRACTOR TO PROTECT ALL EXISTING STRUCTURES DURING INSTALLATION OF PLANT MATERIAL.
4. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ALL FINE GRADING OF LAWN AND PLANTING AREAS DISTURBED DURING CONSTRUCTION. REMOVE ALL TEMPORARY SEEDING/STABILIZATION, STONES, GRAVEL, AND ALL EXTRANEOUS DEBRIS INCLUDING ROOTS AND LIMBS.
5. ALL PLANT BEDS TO BE TILLED AND AMENDED TO A DEPTH OF 12". THE ENTIRE AREA IS TO BE COVERED WITH 3" CLEAN TRIPLE SHRED HARDWOOD MULCH IMMEDIATELY AFTER PLANTING.
6. ALL BEDS TO CONSIST OF 1 PART EXISTING SOIL, 1 PART FRIABLE SOIL, AND 1 PART SOIL CONDITIONER. ALL PLANT BEDS SHOULD BE TILLED IN THEIR ENTIRETY. NO PIT PLANTING OF BEDS WILL BE ACCEPTED.
7. LANDSCAPE CONTRACTOR SHALL FURNISH ALL QUANTITIES NECESSARY TO COMPLETE PLANTINGS AS SHOWN/LOCATED ON DRAWINGS. QUANTITIES SHOWN ON PLANT LIST ARE FOR CONVENIENCE OF CONTRACTORS AND ARE BELIEVED TO BE SUBSTANTIALLY CORRECT, BUT ACCURACY OF QUANTITIES IN LIST IS NOT GUARANTEED.
8. LANDSCAPE CONTRACTOR TO GUARANTEE ALL PLANT MATERIAL AND WORK FOR A PERIOD OF ONE YEAR FROM ACCEPTANCE OF WORK BY OWNER.
9. ANY PLANT MATERIAL SUBSTITUTIONS OR ADJUSTMENTS ARE TO BE REQUESTED IN WRITING TO THE OWNER. NO SUBSTITUTIONS WILL BE PERMITTED WITHOUT WRITTEN NOTICE BY THE OWNER.
10. ALL PLANT MATERIAL TO CONFORM TO THE CURRENT EDITION OF "AMERICAN STANDARD FOR NURSERY STOCK".
11. ALL TREES PLANTED IN GRASS AREAS SHALL HAVE A 3' DIAMETER MULCH RING.
12. ALL GRASS TO PLANT BED BORDERS ARE TO BE NEATLY EDGED WITH A V-CHANNEL EDGE.
13. ALL TREES SHALL BE SPECIMEN QUALITY AND WELL SHAPED.
14. ALL TREES OF THE SAME VARIETY SHALL MATCH IN SHAPE, FORM, AND SIZE WHERE THEY ARE TO BE INSTALLED IN GROUPS, ROWS, OR AS STREET TREES.
15. MINOR SHIFTING AND ADJUSTING OF PROPOSED TREE LOCATIONS MAY BE REQUIRED DUE TO EXACT LOCATION OF UNDERGROUND UTILITIES. LANDSCAPE CONTRACTOR TO CONTACT LANDSCAPE ARCHITECT PRIOR TO RELOCATION.
16. PRIOR TO SEEDING, LANDSCAPE CONTRACTOR IS TO CONTACT GENERAL CONTRACTOR FOR VERIFICATION THAT ALL LAND DISTURBING ACTIVITY HAS BEEN COMPLETED.
17. LANDSCAPE CONTRACTOR TO SOD ALL AREAS NOTED WITH BERMUDA SOD PER SPECIFICATIONS. ADD FERTILIZER AND LIME AS RECOMMENDED BY SOIL TEST. ALL NEW SOD AREAS SHOULD BE STAKED OFF FROM PEDESTRIANS AND VEHICLES FOR A PERIOD OF THREE WEEKS.
18. LANDSCAPE CONTRACTOR TO OBTAIN GRADING PLAN FOR COORDINATION OF FINAL GRADES.
19. CONTRACTOR TO PROVIDE/SUBMIT AN IRRIGATION PLAN FROM A LICENSED IRRIGATION INSTALLER FOR REVIEW BY ENGINEER/LANDSCAPE ARCHITECT. ALL NEW SOD AND SEEDED AREAS ARE TO BE IRRIGATED.

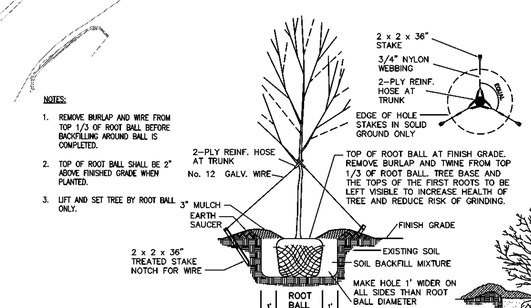






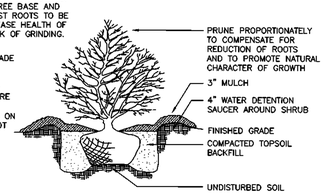
NOTE:
TREE GRATE TO BE:
- ADA COMPLIANT
- TWO-PIECE CONFIGURATION
- CAST GRAY IRON ASTM A-48, CLASS 35B
- BLACK PAINT FINISH
- 18" DIAMETER TREE OPENING
- 0.25" SLOT OPENING
- INSTALL PER MANUFACTURER'S REQUIREMENTS

TREE GRATE
NOT TO SCALE



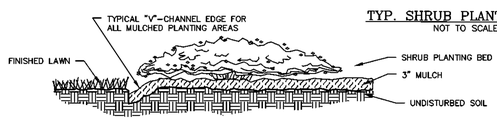
NOTES:
1. REMOVE BURLAP AND WIRE FROM TOP 1/3 OF ROOT BALL BEFORE BACKFILLING AROUND BALL IS COMPLETED.
2. TOP OF ROOT BALL SHALL BE 2" ABOVE FINISHED GRADE WHEN PLANTED.
3. LIFT AND SET TREE BY ROOT BALL ONLY.

TYP. TREE PLANTING DETAIL
NOT TO SCALE



NOTES:
1. ALL SHRUB BEDS SHALL BE RAISED 6" - 8" ABOVE ADJACENT GRADE, AND TILLED WITH SOIL CONDITIONER.
2. ALL SHRUB BEDS IN PARKING ISLANDS ONLY SHALL BE RAISED 12" ABOVE ADJACENT GRADE AND TILLED WITH SOIL CONDITIONER

TYP. SHRUB PLANTING DETAIL
NOT TO SCALE



TYP. "V-CHANNEL EDGE DETAIL
NOT TO SCALE

NOTE:
1. ALL SHRUB BEDS SHALL BE RAISED 3" - 6" ABOVE ADJACENT GRADE AND TILLED WITH SOIL CONDITIONER.
2. "V"-CHANNEL EDGE TO BE LOCATED ALONG OUTER PERIMETER OF SHRUB PLANTING AREAS WHERE SHRUBS ARE PLANTED ADJACENT TO TURF AREAS.

20 0 10 20 40
GRAPHIC SCALE DIVISION VALUE = 20 FEET

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Digitally signed by Alex D. Lapinsky
Date: 2024.03.05 14:05:36-05'00'

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NORTH CAROLINA PROFESSIONAL SEAL 042192 ENGINEER ALEXANDER D. LAPINSKY

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Issue Date: February 12, 2024

Landscape Plan

Rev.	Date	Notes

C-104

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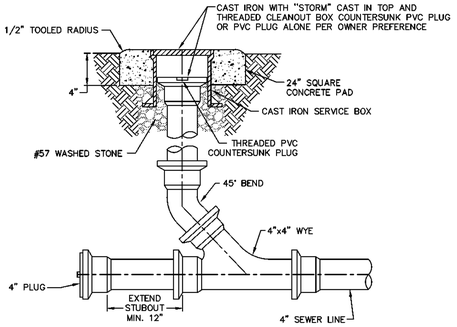
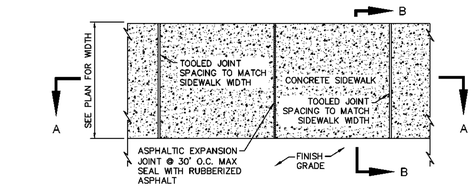
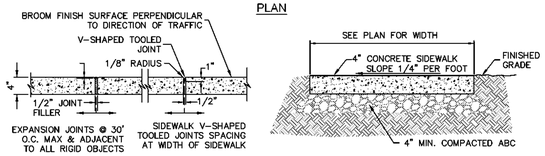


SEWER CLEANOUT

NOT TO SCALE



PLAN



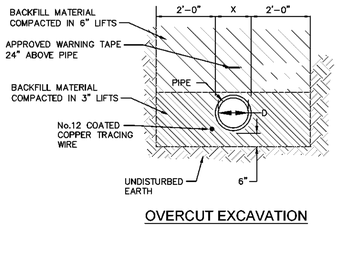
SECTION A-A

SECTION B-B

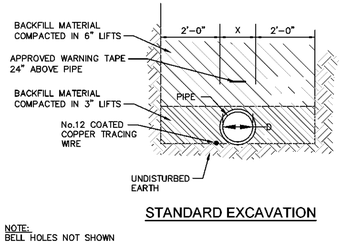
NOTES:

1. SIDEWALK SHALL BE CONSTRUCTED WITH 4000 PSI FIBER REINFORCED CONCRETE.
2. APPLY A NONSLIP BROOM FINISH TO SIDEWALK SURFACE. IMMEDIATELY AFTER FLOAT FINISHING SLIGHTLY ROUGHEN CONCRETE SURFACE BY BROOMING WITH FIBER-BRISTLE BROOM PERPENDICULAR TO MAIN TRAFFIC ROUTE.
3. PLACE 1/2" PREMOULDED EXPANSION JOINT MATERIAL WITH SEALANT AT ALL FIXED OBJECTS ABUTTING SIDEWALK.

CONCRETE SIDEWALK

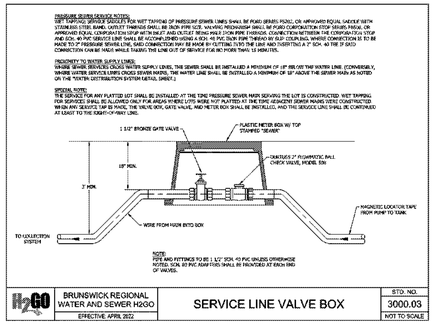


OVERCUT EXCAVATION



STANDARD EXCAVATION

NOTE:
BELL HOLES NOT SHOWN



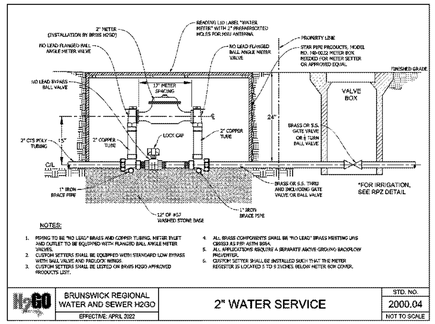
H2GO	BRUNSWICK REGIONAL WATER AND SEWER H2GO	SERVICE LINE VALVE BOX	STD. NO. 3000.03
	EFFECTIVE: APRIL 2022		NOT TO SCALE

NOTE:

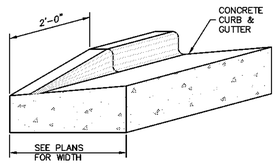
1. CONSTRUCTION OF TRENCHES SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY AND HEALTH REGULATIONS WHICH HAVE JURISDICTION AT THE PROJECT SITE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE APPLICABLE REGULATIONS AND FOLLOW THEM ACCORDINGLY.

WATER LINE TRENCH

NOT TO SCALE

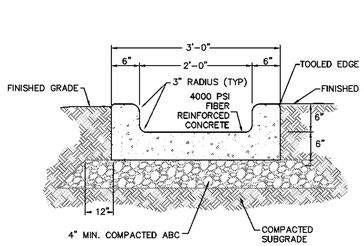


H2GO	BRUNSWICK REGIONAL WATER AND SEWER H2GO	2" WATER SERVICE	STD. NO. 2000.04
	EFFECTIVE: APRIL 2022		NOT TO SCALE



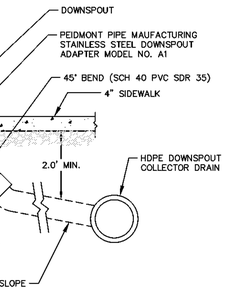
CURB AND GUTTER TERMINUS END SECTION

NOT TO SCALE



CONCRETE FLUME

NOT TO SCALE

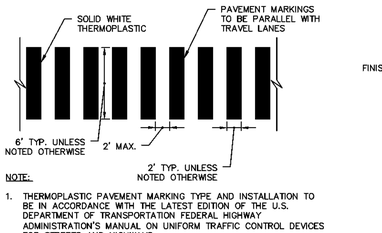


NOTE:

1. THE DOWNSPOUT COLLECTOR DRAIN SHALL BE INSTALLED BEFORE THE DOWNSPOUTS ARE INSTALLED ON THE BUILDING.

EXTERIOR DOWNSPOUT COLLECTOR DRAIN

NOT TO SCALE

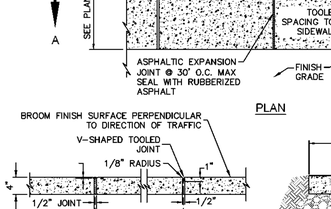


NOTE:

1. THERMOPLASTIC PAVEMENT MARKING TYPE AND INSTALLATION TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION'S MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.

CROSSWALK

NOT TO SCALE

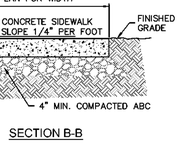


NOTES:

1. SEE PAVEMENT SECTION CONSTRUCTION NOTES.
2. PERVIOUS CONCRETE MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE'S SPECIFICATION FOR CONSTRUCTION OF PERVIOUS CONCRETE PAVEMENT (ACI 522.1–20). THE ACCEPTANCE CRITERION FOR THE PERVIOUS CONCRETE WILL BE A TARGET VOID CONTENT OF BETWEEN 15% TO 25% AS MEASURED BY ASTM C1688.

PERVIOUS PAVEMENT SECTION

NOT TO SCALE

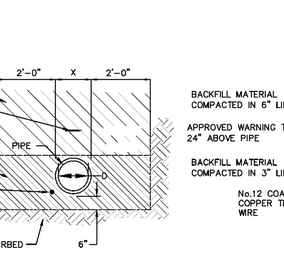


NOTES:

1. SEE PAVEMENT SECTION CONSTRUCTION NOTES.
2. FURNISH AND PLACE NCDOT AGGREGATE BASE COURSE (ABC) MATERIAL ON EXISTING STONE SUBBASE AS NEEDED TO ACHIEVE FINAL PAVEMENT GRADES.

ACCESS DRIVE ASPHALT PAVEMENT SECTION OVER EXISTING AGGREGATE BASE COURSE

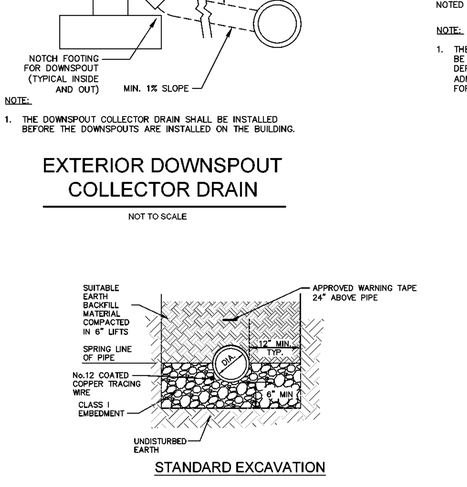
NOT TO SCALE



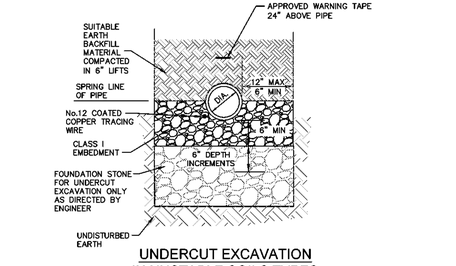
SECTION A-A

DEPRESSED CURB AND GUTTER

NOT TO SCALE



STANDARD EXCAVATION



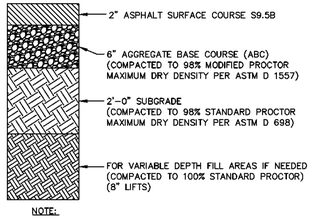
UNDERCUT EXCAVATION IN UNSTABLE SOILS TYPES

NOTES:

1. CONSTRUCTION OF TRENCHES SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY AND HEALTH REGULATIONS WHICH HAVE JURISDICTION AT THE PROJECT SITE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE APPLICABLE REGULATIONS AND FOLLOW THEM ACCORDINGLY.
2. CLASS I EMBEDMENT SHALL BE NCDOT STANDARD # 67 STONE OR APPROVED EQUAL. FOUNDATION STONE SHALL BE NCDOT STANDARD # 57, # 67 STONE, RAILROAD BALLAST OR APPROVED EQUAL.
3. BACKFILL MATERIAL ABOVE THE SPRING LINE OF PIPE TO BE FREE FROM LARGE CLODS, ROOTS OR STONES LARGER THAN ONE INCH.

SANITARY SEWER TRENCH

NOT TO SCALE



NOTE:

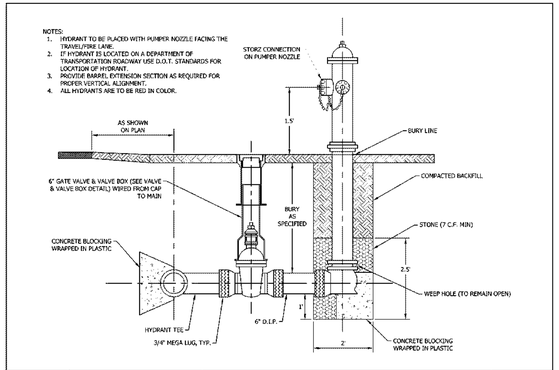
SEE PAVEMENT SECTION CONSTRUCTION NOTES.

ASPHALT PAVEMENT SECTION

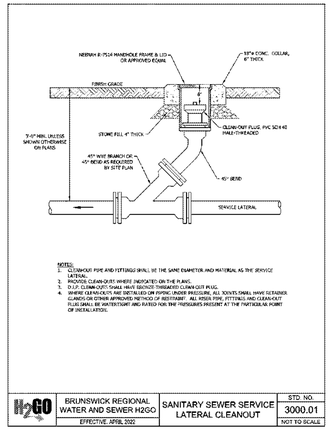
NOT TO SCALE

PAVEMENT SECTION CONSTRUCTION NOTES:

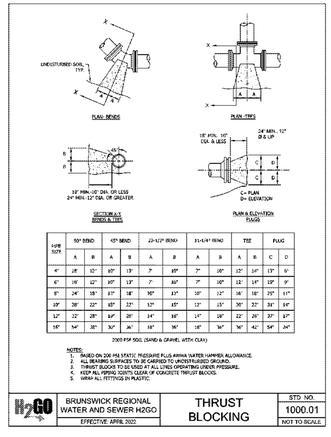
1. COORDINATE WITH ECS SOUTHEAST, LLP "GEOTECHNICAL ENGINEERING REPORT" FOR LELAND TOWN HALL ADDITION DATED FEBRUARY 22, 2023 FOR PAVEMENT SECTION, DENSIFICATION, SUBGRADE PREPARATION, AND ENGINEERED FILL PLACEMENT RECOMMENDATIONS. SHOULD A CONFLICT EXIST, NOTIFY ENGINEER PRIOR TO CONSTRUCTION. THE PAVEMENT DESIGN SHOWN REPRESENTS THE MINIMUM THICKNESS OF SURFACE AND BASE COURSE TO BE USED. SUBGRADE SOILS TESTS MAY DETERMINE HEAVIER PAVEMENT DESIGNS ARE REQUIRED. CONTRACTOR IS REQUIRED TO ENGAGE A LICENSED GEOTECHNICAL ENGINEER FOR SUBGRADE, BASE COURSE AND PAVEMENT TESTING. CONTRACTOR SHALL PROVIDE A STATEMENT SEALED BY A PROFESSIONAL GEOTECHNICAL ENGINEER CONFIRMING THAT ALL WORK COMPLIES WITH COMPACTION REQUIREMENTS.
2. CONTRACTOR SHALL NOTIFY ENGINEER IF SATURATED SUBGRADE IS ENCOUNTERED DURING CONSTRUCTION AS ADDITIONAL DRAINAGE MEASURES MAY BE REQUIRED.
3. UNDERCUT ANY UNSUITABLE MATERIAL AS REQUIRED AND REPLACE WITH SELECT MATERIAL AS DETERMINED BY LICENSED GEOTECHNICAL ENGINEER.
4. NO BASE COURSE SHALL BE PLACED ON MULCH, PINE CLAY, ORGANIC MATTER OR OTHER UNSUITABLE MATERIAL.
5. COMPACTION PERCENTAGE OF ASPHALT SURFACE COURSE SHALL BE IN ACCORDANCE WITH NORTH CAROLINA DEPARTMENT OF TRANSPORTATION REQUIREMENTS.
6. SURFACE COURSE SHALL BE ALLOWED TO CURE THOROUGHLY BEFORE ANY COLOR COATINGS ARE APPLIED.
7. FLOOD SURFACE WITH WATER AND PATCH DEPRESSIONS/BIRDBATHS HOLDING MORE THAN 1/16" WATER WITH ACRYLIC PATCHING MATERIAL PER MANUFACTURER'S REQUIREMENTS. HIGH AREAS SHOULD BE LEVELED BY SCRAPING OR GRINDING. ALL AREAS MUST CURE PER REQUIREMENTS AND AREA MUST BE DRY BEFORE PROCEEDING.
8. ALL MATERIALS SHALL MEET THE REQUIREMENTS SET FORTH IN THE LATEST EDITION OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.



H2GO	BRUNSWICK REGIONAL WATER AND SEWER H2GO	FIRE HYDRANT ASSEMBLY	STD. NO. 2000.08
	EFFECTIVE: APRIL 2022		NOT TO SCALE

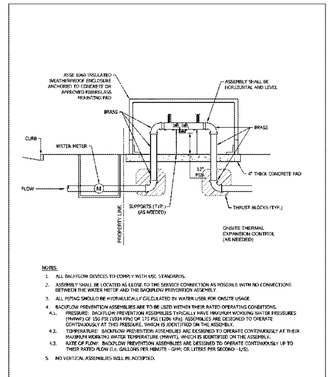


H2GO	BRUNSWICK REGIONAL WATER AND SEWER H2GO	SANITARY SEWER SERVICE LATERAL CLEANOUT	STD. NO. 3000.01
	EFFECTIVE: APRIL 2022		NOT TO SCALE



SIZE	90° BEND			45° BEND			22-1/2° BEND			11-1/4° BEND			TEE		PLUG	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	C	D
4"	28"	12"	20"	13"	7"	19"	7"	16"	12"	16"	12"	13"	9"			
6"	39"	12"	27"	13"	7"	26"	7"	18"	12"	16"	12"	19"	9"			
8"	24"	18"	37"	18"	10"	35"	10"	19"	12"	16"	18"	25"	11"			
10"	28"	22"	45"	22"	12"	45"	12"	23"	15"	20"	22"	31"	14"			
12"	32"	28"	54"	28"	14"	55"	14"	28"	22"	26"	27"	37"	17"			
16"	54"	38"	76"	36"	18"	76"	18"	36"	26"	42"	34"	54"	24"			

H2GO	BRUNSWICK REGIONAL WATER AND SEWER H2GO	THRUST BLOCKING	STD. NO. 1000.01
	EFFECTIVE: APRIL 2022		NOT TO SCALE



H2GO	BRUNSWICK REGIONAL WATER AND SEWER H2GO	RPZ DETAIL 2" + UP	STD. NO. 2000.07
	EFFECTIVE: APRIL 2022		NOT TO SCALE

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SIGNED AND DATED:
Digitally signed by Alex D. Lapinsky
Date: 2024.03.05 14:36:03 -05'00'

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NORTH CAROLINA PROFESSIONAL SEAL 042192 ENGINEER ALEXANDER D. LAPINSKY

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Issue Date: February 12, 2024

Site Details

Rev.	Date	Notes

C-105

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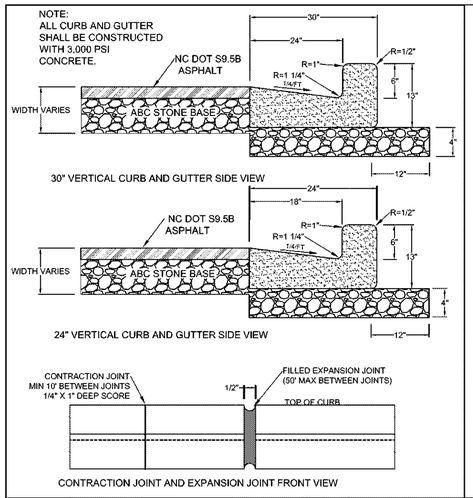
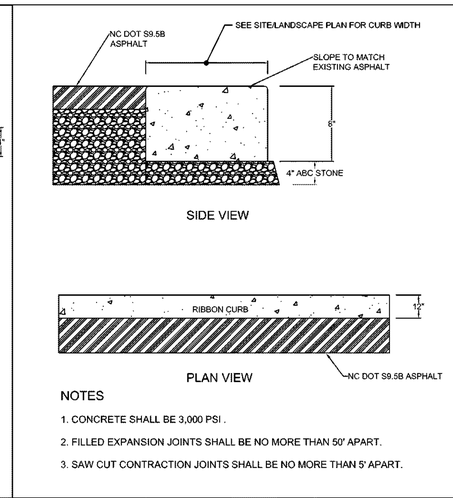


SECTION: STREETS	24" AND 30" VERTICAL CURB AND GUTTER	PUBLIC SERVICES DEPARTMENT	
DATE: 2021			
DRAWN BY: JWP			
CHECKED BY: TOWN PSD			
SCALE: NOT TO SCALE		DETAIL NO. ST - 03	



SECTION: STREETS	CONCRETE RIBBON CURB	PUBLIC SERVICES DEPARTMENT	
DATE: 2021			
DRAWN BY: JWP			
CHECKED BY: TOWN PSD			
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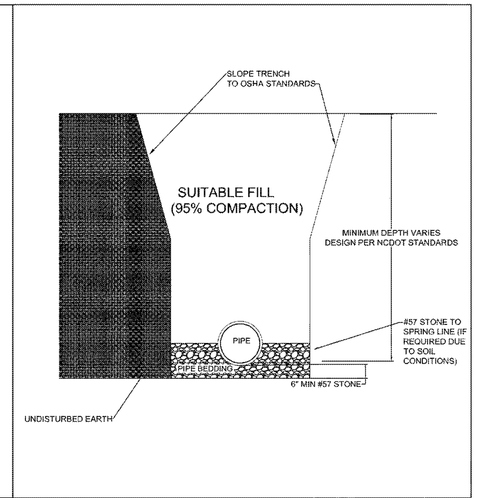
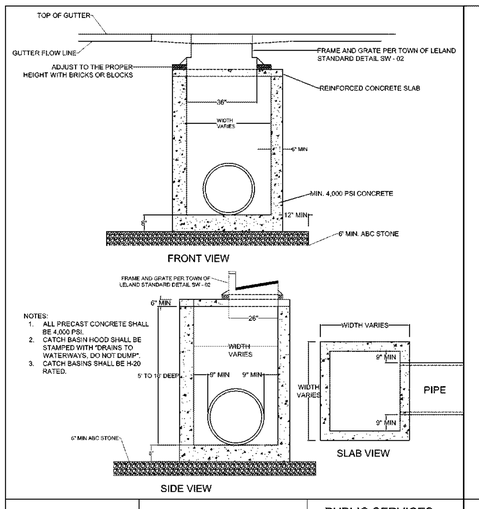


SECTION: STORMWATER	BEDDING FOR REINFORCED CONCRETE PIPE	PUBLIC SERVICES DEPARTMENT	
DATE: 2022			
DRAWN BY: JWP			
CHECKED BY: TOWN PSD			
SCALE: NOT TO SCALE		DETAIL NO. SW - 03	



SECTION: STORMWATER	PRECAST CONCRETE CATCH BASIN (INLET)	PUBLIC SERVICES DEPARTMENT	
DATE: 2021			
DRAWN BY: JWP			
CHECKED BY: TOWN PSD			
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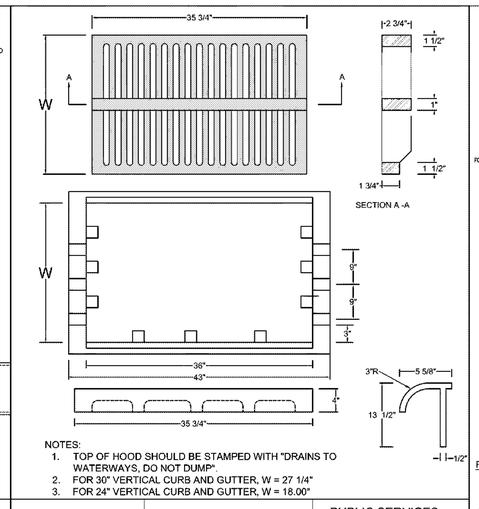
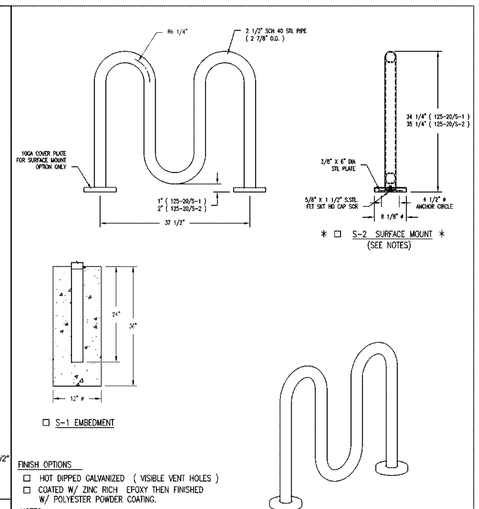
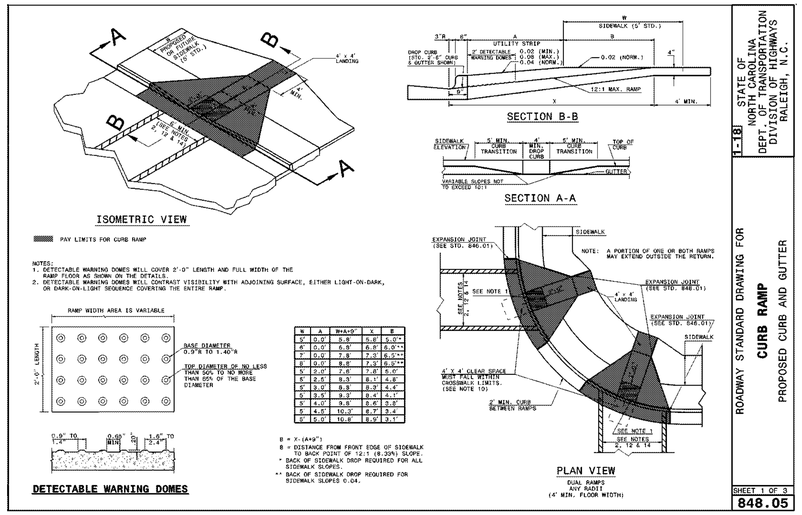


SECTION: STORMWATER	36" CATCH BASIN FRAME, GRATE, AND HOOD FOR 24" AND 30" VERTICAL CURB AND GUTTER	PUBLIC SERVICES DEPARTMENT	
DATE: 2021			
DRAWN BY: JWP			
CHECKED BY: TOWN PSD			
SCALE: NOT TO SCALE		DETAIL NO. SW - 02	

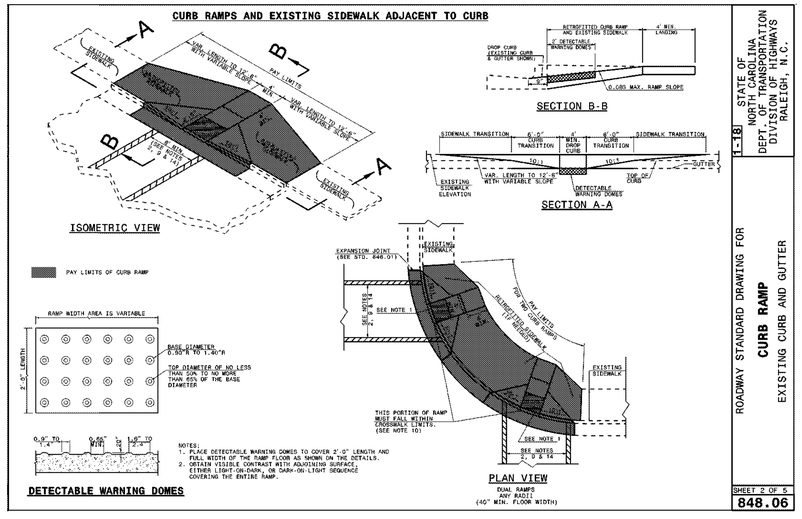


DuMor, inc.
P.O. Box 142 Mifflintown, PA 17059-0142

SCALE : NONE	TITLE : BIKE RACK		
DATE DRAWN : 1/12/11			
DRAWN BY : JSB	REV. B	DRAWING NUMBER 125-20	SHEET 1 OF 2
DATE REV. : 2/28/12			
REV. BY : JSB			



STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.	1-18	ROADWAY STANDARD DRAWING FOR	CURB RAMP PROPOSED CURB AND GUTTER
			SHEET 1 OF 5
			848.05



STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.	1-18	ROADWAY STANDARD DRAWING FOR	CURB RAMP EXISTING CURB AND GUTTER
			SHEET 2 OF 5
			848.06

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SIGNED AND DATED:
Digitally signed by Alex D. Lapinsky
Alex D. Lapinsky Date: 2024.03.05 14:36:39 -05'00'

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NORTH CAROLINA PROFESSIONAL SEAL 042192 ENGINEER ALEXANDER D. LAPINSKY

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Issue Date: February 12, 2024

Site Details

Rev.	Date	Notes

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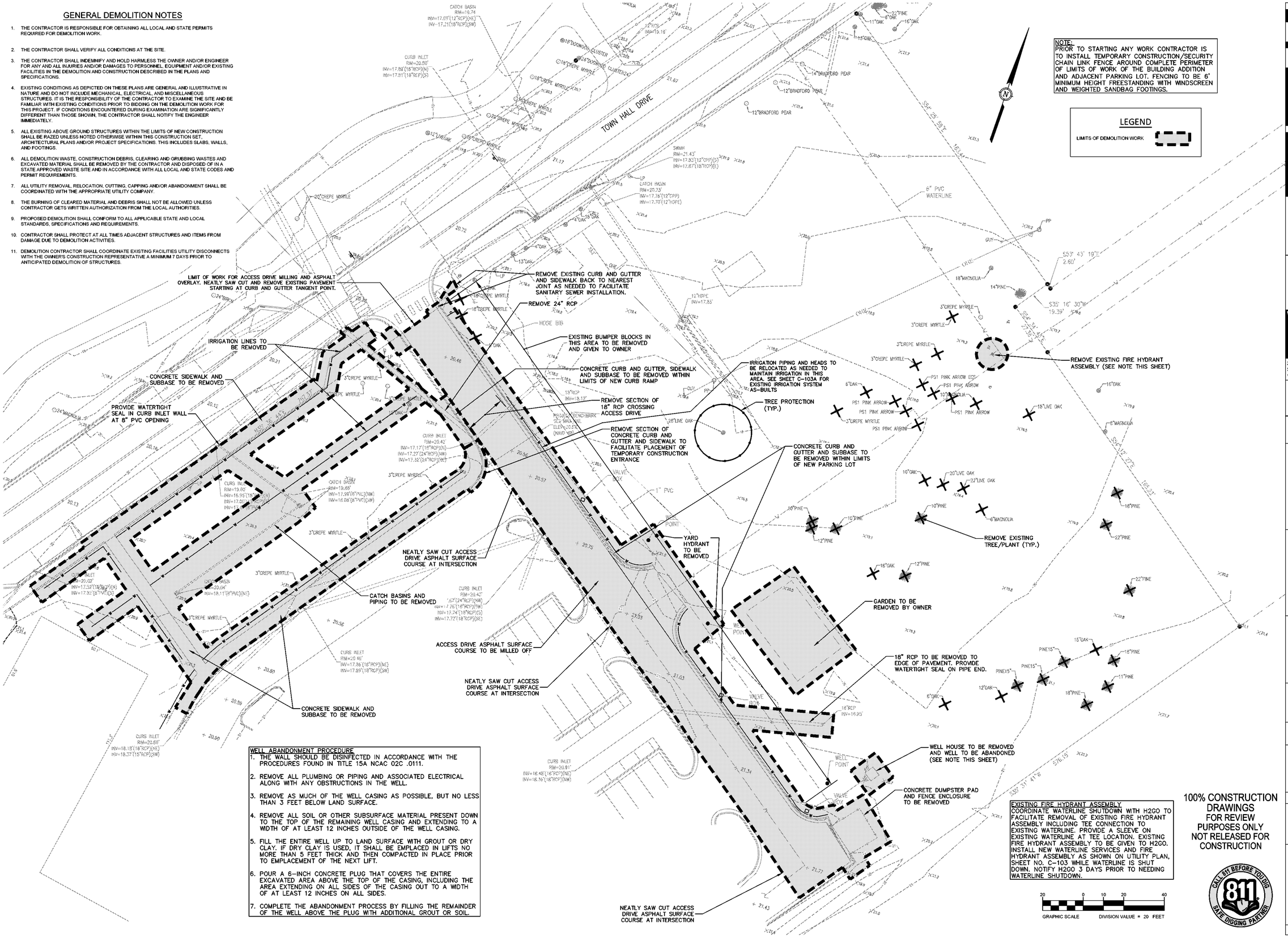
GENERAL DEMOLITION NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL LOCAL AND STATE PERMITS REQUIRED FOR DEMOLITION WORK.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AT THE SITE.
3. THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND/OR ENGINEER FOR ANY AND ALL INJURIES AND/OR DAMAGES TO PERSONNEL, EQUIPMENT AND/OR EXISTING FACILITIES IN THE DEMOLITION AND CONSTRUCTION DESCRIBED IN THE PLANS AND SPECIFICATIONS.
4. EXISTING CONDITIONS AS DEPICTED ON THESE PLANS ARE GENERAL AND ILLUSTRATIVE IN NATURE AND DO NOT INCLUDE MECHANICAL, ELECTRICAL AND MISCELLANEOUS STRUCTURES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BIDDING ON THE DEMOLITION WORK FOR THIS PROJECT. IF CONDITIONS ENCOUNTERED DURING EXAMINATION ARE SIGNIFICANTLY DIFFERENT THAN THOSE SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
5. ALL EXISTING ABOVE GROUND STRUCTURES WITHIN THE LIMITS OF NEW CONSTRUCTION SHALL BE RAZED UNLESS NOTED OTHERWISE WITHIN THIS CONSTRUCTION SET, ARCHITECTURAL PLANS AND/OR PROJECT SPECIFICATIONS. THIS INCLUDES SLABS, WALLS, AND FOOTINGS.
6. ALL DEMOLITION WASTE, CONSTRUCTION DEBRIS, CLEARING AND GRUBBING WASTES AND EXCAVATED MATERIAL SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF IN A STATE APPROVED WASTE SITE AND IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
7. ALL UTILITY REMOVAL, RELOCATION, CUTTING, CAPPING AND/OR ABANDONMENT SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY.
8. THE BURNING OF CLEARED MATERIAL AND DEBRIS SHALL NOT BE ALLOWED UNLESS CONTRACTOR GETS WRITTEN AUTHORIZATION FROM THE LOCAL AUTHORITIES.
9. PROPOSED DEMOLITION SHALL CONFORM TO ALL APPLICABLE STATE AND LOCAL STANDARDS, SPECIFICATIONS AND REQUIREMENTS.
10. CONTRACTOR SHALL PROTECT AT ALL TIMES ADJACENT STRUCTURES AND ITEMS FROM DAMAGE DUE TO DEMOLITION ACTIVITIES.
11. DEMOLITION CONTRACTOR SHALL COORDINATE EXISTING FACILITIES UTILITY DISCONNECTS WITH THE OWNER'S CONSTRUCTION REPRESENTATIVE A MINIMUM 7 DAYS PRIOR TO ANTICIPATED DEMOLITION OF STRUCTURES.


TOWN HALL DRIVE
LIMIT OF WORK FOR ACCESS DRIVE MILLING AND ASPHALT OVERLAY. NEATLY SAW CUT AND REMOVE EXISTING PAVEMENT STARTING AT CURB AND GUTTER TANGENT POINT.
REMOVE EXISTING CURB AND GUTTER AND SIDEWALK BACK TO NEAREST JOINT AS NEEDED TO FACILITATE SANITARY SEWER INSTALLATION.
REMOVE 24" RCP
EXISTING BUMPER BLOCKS IN THIS AREA TO BE REMOVED AND GIVEN TO OWNER
IRRIGATION LINES TO BE REMOVED
CONCRETE CURB AND GUTTER, SIDEWALK AND SUBBASE TO BE REMOVED WITHIN LIMITS OF NEW CURB RAMP
CONCRETE SIDEWALK AND SUBBASE TO BE REMOVED
IRRIGATION PIPING AND HEADS TO BE RELOCATED AS NEEDED TO MAINTAIN IRRIGATION IN THIS AREA. SEE SHEET C-103A FOR EXISTING IRRIGATION SYSTEM AS-BUILTS
PROVIDE WATERTIGHT SEAL IN CURB INLET WALL AT 8" PVC OPENING
TREE PROTECTION (TYP.)
REMOVE SECTION OF 18" RCP CROSSING ACCESS DRIVE
REMOVE SECTION OF CONCRETE CURB AND GUTTER AND SIDEWALK TO FACILITATE PLACEMENT OF TEMPORARY CONSTRUCTION ENTRANCE
CONCRETE CURB AND GUTTER AND SUBBASE TO BE REMOVED WITHIN LIMITS OF NEW PARKING LOT
YARD HYDRANT TO BE REMOVED
NEATLY SAW CUT ACCESS DRIVE ASPHALT SURFACE COURSE AT INTERSECTION
CATCH BASINS AND PIPING TO BE REMOVED
ACCESS DRIVE ASPHALT SURFACE COURSE TO BE MILLED OFF
NEATLY SAW CUT ACCESS DRIVE ASPHALT SURFACE COURSE AT INTERSECTION
CONCRETE SIDEWALK AND SUBBASE TO BE REMOVED
REMOVE EXISTING FIRE HYDRANT ASSEMBLY (SEE NOTE THIS SHEET)
REMOVE EXISTING TREE/PLANT (TYP.)
GARDEN TO BE REMOVED BY OWNER
18" RCP TO BE REMOVED TO EDGE OF PAVEMENT. PROVIDE WATERTIGHT SEAL ON PIPE END.
WELL HOUSE TO BE REMOVED AND WELL TO BE ABANDONED (SEE NOTE THIS SHEET)
CONCRETE DUMPSTER PAD AND FENCE ENCLOSURE TO BE REMOVED
6" PVC WATERLINE
CATCH BASIN RIM=19.74 INV=17.69'(12"RCP)(NE) INV=17.71'(18"RCP)(SW)
CURB INLET RIM=20.80' INV=17.88'(18"RCP)(N) INV=17.81'(18"RCP)(S)
CURB INLET RIM=25.42' INV=17.17'(18"RCP)(N) INV=17.23'(24"RCP)(NW) INV=17.32'(24"RCP)(SE)
CURB INLET RIM=16.95'(18"RCP)(N) INV=17.00'(18"RCP)(S)
CATCH BASIN RIM=19.95' INV=17.99'(6"PVC)(NW) INV=18.06'(8"PVC)(E)
CURB INLET RIM=20.02' INV=17.52'(18"RCP)(N) INV=17.52'(18"RCP)(S)
CATCH BASIN RIM=20.04' INV=18.11'(8"PVC)(NE)
CURB INLET RIM=20.46' INV=17.76'(18"RCP)(NE) INV=17.09'(18"RCP)(SW)
CURB INLET RIM=20.68' INV=18.18'(18"RCP)(NE) INV=18.07'(15"RCP)(SW)
CURB INLET RIM=20.42' INV=17.53'(12"RCP)(S) INV=17.74'(18"RCP)(S) INV=17.77'(18"RCP)(SE)
CURB INLET RIM=21.91' INV=18.45'(18"RCP)(NE) INV=18.36'(18"RCP)(NW)
SMH RIM=21.43' INV=17.83'(12"CPP)(S) INV=17.87'(18"CPP)(E)
LP CATCH BASIN RIM=20.73 INV=17.78'(12"CPP) INV=17.70'(12"HDPE)
12"HDPE INV=17.85'
18"RCP INV=18.95'
1" PVC
VALVE BOX
WELL POINT
HOSE BIB
PP
GUY
LP
S53° 55' 55"E 163.44'
S53° 43' 19"E 2.60'
S35° 16' 30"W 19.39'
S54° 34' 27"E 235.41'
S36° 42' 27"E 106.27'
S53° 31' 41"W 510.15'
24"PINE
8"OAK
11"OAK
16"OAK
14"OAK
14"BRADFORD PEAR
12"BRADFORD PEAR
12"BRADFORD PEAR
24"MAGNOLIA
18"MAGNOLIA
14"PINE
3"CREPE MYRTLE
PS1 PINK ARROW
PS1 PINK ARROW CCS
10"MAGNOLIA
18"LIVE OAK
8"MAGNOLIA
10"OAK
20"LIVE OAK
22"LIVE OAK
10"PINE
6"MAGNOLIA
10"PINE
12"PINE
18"PINE
22"PINE
16"OAK
12"PINE
22"PINE
15"OAK
PINE15"
18"PINE
12"OAK
8"OAK
18"PINE
11"PINE
28"LIVE OAK
20"CREPE MYRTLE
18"CREPE MYRTLE
12"CREPE MYRTLE
4"OAK
13"OAK
HOSE BIB
20.72
20.46
20.57
20.75
21.03
21.34
21.77
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20.80
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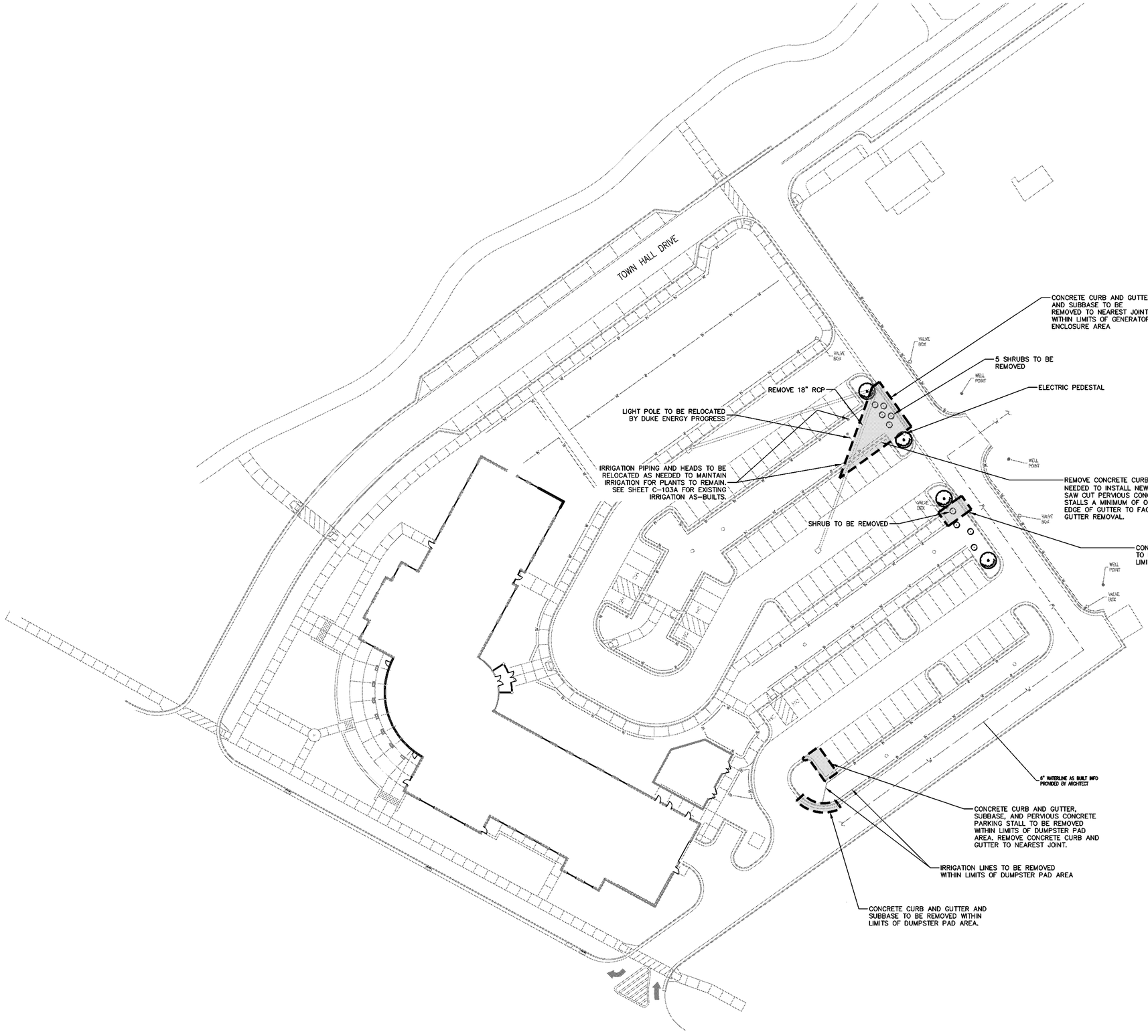

LEGEND

LIMITS OF DEMOLITION WORK

100% CONSTRUCTION DRAWINGS FOR REVIEW PURPOSES ONLY NOT RELEASED FOR CONSTRUCTION

30 0 15 30 60

GRAPHIC SCALE DIVISION VALUE = 30 FEET

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SIGNED AND DATED:
Alex D. Lapinsky
Digitally signed by Alex D. Lapinsky
Date: 2024.05.05 14:02:33-05'00'

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NORTH CAROLINA PROFESSIONAL SEAL 042192 ENGINEER ALEXANDER D. LAPINSKY

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Issue Date: February 12, 2024

Demolition Plan

Rev.	Date	Notes

D-101A

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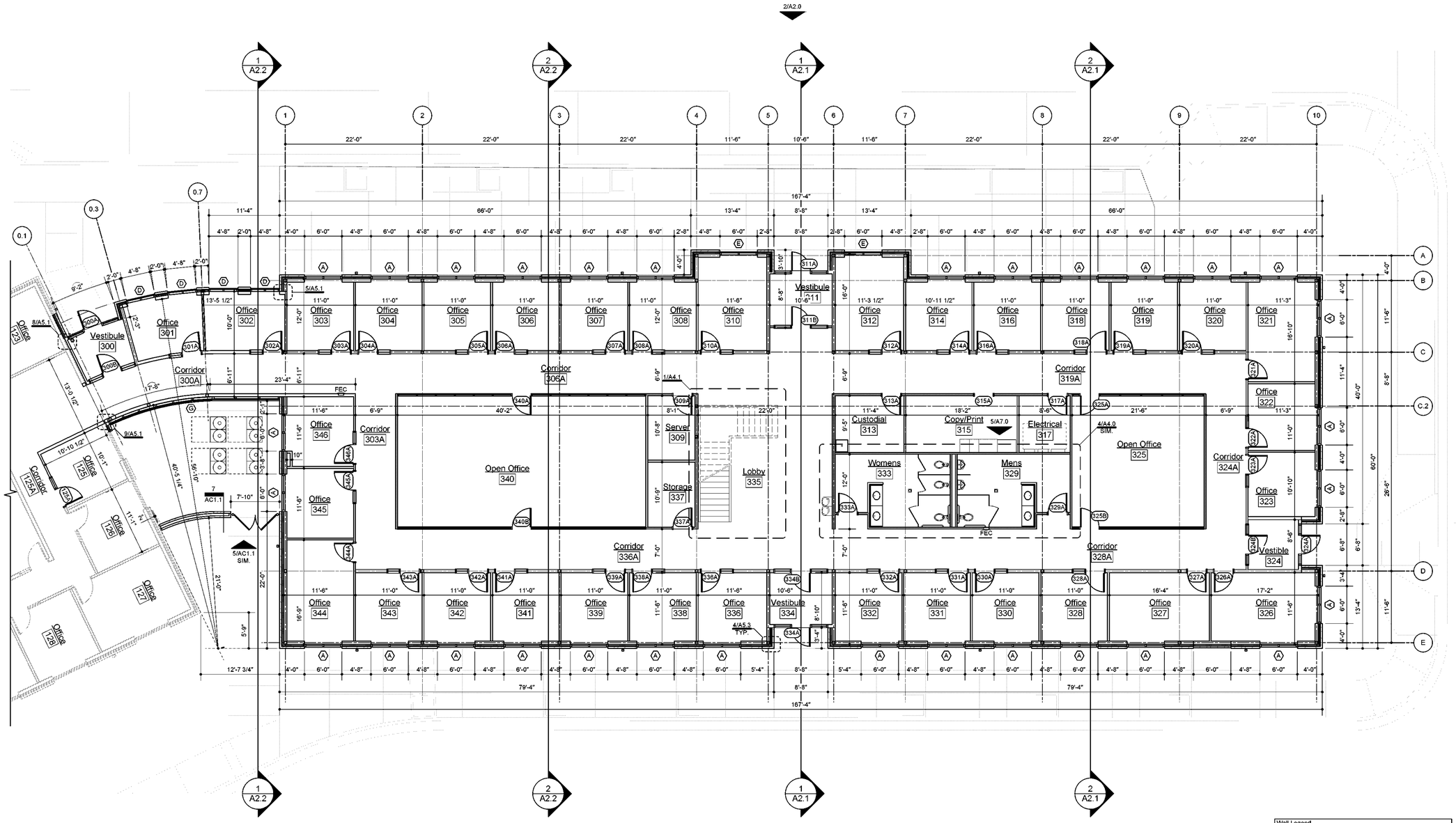

1 **Addition: First Floor Plan**
Scale: 1/8" = 1'-0"

Wall Legend	
	6" Framed Metal Stud with 5/8" GWB, Exterior Wall Sheathing, Weather Barrier, 2" Rigid Insulation, and 4" Brick Veneer. Maintain 8" from exterior face of brick to exterior face of Metal Stud, U.N.O. - See A2.0 for additional information.
	6" Framed Metal Stud with 5/8" GWB, Exterior Wall Sheathing, Weather Barrier, 2" Rigid Insulation, and 4" Cast Stone. Maintain 8" from exterior face of cast stone to exterior face of Metal Stud, U.N.O.
	3-5/8" or 6" Metal Stud, 16" O.C., 5/8" GWB both sides, to 12" above ceiling, U.N.O. Fill stud cavity with sound batt insulation, U.N.O.
	3-5/8" or 6" Metal Stud, 16" O.C., 5/8" GWB both sides, to full height, U.N.O. Fill stud cavity with sound batt insulation, U.N.O.
	Existing Wall to Remain
FEC	Fire Extinguisher Cabinet.

Plan North

North

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NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 1423 2-23-24 JENNY L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Addition - First Floor Plan

Rev.	Date	Notes

A1.0

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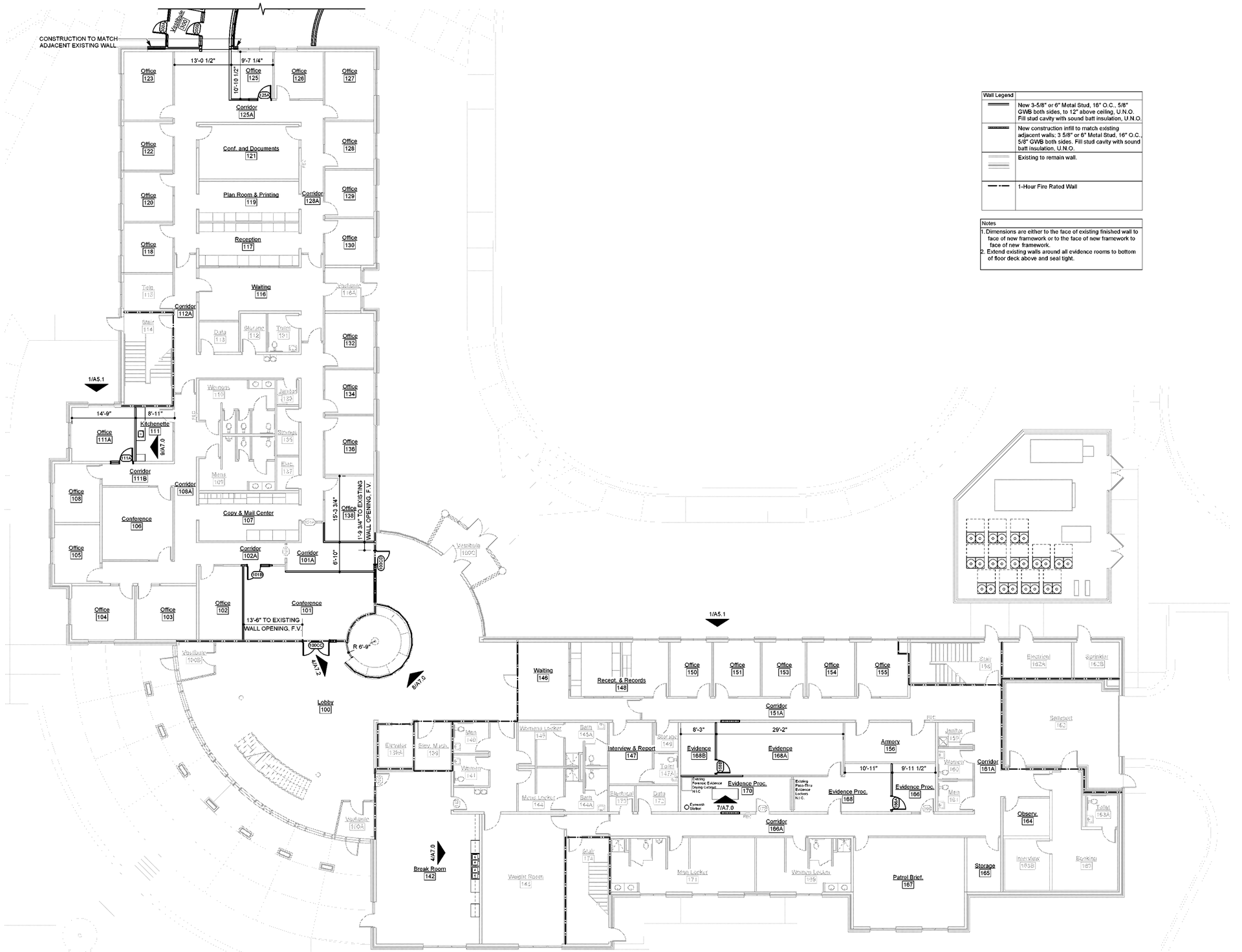

1 Renovations: First Floor Plan
Scale: 3/32" = 1'-0"

Wall Legend	
	New 3-5/8" or 6" Metal Stud, 16" O.C., 5/8" GWB both sides, to 12" above ceiling, U.N.O. Fill stud cavity with sound batt insulation, U.N.O.
	New construction infill to match existing adjacent walls; 3 5/8" or 6" Metal Stud, 16" O.C., 5/8" GWB both sides. Fill stud cavity with sound batt insulation, U.N.O.
	Existing to remain wall.
	1-Hour Fire Rated Wall

Notes
1. Dimensions are either to the face of existing finished wall to face of new framework or to the face of new framework to face of new framework.
2. Extend existing walls around all evidence rooms to bottom of floor deck above and seal tight.

Plan North

North

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NORTH CAROLINA REGISTERED JERRY L. WILLIAMS SEAL 14331 2-23-24 ENGINEER JERRY L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Renovations - First Floor Plan

Rev.	Date	Notes

A1.0R

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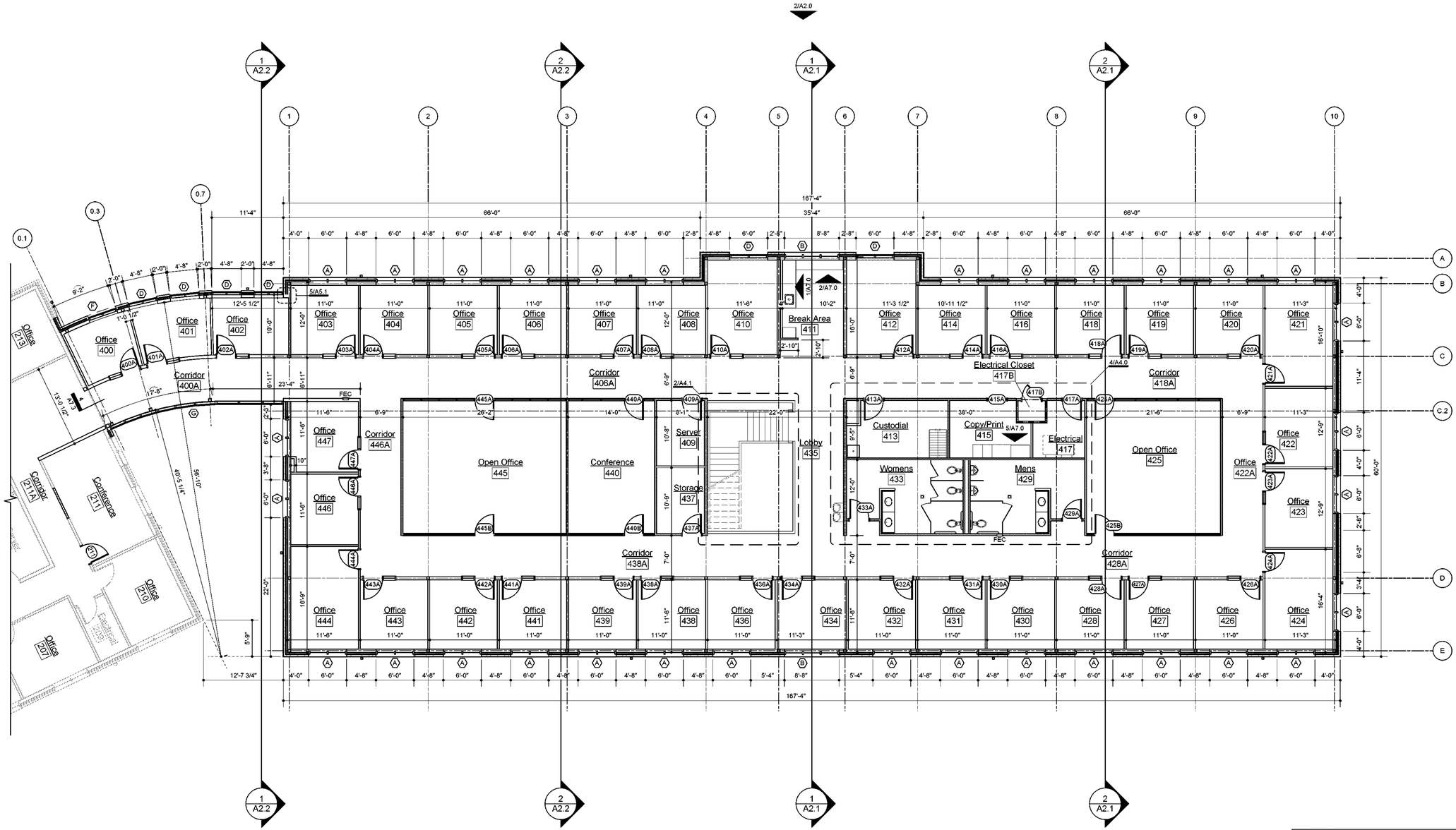
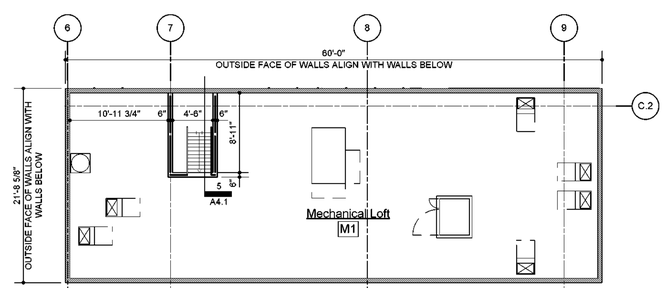


1 Addition: Second Floor Plan
Scale: 1/8" = 1'-0"



2 Addition: Mechanical Loft Plan
Scale: 1/8" = 1'-0"

Wall Legend	
	6" Framed Metal Stud with 5/8" GWB, Exterior Wall Sheathing, Weather Barrier, 2" Rigid Insulation, and 4" Brick Veneer. Maintain 8" from exterior face of brick to exterior face of Metal Stud, U.N.O. - See A2.0 for additional information.
	6" Framed Metal Stud with 5/8" GWB, Exterior Wall Sheathing, Weather Barrier, 2" Rigid Insulation, and 4" Cast Stone. Maintain 8" from exterior face of cast stone to exterior face of Metal Stud, U.N.O.
	3-5/8" or 6" Metal Stud, 16" O.C., 5/8" GWB both sides, to 12" above ceiling, U.N.O. Fill stud cavity with sound batt insulation, U.N.O.
	3-5/8" or 6" Metal Stud, 16" O.C., 5/8" GWB both sides, to full height, U.N.O. Fill stud cavity with sound batt insulation, U.N.O.
	Existing Wall to Remain
FEC	Fire Extinguisher Cabinet.
	2-Hour Fire Rated Wall

Plan North

North

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NORTH CAROLINA REGISTERED SEAL 14331 2-23-24 ARCHITECT JENNY L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Addition - Second Floor Plan

Rev.	Date	Notes

A1.1

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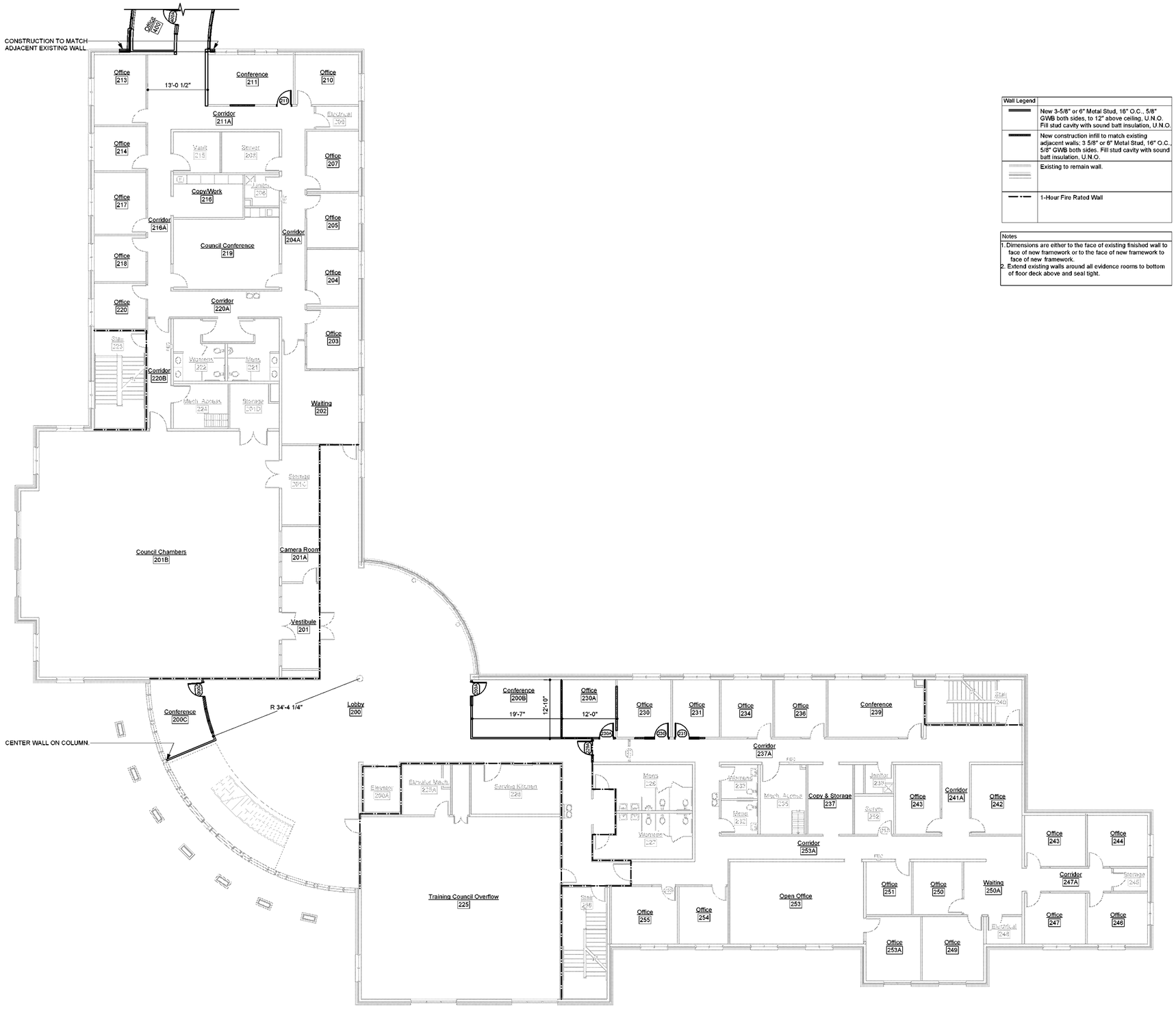

1 **Renovations: Second Floor Plan**
Scale: 3/32" = 1'-0"

Wall Legend	
	New 3-5/8" or 6" Metal Stud, 16" O.C., 5/8" GWB both sides, to 12" above ceiling, U.N.O. Fill stud cavity with sound batt insulation, U.N.O.
	New construction infill to match existing adjacent walls; 3 5/8" or 6" Metal Stud, 16" O.C., 5/8" GWB both sides. Fill stud cavity with sound batt insulation, U.N.O.
	Existing to remain wall.
	1-Hour Fire Rated Wall

Notes
1. Dimensions are either to the face of existing finished wall to face of new framework or to the face of new framework to face of new framework.
2. Extend existing walls around all evidence rooms to bottom of floor deck above and seal tight.

Plan North

North

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NORTH CAROLINA REGISTERED SEAL 14231 2-28-24 ARCHITECT JERRY L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Renovations - Second Floor Plan

Rev.	Date	Notes

A1.1R

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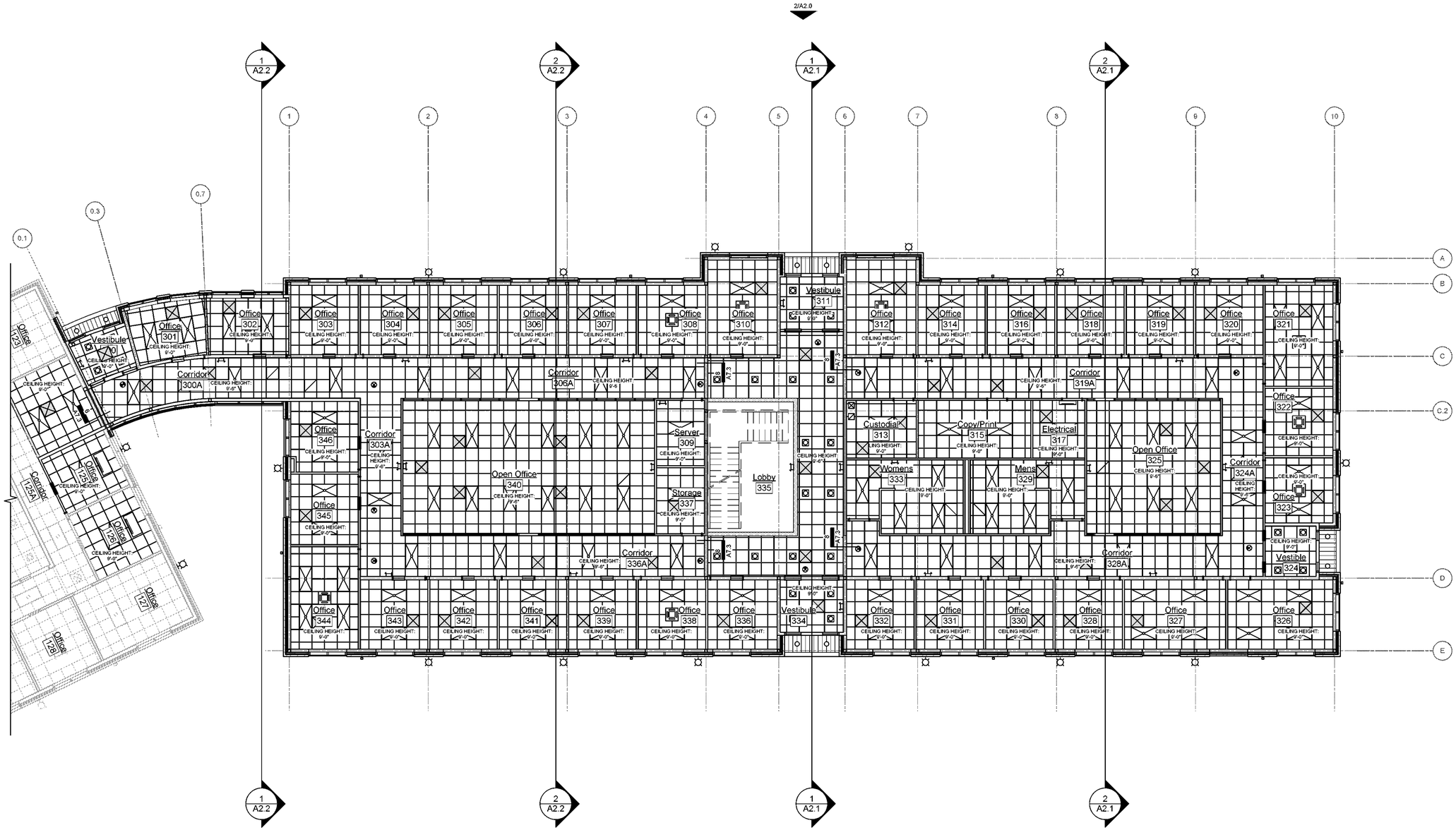

1/A2.0

1 **Additon: First Floor Reflected Ceiling Plan**
Scale: 1/8" = 1'-0"

RCP Legend	
	New suspended 2'x2' grid and acoustical tile ceiling
	New gypsum ceiling
	New metal soffit
	Existing to remain suspended 2'x2' grid and acoustical tile ceiling
	Light fixtures - See Electrical Drawings.
	HVAC Grilles & Equipment - See Mechanical Drawings.

Plan North

North

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NORTH CAROLINA REGISTERED SEAL 14331 2-23-24 ARCHITECT JERRY L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Addition - First Floor Reflected Ceiling Plan

Rev.	Date	Notes

A1.2

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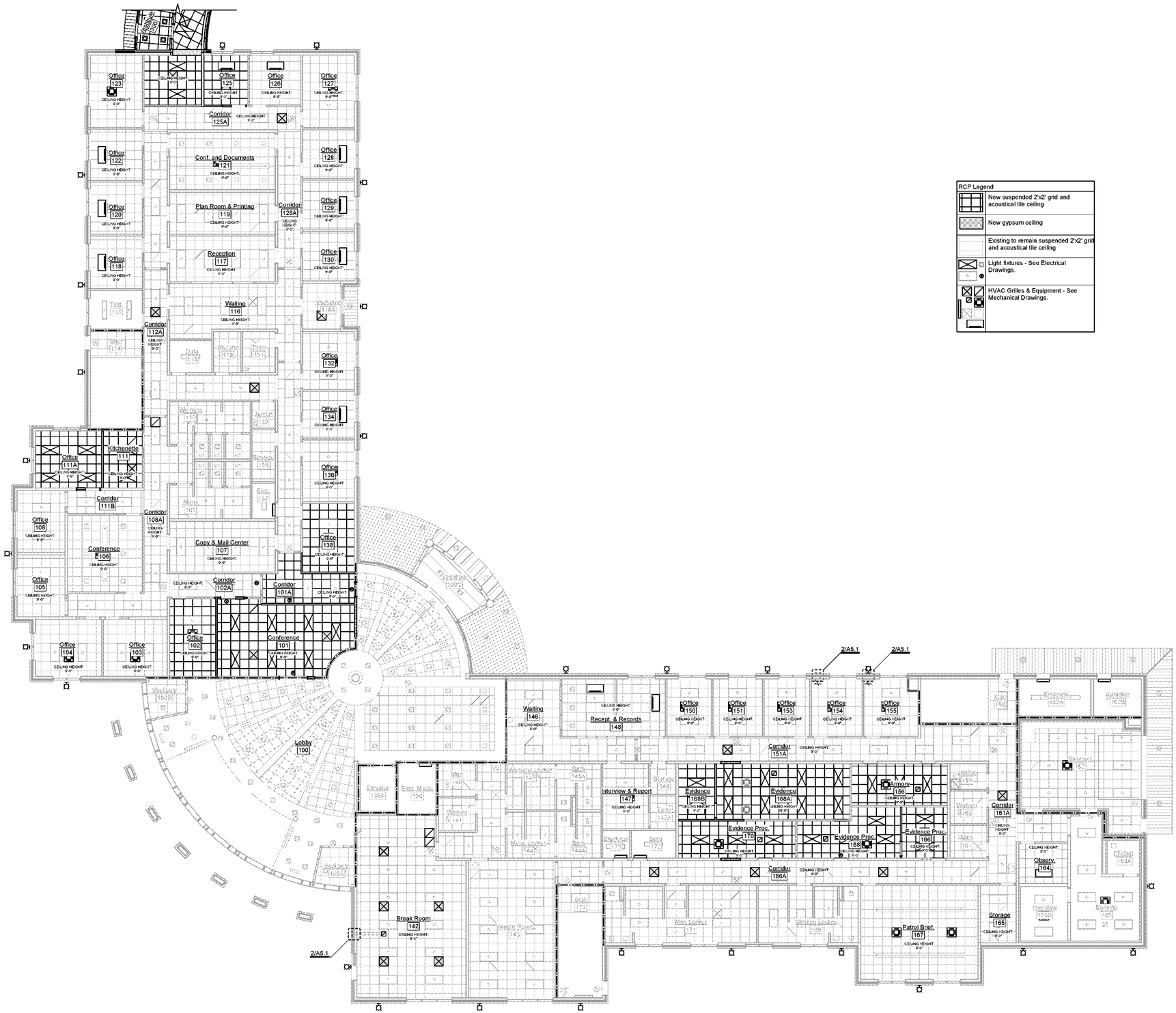

1 Renovations: First Floor Reflected Ceiling Plan
Scale: 3/32" = 1'-0"

RCP Legend	
	New suspended 2'x2' grid and acoustical tile ceiling
	New gypsum ceiling
	Existing to remain suspended 2'x2' grid and acoustical tile ceiling
	Light fixtures - See Electrical Drawings.
	HVAC Grilles & Equipment - See Mechanical Drawings.

Plan North North

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NORTH CAROLINA REGISTERED SEAL 14231 12-28-24 NOTARIZED JENNY L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Renovations - First Floor Reflected Ceiling Plan

Rev.	Date	Notes

A1.2R

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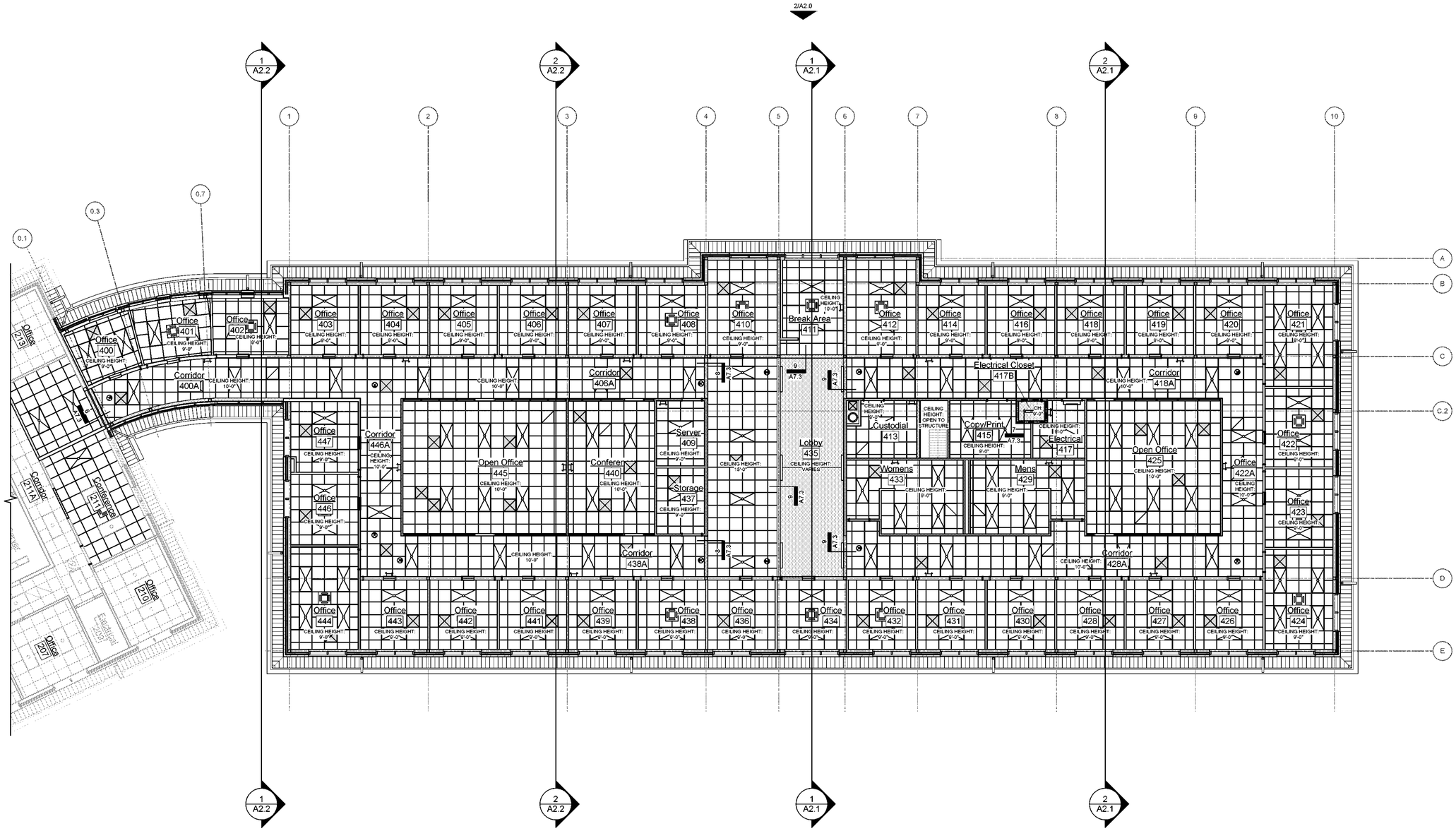

1 **Addition: Second Floor Reflected Ceiling Plan**
Scale: 1/8" = 1'-0"

RCP Legend

	New suspended 2'x2' grid and acoustical tile ceiling
	New gypsum ceiling
	New metal soffit
	Existing to remain suspended 2'x2' grid and acoustical tile ceiling
	Light fixtures - See Electrical Drawings.
	HVAC Grilles & Equipment - See Mechanical Drawings.
	2-Hour Fire Rated Wall

Plan North

North

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NORTH CAROLINA REGISTERED SEAL 14331 2-23-24 ARCHITECT JENNY L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Addition - Second Floor Reflected Ceiling Plan

Rev.	Date	Notes

A1.3

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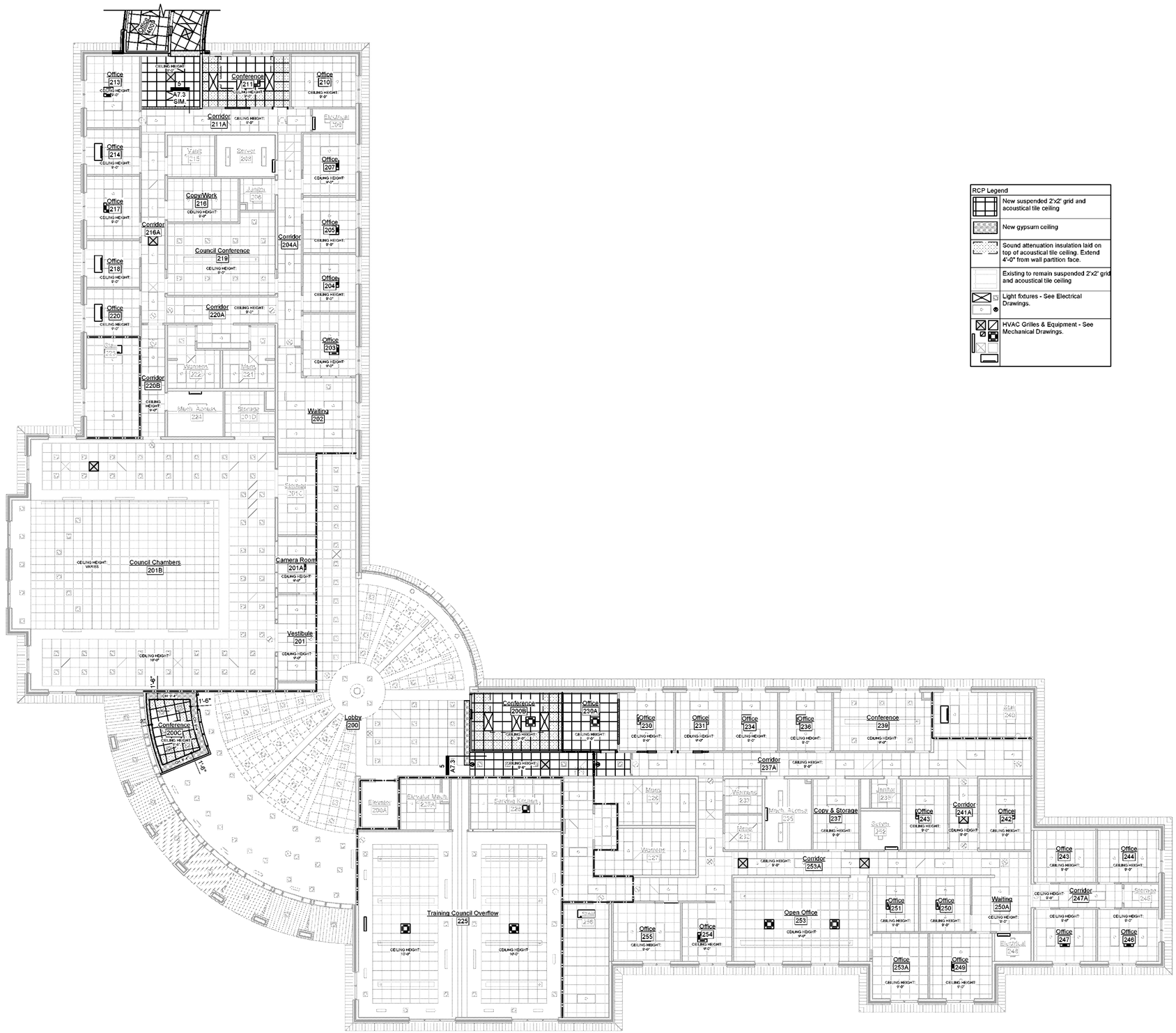

RCP Legend	
	New suspended 2'x2' grid and acoustical tile ceiling
	New gypsum ceiling
	Sound attenuation insulation laid on top of acoustical tile ceiling. Extend 4'-0" from wall partition face.
	Existing to remain suspended 2'x2' grid and acoustical tile ceiling
	Light fixtures - See Electrical Drawings.
	HVAC Grilles & Equipment - See Mechanical Drawings.

1 Renovations: Second Floor Reflected Ceiling Plan
Scale: 3/32" = 1'-0"

Plan North

North

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NORTH CAROLINA REGISTERED SEAL 14331 2-23-24 ARCHITECT JENNY L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Renovations - Second Floor Reflected Ceiling Plan

Rev.	Date	Notes

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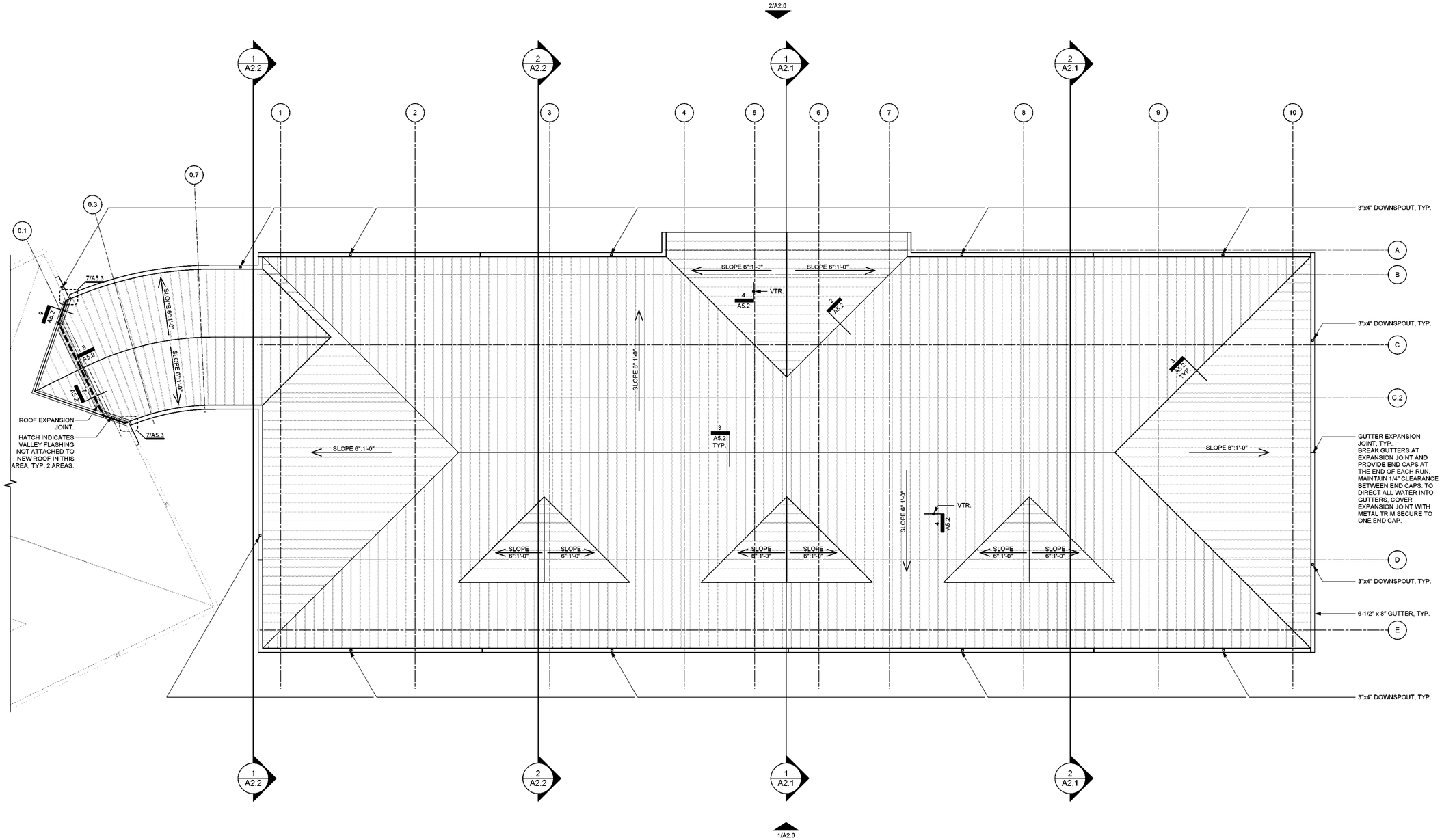

1 **Addition: Roof Plan**
Scale: 1/8" = 1'-0"

Plan North

North

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Leland Town Hall Addition & Renovations

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Construction Drawings

Issue Date: February 23, 2024

Addition - Roof Plan

Rev.	Date	Notes

A1.4

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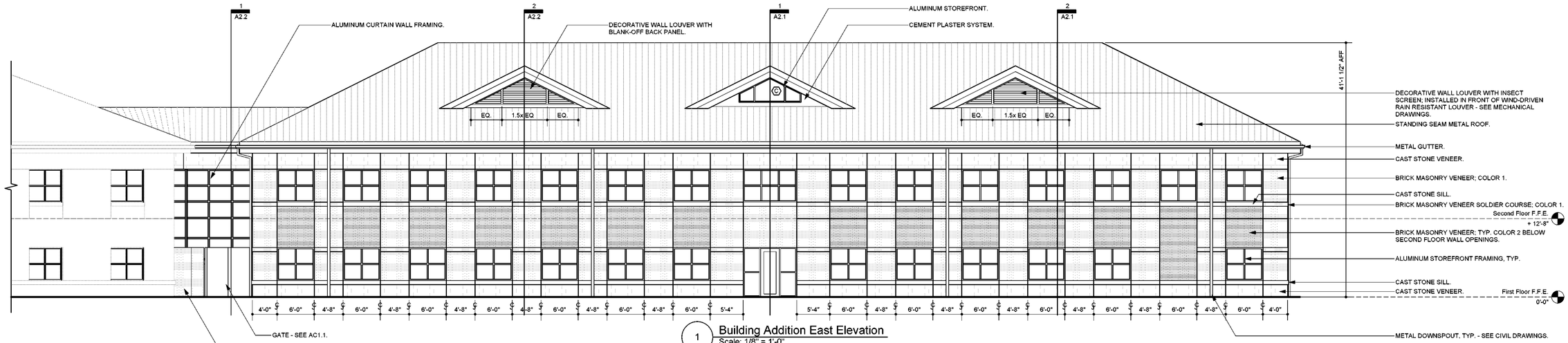
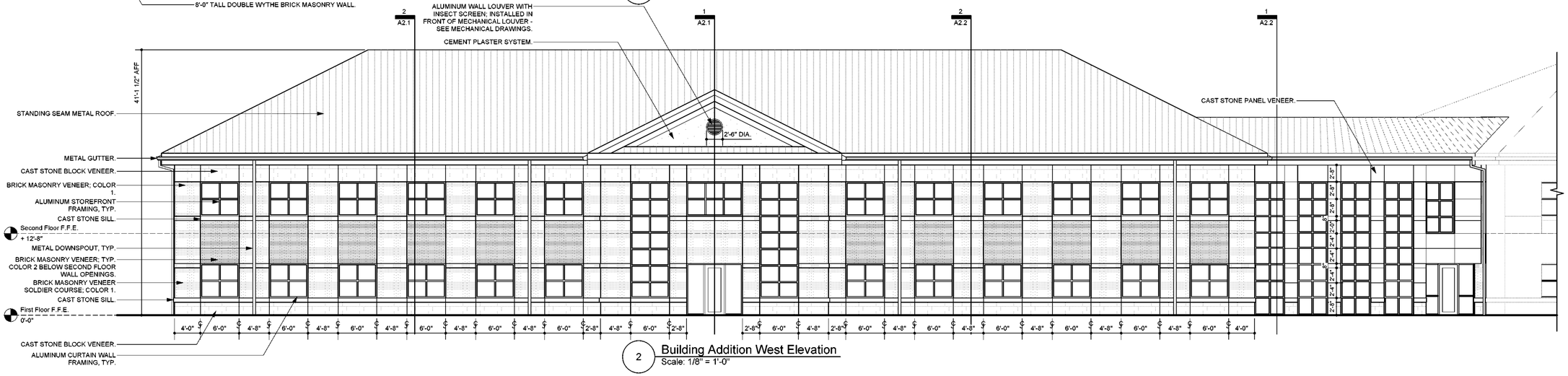


1 **Building Addition East Elevation**
Scale: 1/8" = 1'-0"



2 **Building Addition West Elevation**
Scale: 1/8" = 1'-0"

3 **Building Addition North Elevation**
Scale: 1/8" = 1'-0"

Masonry Veneer Notes

Cast Stone Veneer & Brick Masonry Veneer Color 1:
- Maintain 8" from exterior face of veneer to exterior face of metal studs, U.N.O.
- Cast Stone Veneer sill blocks & Brick Masonry Veneer Color 1 soldier courses as shown in Wall Sections.

Brick Masonry Veneer Color 2:
- Maintain 7" from exterior face of veneer to exterior face of metal studs, U.N.O.

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NORTH CAROLINA REGISTERED SEAL 5423 2-23-24 ARCHITECT JERRY L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Addition - Building Elevations

Rev.	Date	Notes

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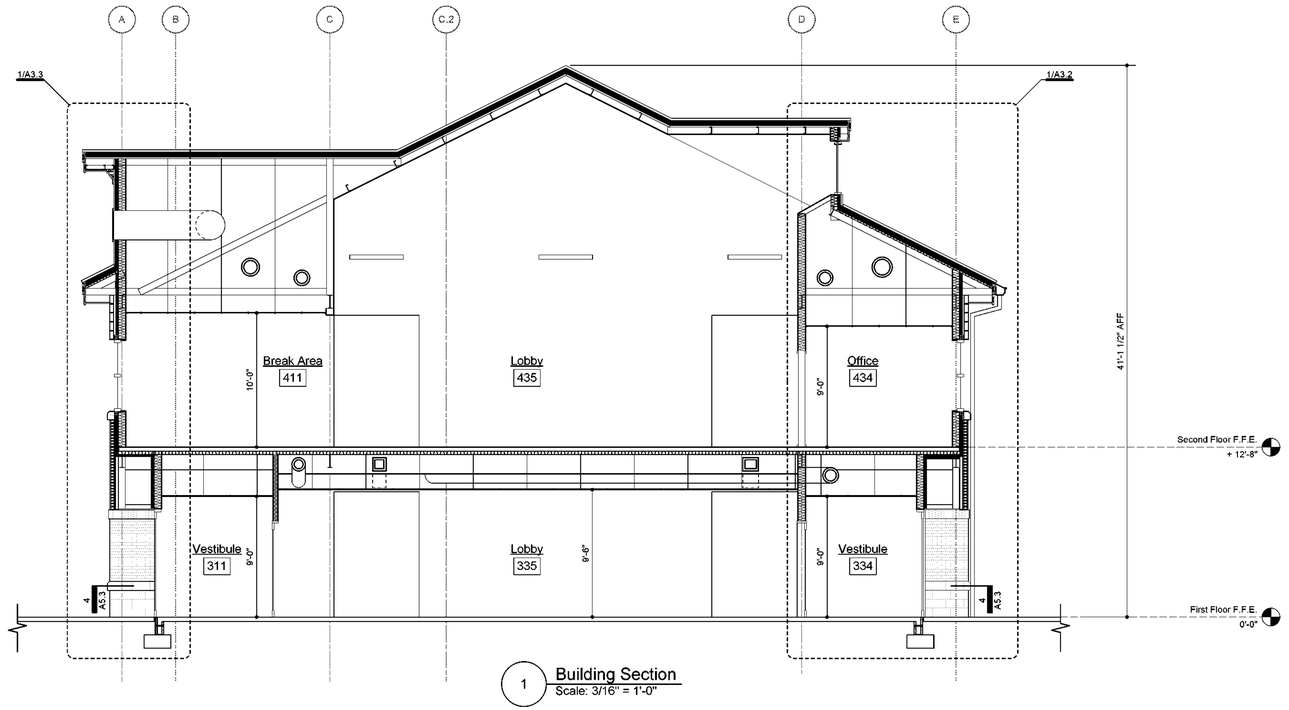
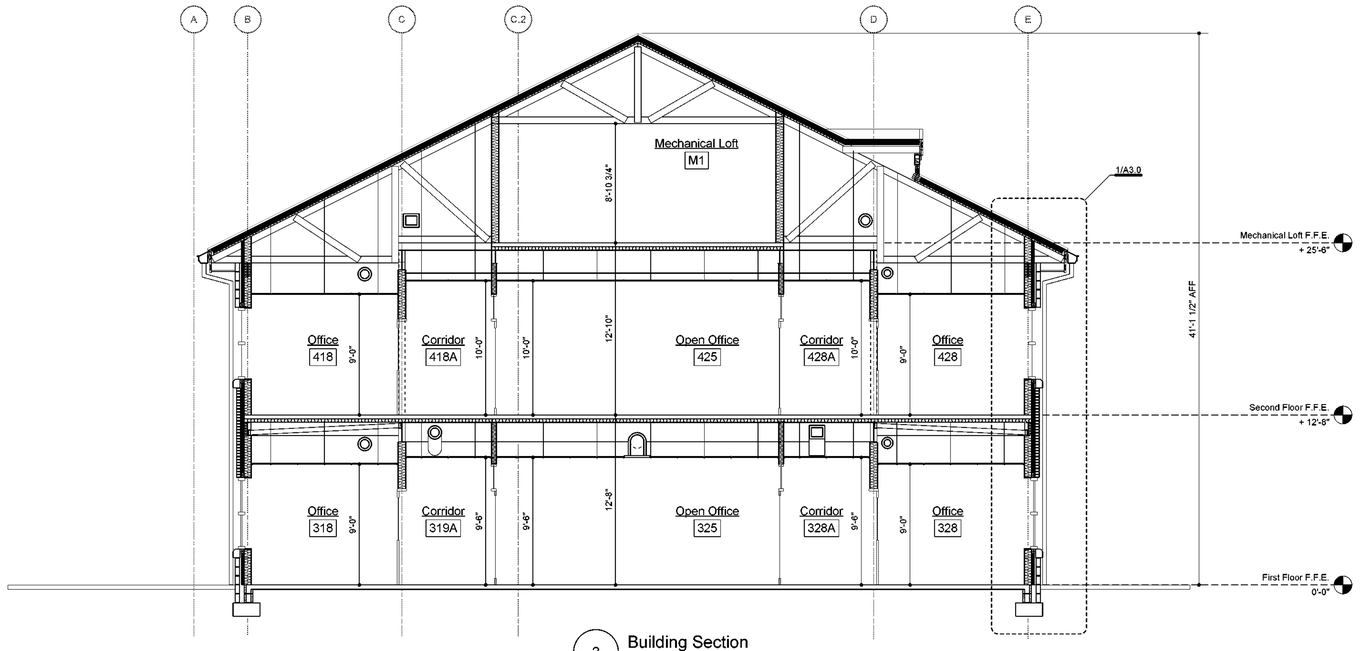


1 Building Section
Scale: 3/16" = 1'-0"



2 Building Section
Scale: 3/16" = 1'-0"

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NORTH CAROLINA REGISTERED SEAL 14231 2-28-24 ARCHITECT JERRY L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Addition - Building Sections

Rev.	Date	Notes

A2.1

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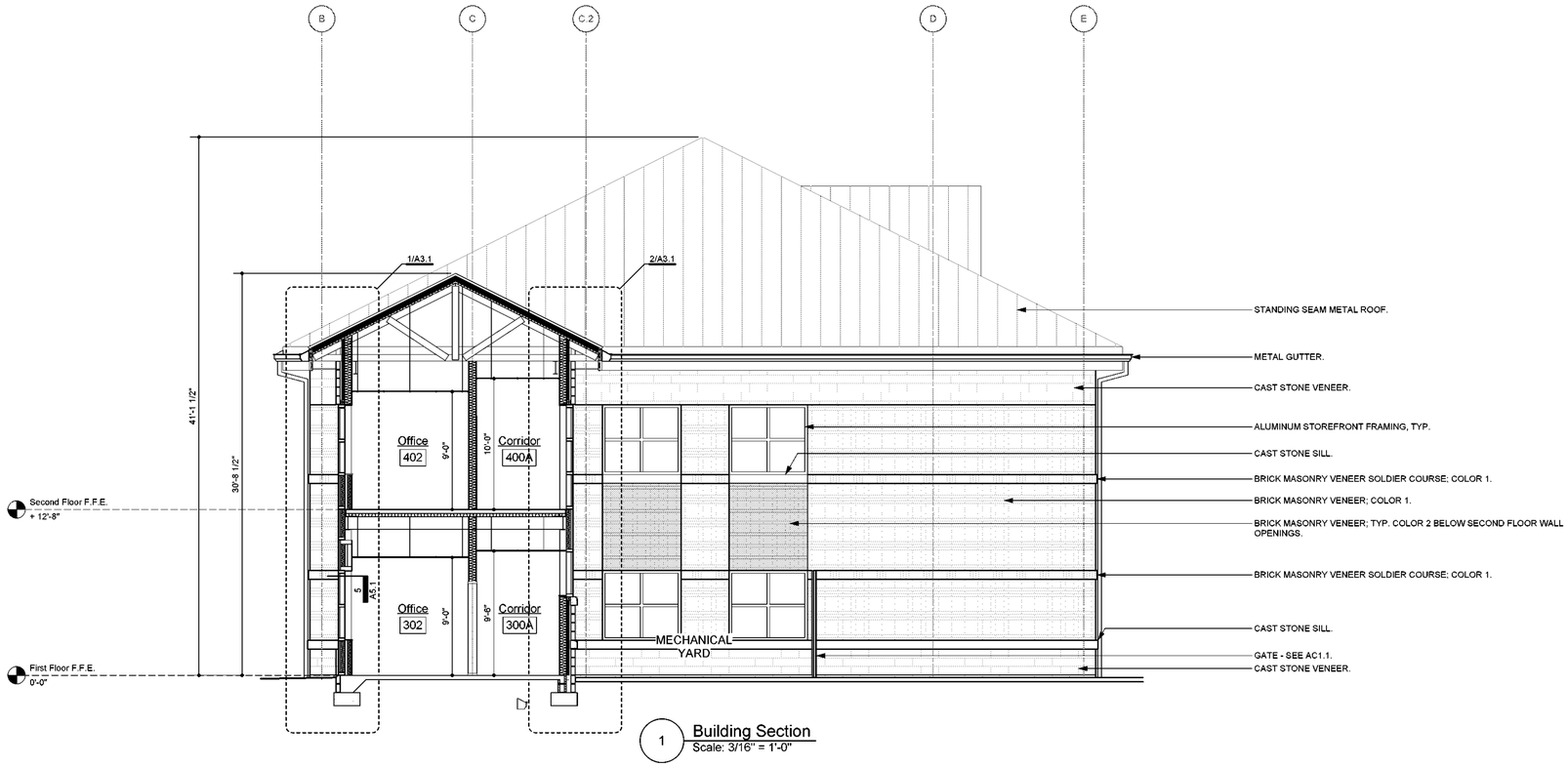

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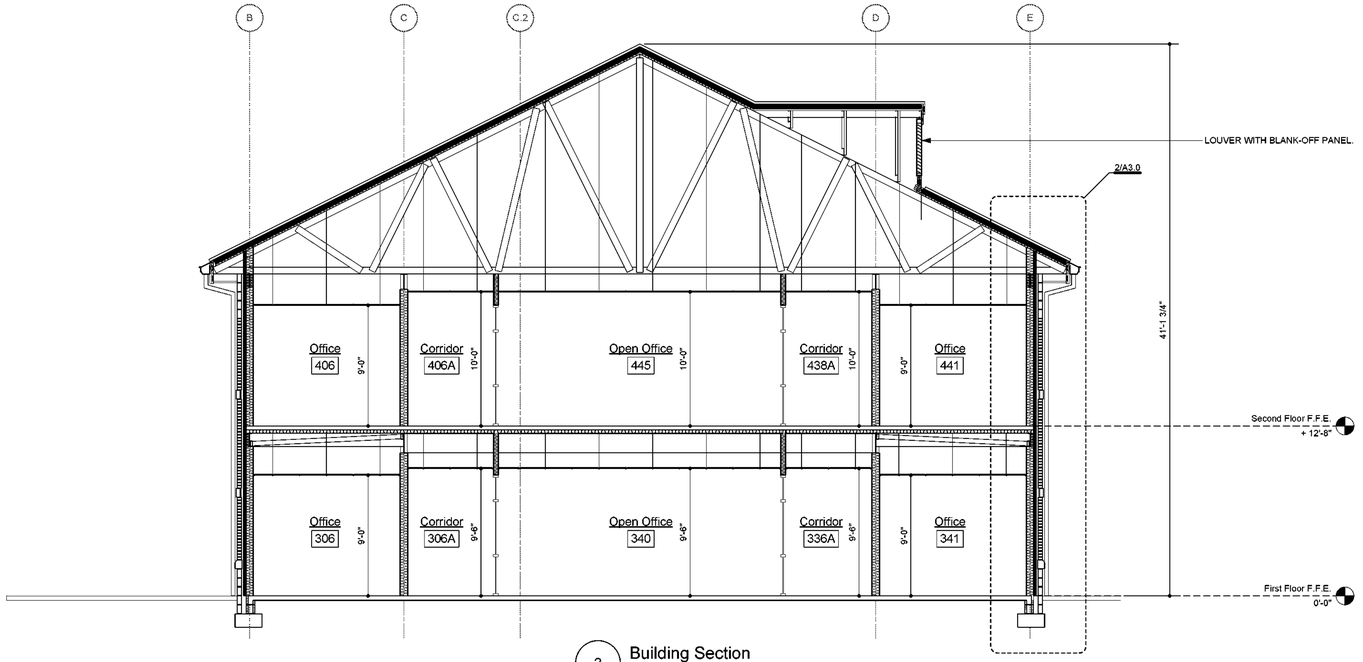

2 Building Section
Scale: 3/16" = 1'-0"

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NORTH CAROLINA REGISTERED SEAL 14231 2-23-24 ARCHITECT JERRY L. WILLIAMS

Leland Town Hall Addition & Renovations

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Construction Drawings

Issue Date: February 23, 2024

Addition - Building Sections

Rev.	Date	Notes

A2.2

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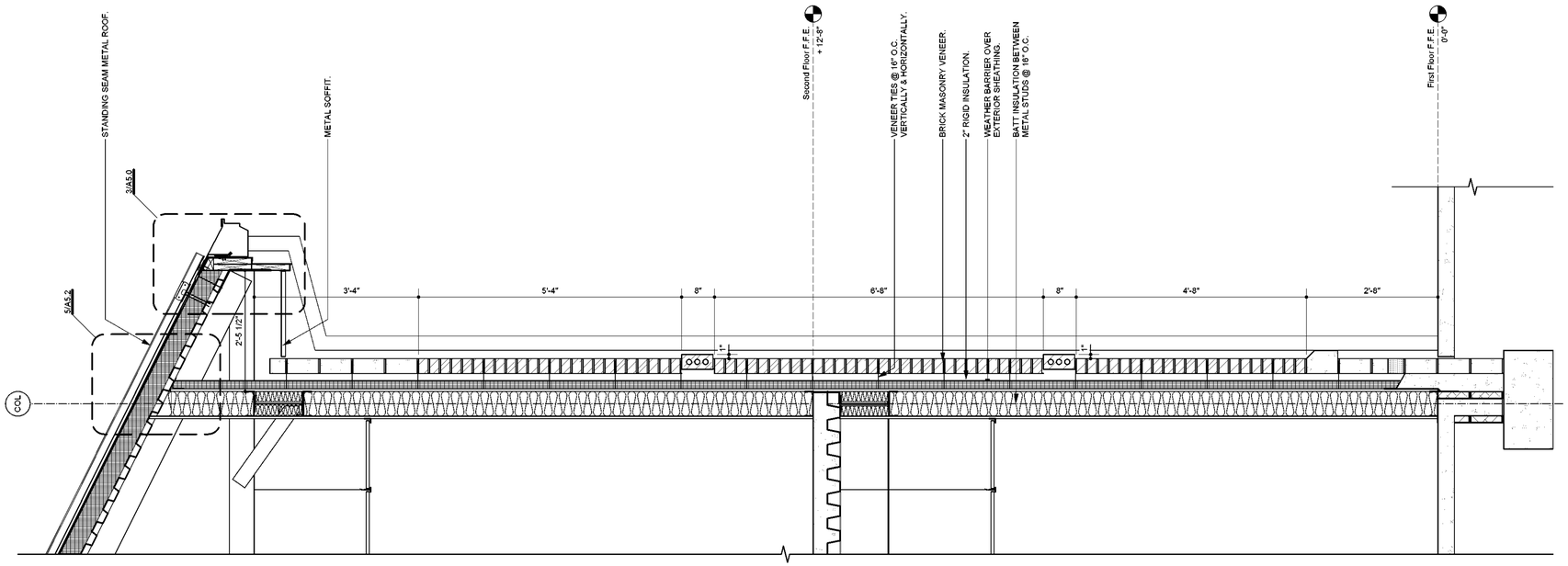

Wall Section
Scale: 3/4" = 1'-0"
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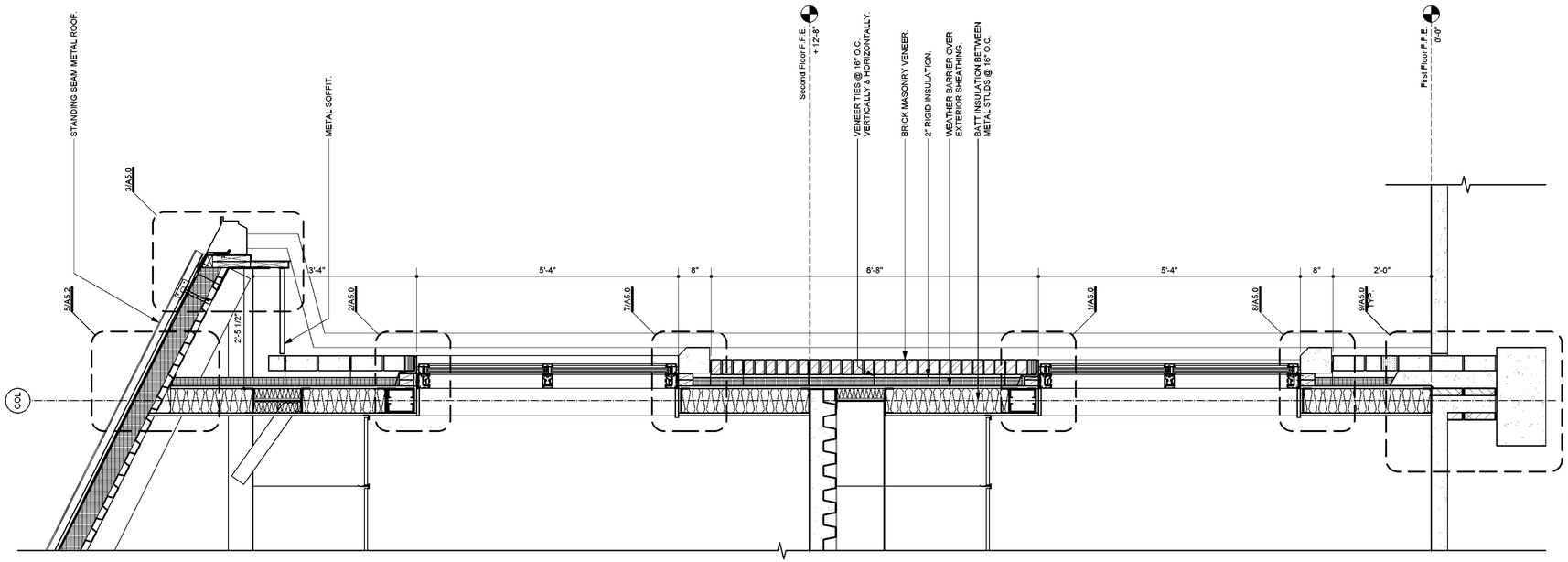

Wall Section
Scale: 3/4" = 1'-0"
1

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NORTH CAROLINA REGISTERED SEAL 14231 2-23-24 ARCHITECT JERRY L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Wall Sections

Rev.	Date	Notes

A3.0

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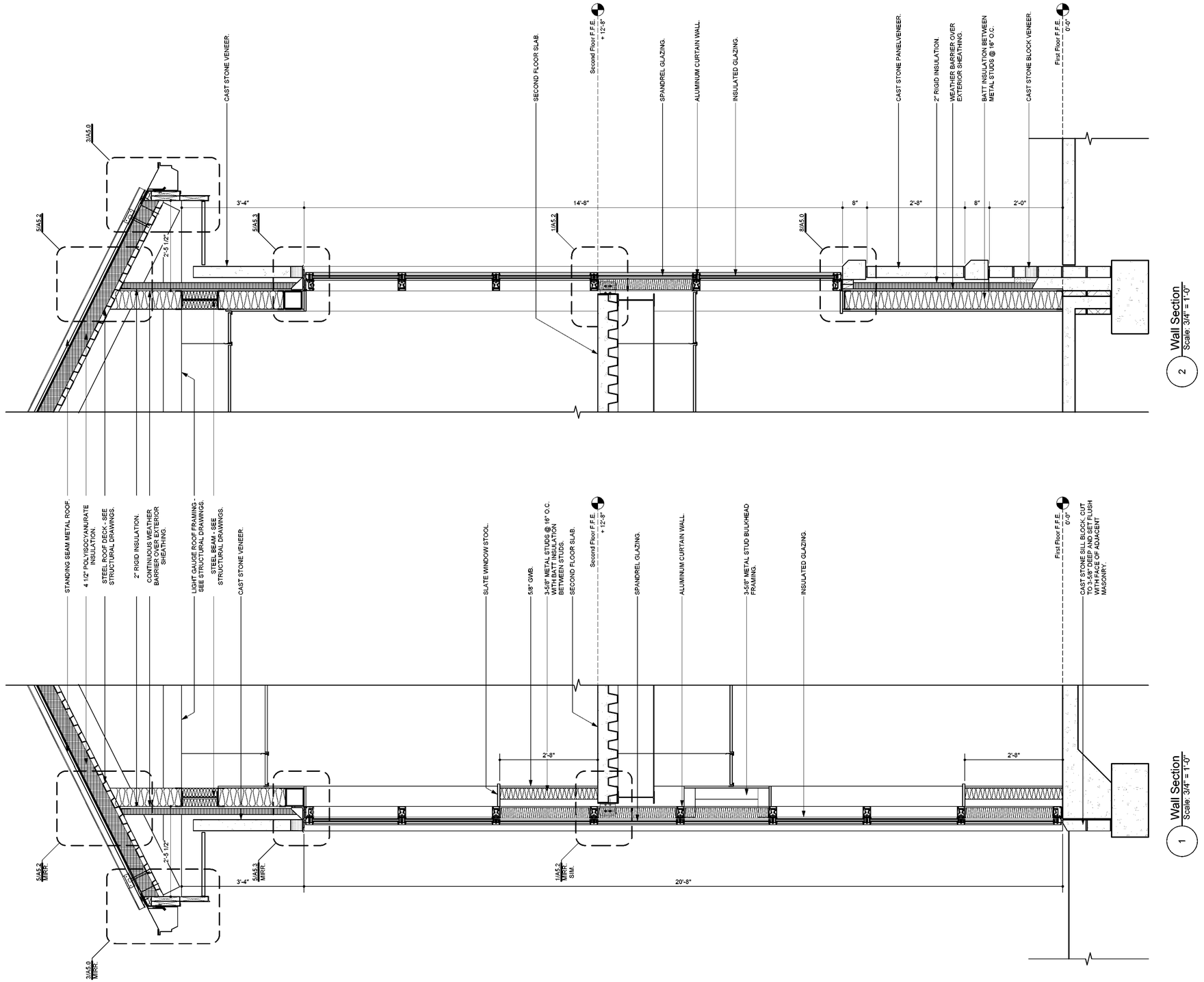

2 Wall Section
Scale: 3/4" = 1'-0"

1 Wall Section
Scale: 3/4" = 1'-0"

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NORTH CAROLINA REGISTERED SEAL 14231 JENNY L. WILLIAMS ARCHITECT 2-23-24

Leland Town Hall Addition & Renovations

102 Town Hall Drive
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Construction Drawings

Issue Date: February 23, 2024

Wall Sections

Rev.	Date	Notes

A3.1

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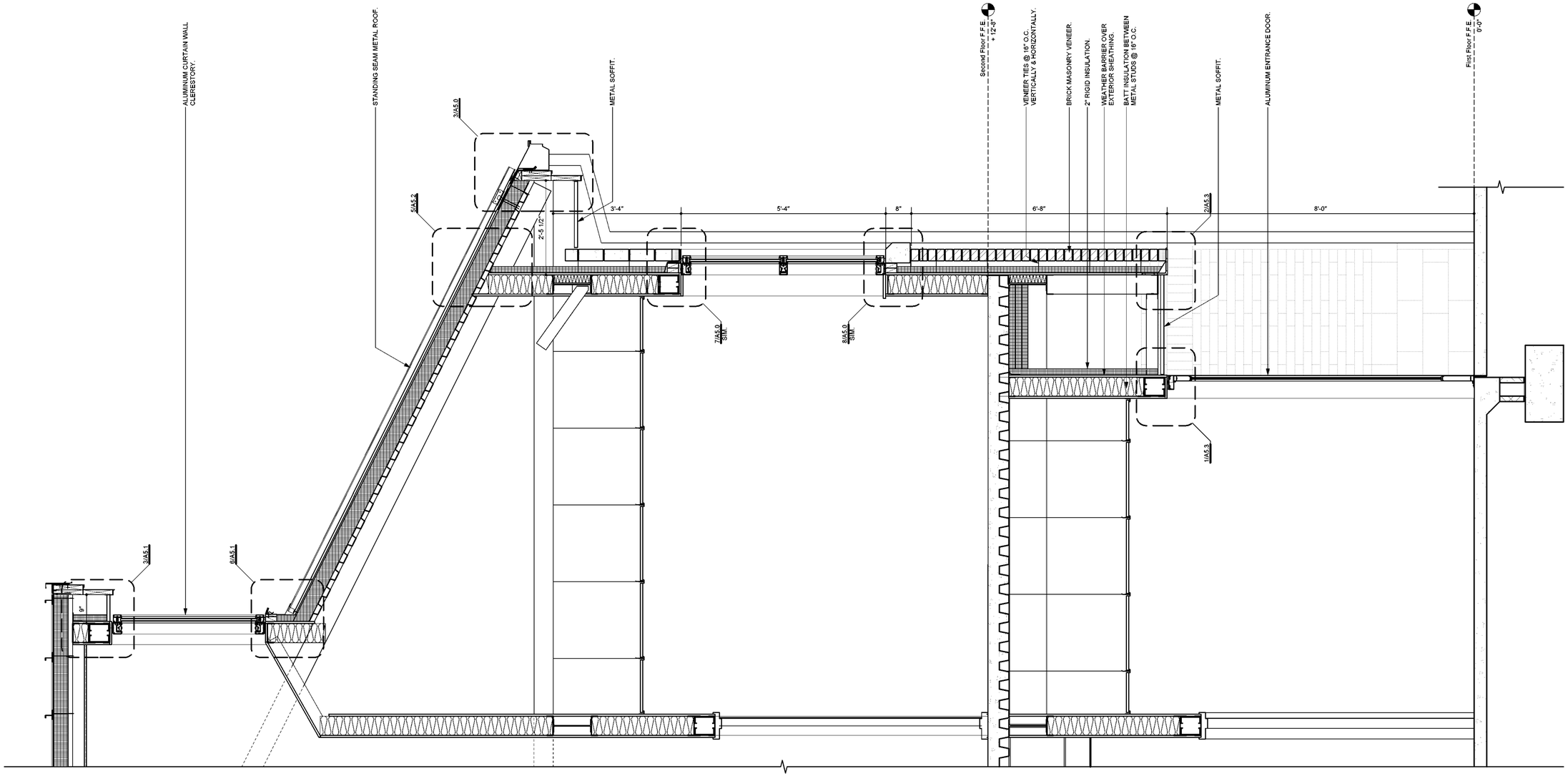

1 Wall Section
Scale: 3/4" = 1'-0"

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Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Wall Sections

Rev.	Date	Notes

A3.2

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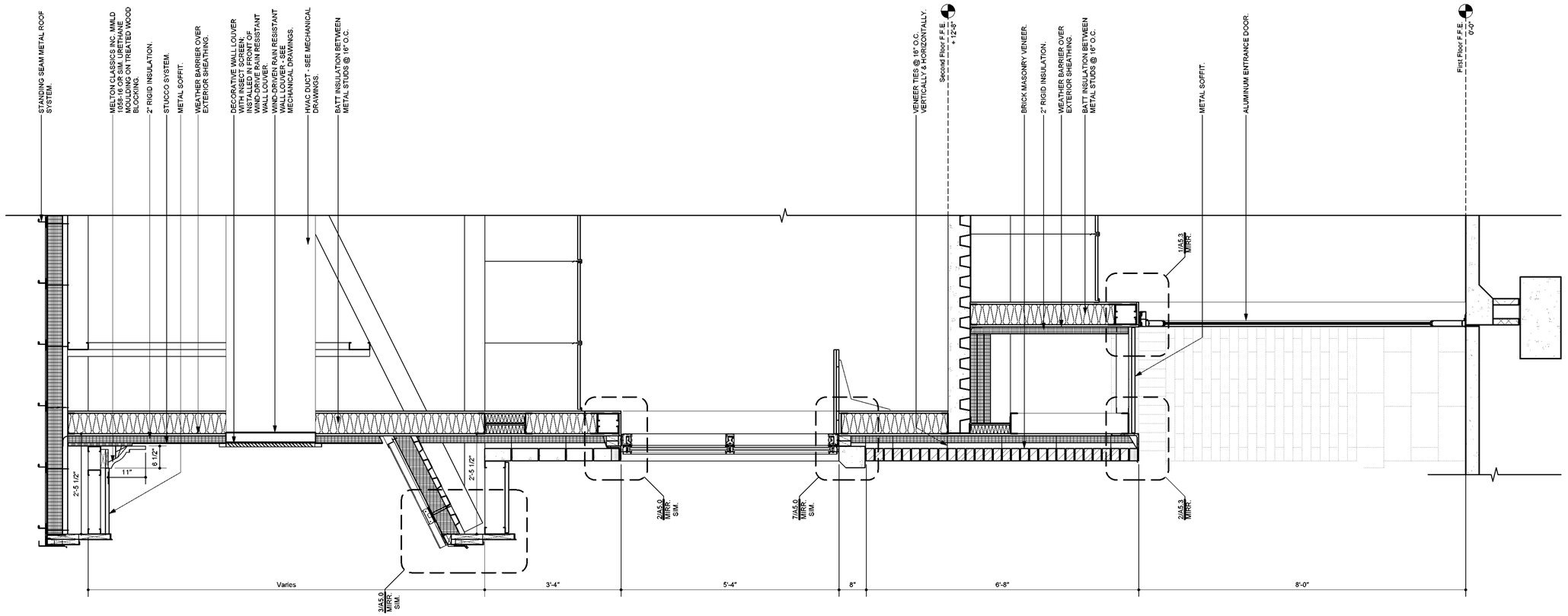

1 Wall Section
Scale: 3/4" = 1'-0"

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NORTH CAROLINA REGISTERED SEAL 14231 2-23-24 ARCHITECT JERRY L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Wall Sections

Rev.	Date	Notes

A3.3

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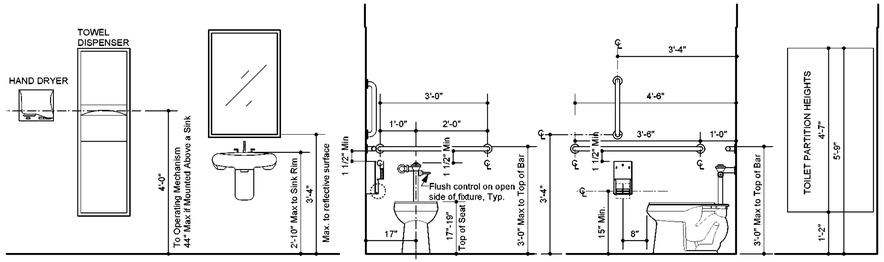

1 Restroom Fixture & Accessory Dimensions
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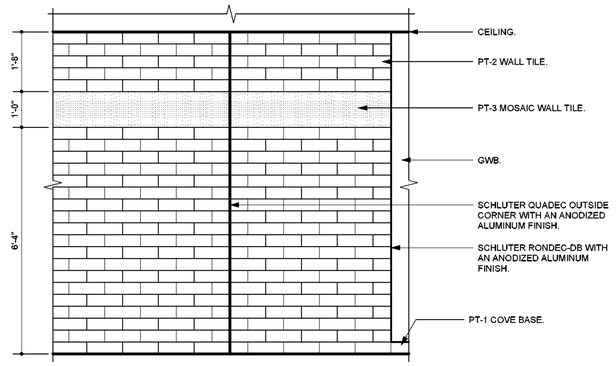
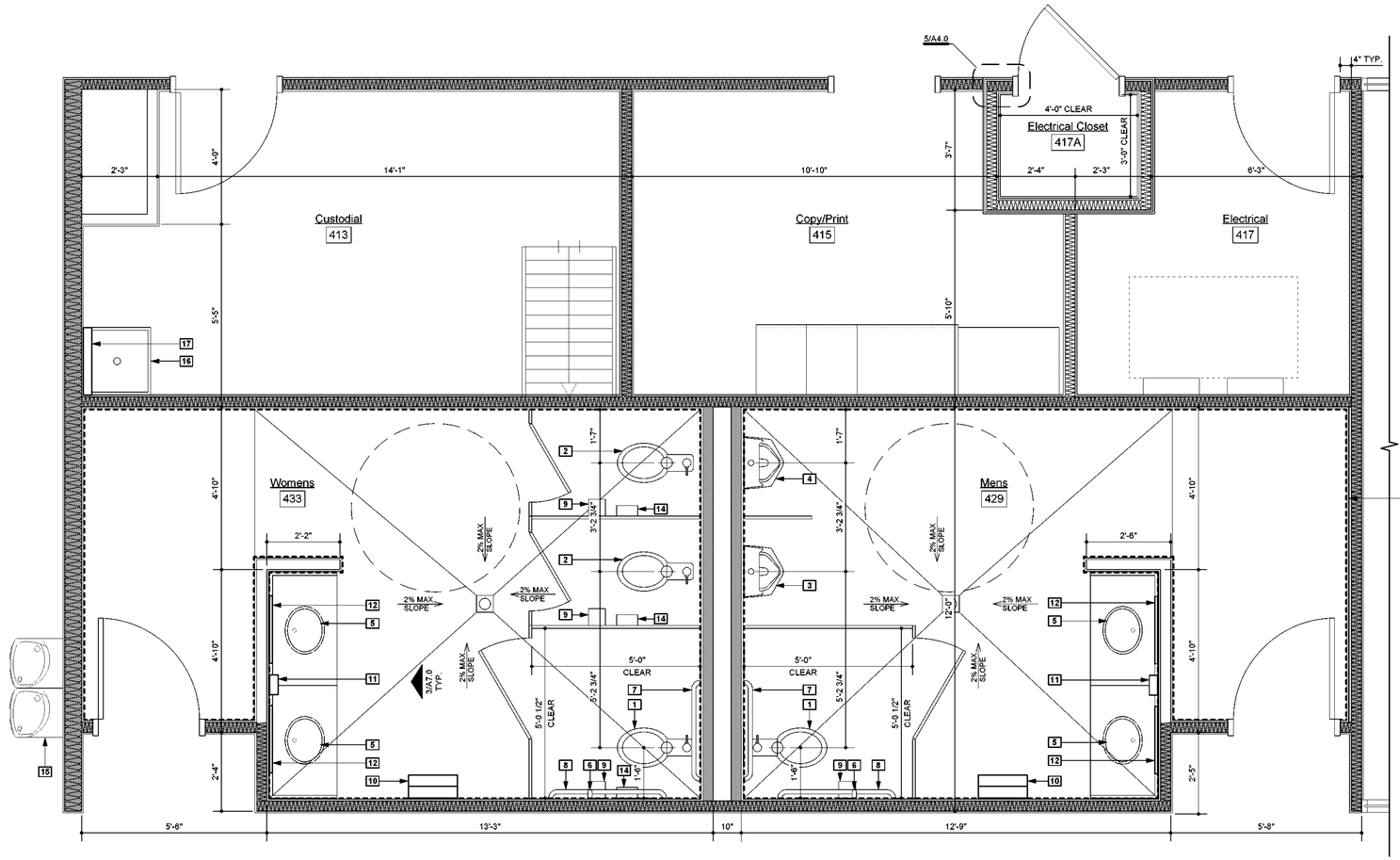
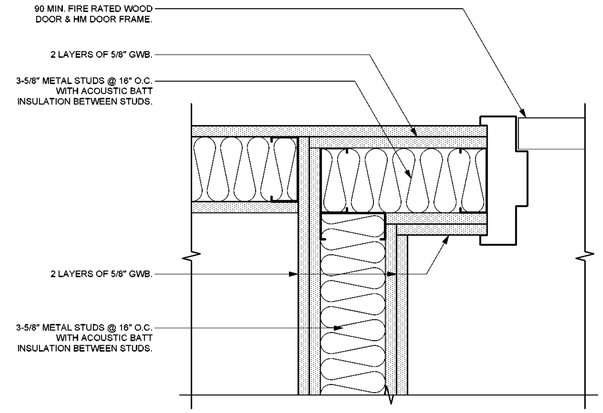


2 Tile Wainscot Typical Elevation & Trim
Scale: 1/2" = 1'-0"



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

EXTENT OF WAINSCOT TILE - SEE DETAIL 2-A4.0.



5 2-HR Fire Rated Wall Detail
Scale: 3" = 1'-0"

Accessory Key Notes

1	Accessible Toilet Fixture
2	Toilet Fixture
3	Accessible Urinal Fixture
4	Urinal Fixture
5	Accessible Lavatory
6	Grab Bar 18"
7	Grab Bar 36"
8	Grab Bar 42"
9	Toilet Tissue Dispenser Provided by Owner, Installed by GC
10	Combination Paper Towel Dispenser / Waste Receptacle
11	Soap Dispenser Provided by Owner, Installed by GC
12	Mirror
13	Not Used
14	Sanitary Napkin Disposal
15	Hi/Lo Water Cooler
16	Mop Sink
17	Mop Holder

NOTES:
-See Specifications for manufacturers and model #s on all toilet accessories.

-See Plumbing Specifications for manufacturers and model #s on all fixtures.

-Grab bars shall support a 250lb load applied in any direction, along entire length.

-Grab bars shall not rotate in their fittings.

-Grab bar edges shall be min. 1/8" radius & free of sharp elements.

-Toilet Seat shall not spring back automatically to a lifted position.

-Flush control shall be operable w/ one hand w/out requiring tight grasping, twisting of wrist or force greater than 5 lbs.

-Control shall be located on the wide side of accessible stalls.

-Toilet paper dispenser shall allow continuous paper delivery.

-Supply & drain lines shall be covered w/ pipe insulation or non-heat conducting baffle where exposed & shall not intrude on required knee space.

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NORTH CAROLINA REGISTERED SEAL 14331 2-23-24 ARCHITECT JENNIFER L. WILLIAMS

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Enlarged Restroom Plan

Rev.	Date	Notes

A4.0

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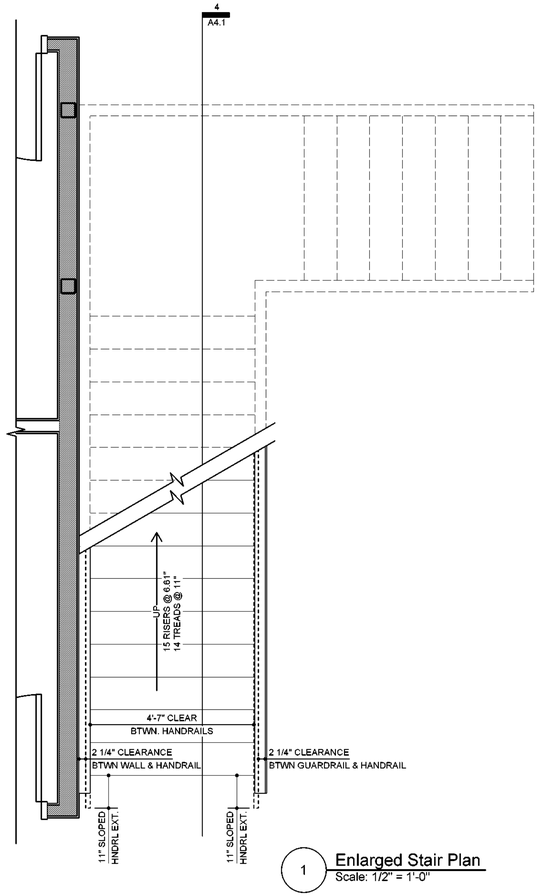

1 Enlarged Stair Plan
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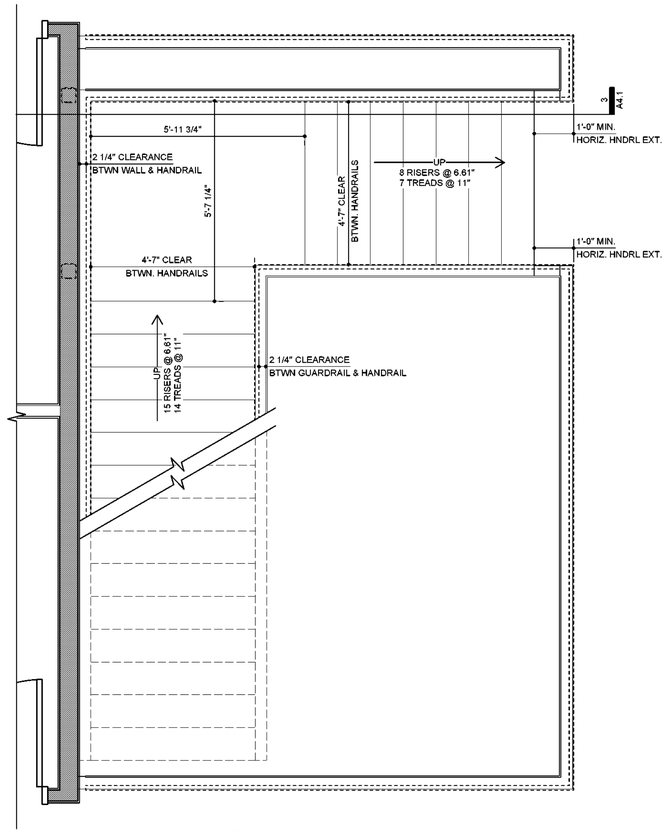

2 Enlarged Stair Plan
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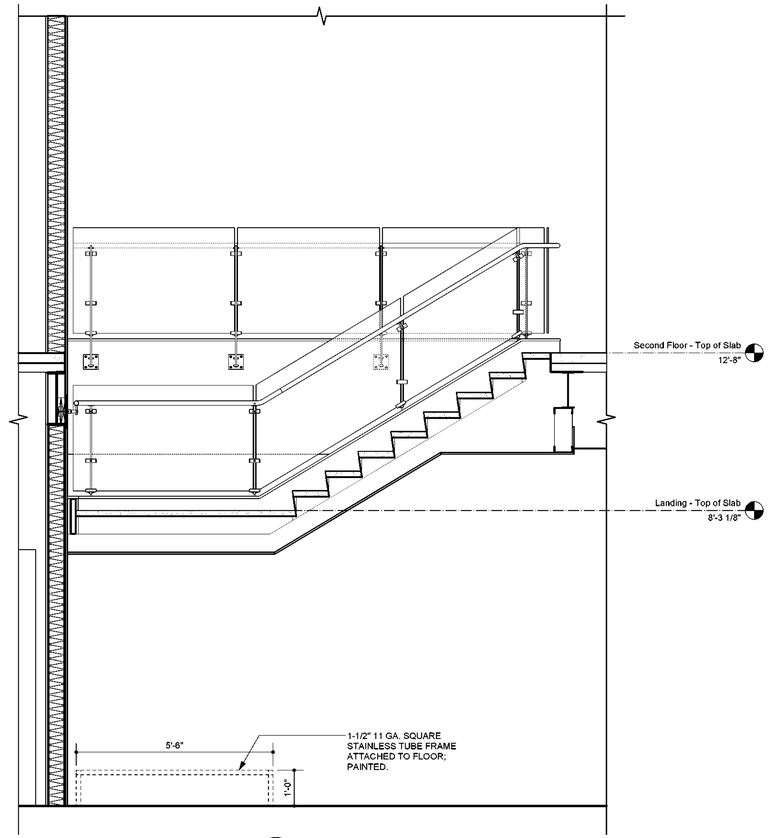
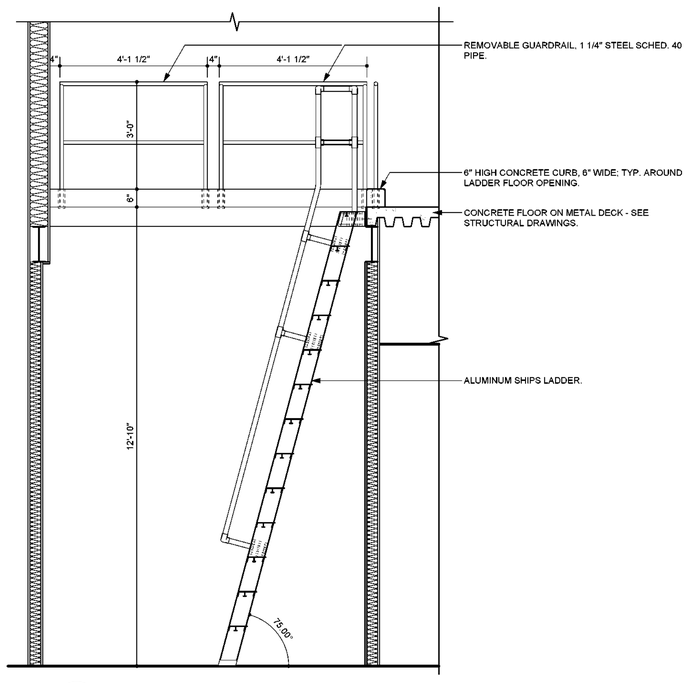


3 Stair Section
Scale: 1/2" = 1'-0"



5 Mechanical Loft Ladder Section
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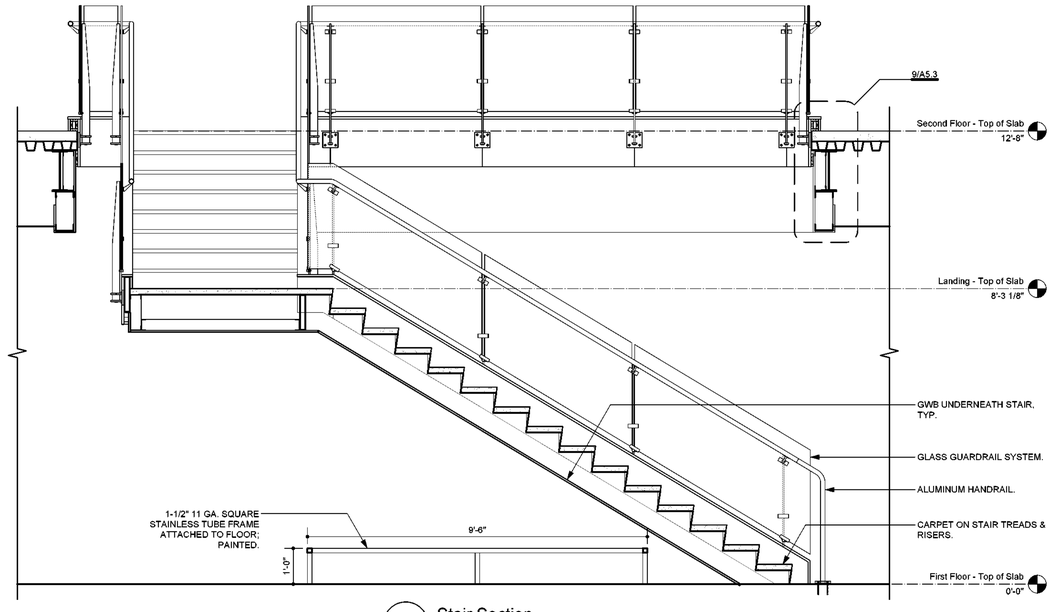

4 Stair Section
Scale: 1/2" = 1'-0"

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Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Enlarged Stair Plan

Rev.	Date	Notes

A4.1

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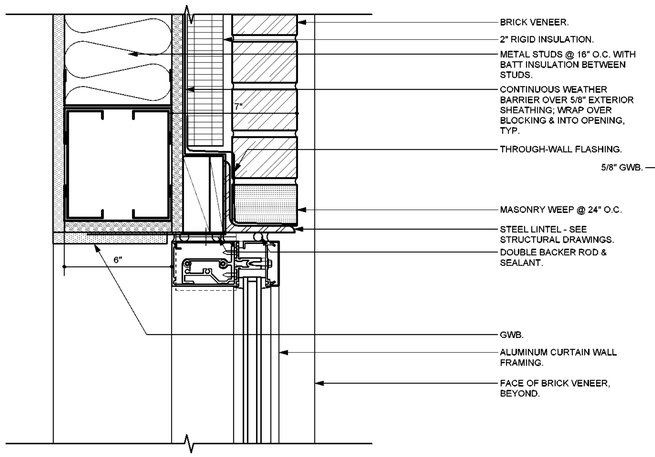
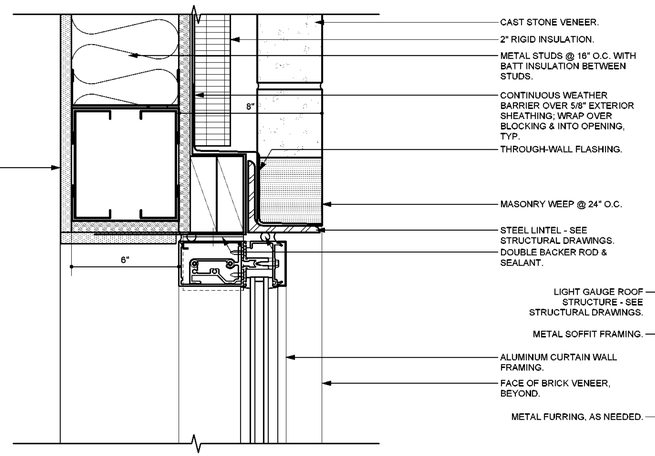
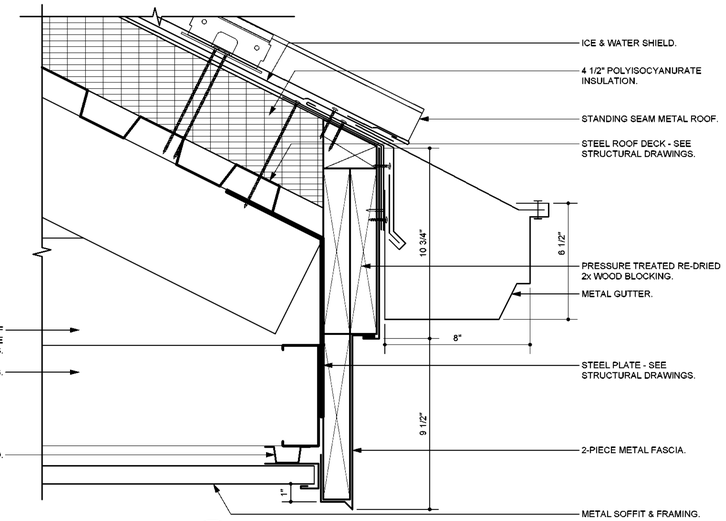


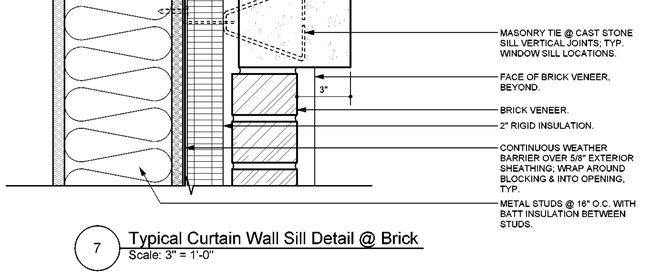
1 Typical Curtain Wall Head Detail @ Brick
Scale: 3" = 1'-0"



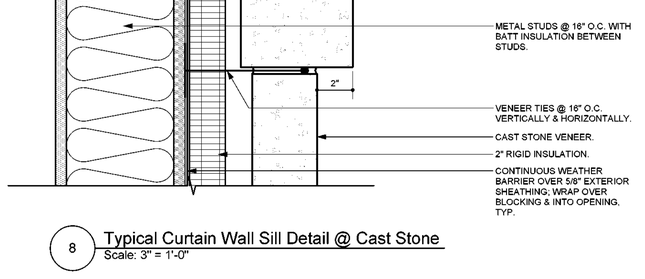
2 Typical Curtain Wall Head Detail @ Cast Stone
Scale: 3" = 1'-0"



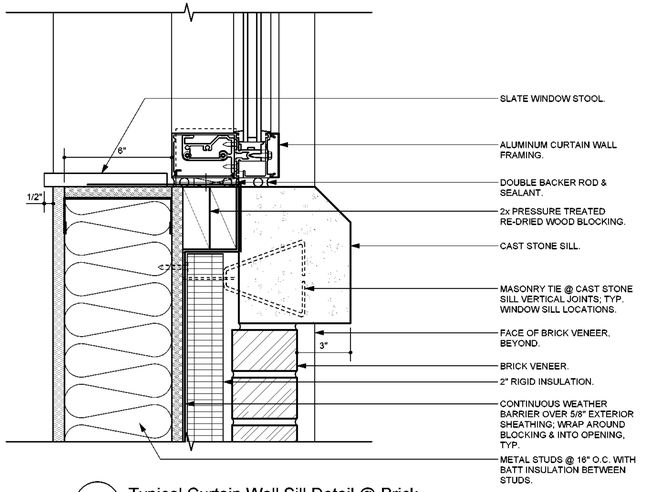
3 Roof Eave Detail
Scale: 3" = 1'-0"



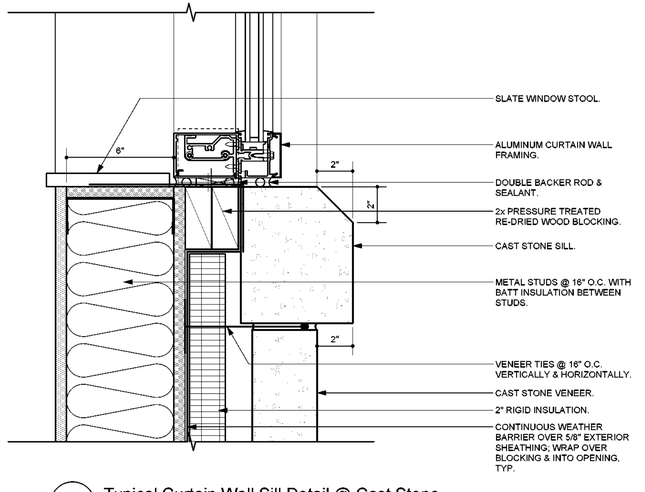
4 Typical Curtain Wall Jamb Detail @ Brick
Scale: 3" = 1'-0"



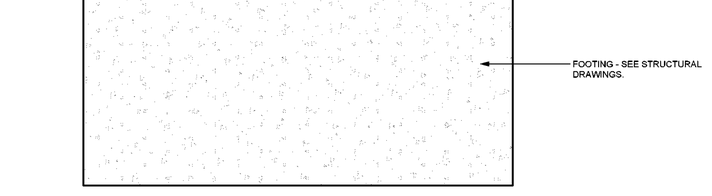
5 Typical Curtain Wall Jamb Detail @ Cast Stone
Scale: 3" = 1'-0"



7 Typical Curtain Wall Sill Detail @ Brick
Scale: 3" = 1'-0"



8 Typical Curtain Wall Sill Detail @ Cast Stone
Scale: 3" = 1'-0"



9 Foundation Detail
Scale: 3" = 1'-0"

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NORTH CAROLINA REGISTERED SEAL 14231 12-23-24 LICENSED JENNY L. WILLIAMS

Leland Town Hall Addition & Renovations
102 Town Hall Drive
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Construction Drawings

Issue Date: February 23, 2024

Details

Rev.	Date	Notes

A5.0

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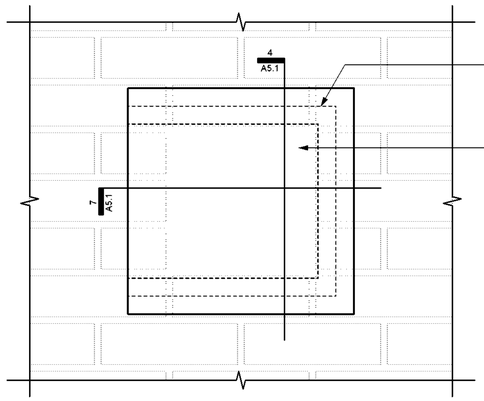
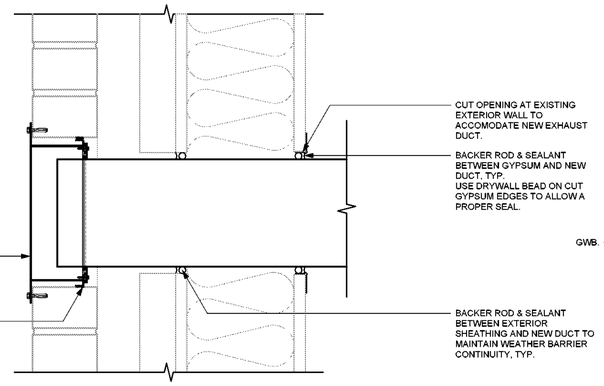


1 Wall Opening Cover Elevation
Scale: 3" = 1'-0"



2 Wall Louver Detail
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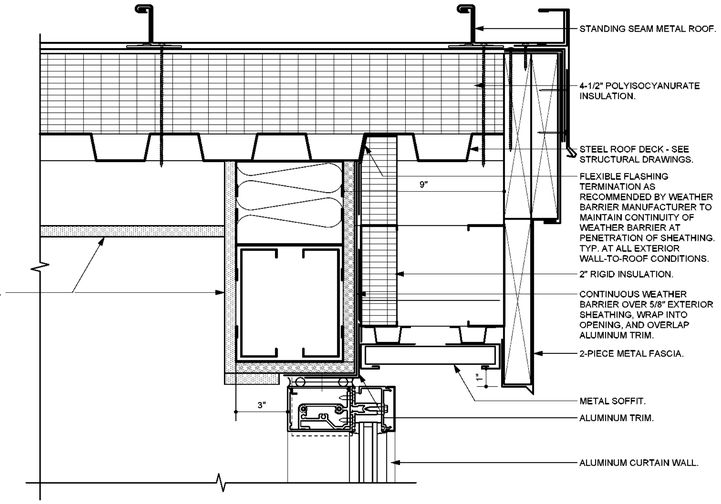
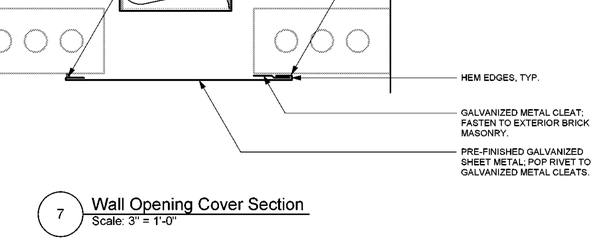


3 Curtain Wall Head Detail @ Clerestory
Scale: 3" = 1'-0"



4 Wall Opening Cover Section
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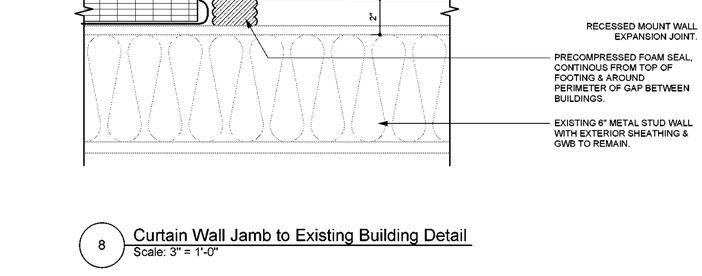
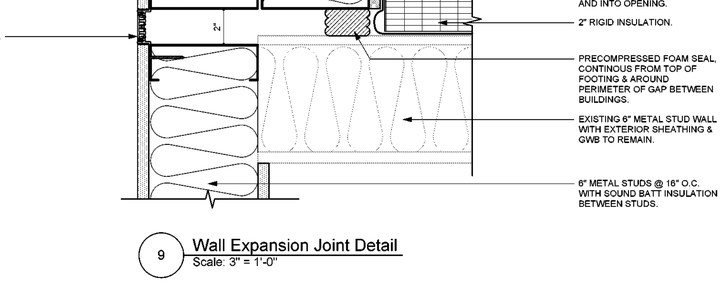
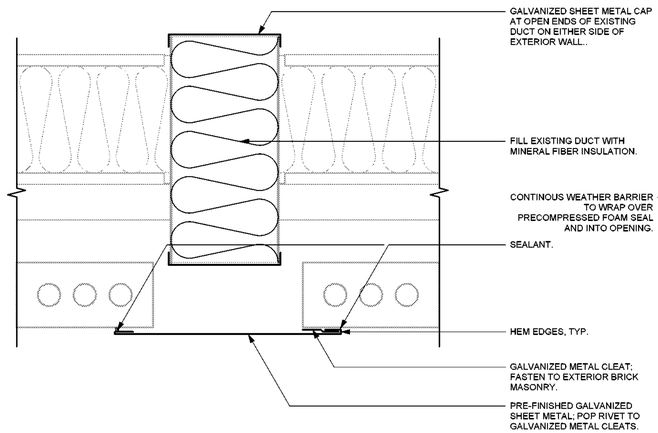


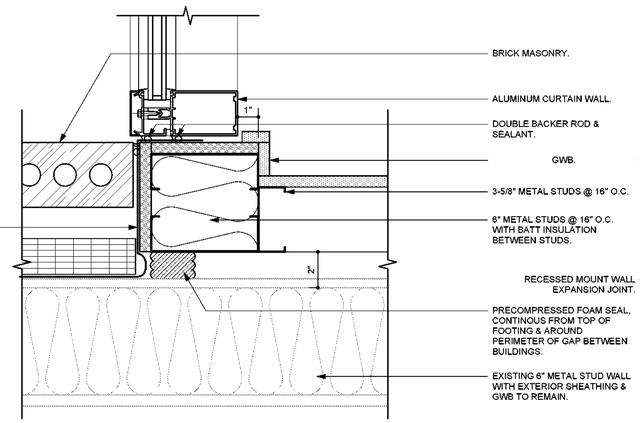
5 Curtain Wall Jamb @ Brick Solidier Course Detail
Scale: 3" = 1'-0"



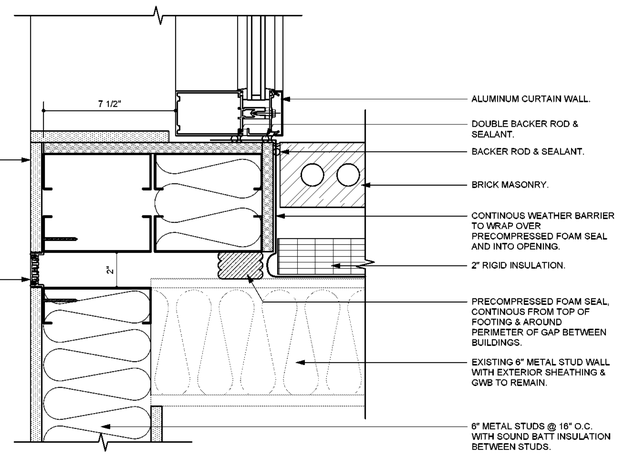
6 Curtain Wall Sill Detail @ Clerestory
Scale: 3" = 1'-0"



7 Wall Opening Cover Section
Scale: 3" = 1'-0"



8 Curtain Wall Jamb to Existing Building Detail
Scale: 3" = 1'-0"



9 Wall Expansion Joint Detail
Scale: 3" = 1'-0"

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SAWYER SHERWOOD & ASSOCIATE, P.C. REGISTERED ARCHITECTURAL CORPORATION 52349 NORTH CAROLINA WILMINGTON, NC

NORTH CAROLINA REGISTERED JENNY L. WILLIAMS SEAL 14931 2-23-24 ARCHITECT

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Details

Rev.	Date	Notes

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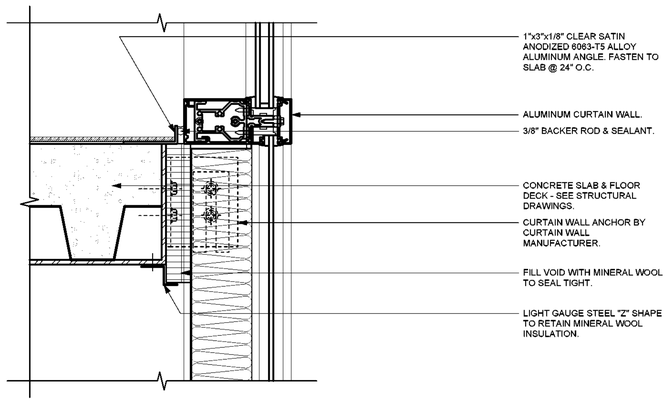
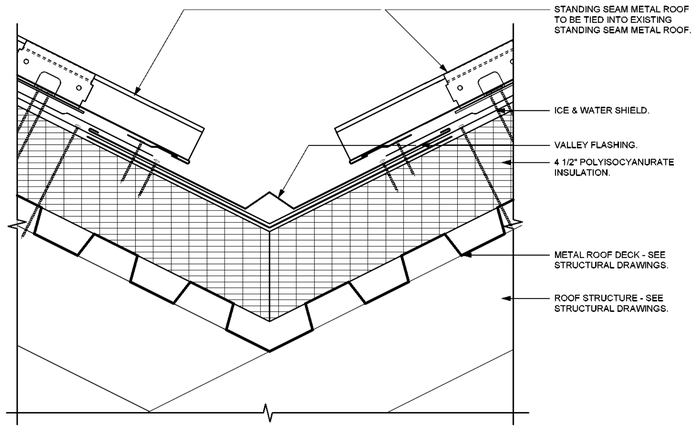
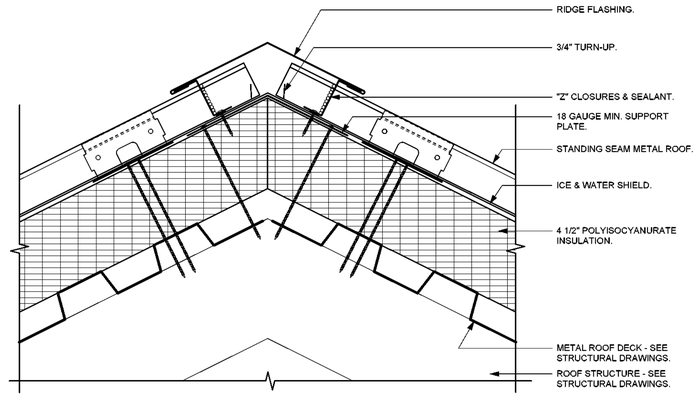


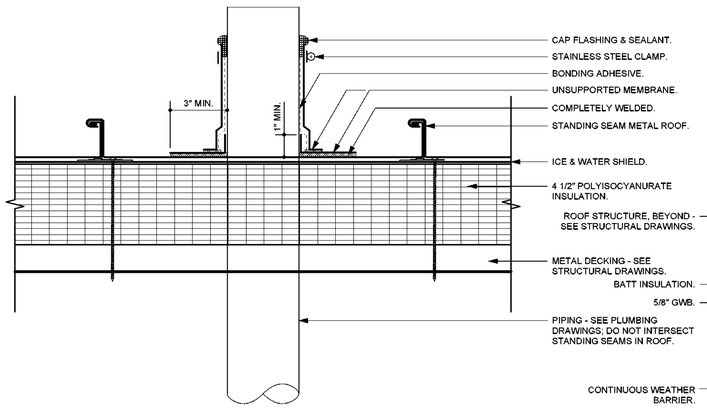
1 Curtain Wall to Floor Slab Detail
Scale: 3" = 1'-0"



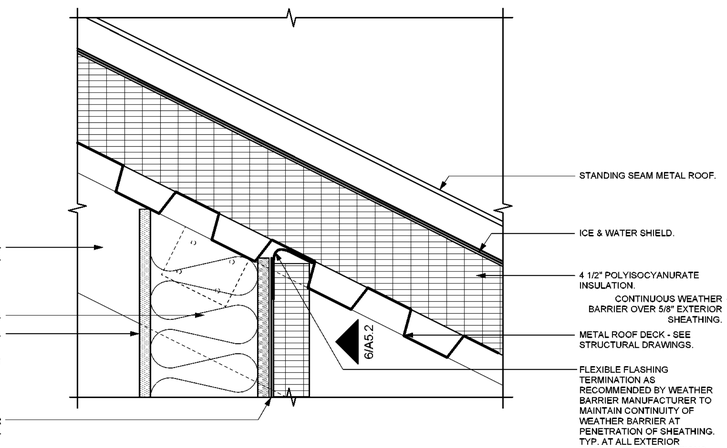
2 Typical Roof Valley Detail
Scale: 3" = 1'-0"



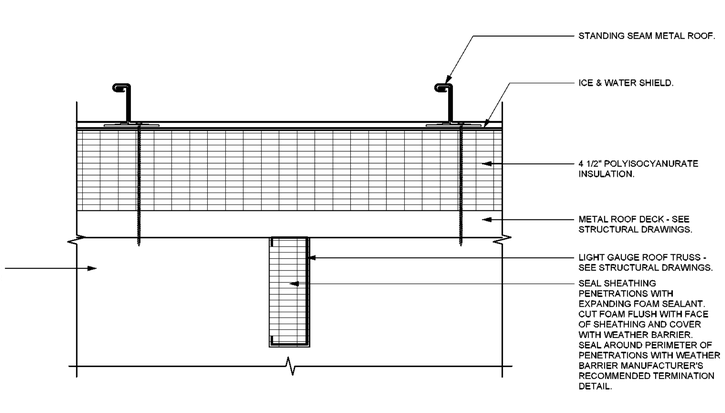
3 Typical Roof Ridge Detail
Scale: 3" = 1'-0"



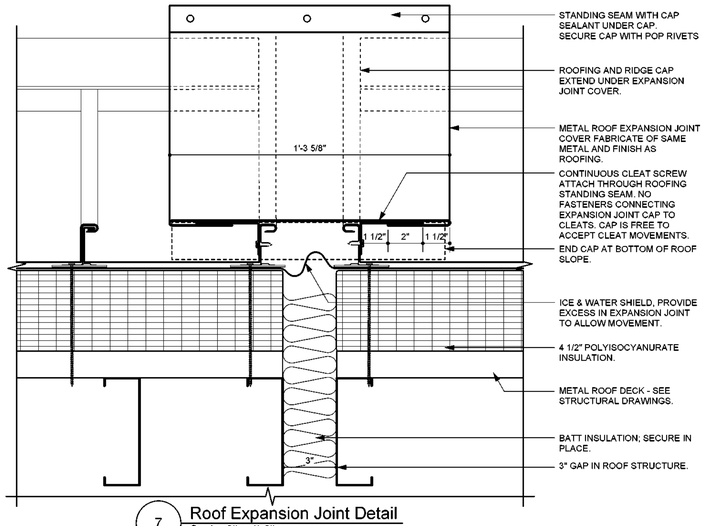
4 Vent Thru Roof Detail
Scale: 3" = 1'-0"



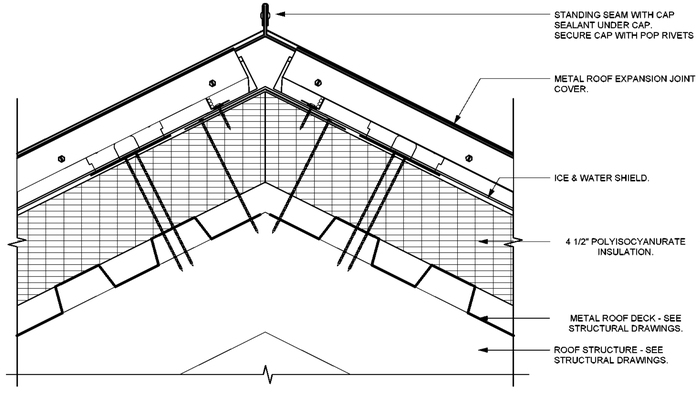
5 Typical Top of Exterior Wall Detail
Scale: 3" = 1'-0"



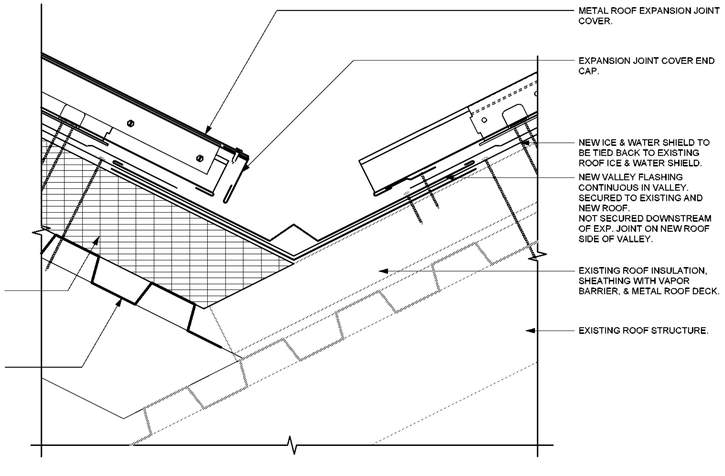
6 Typical Exterior Wall Penetration Detail
Scale: 3" = 1'-0"



7 Roof Expansion Joint Detail
Scale: 3" = 1'-0"



8 Roof Ridge @ Expansion Joint Detail
Scale: 3" = 1'-0"



9 Roof Valley @ Expansion Joint Detail
Scale: 3" = 1'-0"

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SAWYER SHERWOOD & ASSOCIATE, P.C. REGISTERED ARCHITECTURAL CORPORATION 52349 NORTH CAROLINA WILMINGTON, NC

NORTH CAROLINA REGISTERED SEAL 14231 2-23-24 ARCHITECT JENNY L. WILLIAMS

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Details

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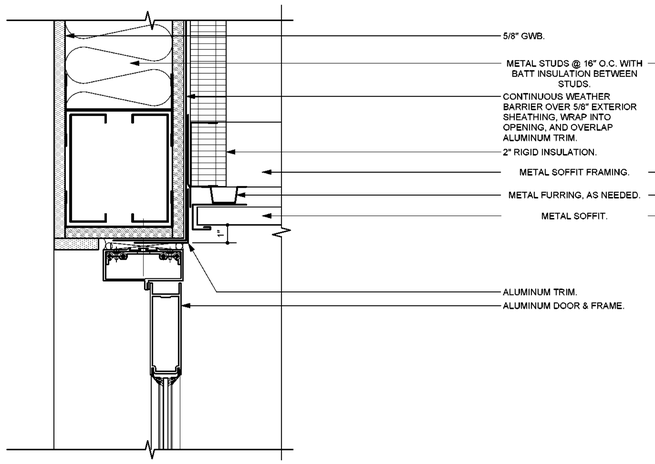
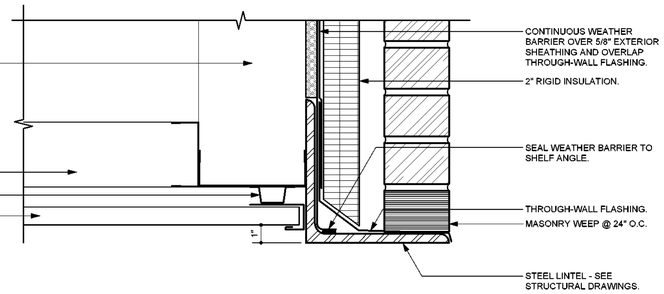
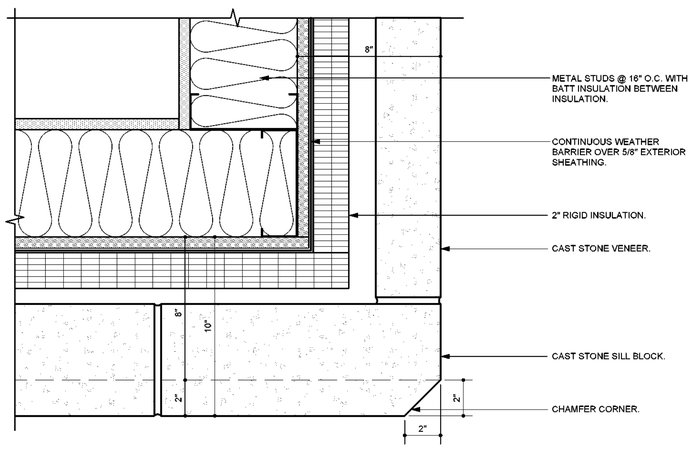


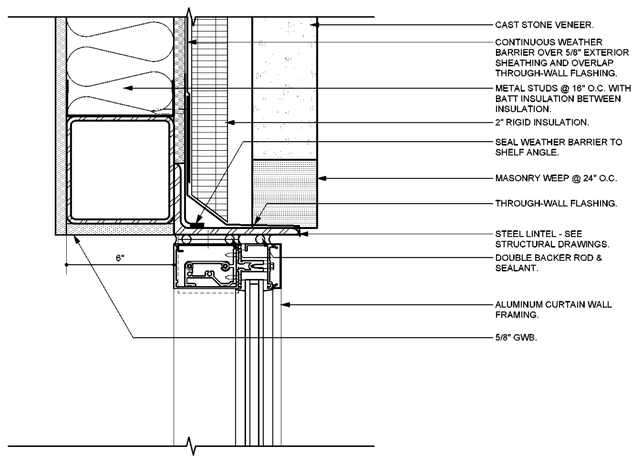
1 Curtain Wall Door Head Detail
Scale: 3" = 1'-0"



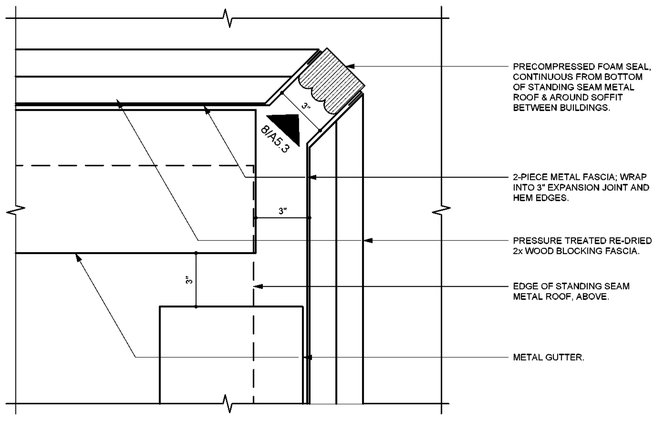
2 Brick Masonry Wall to Soffit Detail
Scale: 3" = 1'-0"



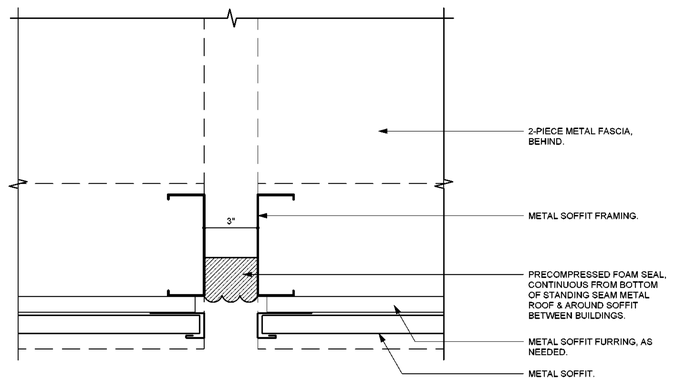
4 Cast Stone Sill Alcove Corner Detail
Scale: 3" = 1'-0"



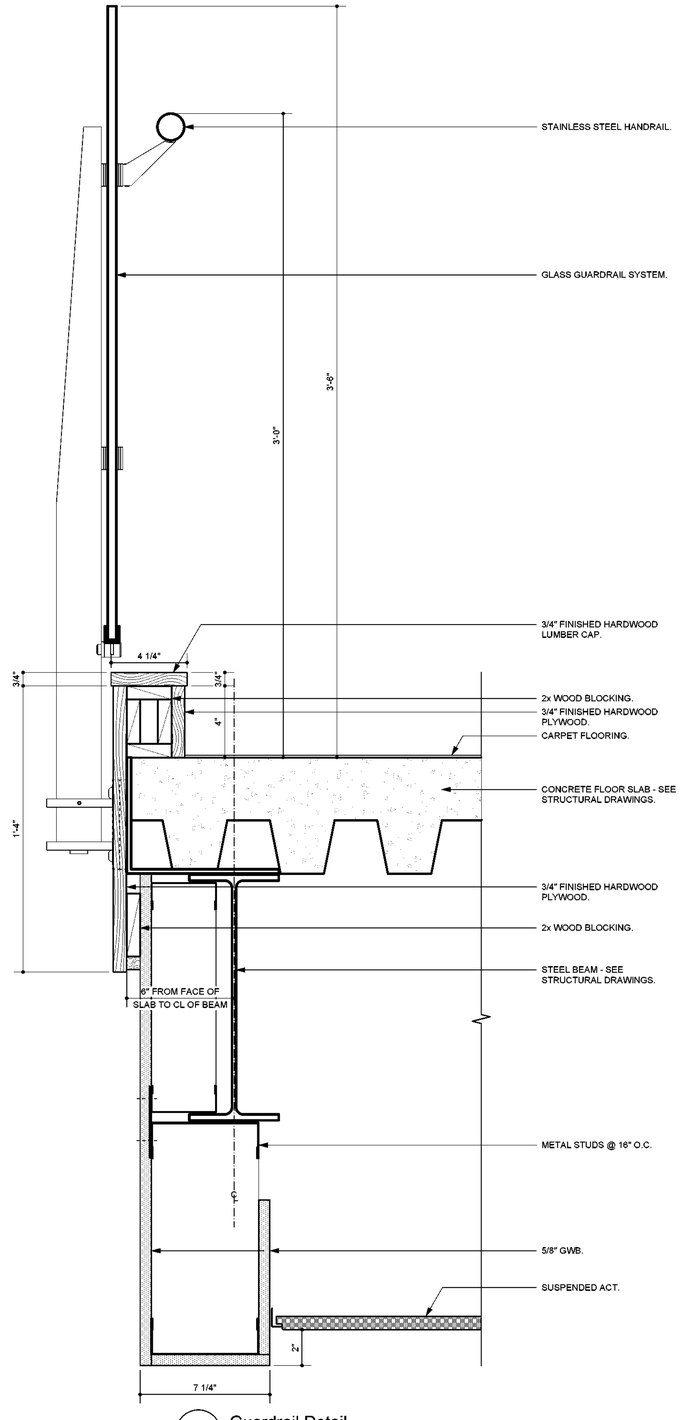
5 Curtain Wall Head Detail @ Connector
Scale: 3" = 1'-0"



7 Roof Fascia @ Expansion Joint Plan
Scale: 3" = 1'-0"



8 Roof Soffit @ Expansion Joint Detail
Scale: 3" = 1'-0"



9 Guardrail Detail
Scale: 3" = 1'-0"

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Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

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FINISH SCHEDULE

ID	ROOM NAME	FLOOR FINISH	BASE MATERIAL	NORTH WALL FINISH	EAST WALL FINISH	SOUTH WALL FINISH	WEST WALL FINISH	CEILING	CEILING HT	REMARKS
100	Lobby	ETR PT	ETR PT	GWB PTD, ETR GWB	ETR GWB	ETR GWB	GWB PTD, ETR	ETR ACT & GWB	See Sheet A1.2R	
101	Conference	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2R	
101A	Corridor	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2R	Wall & Corner Guards
102	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2R	
102A	Corridor	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2R	
103	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
104	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
105	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
106	Conference	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
107	Copy & Mail Center	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
108	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
108A	Corridor	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
111	Kitchenette	PT1	PT1	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2R	
111A	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2R	
111B	Corridor	CPT	ETR RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
112A	Corridor	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
116	Waiting	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
117	Reception	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
118	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
119	Plan Room & Printing	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
120	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
121	Conf. and Documents	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
122	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
123	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
125	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2R	
125A	Corridor	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2R	
125A	Corridor	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2R	
125A	Corridor	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2R	
125A	Corridor	CPT	ETR RB, RB	GWB PTD	ETR GWB PTD	ETR GWB PTD	ETR GWB PTD	ETR ACT, ACT	See Sheet A1.2R	
126	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
127	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
128	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
128A	Corridor	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
129	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
130	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
132	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
134	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
136	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
138	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2R	
142	Break Room	PT1	PT1	ETR GWB PTD	ETR GWB PTD	ETR GWB PTD	ETR GWB PTD	ETR	See Sheet A1.2R	
146	Waiting	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
147	Interview & Report	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
148	Reception & Records	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
150	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
151	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
151A	Corridor	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
153	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
154	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
155	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
156	Armory	VCT	RB	ETR GWB PTD	ETR GWB PTD	ETR GWB PTD	ETR GWB PTD	ACT	See Sheet A1.2R	
161A	Corridor	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
164	Observation	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
165	Storage	ETR	ETR	ETR GWB PTD	ETR GWB PTD	ETR GWB PTD	ETR GWB PTD	ETR	See Sheet A1.2R	
166	Evidence Processing	VCT	RB	ETR GWB PTD	ETR GWB PTD	ETR GWB PTD	GWB PTD	ACT	See Sheet A1.2R	
166A	Corridor	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
167	Patrol Briefing	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.2R	Touch-up wall paint as needed
168	Evidence Processing	VCT	RB	ETR GWB PTD	GWB PTD	ETR GWB PTD	ETR GWB PTD	ACT	See Sheet A1.2R	
168A	Evidence	Resinous Flooring	Resinous Flooring	GWB PTD, ETR	ETR GWB PTD	GWB PTD, ETR	GWB PTD	ACT	See Sheet A1.2R	
168B	Evidence	Resinous Flooring	Resinous Flooring	ETR GWB PTD	GWB PTD	GWB PTD	ETR GWB PTD	ACT	See Sheet A1.2R	
170	Evidence Processing	PT1	PT1	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2R	
200	Lobby	ETR, CPT	ETR, RB	ETR, GWB PTD	ETR, GWB PTD	ETR	ETR, GWB PTD	ETR, ACT, GWB	See Sheet A1.3R	
200B	Conference	CPT	RB	ETR GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3R	
200C	Conference	CPT	RB	ETR GWB PTD	GWB PTD, Aluminum Storefront	GWB PTD	ETR GWB PTD, Aluminum Curtain Wall	ACT, GWB PTD	See Sheet A1.3R	
201	Vestibule	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
201A	Camera Room	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
201B	Council Chambers	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
202	Waiting	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
203	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
204	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
204A	Corridor	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
205	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
207	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
210	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
211	Conference	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3R	
211A	Corridor	CPT	ETR, RB	GWB PTD	ETR GWB PTD	ETR GWB PTD	ETR GWB PTD	ETR ACT, ACT	See Sheet A1.3R	
213	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
214	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
216	Copy/Work	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
216A	Corridor	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
217	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
218	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
219	Council Conference	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
220	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
220A	Corridor	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
220B	Corridor	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
225	Training Council Overflow	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
230	Office	CPT	ETR RB, RB	ETR GWB PTD	ETR GWB PTD	ETR GWB PTD, GWB PTD	ETR GWB PTD, GWB PTD	ETR ACT	See Sheet A1.3R	
230A	Office	CPT	RB	ETR GWB PTD	ETR GWB PTD, GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3R	
231	Office	CPT	ETR RB, RB	ETR GWB PTD	ETR GWB PTD	ETR GWB PTD, GWB PTD	ETR GWB PTD	ETR ACT	See Sheet A1.3R	
234	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
236	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
237	Copy & Storage	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
237A	Corridor	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
239	Conference	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
241A	Corridor	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
242	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
243	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
243	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
244	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
246	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
247	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
247A	Corridor	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
249	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
250	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
250A	Waiting	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
251	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
253	Open Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
253A	Corridor	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
253A	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
254	Office	CPT	ETR RB	ETR GWB	ETR GWB	ETR GWB	ETR GWB	ETR ACT	See Sheet A1.3R	Touch-up wall paint as needed
255	Office	CPT	RB	ETR GWB PTD	ETR GWB PTD	ETR GWB PTD	ETR GWB PTD	ETR	See Sheet A1.3R	
300	Vestibule	Entryway Carpet	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
300A	Corridor	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	Wall & Corner Guards
301	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	

ACT - Acoustical Ceiling Tile
CPT - Carpet Tile
GWB - Gypsum Wall Board
PTD - Painted
PT - Porcelain Tile
VCT - Vinyl Composite Tile
RB - Rubber Base
HM - Hollow Metal
ETR - Existing to Remain

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NORTH CAROLINA REGISTERED SEAL 14231 2-28-24 LICENSED ENGINEER JENNY L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Finish Schedule

Rev.	Date	Notes

A6.0

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FINISH SCHEDULE

ID	ROOM NAME	FLOOR FINISH	BASE MATERIAL	NORTH WALL FINISH	EAST WALL FINISH	SOUTH WALL FINISH	WEST WALL FINISH	CEILING	CEILING HT	REMARKS
302	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
303	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
303A	Corridor	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	Wall & Corner Guards
304	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
305	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
306	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
306A	Corridor	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	Wall & Corner Guards
307	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
308	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
309	Server	VCT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
310	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
311	Vestibule	Entryway Carpet	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
312	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
313	Custodial	PT2	PT2	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
314	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
315	Copy / Print	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
316	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
317	Electrical	VCT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
318	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
319	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
319A	Corridor	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	Wall & Corner Guards
320	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
321	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
322	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
323	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
324	Vestibule	Entryway Carpet	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
324A	Corridor	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	Wall & Corner Guards
325	Open Office	CPT	RB	GWB PTD	GWB PTD, Aluminum Storefront	GWB PTD, Aluminum Storefront	GWB PTD	ACT	See Sheet A1.2	
326	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
327	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
328	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
328A	Corridor	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	Wall & Corner Guards
329	Mens Restroom	PT1	PT1	PT Wainscot	PT Wainscot	PT Wainscot	PT Wainscot	ACT	See Sheet A1.2	Tile Wainscot - See Sheet A4.0
330	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
331	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
332	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
333	Womens Restroom	PT1	PT1	PT Wainscot	PT Wainscot	PT Wainscot	PT Wainscot	ACT	See Sheet A1.2	Tile Wainscot - See Sheet A4.0
334	Vestibule	Entryway Carpet	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
335	Lobby	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	Wall & Corner Guards
336	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
336A	Corridor	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	Wall & Corner Guards
337	Storage	VCT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
338	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
339	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
340	Open Office	CPT	RB	GWB PTD	GWB PTD, Aluminum Storefront	GWB PTD	GWB PTD, Aluminum Storefront	ACT	See Sheet A1.2	
341	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
342	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
343	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
344	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
345	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
346	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.2	
400	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
400A	Corridor	CPT	RB	GWB PTD	GWB PTD, Aluminum Curtain Wall	GWB PTD	GWB PTD	ACT	See Sheet A1.3	Wall & Corner Guards
401	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
402	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
403	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
404	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
405	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
406	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
406A	Corridor	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	Wall & Corner Guards
407	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
408	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
409	Server	VCT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
410	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
411	Break Area	PT1	PT1	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
412	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
413	Custodial	PT2	PT2	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
414	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
415	Copy / Print	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
416	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
417	Electrical	VCT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
417B	Electrical Closet	VCT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	GWB	See Sheet A1.3	2-HR Rated Room
418	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
418A	Corridor	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	Wall & Corner Guards
419	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
420	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
421	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
422	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
422A	Corridor	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	Wall & Corner Guards
423	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
424	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
425	Open Office	CPT	RB	GWB PTD	GWB PTD, Aluminum Storefront	GWB PTD, Aluminum Storefront	GWB PTD	ACT	See Sheet A1.3	
426	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
427	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
428	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
428A	Corridor	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	Wall & Corner Guards
429	Mens Restroom	PT1	PT1	PT Wainscot	PT Wainscot	PT Wainscot	PT Wainscot	ACT	See Sheet A1.3	Tile Wainscot - See Sheet A4.0
430	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
431	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
432	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
434	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
435	Lobby	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	Wall & Corner Guards
436	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
437	Womens Restroom	PT1	PT1	PT Wainscot	PT Wainscot	PT Wainscot	PT Wainscot	ACT	See Sheet A1.3	Tile Wainscot - See Sheet A4.0
437	Storage	VCT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
438	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
438A	Corridor	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	Wall & Corner Guards
439	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
440	Conference	CPT	RB	GWB PTD, Aluminum Storefront	GWB PTD, Aluminum Storefront	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
441	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
442	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
443	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
444	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
445	Open Office	CPT	RB	GWB PTD	GWB PTD, Aluminum Storefront	GWB PTD	GWB PTD, Aluminum Storefront	ACT	See Sheet A1.3	
446	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
446A	Corridor	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	Wall & Corner Guards
447	Office	CPT	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	ACT	See Sheet A1.3	
M1	Mechanical Loft	Concrete	RB	GWB PTD	GWB PTD	GWB PTD	GWB PTD	Exposed to Structure	Varies	

ACT - Acoustical Ceiling Tile
CPT - Carpet Tile
GWB - Gypsum Wall Board
PTD - Painted
PT - Porcelain Tile
VCT - Vinyl Composite Tile
RB - Rubber Base
HM - Hollow Metal
ETR - Existing to Remain

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NORTH CAROLINA REGISTERED SEAL 14231 2-28-24 ARCHITECT JOHN L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Finish Schedule Continued

Rev.	Date	Notes

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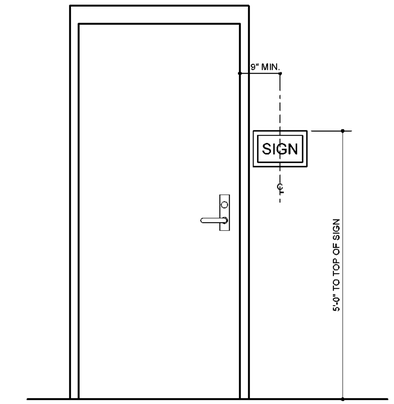
DOOR SCHEDULE

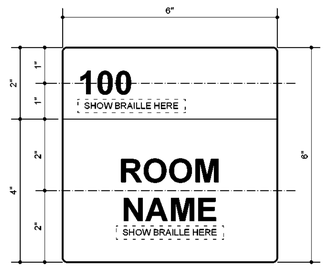
	Door								Hardware	
ID #	Width	Height	Swing Operation	Door Type	Door Material	Jamb Depth	Frame Type	Frame Material	HW Set	Remarks
100	3'0"	7'0"	Single	ETR	ETR	7 1/4"	ETR	ETR	14	New Door Hardware - See Spec Section 08 7100; apply privacy film to door lite & side lites
100CC	6'0"	7'0"	Double Bi-part	Existing	Existing	8 1/4"	HM1	HM	17	45 min rated door & frame; Re-use door & hardware from door 100CC
100CD	3'0"	7'0"	Single	C	Wood	8 1/4"	HM1	HM	12	
101	3'0"	7'0"	Single	-	-	5 7/8"	ETR	ETR	10	Door leaf removed to provide cased opening. Provide flush metal cover at existing hardware prep and paint to match frame.
101A	3'0"	7'0"	Single	-	-	5 7/8"	ETR	ETR	10	Door leaf removed to provide cased opening. Provide flush metal cover at existing hardware prep and paint to match frame.
101B	3'0"	7'0"	Single	B	Wood	5 7/8"	HM2	HM	15	
111A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
125A	3'0"	7'0"	Single	B	Wood	5 7/8"	HM2	HM	04	
142	3'0"	7'0"	Single	ETR	ETR	7 1/4"	ETR	ETR	18	New Door Hardware - See Spec Section 08 7100
166	3'0"	7'0"	Single	ETR	ETR	7 1/4"	ETR	ETR	14	New Door Hardware - See Spec Section 08 7100
166A	3'0"	7'0"	Single	D	Wood	5 7/8"	HM1	HM	11	Dutch door
168B	3'0"	7'0"	Single	A	Wood	5 7/8"	HM1	HM	07	
170	3'0"	7'0"	Single	ETR	ETR	7 1/4"	ETR	ETR	14	New Door Hardware - See Spec Section 08 7100
200A	3'0"	7'0"	Single	B	Wood	5 7/8"	HM2	HM	13	
200B	3'0"	7'0"	Single	B	Wood	5 7/8"	HM6	HM	13	
211	3'0"	7'0"	Single	B	Wood	5 7/8"	HM2	HM	04	
229A	3'0"	7'0"	Single	C	Wood	5 7/8"	HM1	HM	16	45 min rated door & frame
230	3'0"	7'0"	Single	B	Wood	5 7/8"	HM2	HM	04	
230A	3'0"	7'0"	Single	B	Wood	5 7/8"	HM1	HM	04	
231	3'0"	7'0"	Single	B	Wood	5 7/8"	HM2	HM	04	
255	3'0"	7'0"	Single	ETR	ETR	5 7/8"	ETR	ETR	19	New Door Hardware - See Spec Section 08 7100
300A	3'0"	7'10"	Single	E	Alum.	6"	AL1	Alum.	01	
300B	3'0"	7'0"	Single	E	Wood	8 1/4"	HM4	Alum.	02	
301A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
302A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
303A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
304A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
305A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
306A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
307A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
308A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
309A	3'0"	7'0"	Single	A	Wood	5 7/8"	HM1	HM	13	
310A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
311A	3'0"	7'10"	Single	E	Alum.	6"	AL1	Alum.	01	
311B	3'0"	7'0"	Single	E	Wood	5 7/8"	HM3	HM	02	
312A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
313A	3'0"	7'0"	Single	A	Wood	5 7/8"	HM1	HM	05	
314A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
315A	3'0"	7'0"	Single	-	-	5 7/8"	HM1	HM	10	Cased opening
316A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
317A	3'0"	7'0"	Single	A	Wood	5 7/8"	HM1	HM	06	
318A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
319A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
320A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
321A	3'0"	7'0"	Single	B	Wood	5 7/8"	HM1	HM	04	
322A	3'0"	7'0"	Single	B	Wood	5 7/8"	HM2	HM	04	
323A	3'0"	7'0"	Single	B	Wood	5 7/8"	HM2	HM	04	
324A	3'0"	7'10"	Single	E	Alum.	6"	AL2	Alum.	01	
324B	3'0"	7'0"	Single	E	Wood	5 7/8"	HM5	HM	02	
325A	3'0"	7'0"	Single	E	Wood	4 1/2"	AL3	Alum.	09	
325B	3'0"	7'0"	Single	E	Wood	4 1/2"	AL3	Alum.	09	
326A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM1	HM	04	
327A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM1	HM	04	
328A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
329A	3'0"	7'0"	Single	A	Wood	5 7/8"	HM1	HM	03	
330A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
331A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
332A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
333A	3'0"	7'0"	Single	A	Wood	5 7/8"	HM1	HM	03	
334A	3'0"	7'10"	Single	E	Alum.	6"	AL1	Alum.	01	
334B	3'0"	7'0"	Single	E	Wood	8 1/4"	HM3	HM	02	
336A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
337A	3'0"	7'0"	Single	A	Wood	5 7/8"	HM1	HM	05	
338A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
339A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
340A	3'0"	7'0"	Single	E	Wood	4 1/2"	AL6	Alum.	09	
340B	3'0"	7'0"	Single	E	Wood	4 1/2"	AL6	Alum.	09	
341A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
342A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
343A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
344A	3'0"	7'0"	Single	B	Wood	5 7/8"	HM1	HM	04	
345A	3'0"	7'0"	Single	B	Wood	5 7/8"	HM2	HM	04	
346A	3'0"	7'0"	Single	B	Wood	5 7/8"	HM2	HM	04	
400A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
401A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
402A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
403A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
404A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
405A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
406A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
407A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
408A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
409A	3'0"	7'0"	Single	A	Wood	5 7/8"	HM1	HM	13	
410A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
412A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
413A	3'0"	7'0"	Single	A	Wood	5 7/8"	HM1	HM	05	
414A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
415A	3'0"	7'0"	Single	-	-	5 7/8"	HM1	HM	10	Cased opening
416A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
417A	3'0"	7'0"	Single	A	Wood	5 7/8"	HM1	HM	06	
417B	3'0"	7'0"	Single	A	Wood	7 1/8"	HM1	HM	20	90 min rated door & frame
418A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
419A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
420A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
421A	3'0"	7'0"	Single	B	Wood	5 7/8"	HM1	HM	04	
422A	3'0"	7'0"	Single	B	Wood	5 7/8"	HM2	HM	04	
423A	3'0"	7'0"	Single	B	Wood	5 7/8"	HM2	HM	04	
424A	3'0"	7'0"	Single	B	Wood	5 7/8"	HM1	HM	04	
425A	3'0"	7'0"	Single	E	Wood	4 1/2"	AL3	Alum.	09	
425B	3'0"	7'0"	Single	E	Wood	4 1/2"	AL3	Alum.	09	
426A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	

DOOR SCHEDULE

	Door								Hardware	
ID #	Width	Height	Swing Operation	Door Type	Door Material	Jamb Depth	Frame Type	Frame Material	HW Set	Remarks
427A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
428A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
429A	3'0"	7'0"	Single	B	Wood	5 7/8"	HM1	HM	03	
430A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
431A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
432A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
433A	3'0"	7'0"	Single	B	Wood	5 7/8"	HM1	HM	03	
434A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
436A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
437A	3'0"	7'0"	Single	A	Wood	5 7/8"	HM1	HM	05	
438A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
439A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
440A	3'0"	7'0"	Single	E	Wood	4 1/2"	AL5	Alum.	08	
440B	3'0"	7'0"	Single	E	Wood	4 1/2"	AL5	Alum.	08	
441A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
442A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
443A	3'0"	7'0"	Single	B	Wood	8 1/4"	HM2	HM	04	
444A	3'0"	7'0"	Single	B	Wood	5 7/8"	HM1	HM	04	
445A	3'0"	7'0"	Single	E	Wood	4 1/2"	AL4	Alum.	09	
445B	3'0"	7'0"	Single	E	Wood	4 1/2"	AL4	Alum.	09	
446A	3'0"	7'0"	Single	B	Wood	5 7/8"	HM2	HM	04	
447A	3'0"	7'0"	Single	B	Wood	5 7/8"	HM2	HM	04	



1 **Typical Signage Detail**
Scale: 3/4" = 1'-0"



NOTES:
- Final room names and numbers to be determined during submittal review.

2 **Signage Detail**
Scale: Half Actual Size

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SAWYER, SHERWOOD & ASSOCIATE, P.C. REGISTERED ARCHITECTURAL CORPORATION 52349 NORTH CAROLINA WILMINGTON, NC

NORTH CAROLINA REGISTERED SEAL 34231 2-28-24 ARCHITECT JERRY L. WILLIAMS

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Door Schedule

Rev.	Date	Notes

A6.2

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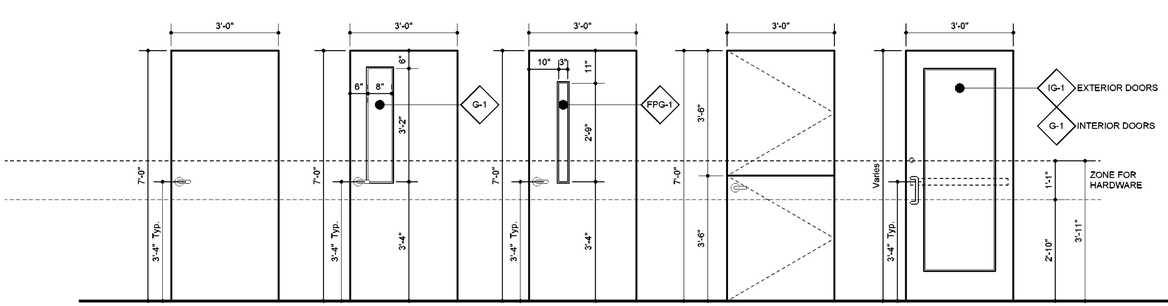
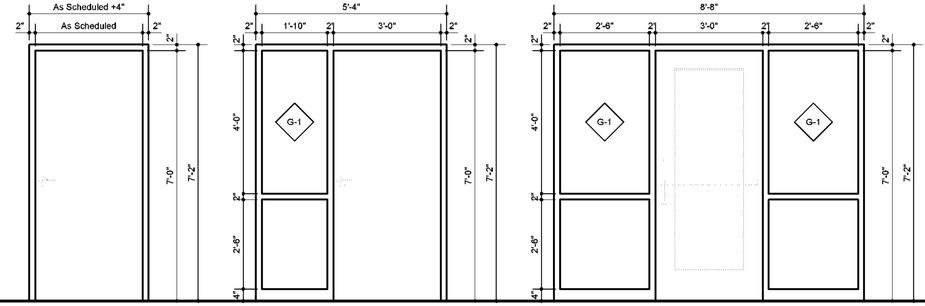
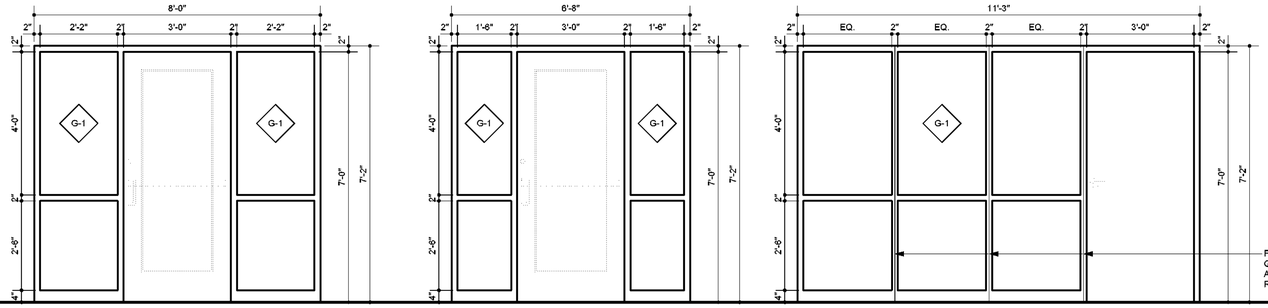


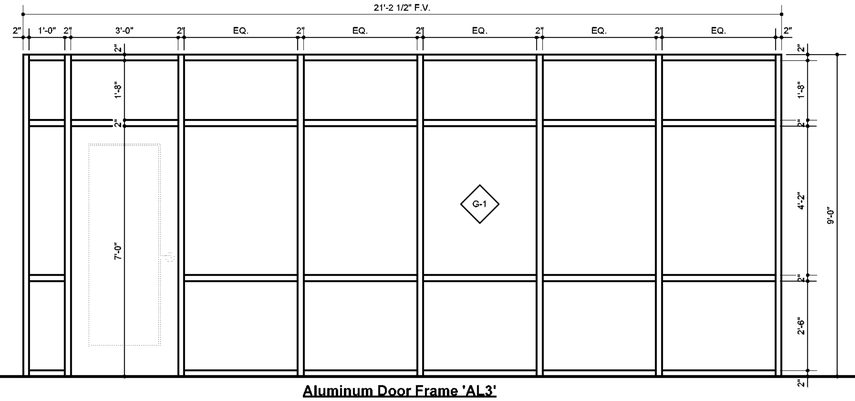
Door Type 'A' | **Door Type 'B'** | **Door Type 'C'** Fire Door | **Door Type 'D'** | **Door Type 'E'**



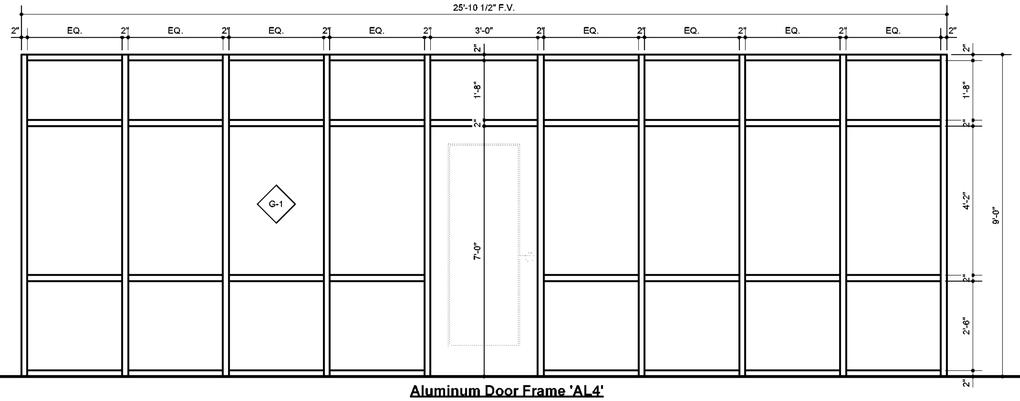
HM Door Frame 'HM1' | **HM Door Frame 'HM2'** | **HM Door Frame 'HM3'**



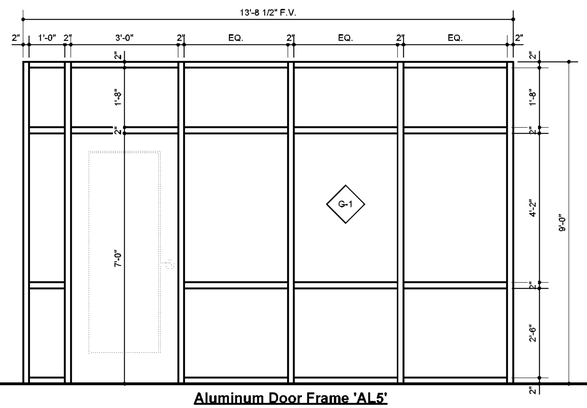
HM Door Frame 'HM4' | **HM Door Frame 'HM5'** | **HM Door Frame 'HM6'** | **Aluminum Door Frame 'AL1'** | **Aluminum Door Frame 'AL2'**



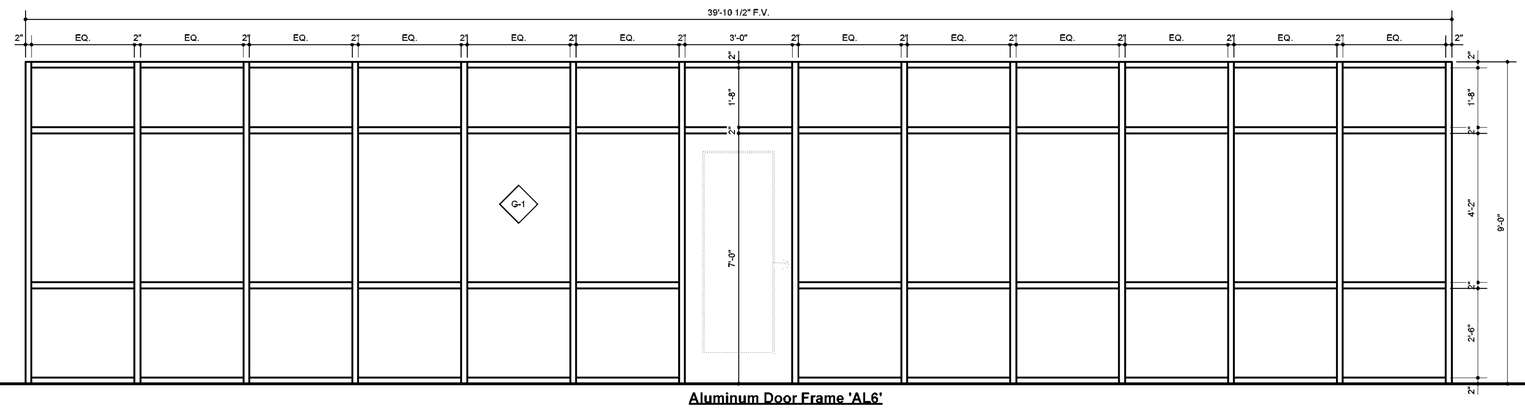
Aluminum Door Frame 'AL3'



Aluminum Door Frame 'AL4'



Aluminum Door Frame 'AL5'



Aluminum Door Frame 'AL6'

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NORTH CAROLINA REGISTERED SEAL 14931 2-23-24 ARCHITECT JENNY L. WILLIAMS

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Door & Window Elevations

Rev.	Date	Notes

A6.3

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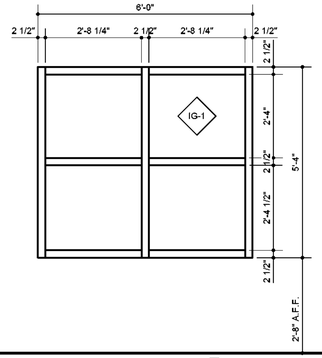
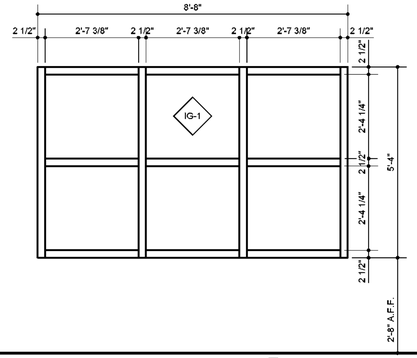
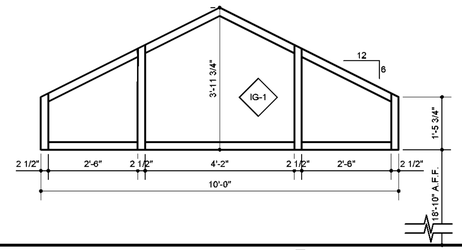
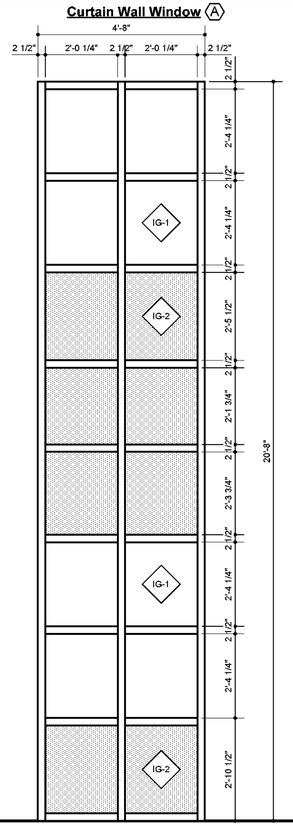


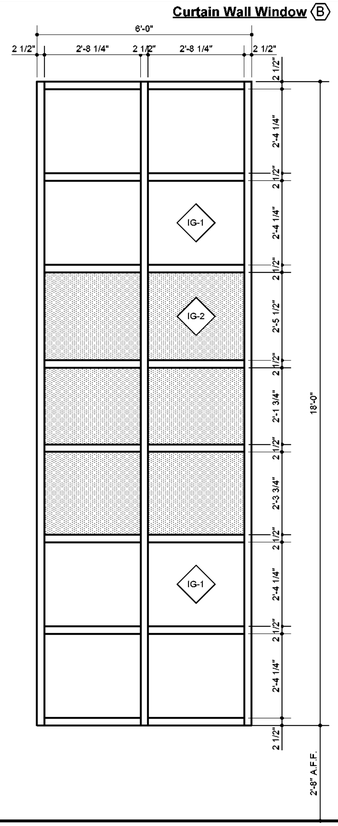




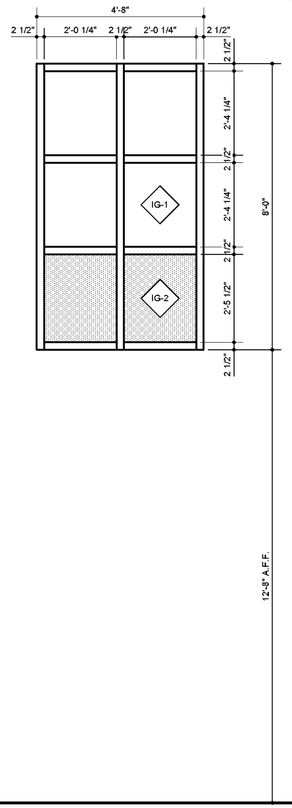
Curtain Wall Window (A)

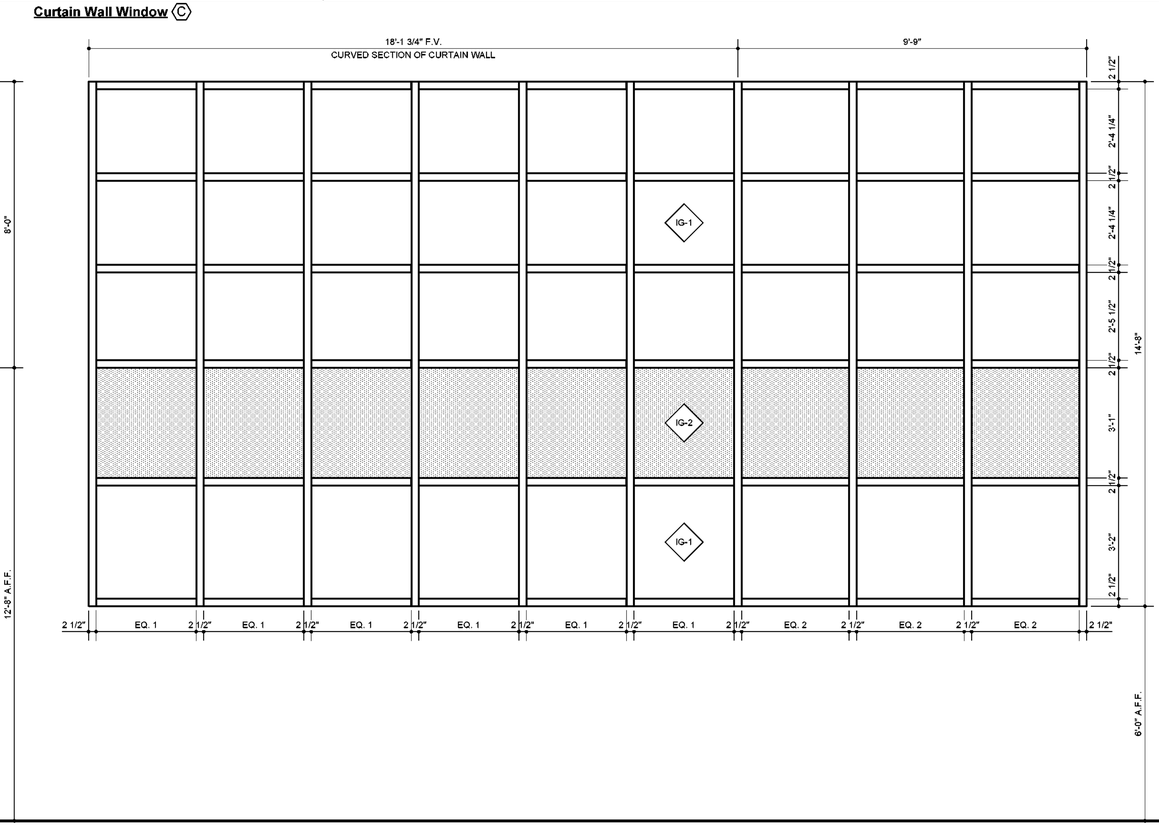


Curtain Wall Window (B)



Curtain Wall Window (C)





Curtain Wall Window (D)

Curtain Wall Window (E)

Curtain Wall Window (F)

Curtain Wall Window (G)

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NORTH CAROLINA REGISTERED SEAL 14231 2-28-24 ENGINEER JENNY L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Window Elevations

Rev.	Date	Notes

A6.4

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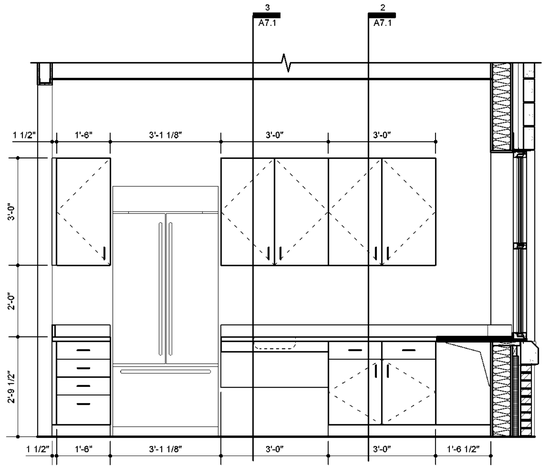
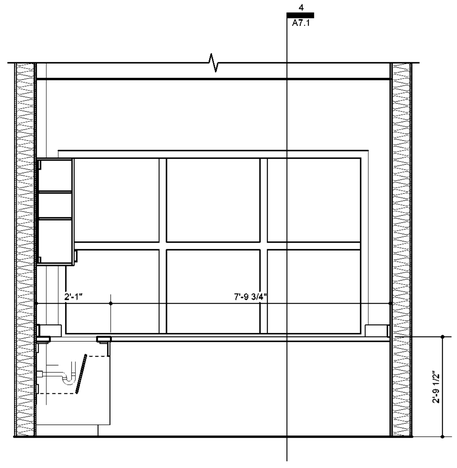
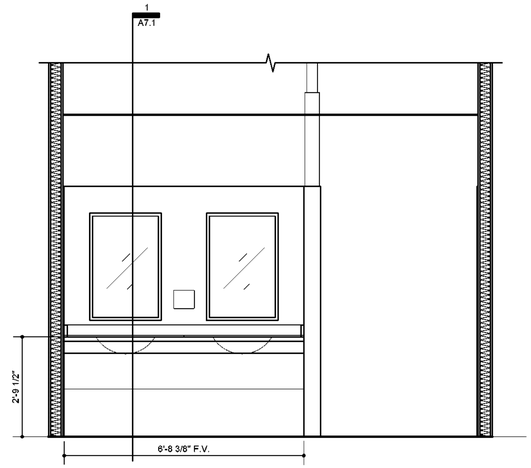


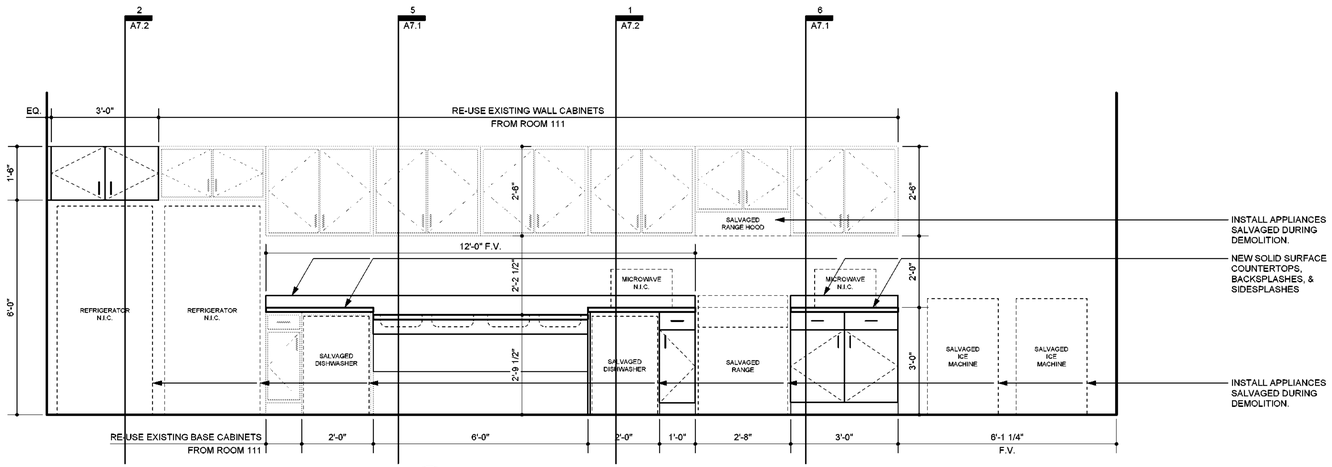
1 Break Area 411 Casework Elevation
Scale: 1/2" = 1'-0"



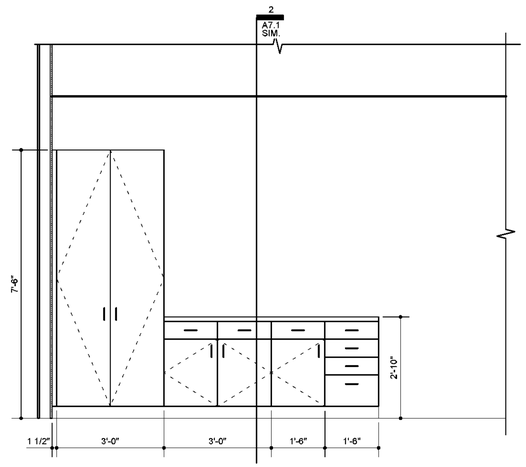
2 Break Area 411 Casework Elevation
Scale: 1/2" = 1'-0"



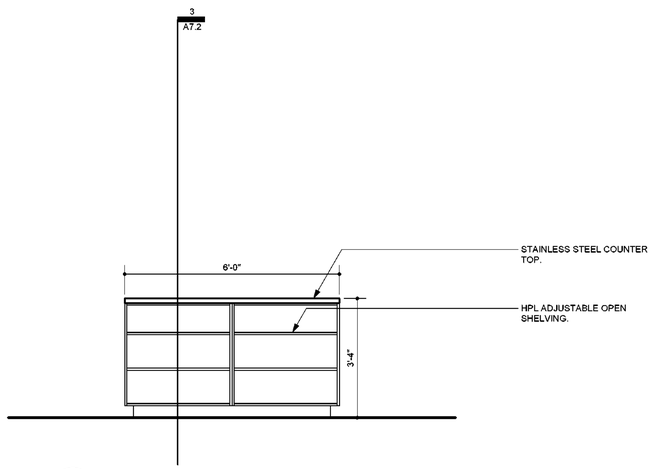
3 Typical Restroom Casework Elevation
Scale: 1/2" = 1'-0"



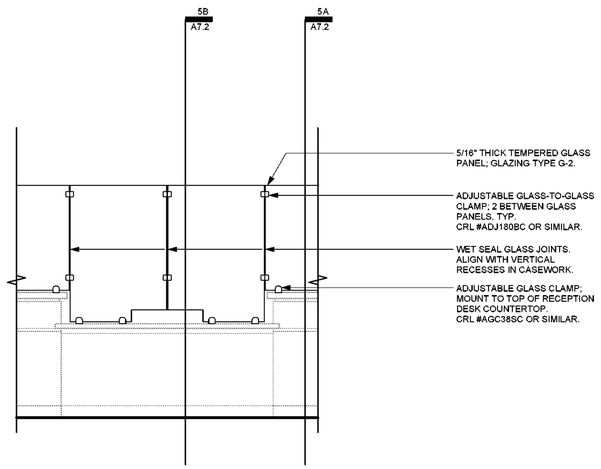
4 Break Room 142 Casework Elevation
Scale: 1/2" = 1'-0"



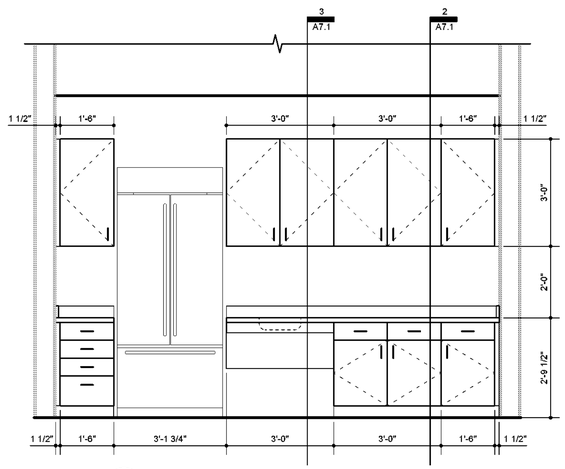
5 Typical Copy/Print Casework Elevation
Scale: 1/2" = 1'-0"



7 Evidence Processing 170 Casework Elevation
Scale: 1/2" = 1'-0"



8 Lobby 100 Reception Casework Elevation
Scale: 1/2" = 1'-0"



9 Kitchenette 111 Casework Elevation
Scale: 1/2" = 1'-0"

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NORTH CAROLINA REGISTERED SEAL 14231 JERRY L. WILLIAMS ENGINEER 2-23-24

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Casework Elevations

Rev.	Date	Notes

A7.0

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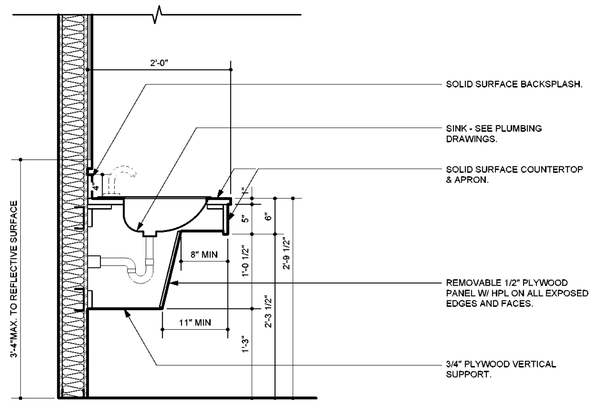
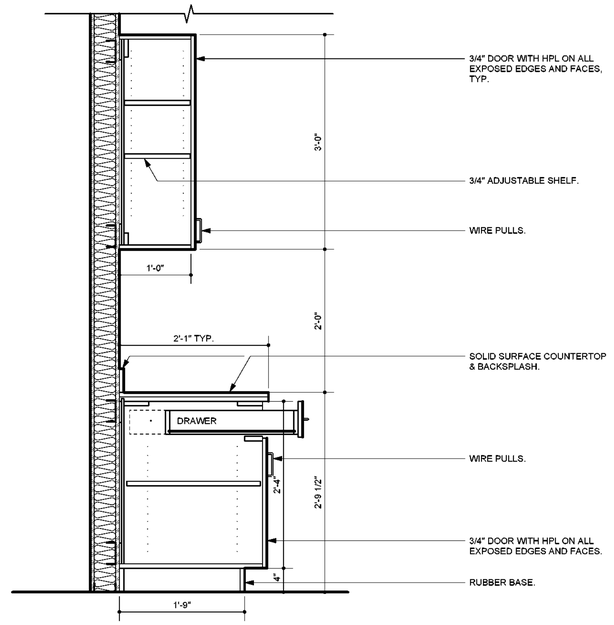


1 Typical Restroom Casework Section
Scale: 1" = 1'-0"



2 Typical Casework Section
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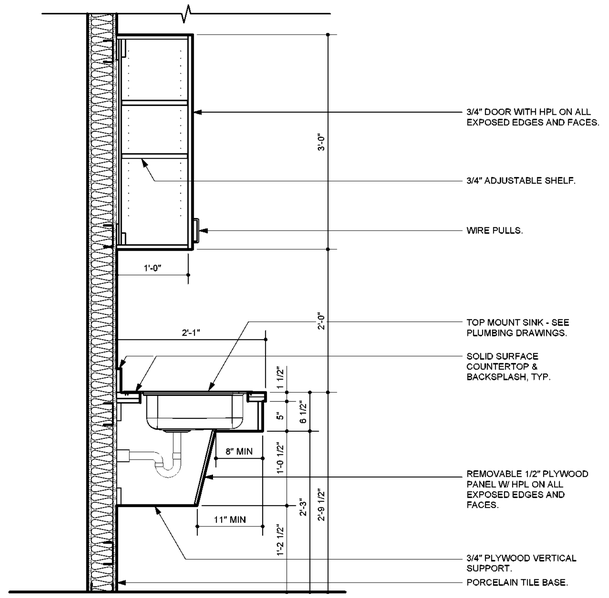

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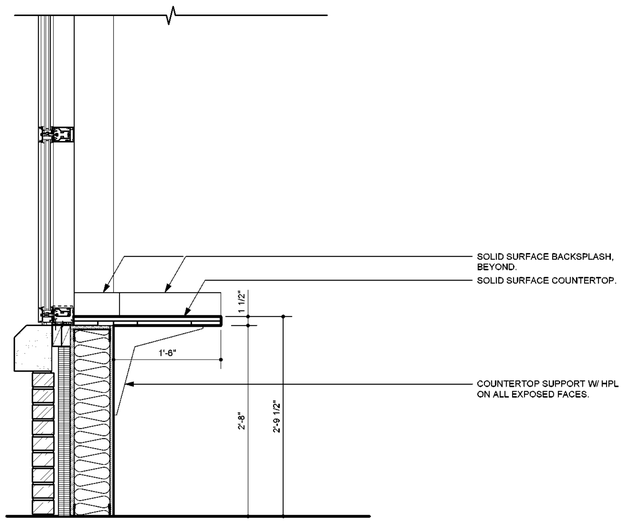
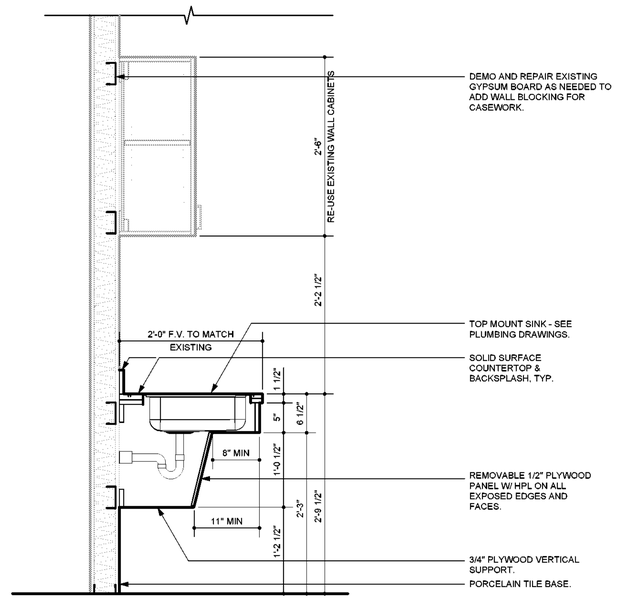
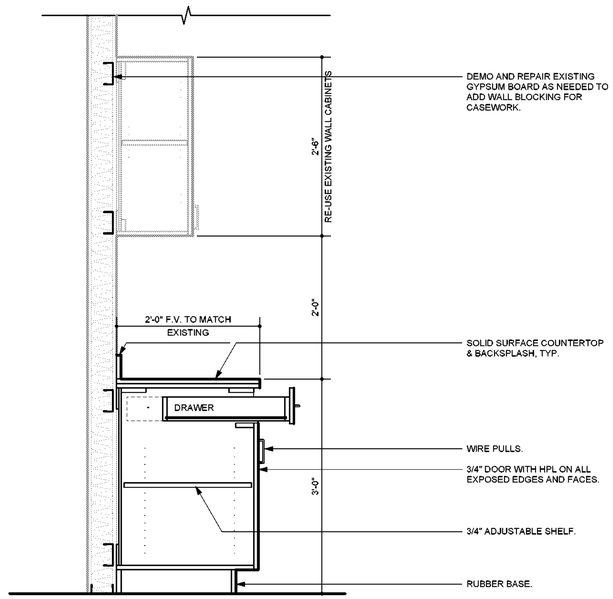


4 Break Area 411 Casework Section
Scale: 1" = 1'-0"



5 Break Room 142 Casework Section
Scale: 1" = 1'-0"



6 Break Room 142 Casework Section
Scale: 1" = 1'-0"

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NORTH CAROLINA REGISTERED SEAL 18231 2-23-24 ARCHITECT JENNY L. WILLIAMS

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Casework Sections

Rev.	Date	Notes

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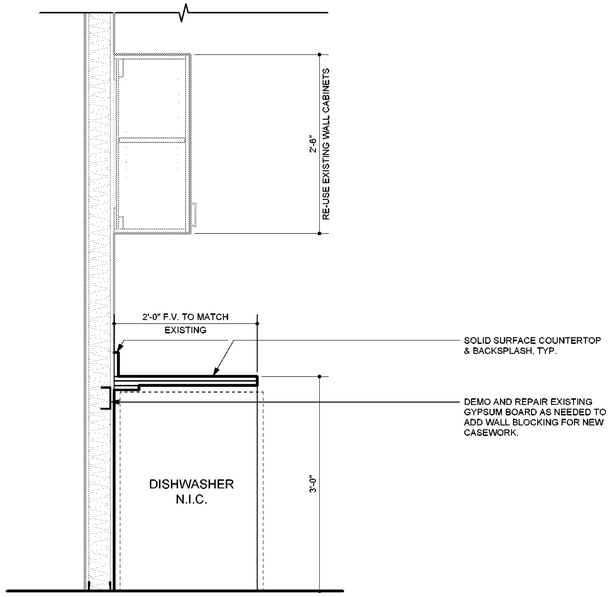
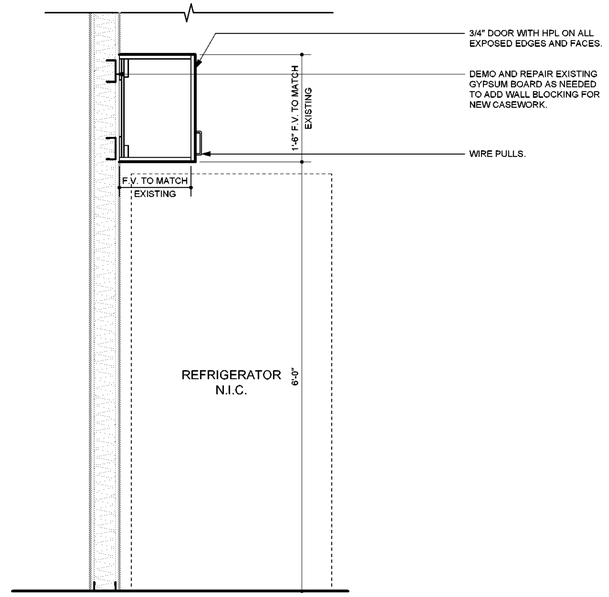


1 Break Room 142 Casework Section
Scale: 1" = 1'-0"



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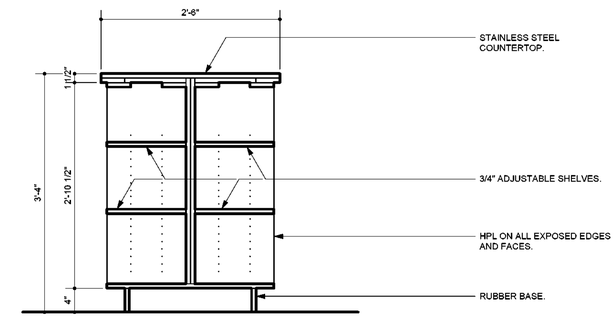
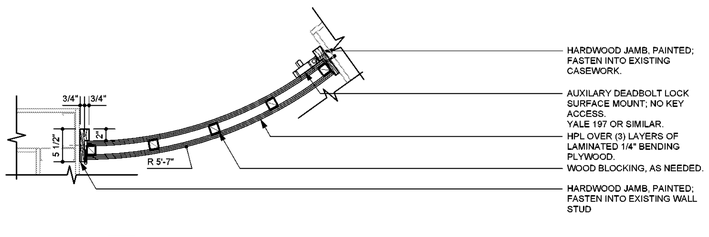
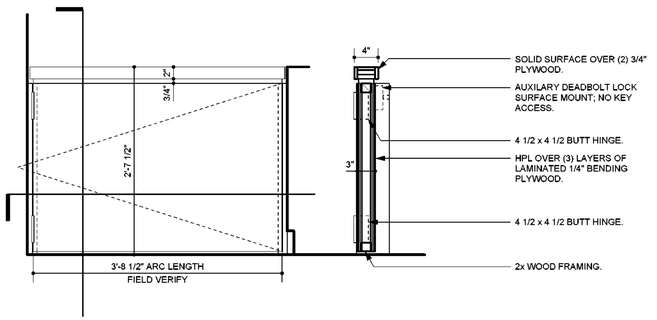
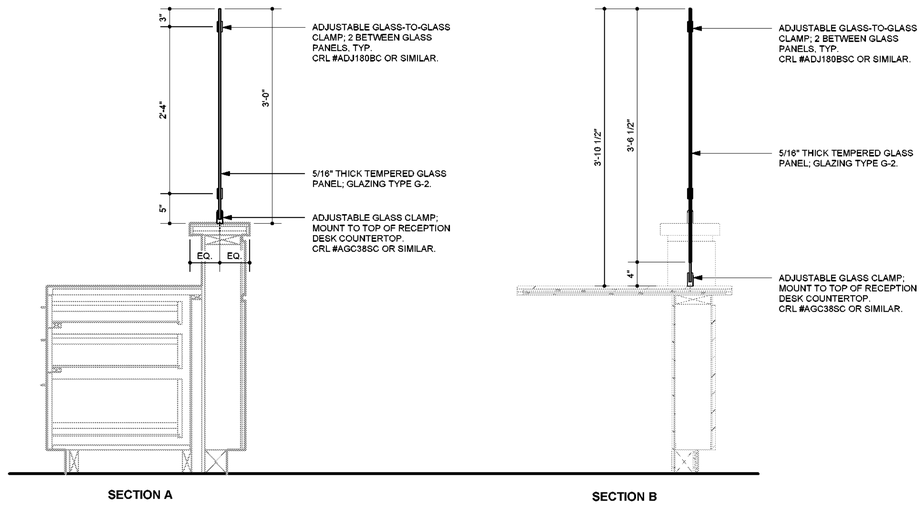


3 Evidence Processing Casework Section
Scale: 1" = 1'-0"





4 Reception Desk Casework Section
Scale: 1" = 1'-0"



5 Reception Desk Casework Sections
Scale: 1" = 1'-0"

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NORTH CAROLINA REGISTERED SEAL 14931 2-23-24 ARCHITECT JERRY L. WILLIAMS

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Casework Sections

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A7.2

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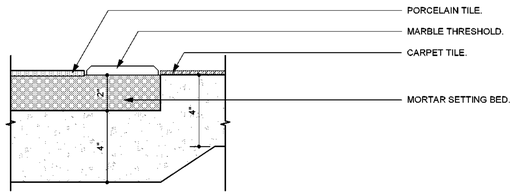
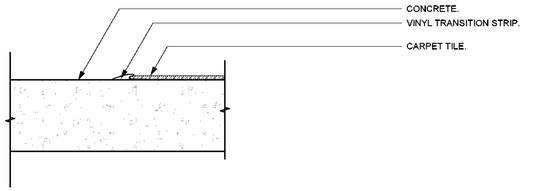


1 Porcelain Tile to Carpet Tile Transition
Scale: 3" = 1'-0"



3 Concrete to Carpet Tile Transition
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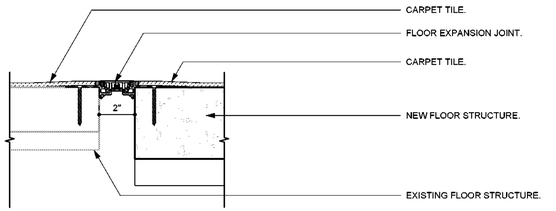
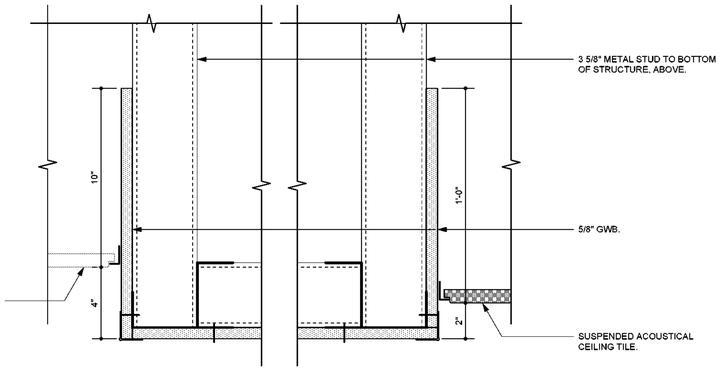
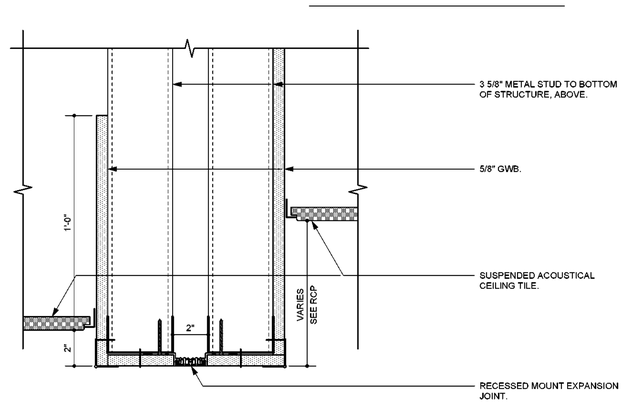


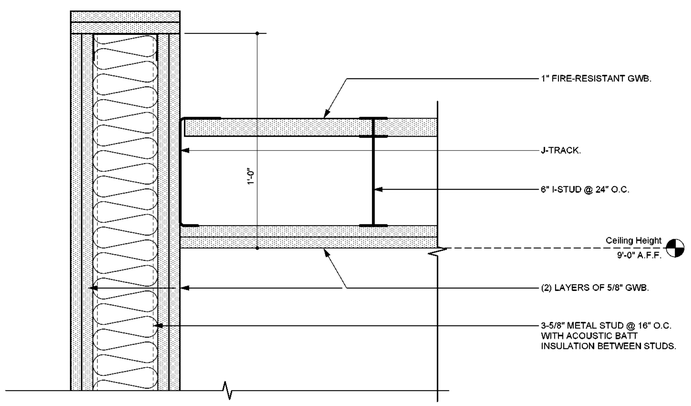
4 Floor Expansion Joint Detail
Scale: 3" = 1'-0"



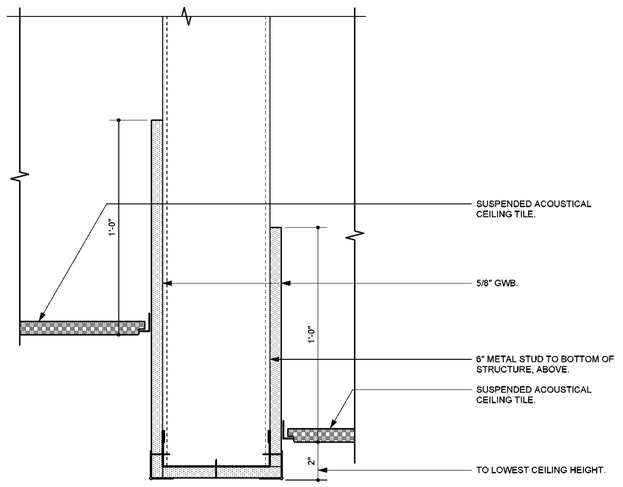
5 GWB Bulkhead Detail
Scale: 3" = 1'-0"



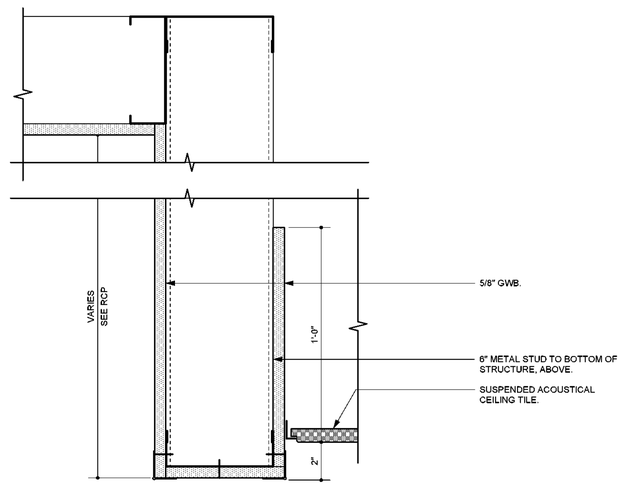
6 GWB Bulkhead at Expansion Joint Detail
Scale: 3" = 1'-0"



7 2-HR Rated Ceiling to Wall Detail
Scale: 3" = 1'-0"



8 ACT to ACT Detail
Scale: 3" = 1'-0"



9 GWB Ceiling to ACT Detail
Scale: 3" = 1'-0"

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NORTH CAROLINA REGISTERED SEAL 14231 2-28-24 ARCHITECT JERRY L. WILLIAMS

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Interior Details

Rev.	Date	Notes

A7.3

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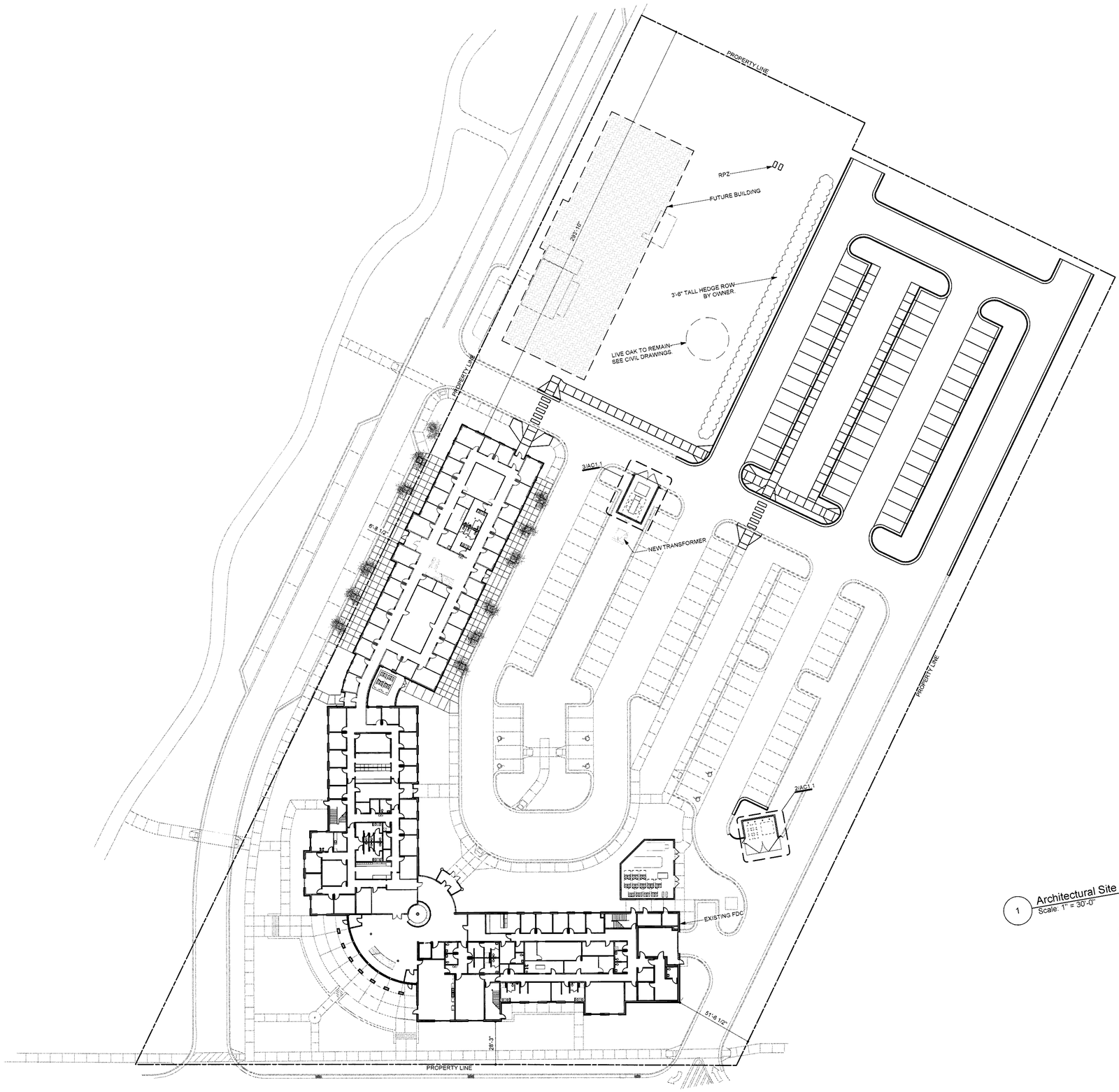

1 Architectural Site Plan
Scale: 1" = 30'-0"

North

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NORTH CAROLINA REGISTERED SEAL 24223 2-23-24 ARCHITECT JENNY L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
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Issue Date: February 23, 2024

Architectural Site Plan

Rev.	Date	Notes

AC1.0

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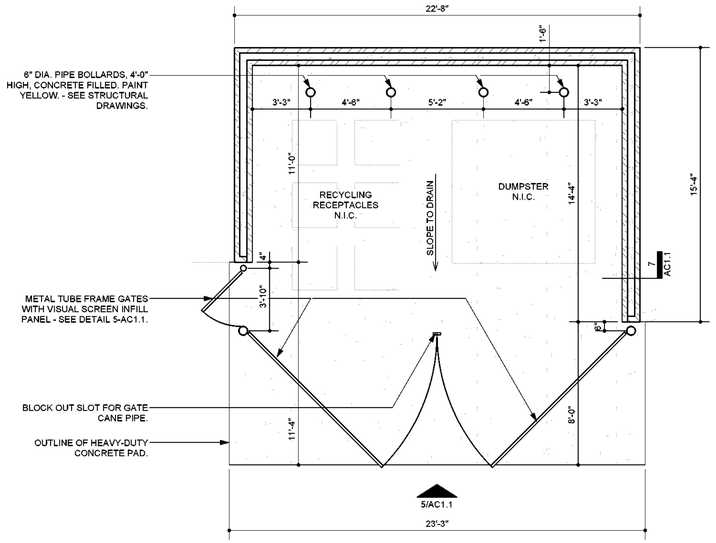
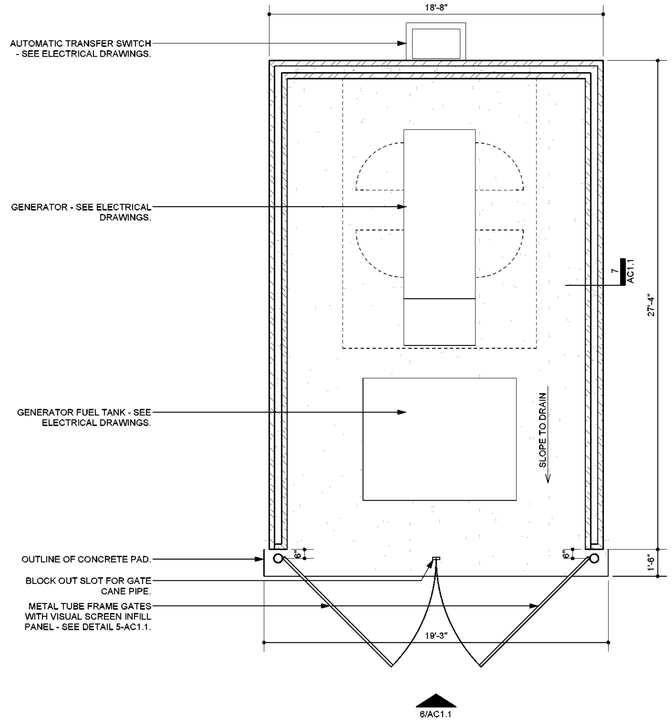
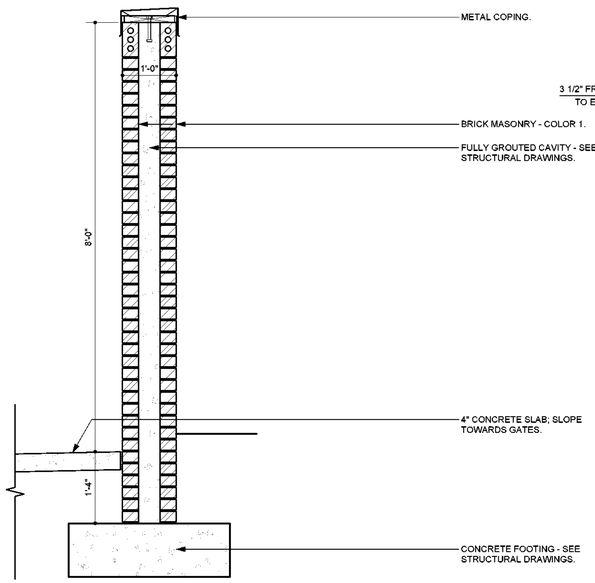


2 Dumpster Enclosure Enlarged Plan
Scale: 1/4" = 1'-0"

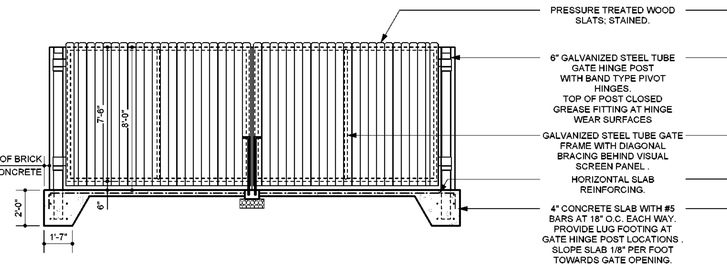


3 Generator Enclosure Enlarged Plan
Scale: 1/4" = 1'-0"

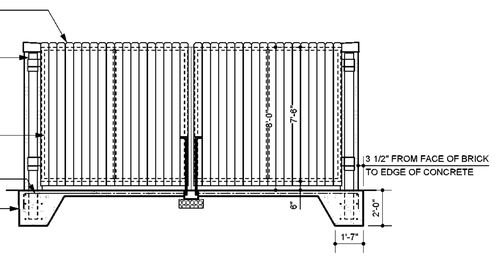
Dumpster Enclosure Notes:
-Steel gates and posts shall be hot dip galvanized (HDG) after fabrication. Provide HDG anchor bolts, nuts & washers for posts. Set top of posts one brick course down from top of walls.
-Provide gate and post shop drawings for Architect review. Work ordered/fabricated prior to review is at contractor's risk.
-Provide (1) 36" HDG cane bolt on each gate leaf. Drill holes into paving to hold gates securely in the open and closed positions.
-Paint gates, hinges, posts and bollards. Follow manufacturer's instructions for surface prep.



7 Screen Wall Section
Scale: 3/4" = 1'-0"



5 Dumpster Enclosure Elevation
Scale: 1/4" = 1'-0"



6 Generator Enclosure Elevation
Scale: 1/4" = 1'-0"

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NORTH CAROLINA REGISTERED SEAL 14231 2-23-24 ARCHITECT JERRY L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Site Details

Rev.	Date	Notes

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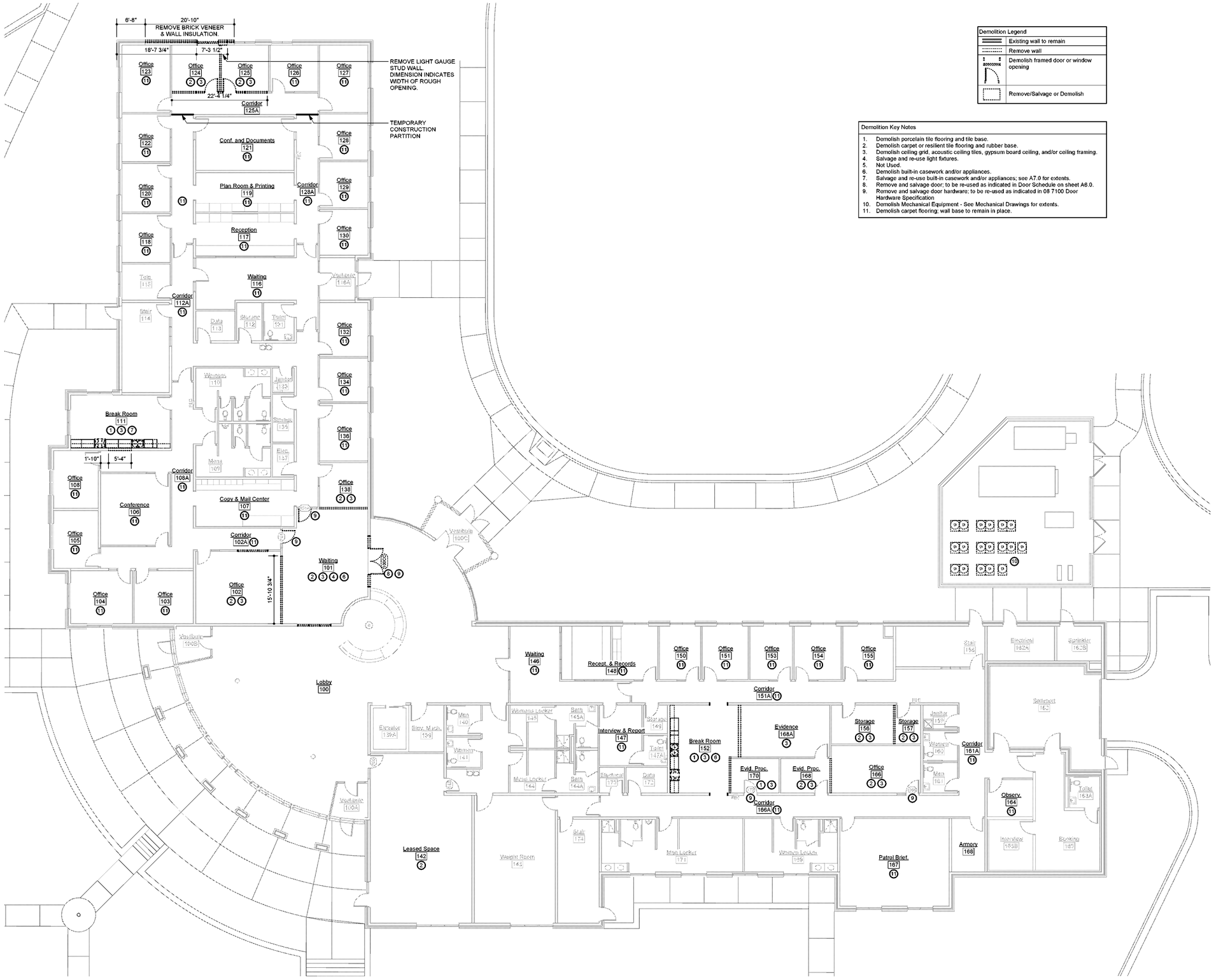

Demolition Legend	
	Existing wall to remain
	Remove wall
	Demolish framed door or window opening
	Remove/Salvage or Demolish

Demolition Key Notes	
1.	Demolish porcelain tile flooring and tile base.
2.	Demolish carpet or resilient tile flooring and rubber base.
3.	Demolish ceiling grid, acoustic ceiling tiles, gypsum board ceiling, and/or ceiling framing.
4.	Salvage and re-use light fixtures.
5.	Not Used.
6.	Demolish built-in casework and/or appliances.
7.	Salvage and re-use built-in casework and/or appliances; see A7.0 for extents.
8.	Remove and salvage door; to be re-used as indicated in Door Schedule on sheet A6.0.
9.	Remove and salvage door hardware; to be re-used as indicated in 08 7100 Door Hardware Specification
10.	Demolish Mechanical Equipment - See Mechanical Drawings for extents.
11.	Demolish carpet flooring; wall base to remain in place.

1 First Floor Demolition Plan
Scale: 3/32" = 1'-0"

Plan North

North

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Leland Town Hall Addition & Renovations

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First Floor Demolition Plan

Rev.	Date	Notes

AD1.0

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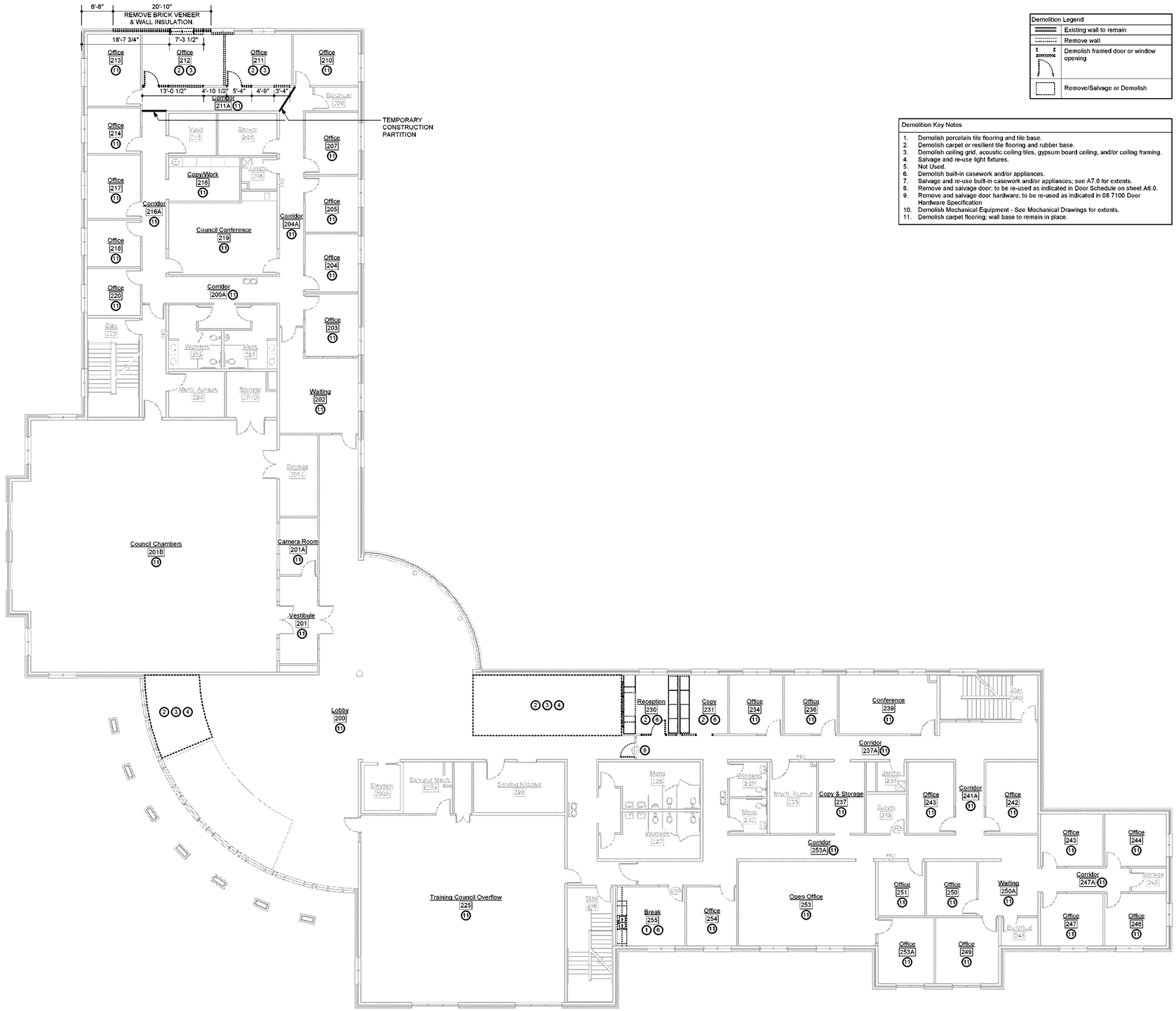

1 Second Floor Demolition Floor Plan
Scale: 3/32" = 1'-0"

Demolition Legend	
	Existing wall to remain
	Remove wall
	Demolish framed door or window opening
	Remove/Salvage or Demolish

Demolition Key Notes

1. Demolish porcelain tile flooring and tile base.
2. Demolish carpet or resilient tile flooring and rubber base.
3. Demolish ceiling grid, acoustic ceiling tiles, gypsum board ceiling, and/or ceiling framing.
4. Salvage and re-use light fixtures.
5. Not Used.
6. Demolish built-in casework and/or appliances.
7. Salvage and re-use built-in casework and/or appliances; see A7.0 for extents.
8. Remove and salvage door; to be re-used as indicated in Door Schedule on sheet A6.0.
9. Remove and salvage door hardware; to be re-used as indicated in 08 7100 Door Hardware Specification
10. Demolish Mechanical Equipment - See Mechanical Drawings for extents.
11. Demolish carpet flooring; wall base to remain in place.

Plan North North

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NORTH CAROLINA REGISTERED SEAL 14231 2-28-24 ARCHITECT JERRY L. WILLIAMS

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Second Floor Demolition Plan

Rev.	Date	Notes

AD1.1

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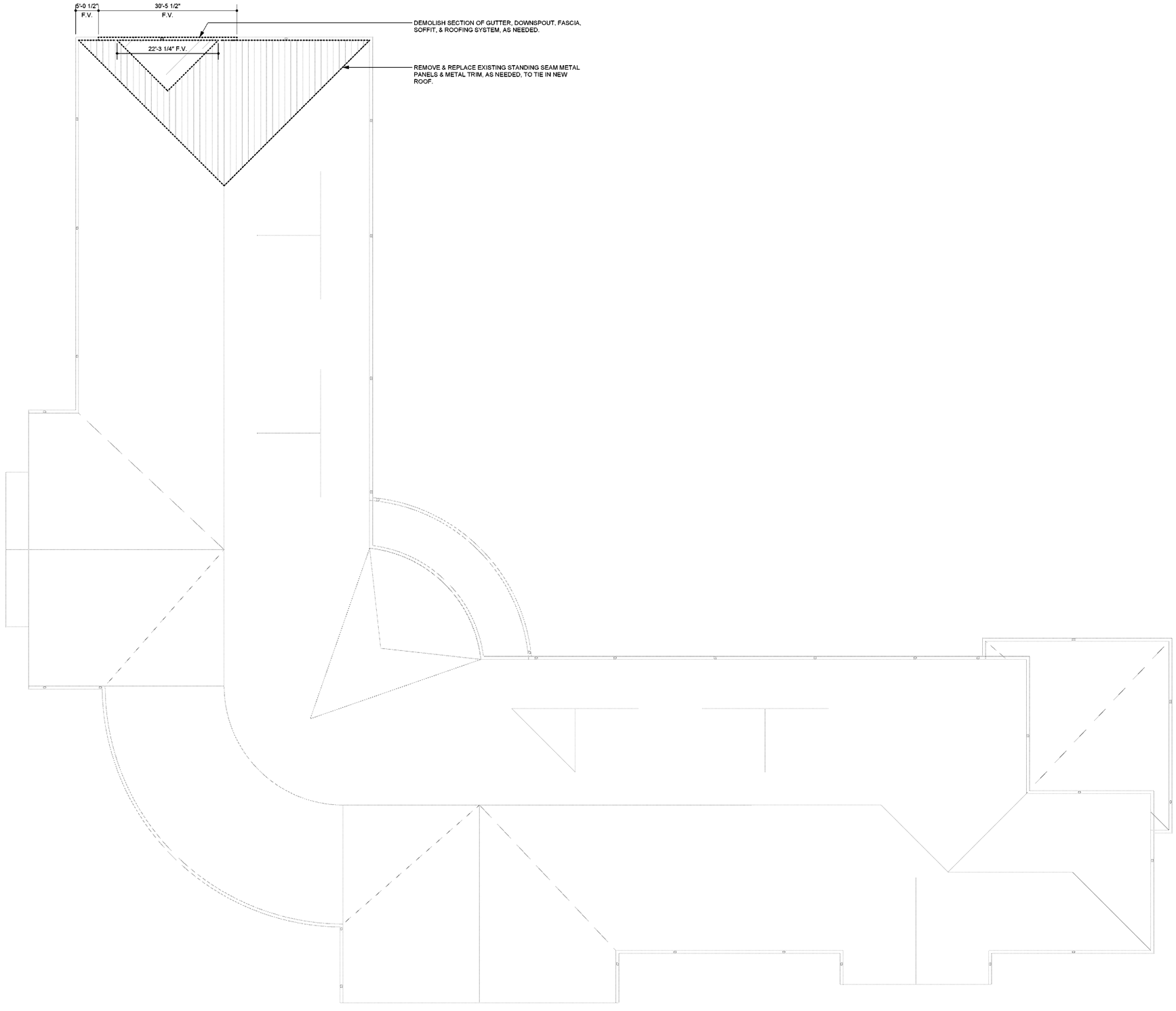

2 Roof Demolition Floor Plan
Scale: 3/32" = 1'-0"

Plan North

North

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NORTH CAROLINA REGISTERED SEAL 34231 2-28-24 ARCHITECT JERRY L. WILLIAMS

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Roof Demolition Plan

Rev.	Date	Notes

AD1.2

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1.0 CODES AND STANDARDS:

1.1 "2018 North Carolina State Building Code" and "International Building Code", 2015.

1.2 "Minimum Design Loads for Buildings and other Structures" SEI/ASCE 7-16.

1.3 "Building Code Requirements for Structural Concrete (ACI 318-14)" American Concrete Institute 2014.

1.4 "Manual of Standard Practice", Concrete Reinforcing Steel Institute, latest edition.

1.5 "Specification for Structural Steel Buildings (AISC 360-10)" American Institute of Steel Construction, 2011 - 14th Edition

1.6 "Structural Welding Code - Steel (AWS D1.1)" and "Structural Welding Code - Reinforcing Steel (AWS D1.4)", American Welding Society.

1.7 "Specification for the Design of Cold-Formed Steel Structural Members", American Iron and Steel Institute (AISI), S100-12.

1.8 "Building Code Requirements for Masonry Structures", ACI 530-13, ASCE 5-13, TMS 402-13.

1.9 "Standard Specifications for Joist Girders (JG-10)", "Standard Specifications for Open Web Steel Joists, K-Series (k-10)", "Standard Specifications for Long Span Steel Joist, LH Series and Deep Longspan Steel Joists, DLH Series (LH/DLH-1.1)", Steel Joist Institute

1.10 "Design Manual For Floor Decks and Roof Decks", Steel Deck Institute, latest edition.

2.0 DESIGN LOADS:
Project Located in: Town of Leland, County of Brunswick, State of North Carolina.

2.1 Gravity Loads: (Reduced where allowed)

GRAVITY LOADS		
Location	Uniform (psf)	Concentrated (lbs) (Over 2.5'x2.5')
Roof Loads:		
Dead Load	20	
Live Load	20	300
Floor Loads:		
Floor Dead Loads:	83	
Ground Floor	50	
Second Floor	78	
Mezzanine	78	
Floor Live Loads:		
Mezzanine	60	
Second Floor Excluding Lobbies	80	2000
Ground Floor and Lobbies	100	2000
Storage	100	

2.2 Drifting Snow Loads per Referenced Code.

Pg = 10 psf
I = 1.2
Ce = 0.9
Ct = 1.0

2.3 Risk Category = IV

2.4 Wind Loads per Referenced Code.

Basic Design Wind Speed:
3-second Gust PER ASCE
V = 159 mph
Exposure "B"

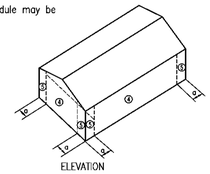
Main Wind Force Resisting System:
Building is enclosed & Internal Pressure coefficient (GCpi) = +0.18 & -0.18
Topographic Factor Kzt = 1.0
Wind Directionality Factor, Kd = 0.85

CALCULATED WIND BASE SHEAR (VULT FOR MWFRS)		
Unit Name	Vx (k)	Vy (k)
Main Building	62	209

Components & Cladding

Components and Cladding Wind Pressure (psf)										
Walls	Area < 10ft²		< 20ft²		Area < 50ft²		Area < 100ft²		Area < 500ft²	
Zone 4	46.7	-50.7	44.8	-48.7	41.8	-45.7	39.6	-43.8	34.9	-38.8
Zone 5	46.7	-62.6	44.8	-58.6	41.8	-52.7	39.6	-48.7	34.9	-38.8
Roof	Area < 10ft²		Area < 20ft²		Area < 50ft²		Area < 100ft²		Area < 500ft²	
Zone 1	34.9	-78.4	30.9	-78.4	23.0	-58.6	19.0	-46.7	19.0	-46.7
Zone 2e	34.9	-110.1	30.9	-100.2	23.0	-84.4	19.0	-72.5	19.0	-62.6
Zone 2r	34.9	-102.2	30.9	-92.3	23.0	-78.4	19.0	-68.5	19.0	-58.6
Zone 3	34.9	-110.1	30.9	-100.2	23.0	-84.4	19.0	-72.5	19.0	-62.6

Notes:
1. Areas noted are effective wind areas as per ASCE 7-16, 26.2 definitions.
2. See figures this sheet for Zone locations.
3. Plus and minus signs signify pressures acting toward and away from surfaces, respectively.
4. Design pressures shown in table are strength design wind pressures. Allowable stress design wind pressures may be calculated by factoring the pressures by 0.6.
5. Design pressures for effective wind areas between those noted in schedule may be interpolated.
6. Tributary area = greater of LxW or LxL/3.
7. Deflections may be calculated based on 42% of these loads.



ELEVATION

COMPONENT & CLADDING WALL ZONES

a = 7ft

2.5 Seismic Loads per Referenced Code.

Risk Category = IV
Site class = "D" (Per Geotechnical Report)
Spectral Response Coefficients:
SS = 0.161g
S1 = 0.07g
SDS = 0.172g
SD1 = 0.112g
Cs = 0.086g

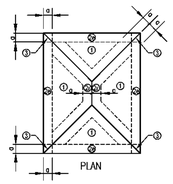
Seismic Design Category = "C"
Seismic Importance Factor = 1.5
Basic Seismic - Force - Resisting System
Building Frame System - Steel Systems not Specifically Detailed for Seismic Resistance

RX=RY=3.0, OX=OY=3.0, CDX=CDY=3.0
Design Base Shear Vx = 103k Vy = 103k
Building Height Limit = NL
Analysis Procedure - per Referenced Code.
Equivalent Lateral Force Procedure

2.6 Guardrail designed per Referenced Code, Chapter 16 IBC

Guardrail:
Uniform load = 50 plf, any direction
Concentrated load = 200 lbs, any direction
Intermediate Rail: (all those except handrail)

2.7 Flood Loads:
Project is not located in a flood zone.



PLAN

COMPONENT & CLADDING
HIP ROOF ZONES

3.0 FOUNDATIONS:

3.1 Foundation design is based on geotechnical report #22:32766 by ECS Southeast, LLP Wilmington, NC dated February 22, 2023. This report is available in the project manual. The recommendations contained in this report are herein made port of the requirements of these contract documents.

3.2 Footings shall bear on strata capable of sustaining a minimum bearing pressure of 3000 psf.

3.3 Top of footing (T/FTG) elevations are shown on the drawings or are to be determined by the Contractor in the field in accordance with the guidelines set forth in the drawings.

3.4 Bottom of exterior footings, grade beams and walls shall bear at a minimum depth of 1'-0" below final grade for frost protection.

3.5 Testing and Inspection:
a. All areas to have slabs on grade shall be proof rolled in accordance with and under observation of the Geotechnical Engineer and approved prior to preparation for concrete placement.

b. All foundation bearing strata shall be inspected and approved by the Geotechnical Engineer prior to any concrete placement.

c. Geotechnical Engineer shall be the sole judge as to suitability of all foundation and/or slab bearing strata.

d. Footing bearing elevations shall be adjusted in the field as required to meet the design bearing pressures by additional excavation or compaction and/or backfilling or by other means acceptable to the Geotechnical Engineer.

3.6 Undercutting to remove existing fill beneath footings and slab shall be performed at the direction of the Geotechnical Engineer.

3.7 Engineered Fill: All fill material shall be selected in accordance with the Geotechnical Report Material shall be a clean, low plastic soil with a plasticity index less than 30 (less than 15 is preferred), liquid limit less than 50, and unit weight of 120 pcf (+ 5 pcf)

3.8 Compaction: All fill shall be placed in loose lifts not exceeding 8 inches in thickness and compacted to a minimum of 96 percent Standard Proctor (ASTM D-698) except that the top 12 inches shall be compacted to a minimum of 98 percent Standard Proctor. Moisture shall be controlled to within 3 percent above or below optimum content.

3.9 Remove all topsoil and organic materials. The stripping should extend at least 10' beyond the proposed construction limits.

3.10 Contractor shall review all construction considerations as outlined in the Geotechnical report and bid accordingly.

4.0 CONCRETE:

4.1 Concrete Strength:
All concrete shall be in accordance with the American Concrete Institute (ACI) 301 and 318.

4.2 Concrete shall have a 28 day compressive strength and density as follows:
a. Footings and Grade Beams.....3,000psi, Density = ±145pcf
b. Elevated Slab on Deck.....3,000psi, Density = ±145pcf
c. Slab on Grade.....See schedule, Density = ±145pcf
d. CMU Grout Fill.....3,000psi pea gravel mix, Density = ±145pcf, Slump 8"-11" or grout per Structural Masonry Notes, this sheet.

4.3 Concrete Mix Designs:
a. Submittals: Submit written reports of each proposed concrete mix not less than 15 days prior to the start of work.
b. Mix designs, including water, cement ratios and slumps, shall be prepared in accordance with ACI 301-05, Section 4, Cement shall conform to ASTM C 150 Type 1 or at contractor's option, ASTM C 595 Type IP where fly ash is permitted. Normal weight aggregate shall conform to ASTM C 33 and light weight aggregate shall conform to ASTM C 330. No admixtures containing calcium chloride shall be permitted in any concrete.
c. Aggregate size shall be #67 stone for supported slabs or other formed concrete elements; #57 stone for slabs on grade and footings or other concrete elements formed from and poured against earth; #89 stone for masonry grout.
d. Water reducing admixture shall be used in all concrete.
e. Air entraining admixture in accordance with ACI 301 shall be used in all concrete exposed freezing and thawing during construction or service conditions.
f. Concrete subjected to freezing/thawing shall have a maximum water/cement ratio of 0.45 and shall contain the amount of air entraining agent specified in ACI 301-05 Section 4.

4.4 Curing:
See specifications for curing method options and apply within two (2) hours after completion of finishing to all concrete flatwork and walls, U.N.O., other than footings and grade beams.

4.5 Use a non-corrosive, non-chloride accelerating admixture in concrete exposed to temperatures below 40 degrees. Uniformly heat the water and aggregates to a temperature of not less than 50 degrees. Place and cure concrete in accordance with ACI 306.

4.6 When hot weather conditions exist, place and cure concrete in accordance with ACI 301. Cool ingredients before mixing to maintain concrete temp. at time of placement below 90 degrees.

4.7 Reinforcing in all abutting concrete, including footings shall be continuous through or around all corners or intersections. Dowels or splices shall be equal in size and spacing to the reinforcing in the abutting members.

4.8 Refer to architectural drawings for door and window openings, drips, regiets, washes, masonry anchors, brick ledge elevations, slab depressions and miscellaneous embedded plates, bolts, anchors, angles, etc.

4.9 Refer to plumbing, mechanical and electrical drawings for underfloor, perimeter and other drains and for sleeves, outlet boxes, conduit, anchors, etc. The various trades are responsible for their items.

4.10 Base plates, anchor rods, support angles and other steel exposed to earth or granular fill shall be covered with a minimum of 3" of concrete.

4.11 Fill slabs, not shown on the structural drawings and all exterior slabs to be broom finished, shall be reinforced with a minimum of 6 x 6 x W2.0 x W2.0 WWM unless noted otherwise on other drawings.

4.12 Finish surfaces to the following tolerances, according to ASTM E 1155, for a randomly trafficked floor surface:
a. Specified overall values of flatness, F(F) 25; and of levelness, F(L) 20; with minimum local values equal to ⅔ of the overall flatness and levelness values.
b. The composite F(F) and F(L) numbers shall be measured and reported within 72 hours after completion of slab concrete finishing operations and before removal of any supporting shores.

4.13 Non-shrink grout shall be pre-mixed, non-corrosive, non-metallic, non-staining containing silica sands, Portland cement, shrinkage compensating and water reducing agents. Product shall only require the addition of water. Minimum compressive strength shall be 2500 psi after one day and 7000 psi after 28 days. Grout shall be free of gas producing or air releasing and oxidizing agents and contain no corrosive iron, aluminum or gypsum.

4.14 Provide concrete grout - not mortar - for reinforced masonry lintel and bond beams where indicated on drawing or as scheduled.

4.15 Tolerance for anchor rods and other embedded items shall be per the AISC Code of Standard Practice Section 7.5.

4.16 Unless otherwise shown in the architectural drawings, provide 3/4-inch chamfers at all column, wall, slab or beam edges that are exposed to view in the finished structure.

4.17 Concrete cover for cast-in-place concrete reinforcement:
Concrete cast against & permanently exposed to earth:.....3 Inches
Concrete exposed to earth or weather:
No. 6 through No. 18 Bars:.....2 Inches
No. 5 Bar and smaller:.....1½" Inches
Concrete not exposed to weather or in contact with ground:
Slabs, Walls, Joists:
No. 11 Bar and smaller:.....¾" Inches
Beams, Columns:
Primary Reinforcement, Ties, Stirrups:.....1½" Inches

5.0 REINFORCING STEEL:

5.1 Reinforcing shall be domestic new billet steel conforming to ASTM A615, Grade 60 or 60S including stirrups and ties, except that reinforcing which is required to be welded shall conform to ASTM A706.

5.2 Field bending of concrete reinforcing steel is not permitted.

5.3 Welded wire mat and fabric shall conform to ASTM A184 and A185 respectively and shall be provided in flat sheets. Welded wire mat/fabric shall be lapped 0'-6" at all splices.

5.4 Bar Splices:

	f'c = 3,000psi		f'c = 4,000psi		f'c = 5,000psi	
Bar Size	Ld (in)	Class "B" Lap Splice (in)	Ld (in)	Class "B" Lap Splice (in)	Ld (in)	Class "B" Lap Splice (in)
#3	17	22	15	19	13	17
#4	22	29	19	25	17	23
#5	28	36	24	31	22	28
#6	33	43	29	37	26	34
#7	48	63	42	54	38	49
#8	55	72	48	62	43	56
#9	6	81	54	70	48	63
#10	69	90	60	78	54	69
#11	76	98	66	85	59	76

NOTES:
1. Values are based on normal weight concrete.
2. Ld = minimum embed of rebar
3. Class "B" lap splice refers to minimum distance bars must be lapped for a full tension splice.
4. For Epoxy Coated bars multiply table values by 1.2
5. For Beam Top Bars multiply table values by 1.3
6. For Top Bars in Slabs and footings 13in and thicker multiply table values by 1.3

6.0 STRUCTURAL MASONRY:

6.1 All structural masonry shall conform to ACI 530 standards as appropriate to the material.

6.2 Concrete Masonry Units (CMU):
a. Units shall be lightweight cellular units conforming to ASTM C 90, Grade N-2. Concrete masonry net area unit strength shall be no less than 2,000psi in accordance with ASTM C 140, with a unit weight not exceeding 95 pcf.
b. Design compressive strength of CMU (fm) = 2,000psi.

6.3 Mortar shall conform to ASTM C 270. Mortar shall be type "S" and shall conform to the ASTM C270 proportion requirements.

6.4 Grouting:
a. Grout shall conform to ASTM C476 as specified by proportion. Masonry grout shall conform to the ASTM proportion requirements for coarse grout with a slump of 8 to 11 inches. Contractor may substitute grout with pea gravel concrete masonry fill, see note 4.2 this sheet.
b. All bond beams shall be filled with grout and reinforced as indicated on the drawings (details or schedules). Mortar fill is not permitted.
c. All masonry wall cells or cavities indicated as reinforced shall be grouted for the full height of the wall, unless specifically noted otherwise on the drawings. Unreinforced walls indicated as grouted shall be grouted full height, unless specifically noted otherwise. Mortar fill is not permitted.
d. All masonry cells or cavities below grade shall be grouted solid unless specifically noted otherwise on the drawings. Mortar fill is not permitted.
e. Vertical grouting shall be low lift or high lift as follows:
(1) Low lift grouting shall be used for all cavity walls and may be used for all walls at the option of the Contractor. Lifts shall not exceed 4'-0" in height.
(2) High lift grouting is permissible only for filling of cellular masonry units and shall not exceed 12'-8" in height. Clean out holes shall be provided at the base of each grouted cell.
f. Grouting shall be stopped 1-1/2" below the top of a course to form a key at the joint.
g. Grouting of masonry beams or lintels shall be done in one continuous operation.
h. Consolidate pours with mechanical vibrator and reconsolidate by mechanical vibration after initial water loss and settlement has occured.
i. Mechanical vibrator shall be a low velocity vibrator with a ¾" head.

6.5 Masonry Reinforcing:
a. Foundation dowels may slope a maximum of 1:6 to align with wall cavities or vertical CMU cores. Greater slopes will require replacement of the foundation dowels.
b. Spliced reinforcing shall be lapped a length calculated per IBC 2107.5 OR 15" OR as shown on drawings, whichever is greatest. All splices shall be wired together.
c. Vertical reinforcing bars shall have a minimum clearance of ½" from masonry and shall be held in position top and bottom and at intervals not exceeding 4'-0". Accessories for such support shall be used. Provide "AA Wire Products Company" (or approved equal) Rebar Positioner AA225 or AA239 for vertical bars and AA238 for horizontal bars or approved equal products from other suppliers.
d. Horizontal joint reinforcing shall be lapped no less than 6" all splices, including corners and tees where no control joint is used.
e. All horizontal joint reinforcing shall stop at control joints.
f. Horizontal reinforcing in bond beams shall be continuous through control joints.
g. All CMU walls shall have joint reinforcing @ 16"o.c. All joint reinforcing shall have (2) 9 gauge (0.148"ø or W1.7) side rods & cross rods @ 16"o.c.

6.6 Masonry contractor shall provide for and coordinate with other trades for placement of all items to be embedded or built into the masonry.

MINIMUM SPLICING LENGTH (Ld) FOR MASONRY	
BAR SIZE	SPLICE LENGTH
#3	16"
#4	22"
#5	26"
#6	43"
#7	60"

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Date: 2024.02.23 16:02:56-05'00'

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

GENERAL NOTES

Rev.	Date	Notes

S1.01

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7.0 COLD-FORMED STEEL FRAMING:

7.1 All members shall be designed in accordance with the American Iron and Steel Institute (AISI) "Specifications for the Design of Cold-formed Steel Structural Members", Latest Edition.

7.2 All framing members shall be formed from corrosion-resistant steel corresponding to the requirements of ASTM A446, with a minimum yield strength of 33 ksi for joists and studs and 33 ksi for runners.

7.3 All members shown are standard designations of Steel Stud Manufacturers Association (SSMA)

7.4 Design of members indicated in structural drawings is based on minimum properties of products produced per SSMA standards of members specified. No substitution of materials is acceptable for use without prior approval of the structural engineer. Substitutions shall meet or exceed all properties produced per SSMA standards of members specified.

7.5 All shop drawing submittals shall show layout, spacing, sizes, thicknesses and types of cold-formed metal framing, fabrication, and fastening and anchorage details, including mechanical fasteners. Show reinforcing channels, opening framing, supplemental framing, strapping, bracing, bridging, splices, accessories, connection details and attachment to adjoining work.

7.6 Shop drawings, design calculations and other structural data shall be prepared and sealed by a qualified engineer. The Structural Engineer shall be legally qualified to practice in the jurisdiction where the project is located and shall be experienced in providing engineering services of the kind indicated.

7.7 All framing components shall be cut squarely for attachment to perpendicular members or as required for an angular fit tight against abutting members. All load bearing stud/walls shall be factory assembled into panels with studs bearing squarely and fully in top and bottom tracks.

7.8 Fastening components shall be by self-drilling screws or by welding as defined below UNO on the drawings.

7.9 Screwed connections:
- a. Screws shall be type S-12 or type S-4 for all framing members per manufacturer's recommendations.
- b. A minimum of three (3) exposed threads shall penetrate through at joined materials.
- c. Corrosion-resistant cadmium-plated screws shall be used for screws attaching metal lath, masonry ties, and other exterior materials.

7.10 Welded connections:
- a. Gas metal arc welding (GMAW) shall be used for 20 ga. Or lighter members. AWSE-705-3, E-705-E, E-705-6 wire electrodes .030"-.035" diameter shall be used with carbon dioxide, argon-oxygen or argon-carbon dioxide shielding. Welding equipment 60-100 amperes at 25 volts using 220-volt 3-phase electric service.
- b. Shielded metal arc welding (SMAW) shall be used for 18 ga' and heavier members. AWS E-6012, E-6013, or E-7014 electrodes of 3/32" or 1/8" diameter shall be used. Welding equipment heat setting shall be varied dependent on material thickness.
- c. All welds shall be touched up with zinc rich paint, or paint similar to that used by the framing member manufacturer.

7.11 Alignment of studs (plumbness) and walls (straightness) shall be within 1/960 of their respective heights and lengths.

7.12 Studs shall be plumbed, aligned, and securely attached to top and bottom runners. Splices in studs are not permitted.

7.13 Where manufacturer's recommendations for erection, attachment, assembly, bracing, alignment, or other installation, or assembly requirements are more stringent than indicated in these drawings, the manufacturer's recommendations shall apply.

STEEL THICKNESS						
Gauge:	Mils	Design Thickness		Minimum Thickness		Yield Strength
		Inches	mm	Inches	mm	ksi
20	33	0.0346	0.879	0.0329	0.836	33
18	43	0.0451	1.146	0.0428	1.087	33
16	54	0.0566	1.438	0.0538	1.367	50
14	68	0.0713	1.811	0.0677	1.720	50
12	97	0.1017	2.583	0.0966	2.454	50

8.0 STRUCTURAL STEEL:

8.1 All structural steel shall be of the grades indicated below, unless noted otherwise on plans or details.
Rolled shapes ASTM A992 Gr. 50
Steel pipe ASTM A53, Type E or S, Grade B, Fy-35ksi
Structural tubing ASTM A500, Grade B, Fy-46ksi
Plates and bars ASTM A36 U.N.O.
Anchor rods ASTM F1554, Grade 36 U.N.O.
Miscellaneous ASTM A36 U.N.O.

8.2 All structural steel shall be detailed, fabricated and erected in accordance with the AISC Code of Standard Practice. The fabricator is responsible for the design of connections not shown on the structural drawings. For the purpose of the connection design, the fabricator shall retain a professional engineer registered in the state where the project is located. The engineer shall seal and sign each shop drawing containing connection design. A note shall accompany the drawings stating that the seal is for "Connection Design Only".

8.3 Connection Design:
- a. Generally, connections shown on the drawings are schematic and are intended to show the relationship of the members.
- b. Connections shall be designed for one-half (1/2) the allowable uniform load on the member, as defined in Part 3, "Allowable Loads on Beams" tables in the AISC "Manual of Steel Construction", 14th Edition, See plan notes for design methodology and minimum reactions.

8.4 Bolted connections:
- a. Bearing type connections shall be snug tight with A325N or A490N bolts, U.N.O. Oversized and long-slotted holes are NOT permitted U.N.O. At single shear plate connections, provide bearing type fasteners with horizontal short slotted holes. All bolts shall be snug tight. DO NOT over torque bolts.
- b. Protruding bolt heads, shafts or nuts shall not extend nor prohibit the application of architectural finishes or placement of steel deck at its correct location and elevation.
- c. Connection designer is responsible for verifying the axial capacity after a section is reduced for bolt holes. Member size may be increased or plates added to maintain required capacity.
- d. Bolted connections shall be assembled and inspected in accordance with RCSC-2009 (Specification for Structural Joints Using High-Strength Bolts).

8.5 Welded connections:
- a. All welding shall be in accordance with the "Structural Welding Code - Steel" (AWS D1.1) of the American Welding Society, Latest Edition.
- b. Electrodes for welding shall comply with the requirements of Table 4.1.1 of the AWS code.
- c. At Moment Connections and Braced Frames Provide filler Metal that has a minimum CVN Toughness of 20 ft-lbs at minus 20 degrees F, As determined by AWS classification or Manufacturer Certification.
- d. Proof of welder certification shall be available at the job site during times of inspection.

8.6 Minimum plate thickness shall be 3/8" U.N.O.; minimum bolt diameter shall be 3/4-inch U.N.O.; minimum shop weld shall be 3/16" and minimum field weld shall be 1/4-inch U.N.O.

8.7 All re-entrant corners (such as copes and blocks) shall be cut and shaped notch free with a radius of at least 1/2-inch.

9.0 STEEL DECK:

9.1 Steel roof deck shall be galvanized, Type B, 1 1/2" deep, 20 gauge, U.N.O.

9.2 For steel roof deck spans, mechanically fasten side laps at mid-span using "Buildex", self-tapping TEKS No. 10 or larger machine screws or as noted on plan.
Provide additional sidelap fasteners where noted on plan.
Fasten roof deck to supporting members as noted on plan.

9.3 Do not hang pipes or ducts from steel roof deck. Fasten roof deck to supporting members as noted on plan.

9.4 COMPOSITE FLOOR DECK:
- a. Deck shall be 3" - 20 gauge, galvanized, composite floor deck. Vulcraft 3VLI20 or approved equal.
- b. Deck shall be galvanized per ASTM A924-94 (G60)
- c. Fasten composite floor deck to supporting members by not less than 3/4-inch puddle welds or elongated welds of equal perimeter, spaced not more than 12" o.c. with a minimum 2 welds per unit at each support.

10.0 COMPOSITE BEAMS:

10.1 Composite beams and girders DO NOT require temporary shoring for construction loads (wet concrete + 20 psf) U.N.O on the drawings. Contractor is responsible for verifying the construction load imposed on the structure. Where questions as to capacity arise, Contractor shall inform the Structural Engineer prior to proceeding with any work.

10.2 See details on S1.04 for typical stud layouts.

10.3 The number of shear connectors (studs) shown is based upon obtaining the full horizontal shear capacity indicated on the AISC "Load and Resistance Factor Design Specification for Steel Buildings" (LRFD) Chapter "I" for each stud for the strength and density of concrete where used. See composite steel deck notes also.

10.4 Studs shall be 3/4-inch diameter and shall extend not less than 1-1/2 inches above the top of the steel deck and shall not have less than 1/2-inch concrete cover above top of stud after welding and shall conform to ASTM A108.

10.5 The number of studs on a beam or between any two connections along a beam is shown on the drawings. Spacing of studs within the length shown shall be as uniform as possible.

10.6 No shop paint shall be applied to any studs nor to top flanges or surfaces of members receiving field welds.

10.7 Stud capacity varies with the type and length of the stud and with the properties of the composite deck. The deck supplier shall provide deck with a configuration that does not reduce the stud capacity per AISC requirements.

10.8 Stud type, length, shear value and detailed layout shall be submitted with the composite metal deck shop drawings.

10.9 Break ceramic ferrules (arc shields) loose and remove from deck.

10.10 A stud shear connector welded through the metal deck may take the place of a 3/4-inch puddle weld in order to secure the deck to the steel framing. Do not weld shear connectors through two layers (lapped ends) of deck units.

11.0 POST-INSTALLED ANCHORS:

11.1 Except where indicated on the drawings, post-installed anchors shall consist of the following anchor types as provided by HILTI, Inc. Contact HILTI at (800) 879-8000 for product related questions.

Anchorage to Concrete
- a. Adhesive anchors for cracked and uncracked concrete use:
  1. HILTI HIT-HY 200 Safe Set System with HILTI HIT-Z Rod per ICC ESR-3187 (pending).
  2. HILTI HIT-HY 200 Safe Set System with HILTI Hollow Drill Bit System with HAS-E threaded rod per ICC ESR-3187.
  3. HILTI HIT-RE 500-SD Epoxy Adhesive Anchoring system with HAS-E threaded rod per ICC ESR-2322 for slow cure applications.
- b. Medium duty mechanical anchors for cracked and uncracked concrete use:
  1. HILTI KWIK HUS EZ and KWIK HUS EZ-I Screw Anchors per ICC ESR-3027
  2. HILTI KWIK BOLT-TZ Expansion Anchors per ICC ESR-1917
  3. HILTI KWIK Bolt 3 Expansion Anchors (uncracked concrete only) per ICC ESR-2302
- c. Heavy duty mechanical anchors for cracked and uncracked concrete use:
  1. HILTI HDA Undercut Anchors per ICC ESR 1546
  2. HILTI HSL-3 Expansion Anchors per ICC ESR 1545

Rebar Doweling into Concrete
- a. Adhesive anchors for cracked and uncracked concrete use:
  1. HILTI HIT-HY 200 Safe Set System with HILTI Hollow Drill Bit System with continuously deformed rebar per ICC ESR-3187.
  2. HILTI HIT-RE 500-SD Epoxy Adhesive Anchoring System with continuously deformed rebar per ICC ESR-2322.

Anchorage to Solid Grouted Masonry
- a. Adhesive Anchors use:
  1. HILTI HIT-HY 70 Masonry Adhesive Anchoring System (ICC pending).
  2. Steel anchor element shall be HILTI HAS-E continuously threaded rod or continuously deformed steel rebar.
- b. Mechanical Anchors use:
  1. HILTI KWIK BOLT-3 Expansion Anchors per ICC ESR 1385.

Anchorage to Hollow/Multi-wythe Masonry
- a. Adhesive Anchors use:
  1. HILTI HIT-HY 70 Masonry Adhesive Anchoring System per ICC ESR-3342.
  2. Steel anchor element shall be HILTI HAS-E continuously threaded rod or continuously deformed steel rebar.
  3. The appropriate size screen tube shall be used per adhesive manufacturer's recommendation.

11.2 Anchor capacity used in design shall be based on the technical data published by HILTI or such other method as approved by the Structural Engineer of record. Substitution requests for alternate products must be approved in writing by the Structural Engineer of record prior to use. Contractor shall provide calculations demonstrating that the substituted product is capable of achieving the performance values of the specified product. Substitutions will be evaluated by their having and ICC ESR showing compliance with the relevant building code for seismic uses, load resistance, installation category, and availability of comprehensive installation instructions. Adhesive anchor evaluation will also consider creep, in-service temperature and installation temperature.

11.3 Install anchors per the manufacturer instructions, as included in the anchor packaging.

11.4 Overhead adhesive anchors must be installed using the HILTI PROFI System.

11.5 The contractor shall arrange an anchor manufacturer's representative to provide onsite installation training for all of their anchoring products specified. The Structural Engineer of record must receive documented confirmation that all of the contractor's personnel who install anchors are trained prior to the commencement of installing anchors.

11.6 Anchor capacity is dependant upon spacing between adjacent anchors and proximity of anchors to edge of concrete. Install anchors in accordance with spacing and edge clearances indicated on the drawings.

11.7 Existing reinforcing bars in the concrete structure may conflict with specific anchor locations. Unless noted on the drawings that the bars can be cut, the contractor shall review the existing structural drawings and shall undertake to locate the position of the reinforcing bars at the locations of the concrete anchors, by HILTI FERROSCAN, GPR, X-ray, chipping or other means.

12.0 CONSTRUCTION AND SAFETY:

12.1 Woods Engineering P.A.'s responsibility is limited to the details and information shown on these drawings. It is the responsibility of the Contractor to provide adequate safety measures required by local codes as well as OSHA Standards for the Construction Industry.
This should include, but not be limited to the following:
Shoring to protect new as well as existing structures.
Necessary Scaffolding.
Material Handling Equipment.
Trench Boxing.

13.0 SPECIAL INSPECTIONS:

13.1 Refer to Specification Section 014533 for all Special Inspections requirements.

14.0 SHOP DRAWING SUBMITTAL:

14.1 See Project Manual

14.2 Contractor shall submit Electronic copies (PDF format) of each shop drawing for review. Shop drawings shall be reviewed by the Contractor prior to submission to the Engineer. The Contractor shall allow 10 working days for shop drawing approval.

15.0 SUPPLEMENTAL FRAMING:

15.1 Provide supplemental framing for the support of pipes, conduits, light fixtures, etc. Supplemental framing shall consist of slotted steel channels, steel angles, hanger rods, and appropriate hardware. Finish for framing and hardware shall be galvanized or rust-inhibiting acrylic enamel paint.

15.2 Slotted Steel Channels: For exterior use, hot-dipped galvanized finish. For interior use, manufacturer's standard finish.

15.3 Steel Angles: for exterior use, hot-dipped galvanized. For interior use, prime with rust-inhibitive primer and finish paint two coats of alkyd enamel.

15.4 Hanger Rods: Galvanized carbon steel threaded rods.

15.5 Fastening Hardware: Finish shall match connected parts.

ABBREVIATIONS

@	AT	EOR	ENGINEER OF RECORD	NS	NEAR SIDE
&	AND	EQ	EQUAL	NTS	NOT TO SCALE
AB	ANCHOR BOLTS	EQUIP	EQUIPMENT	NWC	NORMAL WEIGHT CONCRETE
ACI	AMERICAN CONCRETE INSTITUTE	EF	EACH FACE	OC	ON CENTER
ADDL	ADDITIONAL	EJ	EXPANSION JOINT	OFB	OUTSIDE FACE OF BRICK
AFF	ABOVE FINISHED FLOOR	EOD	EDGE OF DECK	OFM	OUTSIDE FACE OF MASONRY
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	EOM	EDGE OF MASONRY	OFS	OUTSIDE FACE OF STUD
		EOS	EDGE OF SLAB	OPNG	OPENING
AISI	AMERICAN IRON AND STEEL INSTITUTE	EOW	EDGE OF WALL	OPP	OPPOSITE HAND
		EW	EACH WAY	PEBS	PRE-ENGINEERED BUILDING SUPPLIER
ALT	ALTERNATE	EXIST	EXISTING		
ARCH	ARCHITECTS - ARCHITECTURAL	EXP	EXPANSION	PED	PEDESTAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	EXT	EXTERIOR	PL	PLATE
		FDN	FOUNDATION	PSF	POUNDS PER SQUARE FOOT
AWS	AMERICAN WELDING SOCIETY	FFE	FINISHED FLOOR ELEVATION	PSI	POUNDS PER SQUARE INCH
B, BOTT	BOTTOM	FS	FAR SIDE	PSL	PARALLEL STRAND LUMBER
BOX	BOTTOM CHORD EXTENSION	FTG	FOOTING	PLF	POUNDS PER LINEAR FOOT
BFF	BELOW FINISHED FLOOR	GA	GAUGE	PT	PRESSURE TREATED
BLDG	BUILDING	GALV	GALVANIZED	REF	REFERENCE
BM	BEAM	GT	GIRDER TRUSS	REINF	REINFORCING
BOS	BOTTOM OF STEEL	HD	HEADED	REQD	REQUIRED
BRG	BEARING	HI	HIGH	(S)	SHORT SIDE REINFORCEMENT
BTWN	BETWEEN	HORIZ	HORIZONTAL	SB	SHORT BAR
CFS	COLD FORMED STEEL	HSS	HOLLOW STRUCTURAL SECTION	SCHD	SCHEDULE
CJ	CONTRACTION JOINT	HT	HIP TRUSS	SF	STEP FOOTING
CL	CENTERLINE	IFM	INSIDE FACE OF MASONRY	SIM	SIMILAR
CLR	CLEAR	INT	INTERIOR	SOG	SLAB ON GRADE
CMU	CONCRETE MASONRY UNITS	JBE	JOIST BEARING ELEVATION	SPEC(S)	SPECIFICATION(S)
COL	COLUMN	JT	JOINT	SPF	SPRUCE PINE FUR
CONC	CONCRETE	K	KIP-S	SQ	SQUARE
CONN	CONNECTION	KB	KICKER BRACE	STD	STANDARD
CONST JT	CONSTRUCTION JOINT	KSI	KIPS PER SQUARE INCH	STIFF	STIFFENER
CONT	CONTINUOUS	(L)	LONG SIDE REINFORCEMENT	STIRR	STIRRUP
CONTR	CONTRACTOR	LB	LONG BAR	STL	STEEL
CSJ	COMPOSITE STEEL JOIST	LBS	POUNDS	STR	STRUCTURAL
CTRD	CENTERED	LLH	LONG LEG HORIZONTAL	SW	SHEAR WALL
DBA	DEFORMED BAR ANCHOR	LLV	LONG LEG VERTICAL	SYP	SOUTHERN YELLOW PINE
DD	DELEGATED DESIGN	LO	LOW	T	TOP
DEFL	DEFLECTION	LOC	LOCATION	TCX	TOP CHORD EXTENSION
DEPR	DEPRESSION - DEPRESSED	LWC	LIGHT WEIGHT CONCRETE	TOC	TOP OF CONCRETE
DET	DETAIL	MAX	MAXIMUM	TOS	TOP OF STEEL
DIAG	DIAGONAL	MC	MOMENT CONNECTION	TOW	TOP OF WALL
ø	DIAMETER	MECH	MECHANICAL	TYP	TYPICAL
DIM	DIMENSION	MFR	MANUFACTURER	UNO	UNLESS NOTED OTHERWISE
DIST	DISTANCE	MID	MIDDLE	VB	VEHICLE BARRIER
DWG(S)	DRAWING(S)	MIN	MINIMUM	VERT	VERTICAL
DWL(S)	DOWEL(S)	MISC	MISCELLANEOUS	VIF	VERIFY IN FIELD
EA	EACH	MOW	MIDDLE OF WALL	W	WITH
ELEV	ELEVATION	MP	MASONRY PILASTER	WWF	WELDED WIRE FABRIC
EMBED	EMBEDDED - EMBEDMENT	d	NAILS - PENNY		
ENG	ENGINEER	No	NUMBER		

DO NOT SCALE DIGITAL OR HARD COPIES OF THESE DRAWINGS:

Unless Specifically Noted - Drawings, Plans, Sections, Details, Etc. are a graphic representation of the framing conditions and/or requirements.
Rebar lengths, bends & etc. SHALL NOT be determined by scaling any drawings included in this set of documents. Lengths & sizes shall be determined by the schedules only, or specifically requested if not numerically shown. Submit a written request to Woods Engineering, PA if further clarification is needed.

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Date: 2024.02.23 16:03:03-05'00'

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

GENERAL NOTES

Rev.	Date	Notes

S1.02

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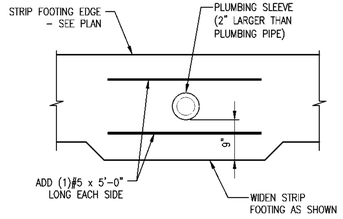
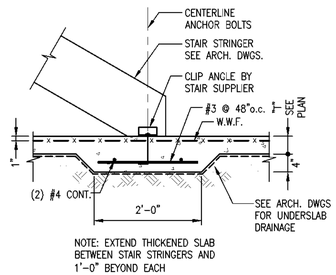


PLAN DETAIL OF VERTICAL PIPE PENETRATION AT STRIP FOOTING

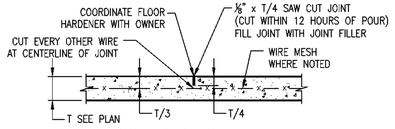
SCALE: 3/4" = 1'-0"



NOTE: EXTEND THICKENED SLAB BETWEEN STAIR STRINGERS AND 1'-0" BEYOND EACH

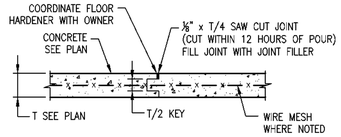
TYPICAL THICKENED SLAB @ BASE OF STAIRS

SCALE: 3/4" = 1'-0"



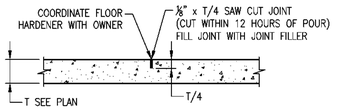
CONTRACTION JOINT

SCALE: 1" = 1'-0"
WITH WIRE MESH



CONSTRUCTION JOINT

SCALE: 1" = 1'-0"
WITH WIRE MESH



CONTRACTION JOINT

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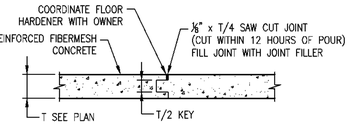
WITHOUT WIRE MESH



CONSTRUCTION JOINT

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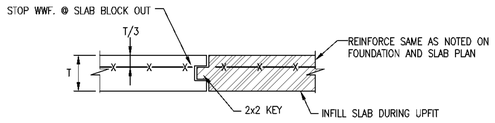
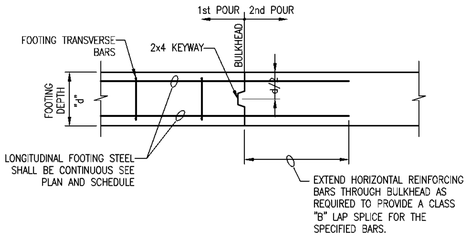
WITHOUT WIRE MESH



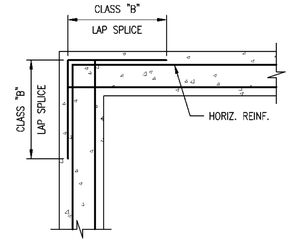
TYPICAL SLAB CONSTRUCTION JOINT @ SLAB BLOCKOUT

NOT TO SCALE

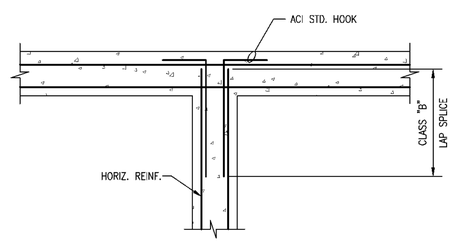


TYPICAL FOOTING CONSTRUCTION JOINT SECTION

SCALE: 3/4" = 1'-0"



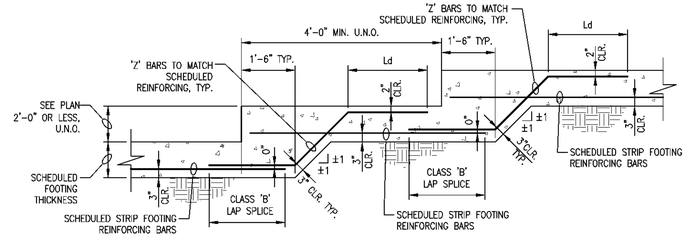
② FOOTING CORNERS



② FOOTING INTERSECTION

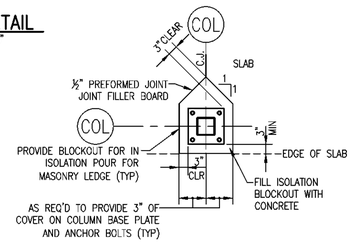
TYPICAL CORNER REINFORCING FOR CONCRETE FOOTINGS

SCALE: 3/4" = 1'-0"



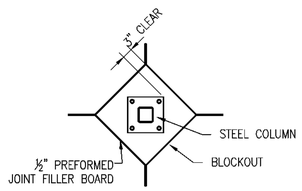
STEP FOOTING DETAIL

SCALE: 1/2" = 1'-0"



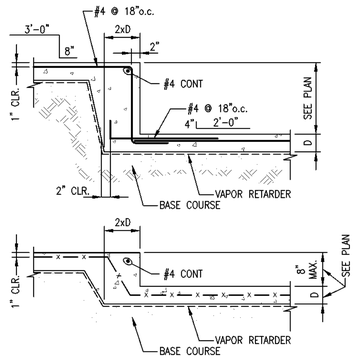
TYPICAL ISOLATION JOINT AT SLAB EDGE

NOT TO SCALE



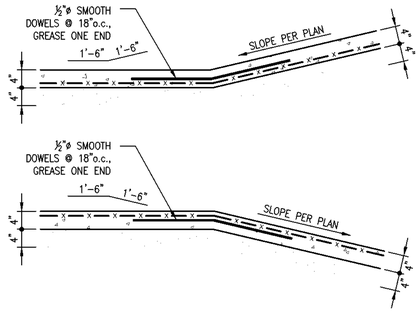
ISOLATION JOINT DETAIL

NOT TO SCALE



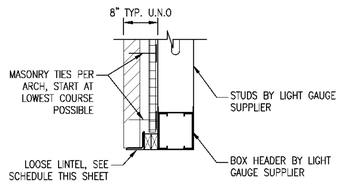
TYPICAL SLAB STEP

SCALE: 3/4" = 1'-0"



TYPICAL RAMP AT SLAB ON GRADE

SCALE: 3/4" = 1'-0"



LOOSE LINTEL DETAIL

SCALE: 3/4" = 1'-0"

STEEL LINTEL SCHEDULE

HEIGHT OF BRICK ABOVE (FT)	LENGTH OF LINTEL (FT)					
	4	6	8	10	12	14
4	L4x4x5/16	L4x4x5/16	L4x4x3/8	L6x4x3/8	L7x4x3/8	BP8x4x3/8
6	L4x4x5/16	L4x4x5/16	L6x4x5/16	L6x4x3/8	BP8x4x3/8	BP9x4x3/8
10	L4x4x5/16	L6x4x5/16	L6x4x5/16	L7x4x3/8	BP9x4x3/8	BP12x4x3/8
12	L4x4x5/16	L6x4x5/16	L6x4x3/8	BP8x4x3/8	BP10x4x3/8	BP12x4x3/8

NOTES:
1. WHERE LINTELS BEAR ON HOLLOW MASONRY UNITS FILL ALL CORES UNDER BEARING WITH GROUT FROM BOTTOM OF LINTEL TO 16" MINIMUM BELOW.
2. THESE LINTELS ARE NOT DESIGNED FOR MASONRY WALLS THAT CARRY FLOOR OR ROOF LOAD.
3. LINTELS ARE DESIGNED TO CARRY THE MAXIMUM HEIGHT OF BRICK LISTED IN SCHEDULE. IF STACKED BRICK HEIGHT EXCEEDS LISTED VALUE, THEN CONTACT STRUCTURAL ENGINEER FOR ALTERNATE DESIGN.
4. ALL STEEL LINTELS SHALL BE HOT DIP GALVANIZED.
5. SEE DETAIL THIS SHEET FOR REQUIREMENTS.
6. ALL LINTELS HAVE LONG LEG VERTICAL U.N.O.
7. "BP" INDICATES STEEL BENT PLATE

FLOOR ELEVATION TABLE

LEVEL	ELEVATION U.N.O.
ROOF TRUSS BEARING	+24'-0"
MEZZANINE T/SLAB	+25'-6"
2nd FLOOR T/SLAB	+12'-8"
T/SLAB ON GRADE	+0'-0"

GENERAL NOTE:
DETAILS SHOWN ON THIS SHEET ARE GENERIC IN NATURE AND MAY NOT PORTRAY EXACT CONDITIONS. THESE DETAILS ARE INTENDED TO PROVIDE GENERAL GUIDELINES FOR TYPICAL CONSTRUCTION CONDITIONS.

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 041563 ADAM L SISK

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DN: E=asisk@woodseng.com, CN=Adam L Sisk, PE, SE, O="WOODS ENGINEERING, P.A.", L=Wilmington, S=North Carolina, C=US
Date: 2024.02.23 16:03:09-05'00'

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 041563 ADAM L SISK

WOODS ENGINEERING P.A. CORPORATE SEAL No. C-1806 NORTH CAROLINA

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

CONCRETE TYPICAL DETAILS

Rev.	Date	Notes

S1.03

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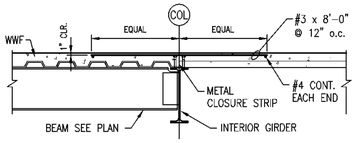
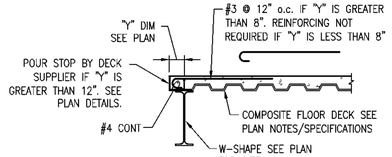


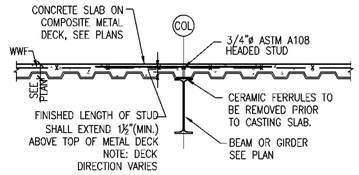
TYPICAL COMPOSITE SLAB REINFORCEMENT @ DECK SPAN CHANGE

SCALE: 1/2" = 1'-0"



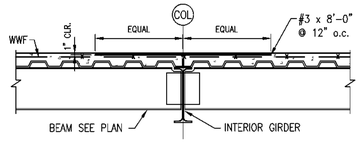
TYPICAL INTERIOR EDGE OF FRAMED FLOOR SLAB

SCALE: 1/2" = 1'-0"



TYPICAL SHEAR STUD DETAIL

SCALE: 1/2" = 1'-0"



TYPICAL COMPOSITE SLAB REINFORCEMENT

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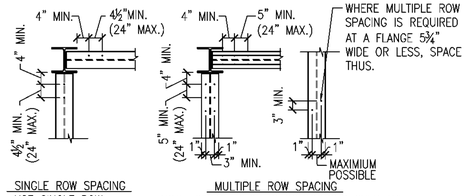
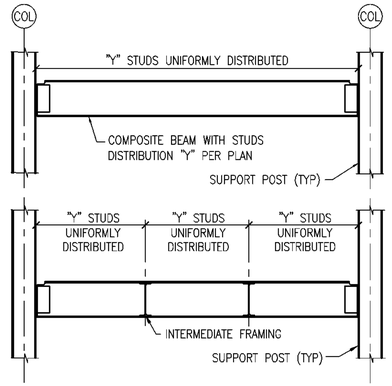


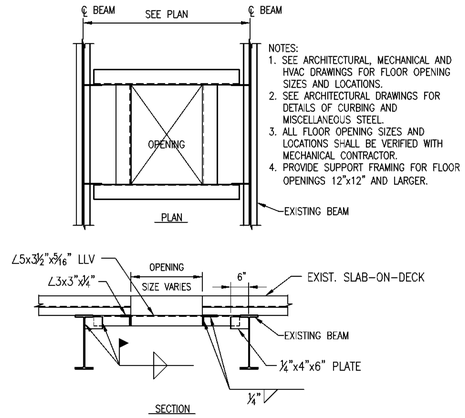
TYPICAL SHEAR STUD DETAIL

SCALE: 1/2" = 1'-0"



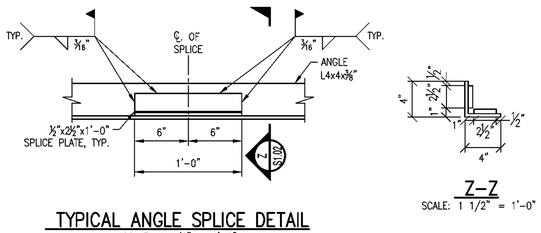
TYPICAL COMPOSITE BEAM STUD DISTRIBUTION

SCALE: 1/2" = 1'-0"



DETAIL OF TYPICAL FLOOR OPENING

NOT TO SCALE

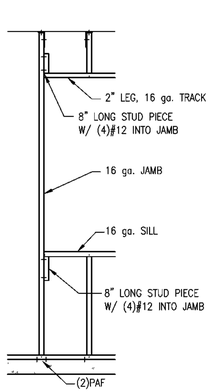


TYPICAL ANGLE SPLICE DETAIL

SCALE: 1 1/2" = 1'-0"

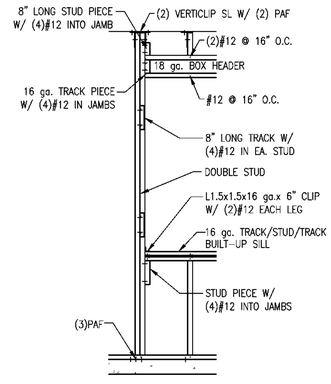
Z-Z

SCALE: 1 1/2" = 1'-0"



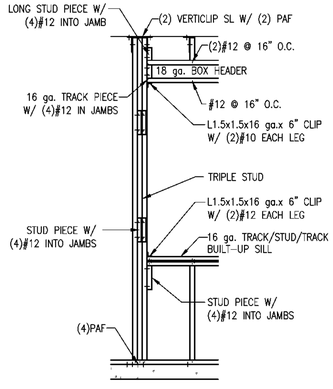
TYPICAL EXTERIOR WALL FRAMING AT WINDOW OPENING UP TO 3'-4"

SCALE: 1/2" = 1'-0"



TYPICAL EXTERIOR WALL FRAMING AT WINDOW OPENING UP TO 6'-4"

SCALE: 1/2" = 1'-0"



TYPICAL EXTERIOR WALL FRAMING AT WINDOW OPENING UP TO 8'-8"

SCALE: 1/2" = 1'-0"

TYPICAL LIGHT GAUGE CONSTRUCTION DETAILS FOR NON-LOAD BEARING EXTERIOR WALLS

NOTE: THESE DETAILS ARE GENERIC AND ARE FOR GENERAL INFORMATION AND BUDGET PRICING. ACTUAL DESIGN BY LIGHT GAUGE SUPPLIER AND ENGINEER.

GENERAL NOTE:
DETAILS SHOWN ON THIS SHEET ARE GENERIC IN NATURE AND MAY NOT PORTRAY EXACT CONDITIONS. THESE DETAILS ARE INTENDED TO PROVIDE GENERAL GUIDELINES FOR TYPICAL CONSTRUCTION CONDITIONS.

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WOODS ENGINEERING P.A. CORPORATE SEAL No. C-1606 NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 041563 ENGINEER ADAM L. SISK

NORTH CAROLINA PROFESSIONAL SEAL 041563 ENGINEER ADAM L. SISK
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Date: 2024.02.23 16:03:14-05'00'

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

STEEL TYPICAL DETAILS

Rev.	Date	Notes

S1.04

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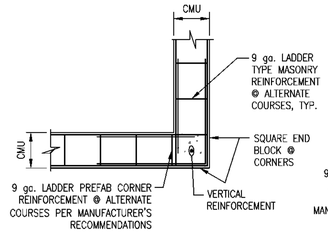
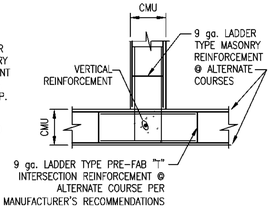


TYPICAL CMU CORNER

DETAIL "B"

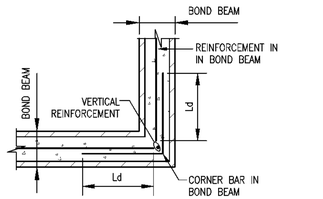
SCALE: 3/4" = 1'-0"



TYPICAL CMU INTERSECTION

DETAIL "C"

SCALE: 3/4" = 1'-0"

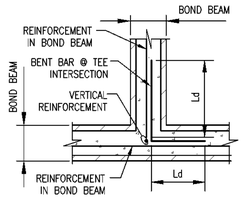


TYPICAL BOND BEAM REINFORCING

DETAIL "D"

SCALE: 3/4" = 1'-0"

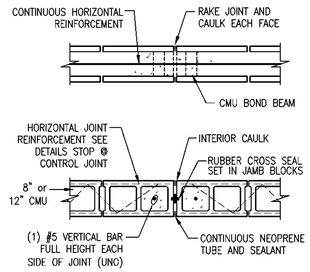
NOTE: TRUSS TYPE REINFORCEMENT SHOWN, HOWEVER LADDER OR TRUSS TYPES ARE ACCEPTABLE.



TYPICAL BOND BEAM INTERSECTION REINFORCING

DETAIL "E"

SCALE: 3/4" = 1'-0"



TYPICAL CONTROL JOINT

DETAIL "F"

SCALE: 3/4" = 1'-0"

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WOODS ENGINEERING, INC. CORPORATE SEAL No. C-1806 NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 041563 ENGINEER ADAM L SISK

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Leland Town Hall Addition & Renovations

102 Town Hall Drive
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CMU TYPICAL DETAILS

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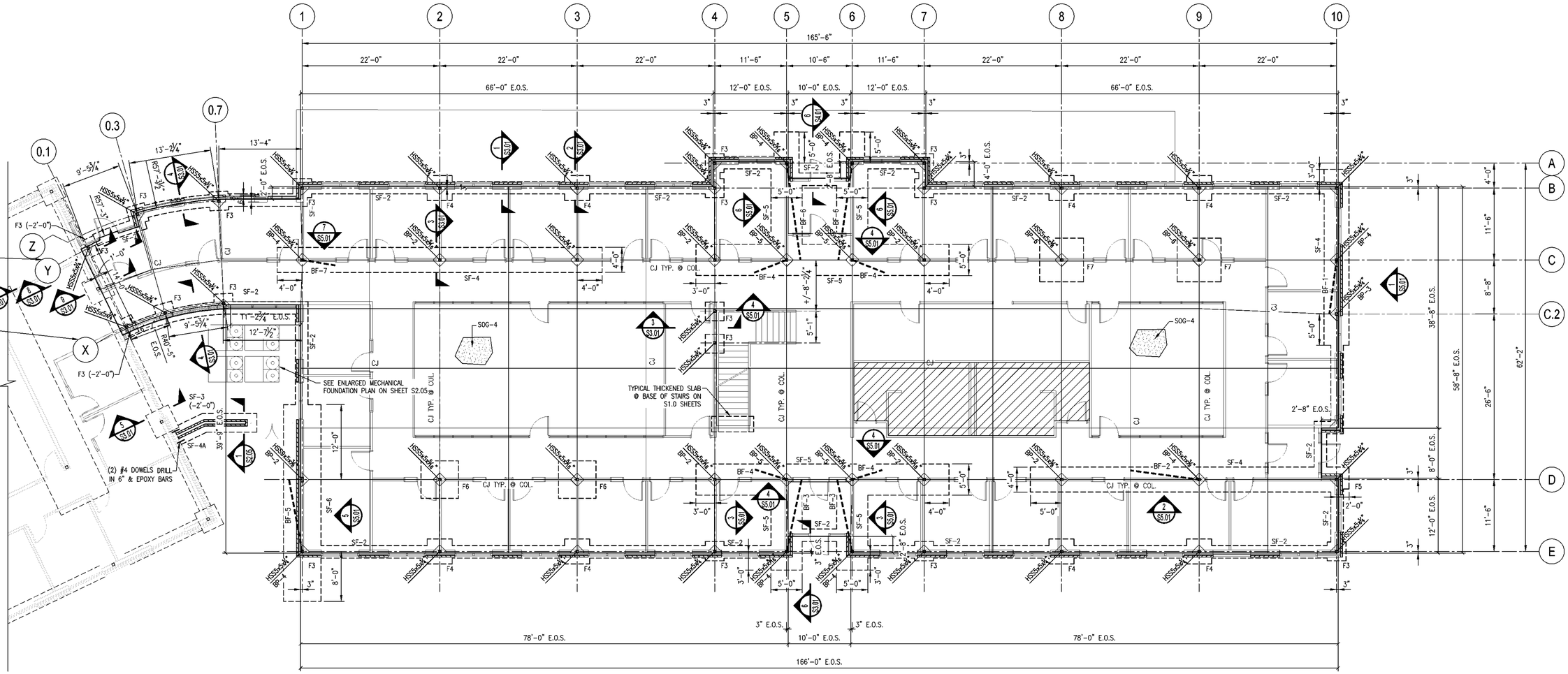

STRIP FOOTING (SF-X) SCHEDULE

MARK	SIZE width x thickness x length	REINFORCEMENT (BOTTOM BARS U.N.O.)	REMARKS	TYPICAL LOCATION, U.N.O.
SF-1	0'-8" x 1'-4" x CONT.	(1)#4 x CONT.		SLAB EDGE AT DUMPSTER AND GENERATOR ENCLOSURE
SF-2	2'-0" x 1'-0" x CONT.	(3) #5 x CONT.	–	EXTERIOR PERIMETER
SF-3	3'-0" x 1'-4" x CONT.	(4) #5 x CONT.	–	MECHANICAL ENCLOSURE
SF-4	4'-0" x 2'-0" x SEE PLAN	(5) #6 LONG TOP & (5) #7 LONG BOTT.	–	–
SF-4A	4'-0" x 1'-4" x CONT.	(4)#6 x CONT.	–	SCREEN WALL
SF-5	5'-0" x 2'-0" x SEE PLAN	(6) #6 LONG TOP & (10) #8 LONG BOTT.	–	–
SF-6	6'-0" x 2'-6" x SEE PLAN	(8) #6 LONG TOP & (12) #8 LONG BOTT.	–	–

SPREAD FOOTING (FX) SCHEDULE

MARK	SIZE width x length x thickness	REINFORCEMENT		REMARKS
		TOP BARS EACH WAY (U.N.O.)	BOTTOM BARS EACH WAY (U.N.O.)	
F3	3'-0" x 3'-0" x 1'-0"		(3) #5	
F4	4'-0" x 4'-0" x 1'-0"		(4) #5	
F5	5'-0" x 5'-0" x 1'-2"		(5) #5	
F6	6'-0" x 6'-0" x 1'-4"		(6) #6	
F7	7'-0" x 7'-0" x 1'-7"		(7) #6	

SLAB ON GRADE SCHEDULE

MARK	THICKNESS	CONCRETE STRENGTH	REINFORCEMENT	AIR ENTRAINMENT	TYPICAL LOCATION	VAPOR BARRIER	COMMENTS
SOG-4	4"	3,000psi	WWM6x6xW2.0xW2.0 OR 3lb/cy MACROFIBER	NO	TYP INTERIOR	15mil	–
SOG-4E	4"	4,000psi	WWM6x6xW2.0xW2.0 FLAT SHEETS	YES	TYP EXTERIOR	10mil	LIGHT BROOM FINISH
SOG-8	8"	4,000psi	#5@18"o.c. TOP EACH WAY HOOK TOP BARS AT SLAB EDGES	YES	DUMPSTER AND GENERATOR PAD	10mil	LIGHT BROOM FINISH

ALL SLAB-ON-GRADES SHALL BEAR ON DRAINAGE LAYER AND WELL COMPACTED SUBGRADE PER GEOTECHNICAL REPORT. VERIFY COMPACTION AND MATERIAL WITH GEOTECHNICAL ENGINEER.

FOUNDATION PLAN

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

FOUNDATION LEGEND

- Fx — SPREAD FOOTING DESIGNATION SEE SCHEDULE THIS SHEET
- SF-x — STRIP FOOTING DESIGNATION SEE SCHEDULE THIS SHEET
- CJ / C3 — INDICATES CONCRETE SLAB CONTRACTION JOINTS, SEE S1.0 SHEETS FOR TYPICAL DETAILS. SEE PLAN FOR LOCATIONS. MAXIMUM SPACING = 12' IN BOTH DIRECTIONS
- HSSXxX — STEEL COLUMN – SEE PLAN FOR SIZE AND LOCATION BASE PLATE TO BE BP-1 U.N.O. SEE S3.0 SHEETS FOR DETAILS
- 0 — GRID DESIGNATION FOR CENTERLINE OF COLUMN U.N.O.
- BRACE #x — INDICATES STEEL BRACE LOCATIONS SEE PLAN & SHEET S5.0 SHEETS
- E.J. — BUILDING EXPANSION JOINT LOCATION – SEE SECTIONS FOR DETAILS
- INDICATES BRICK
- INDICATES 3/4" SLAB DEPRESSION – SEE S1 SHEETS FOR DETAIL AND ARCH FOR EXACT EXTENTS
- INDICATES 2" SLAB DEPRESSION – SEE S1 SHEETS FOR DETAIL AND ARCH FOR EXACT EXTENTS
- SOG-x — INDICATES SLAB-ON-GRADE, SEE SCHEDULE THIS SHEET FOR REQUIREMENTS

FOUNDATION PLAN NOTES:

1. SEE S1.0 SHEETS FOR ADDITIONAL GENERAL NOTES, MATERIAL NOTES AND MATERIAL SPECIFICATIONS. ALSO, SEE S1.0 SHEETS FOR TYPICAL DETAILS. TYPICAL DETAILS ARE GENERALLY NOT SHOWN ON PLAN BUT RATHER ARE INTENDED TO DEFINE TYPICAL CONSTRUCTION CONDITIONS.
2. DATUM ELEVATION = TOP OF SLAB ELEVATION = ASSUMED 0'-0". OTHER ELEVATIONS ARE NOTED AS (+ OR -) FROM DATUM ELEVATION. SEE CIVIL FOR ELEVATIONS RELATIVE TO MSL. ALSO, SEE TABLE ON S1.0 SHEETS FOR FLOOR ELEVATIONS.
3. TOP OF FOOTINGS SHALL BE (-1'-4") FROM DATUM ELEVATION, U.N.O.
4. SEE SCHEDULE THIS SHEET FOR SLAB-ON-GRADE REQUIREMENTS
5. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND OTHER DISCIPLINE DRAWINGS FOR OPENINGS AND DEPRESSIONS NOT SHOWN ON THESE DRAWINGS.
6. RELOCATE ANY UTILITY LINES THAT CONFLICT WITH THE FOUNDATIONS OR DROP THE FOUNDATIONS TO AN ELEVATION BELOW THE PROPOSED UTILITIES. RELOCATE ANY GRAVITY FLOW LINES THAT CONFLICT WITH SPREAD FOOTINGS AS SHOWN ON STRUCTURAL FOUNDATION PLANS. IF A GRAVITY FLOW LINE TRAVELS UNDER A CONTINUOUS STRIP FOOTING EITHER:
   a. DROP THE FOOTING ELEVATION BELOW THE PROPOSED LINE.
   b. IF THE UTILITY LINE IS < 2'-0" BELOW THE STRIP FOOTING, THEN ENCASE THE LINE IN A STEEL PIPE 2" LARGER IN DIAMETER THAN THE LINE AND EXTEND THE PIPE 1'-0" PAST EACH SIDE OF THE CONCRETE FOOTING.
   c. IF THE LINE IS ≥ 2'-0" BELOW BOTTOM OF FOOTING, THEN STEEL PIPE IS NOT REQUIRED. BACKFILL THE TRENCH WITH #57 STONE. THE BEARING CAPACITY OF THIS AREA MUST MEET OR EXCEED THE ALLOWABLE SOIL BEARING CAPACITY.
7. DIMENSIONS ARE FROM EDGE OF SLAB (E.O.S.) AND OUTSIDE FACE OF STUD (O.F.S.) / CURTAIN WALL (O.F.CW.) TO COLUMN CENTERLINE UNLESS NOTED OTHERWISE.
8. SEE S5.0 SHEETS FOR BRACE FRAMING INFORMATION AND REQUIREMENTS.
9. WHEN A SECTION IS CUT OR A DETAIL IS LABELED FOR A PARTICULAR CONDITION, THAT SECTION OR DETAIL SHALL APPLY FOR ALL SIMILAR CONDITIONS REGARDLESS OF WHETHER CUT OR LABELED, U.N.O.

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 041563 ADAM L. SISK

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Date: 2024.02.23 16:03:25-05'00'

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

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FOUNDATION PLAN

Rev.	Date	Notes

S2.01

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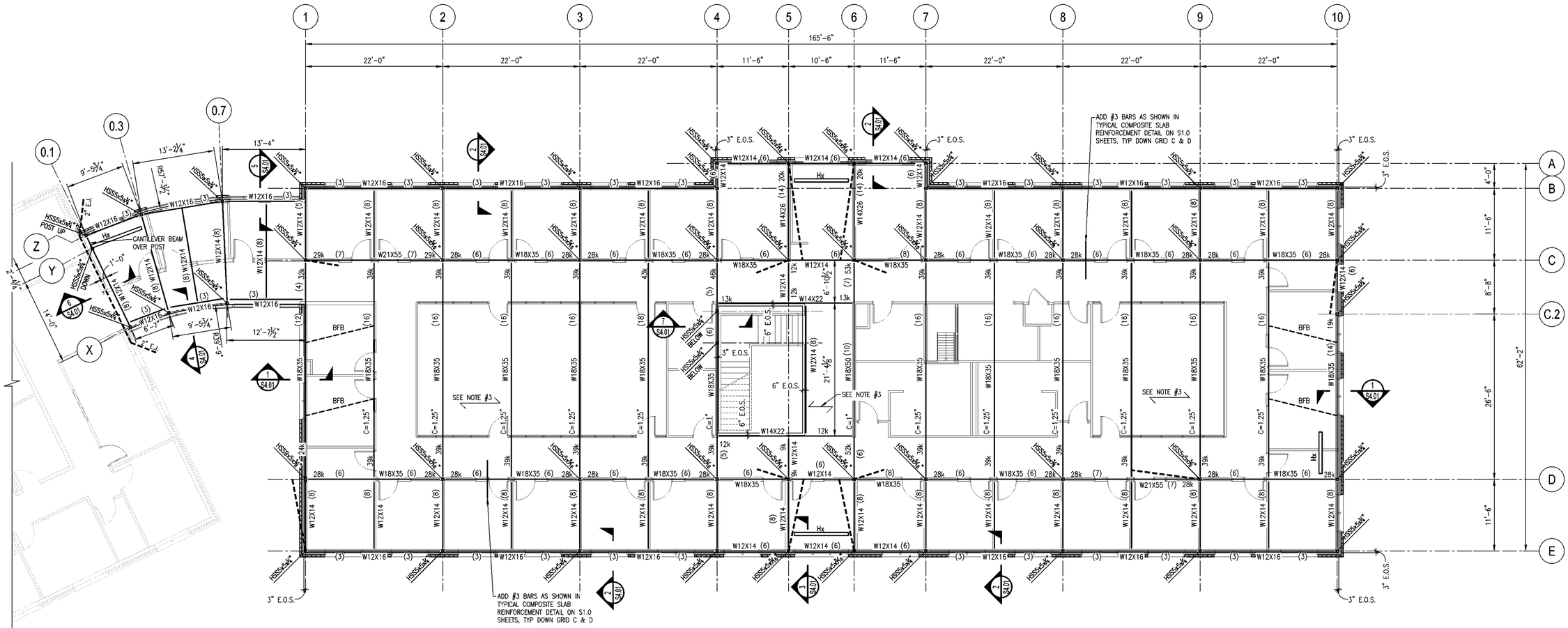
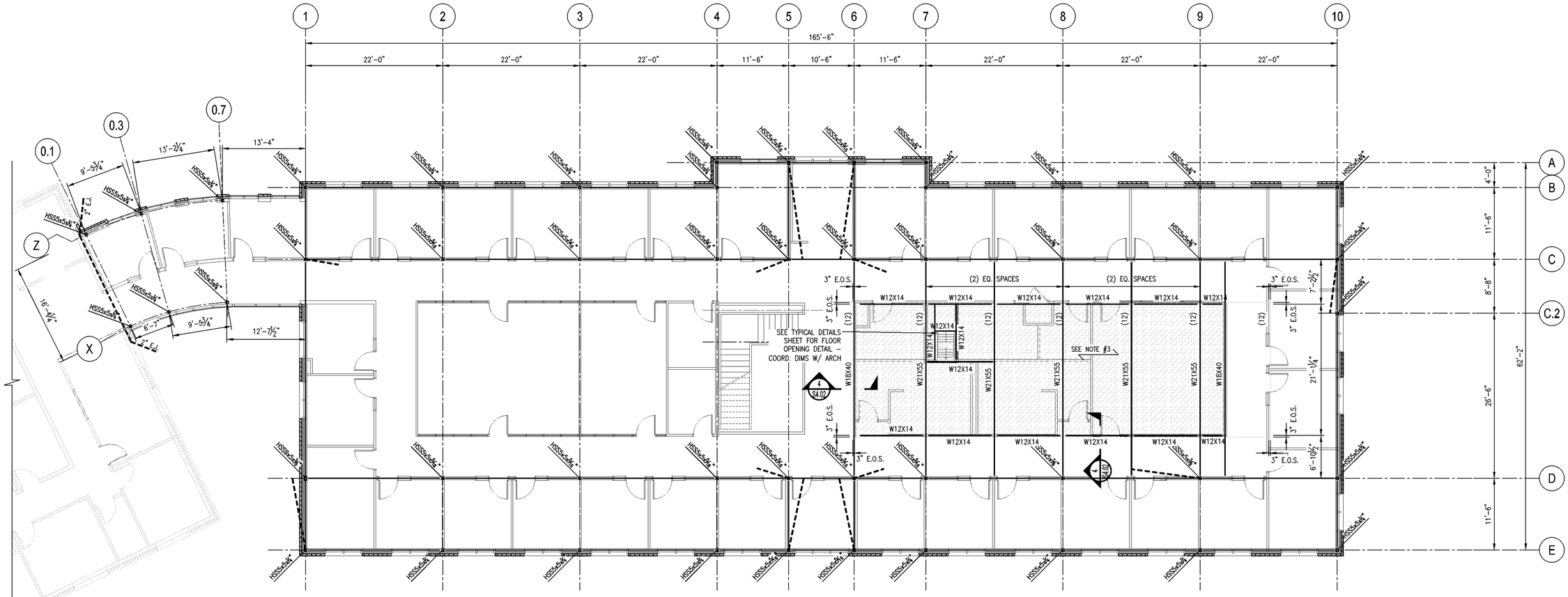

1
2
3
4
5
6
7
8
9
10
165'-6"
22'-0"
22'-0"
22'-0"
11'-6"
10'-6"
11'-6"
22'-0"
22'-0"
22'-0"
A
B
C
C.2
D
E
4'-0"
11'-6"
8'-8"
26'-6"
11'-6"
62'-2"
0.1
0.3
0.7
Z
Y
X
13'-4"
9'-5¾"
13'-2¼"
R57'-3½"
2" E.J.
2'-3¼"
14'-0"
6'-1"
9'-5¾"
12'-7½"
5'-8⅝"
CANTILEVER BEAM OVER POST
POST UP
HSS5x5x¼
W12X16
W12X14
W18X35
W21X55
W14X26
W14X22
W12X50
W18X50
W12X14
W12X14
W12X14



MECHANICAL MEZZANINE FRAMING PLAN

SCALE: 1/8" = 1'-0"
T/STEEL: 25'-6"

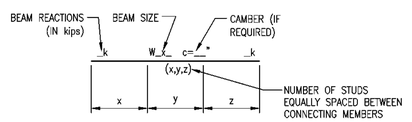
MECHANICAL MEZZANINE FRAMING LEGEND

- HSSxxx — STEEL COLUMN – SEE PLAN FOR SIZE AND LOCATION
- W_x_ — STEEL BEAM – SEE PLAN FOR SIZE AND LOCATION
- MC — INDICATES MOMENT CONNECTION
- 0 — GRID DESIGNATION FOR CENTERLINE OF COLUMN U.N.O.
- BRACE #x — INDICATES STEEL BRACE LOCATIONS SEE FOUNDATION PLAN & SHEET S5.0 SHEETS
- E.J. — BUILDING EXPANSION JOINT LOCATION – SEE SECTIONS FOR DETAILS
- MECHANICAL MEZZANINE

MECHANICAL MEZZANINE FRAMING PLAN NOTES:

1. SEE S1.0 SHEETS FOR ADDITIONAL GENERAL NOTES, MATERIAL NOTES AND MATERIAL SPECIFICATIONS. ALSO, SEE S1.0 SHEETS FOR TYPICAL DETAILS. TYPICAL DETAILS ARE GENERALLY NOT SHOWN ON PLAN BUT RATHER ARE INTENDED TO DEFINE TYPICAL CONSTRUCTION CONDITIONS.
2. SEE FLOOR ELEVATION TABLE SHEET S1.03 FOR TYPICAL SLAB ELEVATIONS. T/STL ELEVATIONS ARE 6½" BELOW SLAB ELEVATION.
3. TYPICAL FLOOR SLAB IS 3¼" – 3,000 psi NORMAL WEIGHT CONCRETE TOPPING WITH 4lbs/yd³ OF SYNTHETIC MACRO-FIBERS (TUF-STRAND SF BY EUCLID, FORTA-FERRO BY FORTA CORP, OR APPROVED EQUAL) ON 3", 20 GAUGE GALVANIZED COMPOSITE METAL DECK VULCRAFT 3VLI20 OR APPROVED EQUAL. TOTAL FLOOR SLAB SYSTEM IS 6½" THICK.
4. WHEN A SECTION IS CUT OR A DETAIL IS LABELED FOR A PARTICULAR CONDITION, THAT SECTION OR DETAIL SHALL APPLY FOR ALL SIMILAR CONDITIONS REGARDLESS OF WHETHER CUT OR LABELED, U.N.O.
5. DESIGNATIONS ON PLAN FOR BEAM REACTIONS, CAMBERS AND COMPOSITE BEAM SHEAR STUDS AS INDICATED BELOW. SEE "TYPICAL DETAILS" ON S1.0 SHEETS FOR STUD PLACEMENT DETAILS.

STUDS EQUALLY PLACED ALONG MEMBER.....(xx)
STUDS EQUALLY PLACED BETWEEN CONNECTING MEMBERS.....(xx/YY/ZZ)
CAMBER AT MID SPAN (UNO).....C=xx ĸ
REACTIONS AT EACH END (KIPS).....xx ĸ (LRFD)
(MINIMUM REACTION = 16k IF NOT SHOWN ON PLAN)(LRFD)



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Suite 201 Fax: 910.343.8088
Wilmington, NC 28401 www.woodseng.com

WOODS ENGINEERING, INC. CORPORATE SEAL No. C-1806 NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 041563 ENGINEER ADAM L. SISK

Digitally signed by Adam L. Sisk, PE, SE
DN: E=adam@woodseng.com, CN=Adam L. Sisk, PE, SE, O="WOODS ENGINEERING, P.A.", L=Wilmington, S=North Carolina, C=US
Date: 2024.02.23 16:03:35-05'00'

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

MECHANICAL MEZZANINE FRAMING PLAN

Rev.	Date	Notes

S2.03

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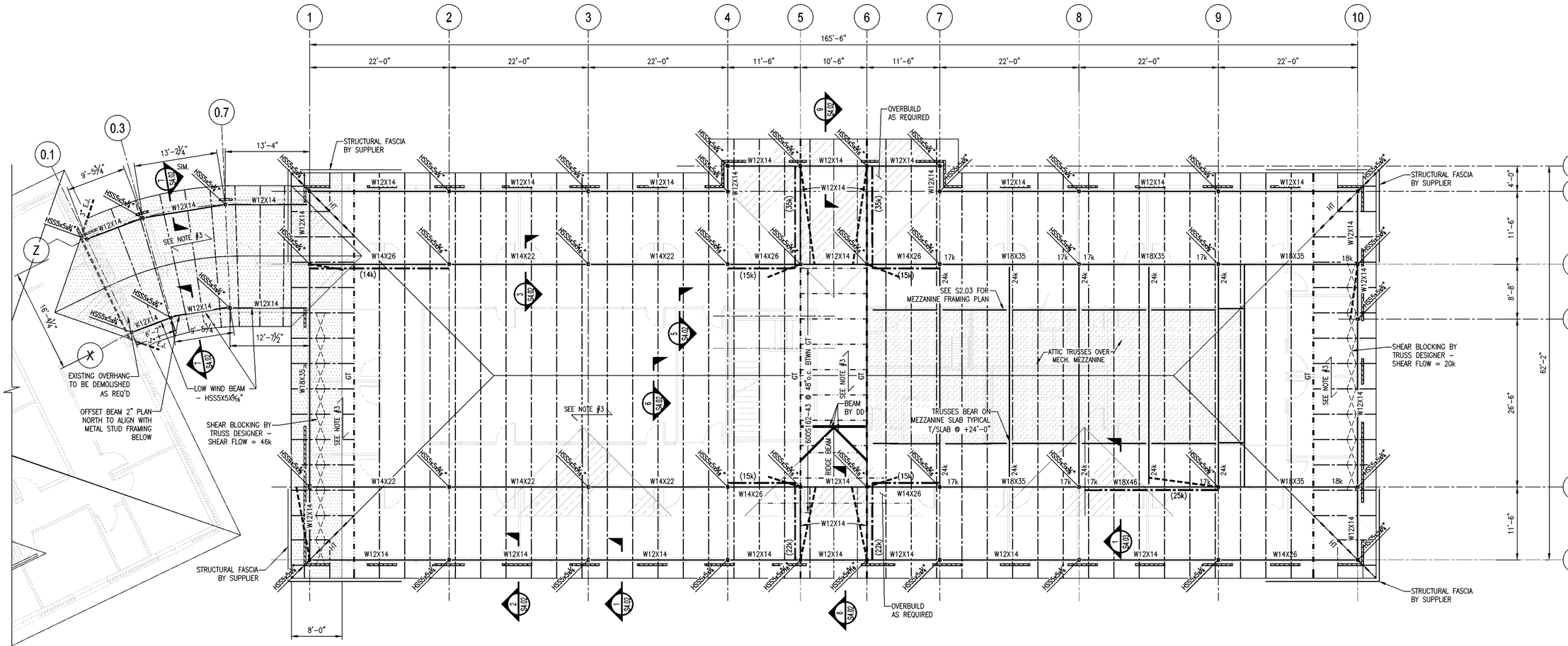


ROOF FRAMING PLAN

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

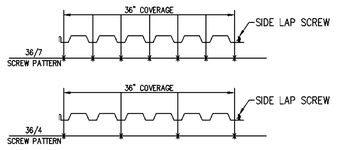
T/STL = +24'-0" U.N.O.

ROOF FRAMING LEGEND

- HSSXXX — STEEL COLUMN – SEE PLAN FOR SIZE AND LOCATION
- W_x_ — STEEL BEAM – SEE PLAN FOR SIZE AND LOCATION
- METAL ROOF TRUSSES @48"o.c.
- GT — INDICATES GIRDER TRUSS
- (XX k) — INDICATES DRAG TRUSS PROVIDE DRAG TRUSS SHEAR FLOW LOAD = (XX KIPS) (LRFD)
- 600S162-43 @ 48"o.c.
- 0 — GRID DESIGNATION FOR CENTERLINE OF COLUMN U.N.O.
- BRACE #x — INDICATES STEEL BRACE LOCATIONS SEE FOUNDATION PLAN & SHEET S5.0 SHEETS
- MECHANICAL MEZZANINE
- INDICATES OVERBUILD
- INDICATES METAL ROOF DECK SHALL BE ATTACHED TO SUPPORTING MEMBERS WITH #12 TEK SCREWS TO TRUSSES IN A 36/7 PATTERN WITH (7) #10 SIDELAP SCREWS PER SPAN

ROOF FRAMING PLAN NOTES

1. SEE S1.0 SHEETS FOR ADDITIONAL GENERAL NOTES, MATERIAL NOTES AND MATERIAL SPECIFICATIONS. ALSO, SEE S1.0 SHEETS FOR TYPICAL DETAILS. TYPICAL DETAILS ARE GENERALLY NOT SHOWN ON PLAN BUT RATHER ARE INTENDED TO DEFINE TYPICAL CONSTRUCTION CONDITIONS.
2. ELEVATIONS SHOWN ON PLAN ARE REFERENCED TO DATUM ELEVATION (0'-0") – SEE S2.01.
3. TYPICAL ROOF DECK IS 1½" DEEP, 20 ga., GALVANIZED, TYPE 'B' METAL ROOF DECK.
4. METAL ROOF DECK SHALL BE ATTACHED TO SUPPORTING MEMBERS WITH #12 TEK SCREWS TO TRUSSES IN A 36/4 PATTERN U.N.O. PROVIDE (1) #10 SIDELAP SCREWS PER SPAN, U.N.O. ON PLAN. EXCEPT WITHIN 10' OF ROOF EDGE PROVIDE FASTENERS IN A 36/7 PATTERN PROVIDE (1) #10 SIDELAP SCREW PER SPAN, U.N.O ON PLAN.



5. ALL TRUSSES SHALL BE DESIGNED FOR A NET ALLOWABLE UPLIFT PRESSURE OF 40 psf.
6. SEE S5.0 SHEETS FOR BRACE FRAME INFORMATION.
7. WHEN A SECTION IS CUT OR A DETAIL IS LABELED FOR A PARTICULAR CONDITION, THAT SECTION OR DETAIL SHALL APPLY FOR ALL SIMILAR CONDITIONS REGARDLESS OF WHETHER CUT OR LABELED, U.N.O.

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Leland Town Hall Addition & Renovations

102 Town Hall Drive
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Construction Drawings

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ROOF FRAMING PLAN

Rev.	Date	Notes

S2.04

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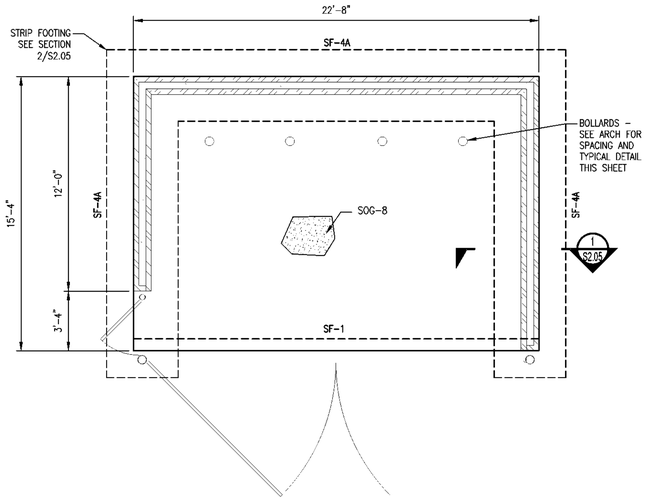
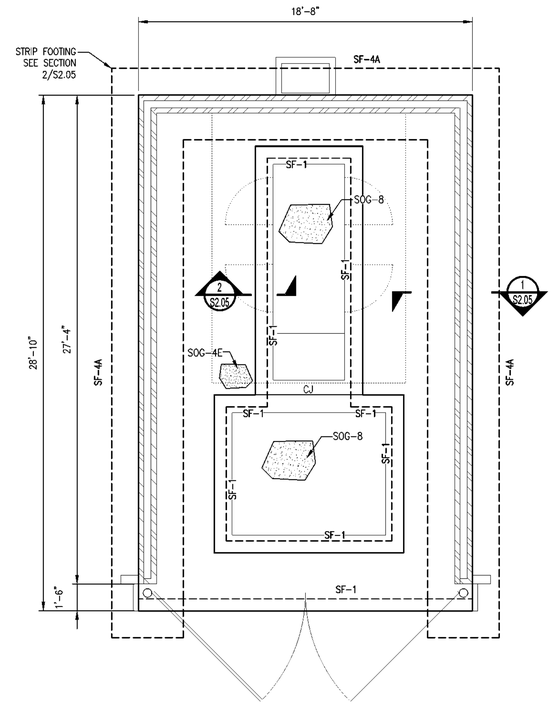


DUMPSTER ENCLOSURE ENLARGED PLAN

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



GENERATOR ENCLOSURE ENLARGED PLAN

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

NOTE: FIELD VERIFY PAD SIZE REQUIREMENTS AND RACEWAY STUB UP LOCATIONS WITH ENGINE-GENERATOR SUPPLIER SUB-BASE FUEL TANK SUPPLIER AND ENGINEER PRIOR TO POURING PAD

FOUNDATION LEGEND

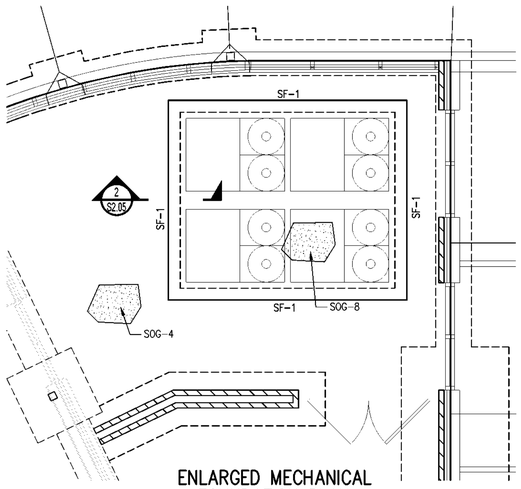
MASONRY SCREEN WALL
SEE SECTION THIS SHEET

SF-x
STRIP FOOTING DESIGNATION
SEE SECTIONS THIS SHEET

SOG-X
SLAB ON GRADE DESIGNATION
SEE SCHEDULE ON SHEET S2.01

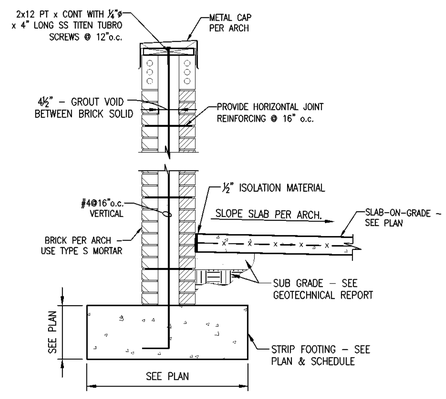
FOUNDATION PLAN NOTES

1. SEE S1.0 SHEETS FOR ADDITIONAL GENERAL NOTES, MATERIAL NOTES AND MATERIAL SPECIFICATIONS. ALSO, SEE S1.0 SHEETS FOR TYPICAL DETAILS. TYPICAL DETAILS ARE GENERALLY NOT SHOWN ON PLAN BUT RATHER ARE INTENDED TO DEFINE TYPICAL CONSTRUCTION CONDITIONS.
2. DATUM ELEVATION = TOP OF SLAB ELEVATION = ASSUMED 0'-0". OTHER ELEVATIONS ARE NOTED AS (+ OR -) FROM DATUM ELEVATION. SEE CIVIL FOR ELEVATIONS RELATIVE TO MSL. ALSO, SEE TABLE ON S1.0 SHEETS FOR FLOOR ELEVATIONS.
3. TOP OF FOOTINGS SHALL BE (-1'-4") FROM DATUM ELEVATION, U.N.O.
4. SEE SCHEDULE ON S2.01 FOR SLAB-ON-GRADE REQUIREMENTS
5. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND OTHER DISCIPLINE DRAWINGS FOR OPENINGS AND DEPRESSIONS NOT SHOWN ON THESE DRAWINGS.
6. RELOCATE ANY UTILITY LINES THAT CONFLICT WITH THE FOUNDATIONS OR DROP THE FOUNDATIONS TO AN ELEVATION BELOW THE PROPOSED UTILITIES. RELOCATE ANY GRAVITY FLOW LINES THAT CONFLICT WITH SPREAD FOOTINGS AS SHOWN ON STRUCTURAL FOUNDATION PLANS. IF A GRAVITY FLOW LINE TRAVELS UNDER A CONTINUOUS STRIP FOOTING EITHER:
   a. DROP THE FOOTING ELEVATION BELOW THE PROPOSED LINE.
   b. IF THE UTILITY LINE IS < 2'-0" BELOW THE STRIP FOOTING, THEN ENCASE THE LINE IN A STEEL PIPE 2" LARGER IN DIAMETER THAN THE LINE AND EXTEND THE PIPE 1'-0" PAST EACH SIDE OF THE CONCRETE FOOTING.
   c. IF THE LINE IS ≥ 2'-0" BELOW BOTTOM OF FOOTING, THEN STEEL PIPE IS NOT REQUIRED. BACKFILL THE TRENCH WITH #57 STONE. THE BEARING CAPACITY OF THIS AREA MUST MEET OR EXCEED THE ALLOWABLE SOIL BEARING CAPACITY.
7. DIMENSIONS ARE FROM EDGE OF SLAB (E.O.S.) AND OUTSIDE FACE OF BRICK UNLESS NOTED OTHERWISE.
8. WHEN A SECTION IS CUT OR A DETAIL IS LABELED FOR A PARTICULAR CONDITION, THAT SECTION OR DETAIL SHALL APPLY FOR ALL SIMILAR CONDITIONS REGARDLESS OF WHETHER CUT OR LABELED, U.N.O.



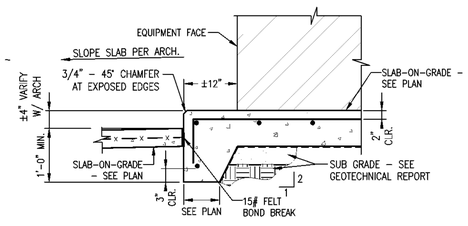
ENLARGED MECHANICAL FOUNDATION PLAN

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



SECTION 1

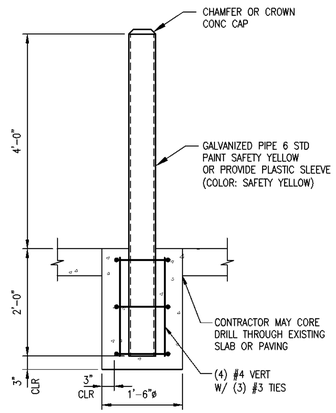
SCALE: 3/4" = 1'-0"



SECTION 2

SCALE: 3/4" = 1'-0"

PAD FOR MECHANICAL UNITS



TYPICAL BOLLARD DETAIL

SCALE: 3/4" = 1'-0"

FOUNDATION SECTION NOTES

1. DO NOT SCALE SECTIONS. SEE PLANS AND SCHEDULES FOR SIZES NOT SHOWN.
2. REBAR IS SHOWN FOR REFERENCE ONLY. SEE PLANS AND SCHEDULES FOR REINFORCEMENT REQUIREMENTS. WHERE REINFORCEMENT IS SPECIFIED IN SECTIONS IT IS IN ADDITION TO SCHEDULES.
3. IF A HOOK IS SHOWN ON REINFORCEMENT A STANDARD HOOK PER ACI IS REQUIRED U.N.O.
4. IF A DISCREPANCY EXISTS BETWEEN THE SECTIONS AND PLAN THE MORE STRINGENT REQUIREMENTS SHALL APPLY
5. EPOXY FOR CMU SHALL BE HY-270.
6. EPOXY FOR CONCRETE SHALL BE HY-200.

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Leland Town Hall Addition & Renovations

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Construction Drawings

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MISC. SITE PLANS & DETAILS

Rev.	Date	Notes

S2.05

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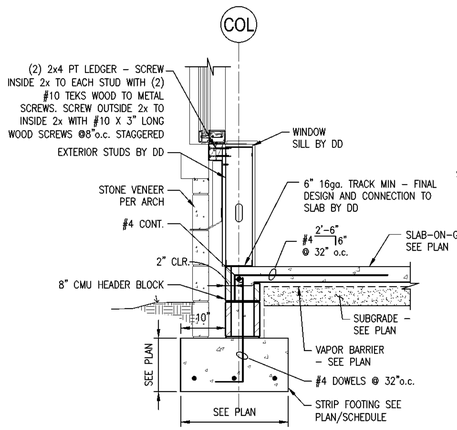
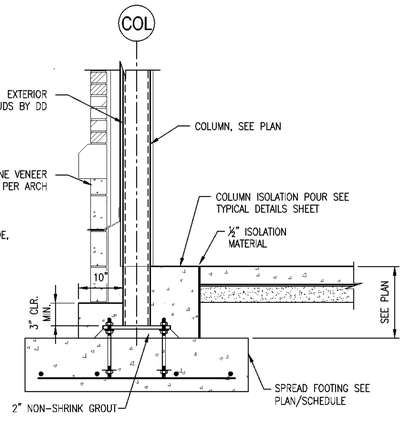
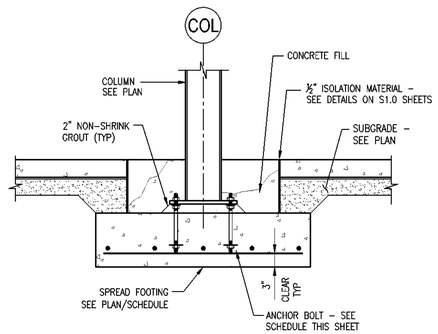


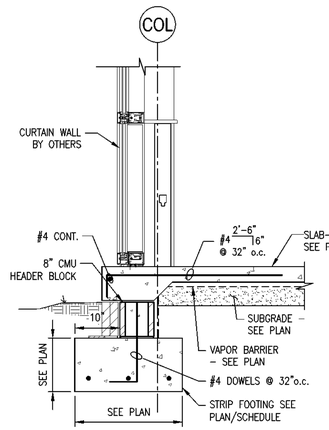
SECTION 1
SCALE: 3/4" = 1'-0"
TYPICAL EXTERIOR FOUNDATION AT CFS FRAMING



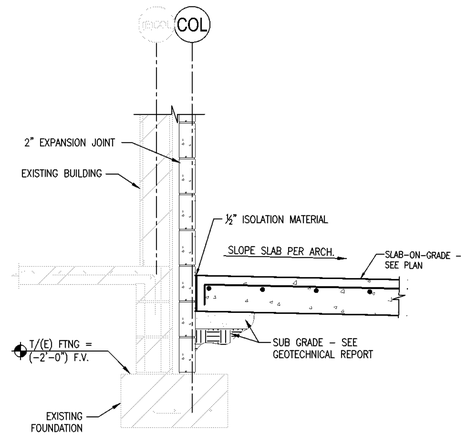
SECTION 2
SCALE: 3/4" = 1'-0"
TYPICAL EXTERIOR FOUNDATION AT COLUMN



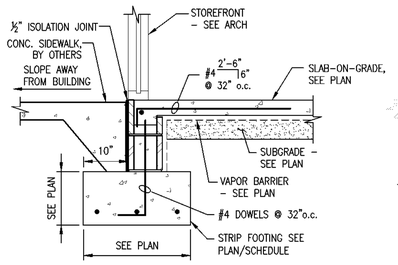
SECTION 3
SCALE: 3/4" = 1'-0"
TYPICAL INTERIOR FOUNDATION AT COLUMN



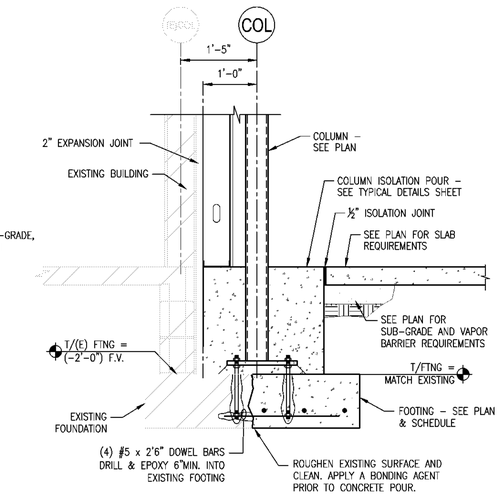
SECTION 4
SCALE: 3/4" = 1'-0"
TYPICAL EXTERIOR FOUNDATION AT CURTAIN WALL



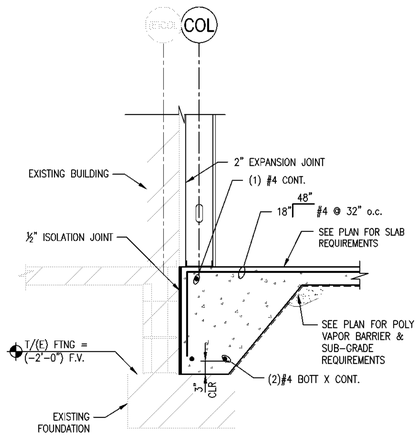
SECTION 5
SCALE: 3/4" = 1'-0"
EXTERIOR COURTYARD SLAB AT EXISTING BUILDING



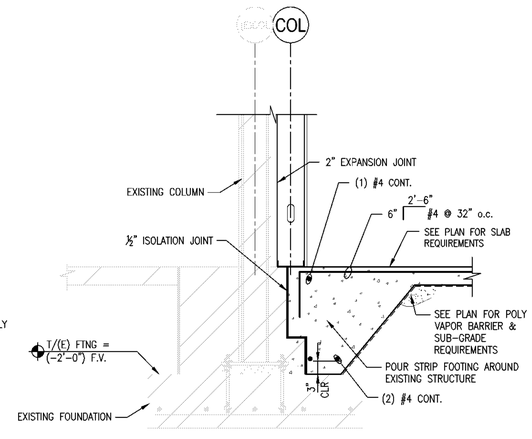
SECTION 6
SCALE: 3/4" = 1'-0"



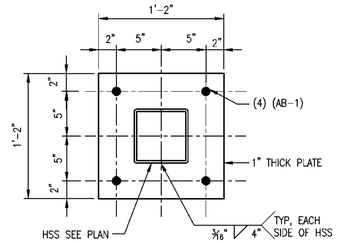
SECTION 7
SCALE: 3/4" = 1'-0"
NEW COLUMN AT EXISTING FOUNDATION



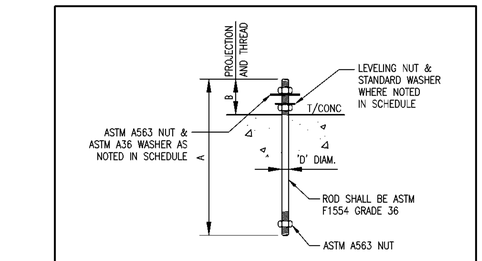
SECTION 8
SCALE: 3/4" = 1'-0"
NEW SLAB EDGE BETWEEN EXISTING COLUMNS



SECTION 9
SCALE: 3/4" = 1'-0"
NEW SLAB EDGE AT EXISTING COLUMN

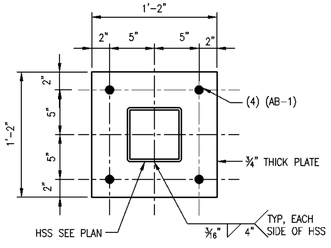


DETAIL "BP-6"
SCALE: 1 1/2" = 1'-0"

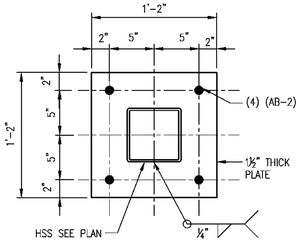


ANCHOR BOLT SCHEDULE							
MARK	BOLT DIAM. D	HOLE DIAMETER	A	B	TOP WASHER O.D. x t	LEVELING NUT	REMARKS
AB-1	¾"	1 5/16"	1'-2"	5"	2" x ¼"	YES	2" LEVELING GROUT
AB-2	1¼"	2 1/16"	2'-4"	7"	3" x ½"	YES	2" LEVELING GROUT
AB-3	1½"	2 5/16"	2'-5"	8"	3½" x ½"	YES	3" LEVELING GROUT

NOTE: ALL ANCHOR BOLTS GREATER OR EQUAL TO 1½"ø SHALL HAVE HEAVY HEX HEAD NUTS.



DETAIL "BP-1"
SCALE: 1 1/2" = 1'-0"
HSS5X5 TYP. U.N.O.



DETAIL "BP-2"
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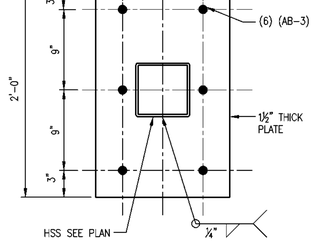

DETAIL "BP-3"
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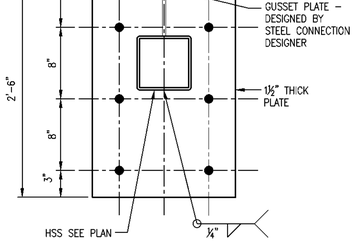
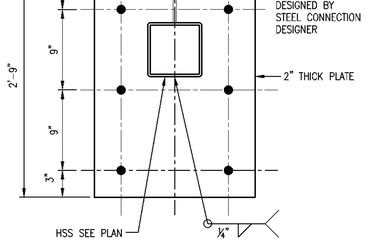


DETAIL "BP-4"
SCALE: 1 1/2" = 1'-0"



DETAIL "BP-5"
SCALE: 1 1/2" = 1'-0"

FOUNDATION SECTION NOTES

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2. REBAR IS SHOWN FOR REFERENCE ONLY. SEE PLANS AND SCHEDULES FOR REINFORCEMENT REQUIREMENTS. WHERE REINFORCEMENT IS SPECIFIED IN SECTIONS IT IS IN ADDITION TO SCHEDULES.
3. IF A HOOK IS SHOWN ON REINFORCEMENT A STANDARD HOOK PER ACI IS REQUIRED U.N.O.
4. IF A DISCREPANCY EXISTS BETWEEN THE SECTIONS AND PLAN THE MORE STRINGENT REQUIREMENTS SHALL APPLY
5. EPOXY FOR CMU SHALL BE HY-270.
6. EPOXY FOR CONCRETE SHALL BE HY-200.
7. FOR PRICING ASSUME ALL EXTERIOR FRAMING IS 600S162-54 @16" o.c. – FINAL DESIGN BY DD (18ga MIN.)
8. ALL CFS FRAMING AND CONNECTIONS SHOWN ARE FOR PRICING ONLY – FINAL DESIGN BY DD

SAWYER SHERWOOD & ASSOCIATE ARCHITECTURE
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mcgill Shaping Communities Together

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Date: 2024.02.23 16:05:57-05'00'

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

FOUNDATION SECTIONS & DETAILS

Rev.	Date	Notes

S3.01

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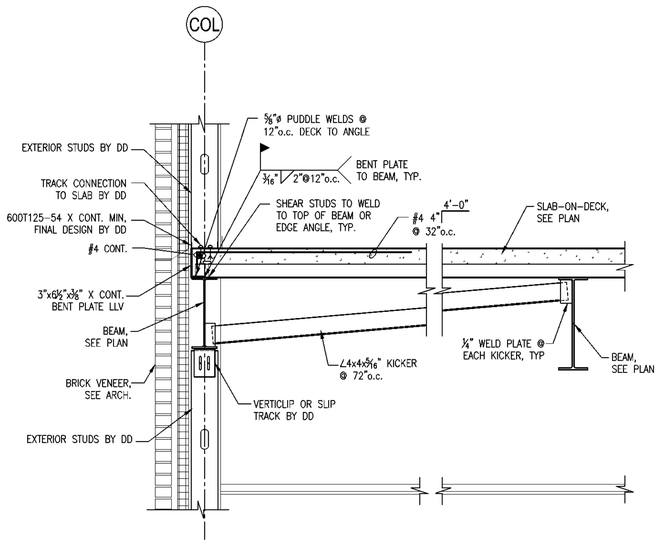
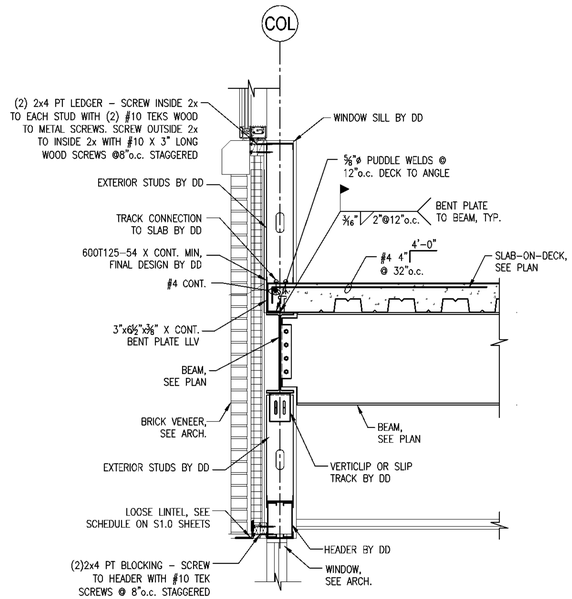


SECTION 1

SCALE: 3/4" = 1'-0"

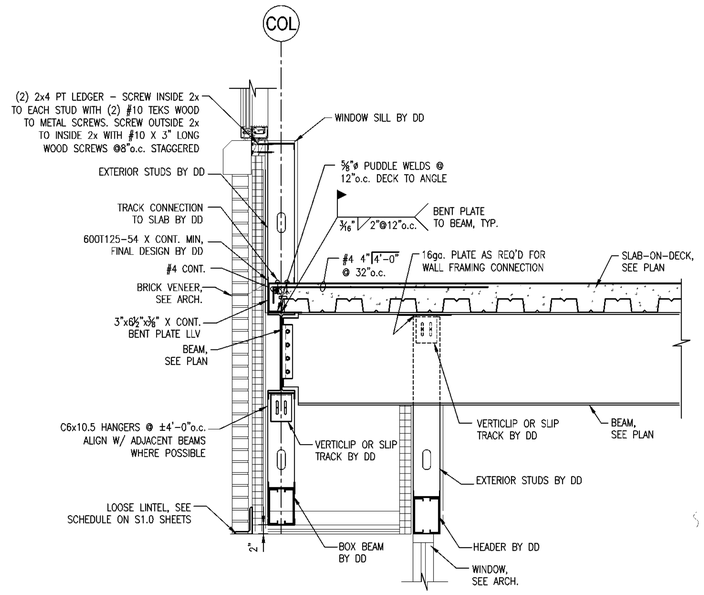
FLOOR FRAMING AT SLAB EDGE PERPENDICULAR TO DECK SPAN



SECTION 2

SCALE: 3/4" = 1'-0"

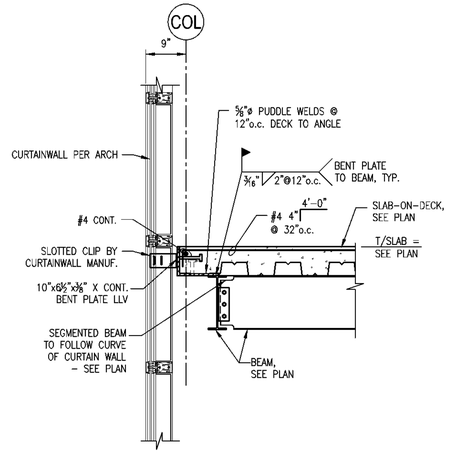
FLOOR FRAMING AT SLAB EDGE PARALLEL TO DECK SPAN



SECTION 3

SCALE: 3/4" = 1'-0"

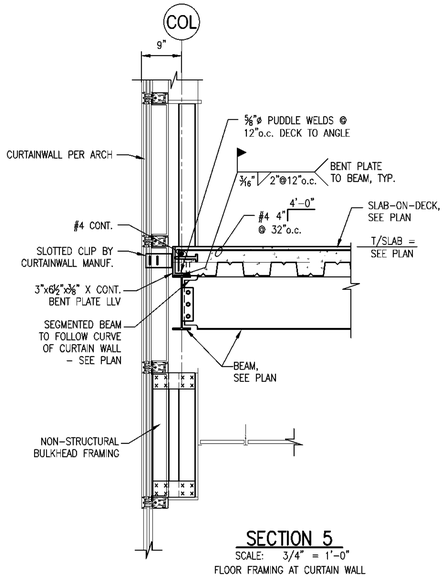
FLOOR FRAMING AT BUMPOUT



SECTION 4

SCALE: 3/4" = 1'-0"

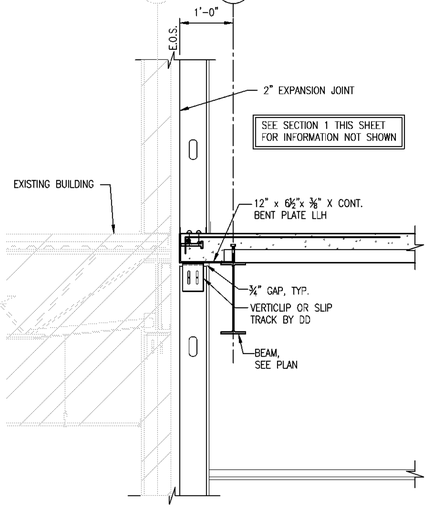
FLOOR FRAMING AT CURTAIN WALL



SECTION 5

SCALE: 3/4" = 1'-0"

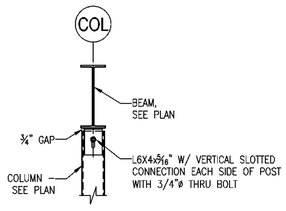
FLOOR FRAMING AT CURTAIN WALL



SECTION 6

SCALE: 3/4" = 1'-0"

FLOOR FRAMING AT EXPANSION JOINT



SECTION 7

SCALE: 3/4" = 1'-0"

TOP OF STAIR POST CONNECTION

FRAMING SECTION NOTES

1. FOR PRICING ASSUME ALL EXTERIOR FRAMING IS 600S162-54 @16" o.c. – FINAL DESIGN BY DD (18ga MIN.)
2. ALL CFS FRAMING AND CONNECTIONS SHOWN ARE FOR PRICING ONLY – FINAL DESIGN BY DD

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WOODS ENGINEERING, P.A. CORPORATE SEAL No. C-1606 NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 041563 ADAM L. SISK

Digitally signed by Adam L. Sisk, PE, SE
DN: E=adams@woodseng.com, CN="Adam L. Sisk, PE, SE", O="WOODS ENGINEERING, P.A.", L=Wilmington, S=North Carolina, C=US
Date: 2024.02.23 16:04:52-05'00'

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

FRAMING SECTIONS & DETAILS

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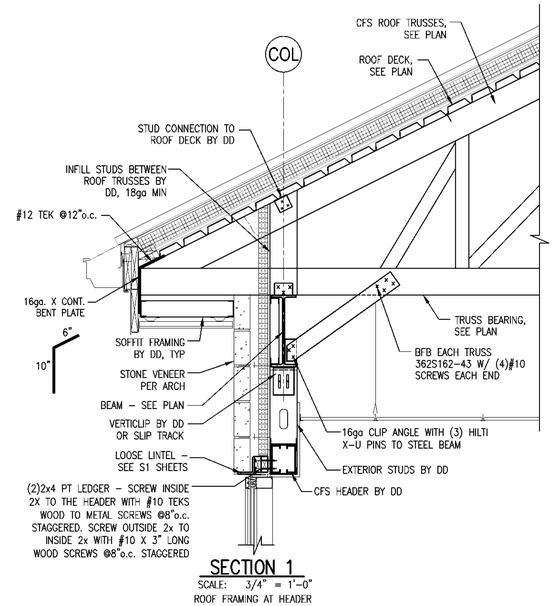
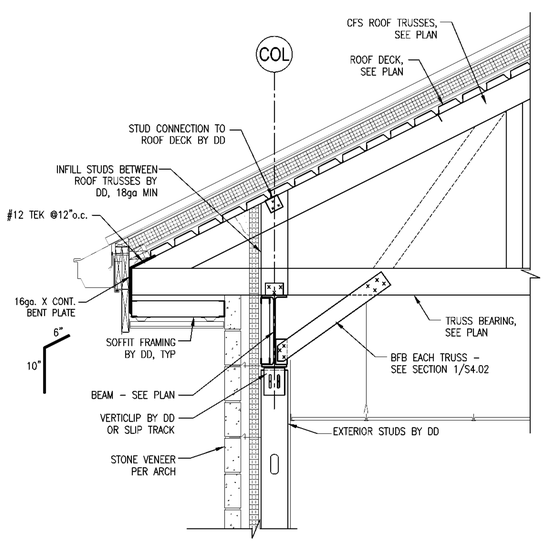


SECTION 1
SCALE: 3/4" = 1'-0"
ROOF FRAMING AT HEADER



SECTION 2
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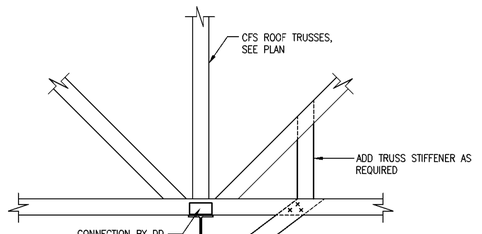
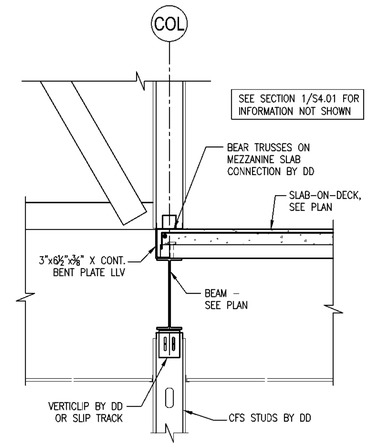
ROOF FRAMING BETWEEN HEADERS



SECTION 3
SCALE: 3/4" = 1'-0"
ROOF FRAMING INTERIOR BEAM



SECTION 4
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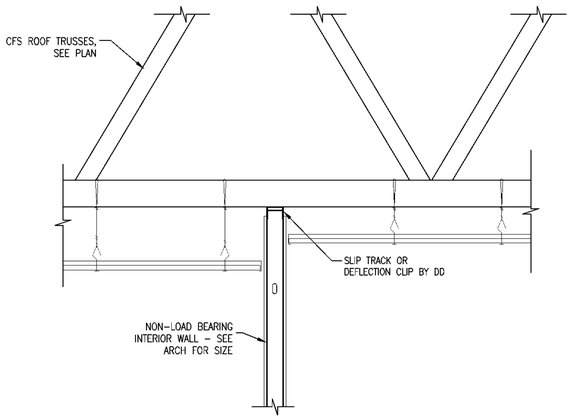
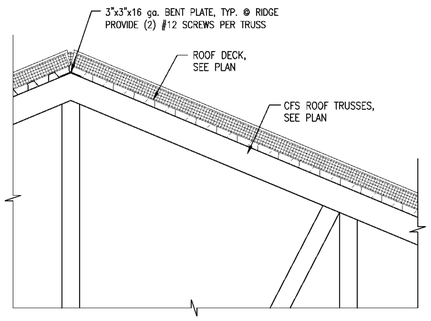
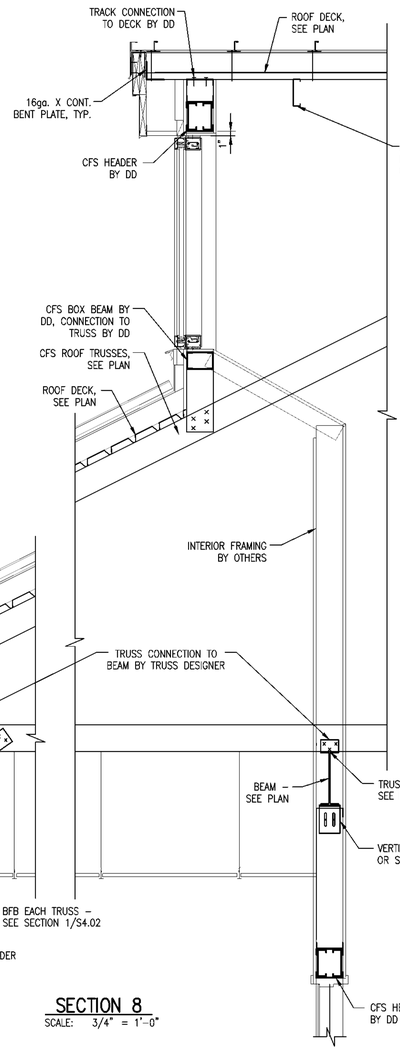
ROOF FRAMING AT MEZZANINE EDGE



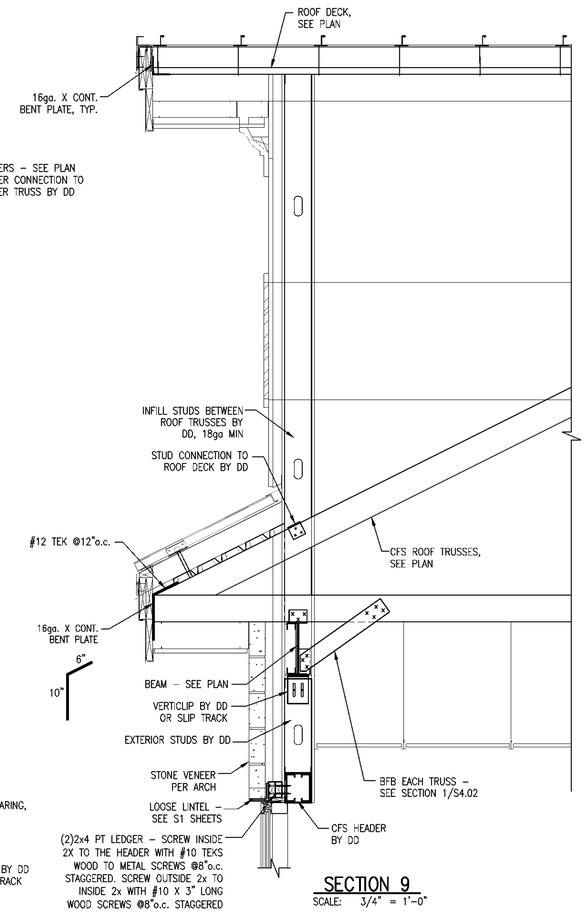
SECTION 5
SCALE: 3/4" = 1'-0"
ROOF FRAMING AT INTERIOR NON-LOAD BEARING WALL



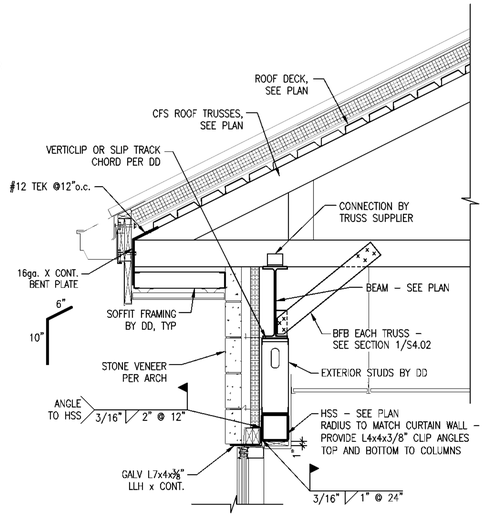
SECTION 6
SCALE: 3/4" = 1'-0"
ROOF FRAMING AT RIDGE



SECTION 8
SCALE: 3/4" = 1'-0"



SECTION 9
SCALE: 3/4" = 1'-0"



SECTION 7
SCALE: 3/4" = 1'-0"
ROOF FRAMING AT RADIUS HSS HEADER

FRAMING SECTION NOTES

1. FOR PRICING ASSUME ALL EXTERIOR FRAMING IS 600S162-54 @16" o.c. – FINAL DESIGN BY DD (18ga MIN.)
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 041563 ADAM L SISK

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Date: 2024.02.23 16:04:07-05'00'

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

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ROOF FRAMING SECTIONS & DETAILS

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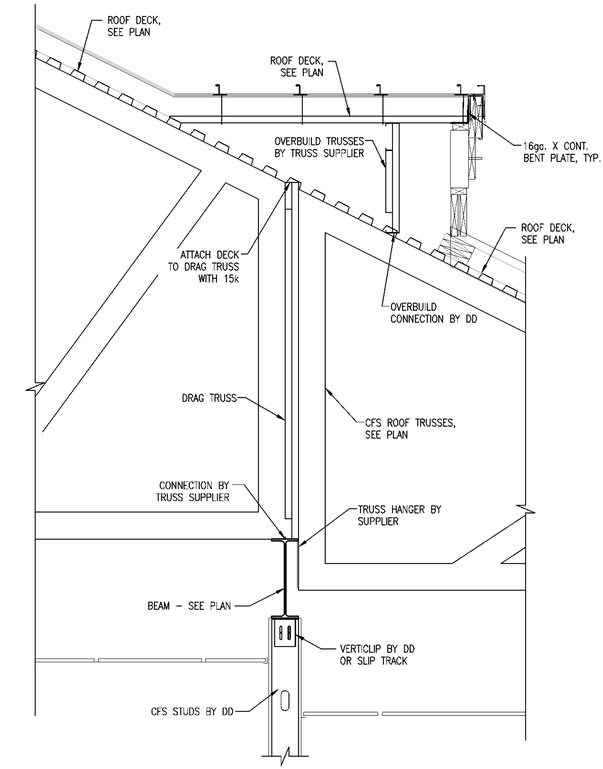

SECTION 1
SCALE: 3/4" = 1'-0"

FRAMING SECTION NOTES

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ROOF FRAMING SECTIONS & DETAILS

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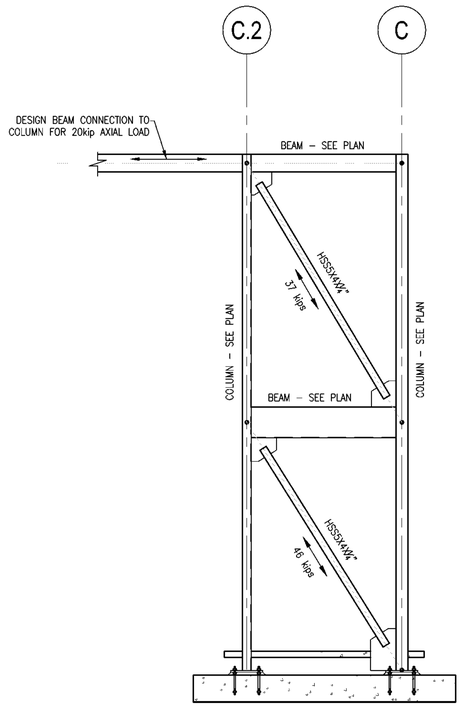
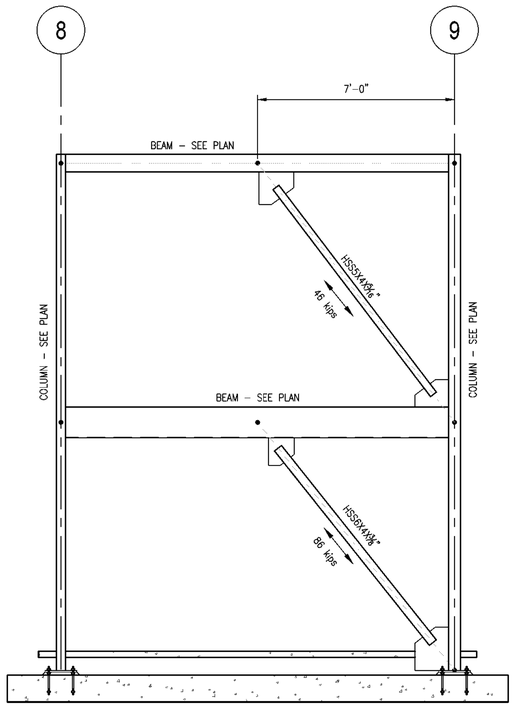


BRACE FRAME #1 ELEVATION
SCALE: 1/4" = 1'-0"



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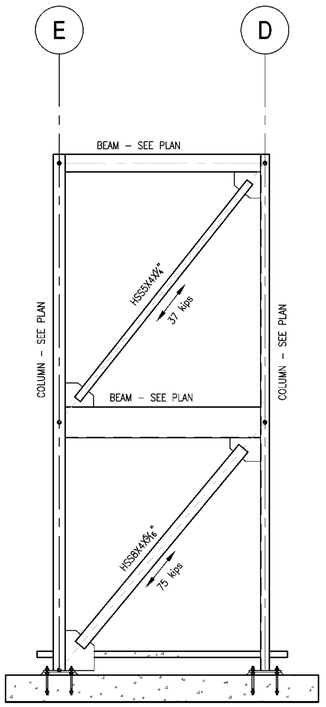

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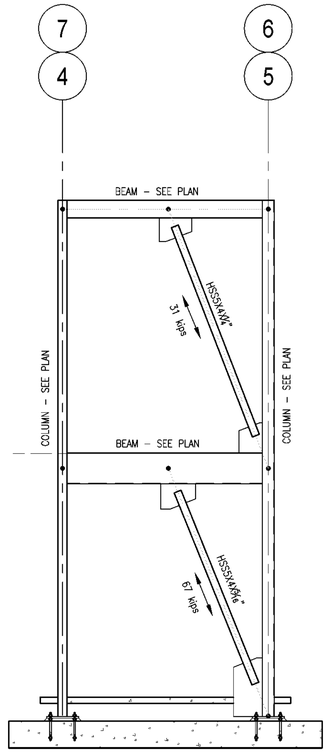
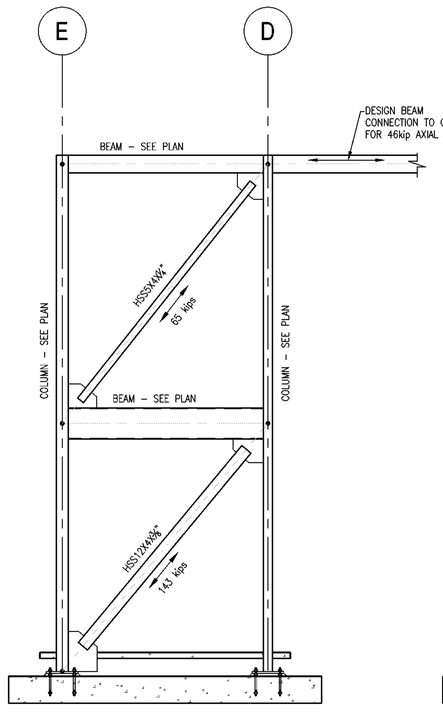


BRACE FRAME #4 ELEVATION
SCALE: 1/4" = 1'-0"

STEEL SUPPLIER SHALL DESIGN BRACE CONNECTIONS FOR LOADS SHOWN. LOADS ARE IN LRFD.



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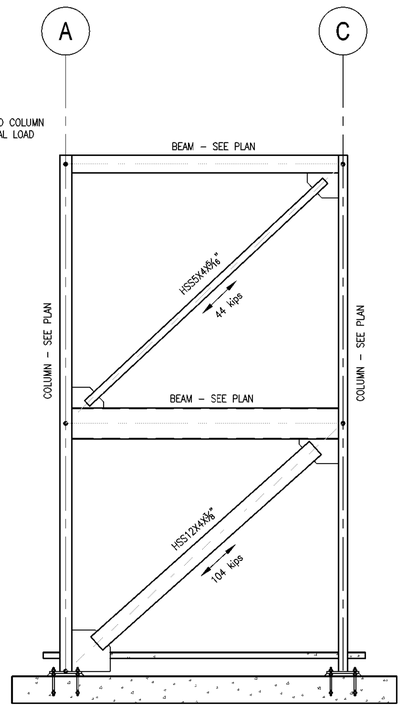

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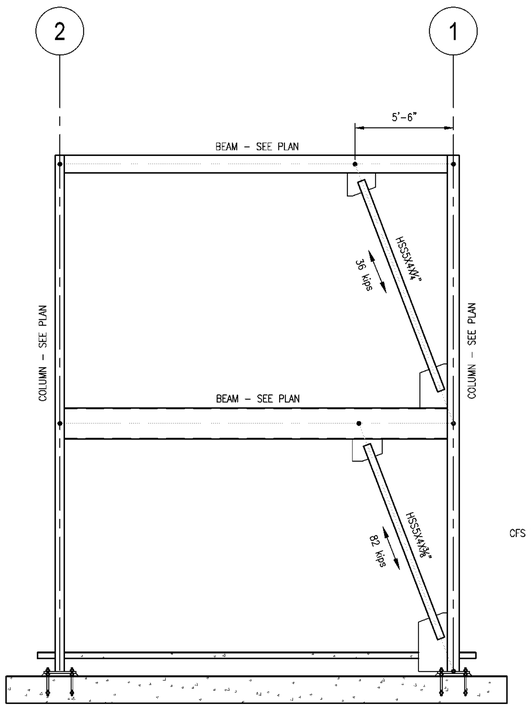
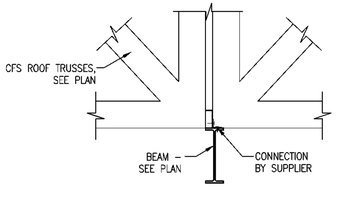


BRACE FRAME #7 ELEVATION
SCALE: 1/4" = 1'-0"



DETAIL B–B
SCALE: 3/4" = 1'-0"
DRAG TRUSS ON STEEL BEAM

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Date: 2024.02.23 16:04:18-05'00'

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

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X-BRACE ELEVATIONS

Rev.	Date	Notes

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MANUAL FIRE ALARM SYSTEM NOTES

1. AS A MINIMUM THE FIRE ALARM SYSTEM SHALL INCLUDE DETECTORS, PULL STATIONS, HORN/STROBES WITH FIRE RATED CABLE. THE FIRE ALARM SYSTEM SHALL MEET NFPA REQUIREMENTS, THE NATIONAL ELECTRICAL CODE, THE STATE CODES, AND THE LOCAL BUILDING CODES.
2. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL CABLE, MATERIALS AND EQUIPMENT AS SHOWN ON THE DRAWINGS/OR HEREIN SPECIFIED. ALL SYSTEM COMPONENTS SPECIFIED HEREIN, AS WELL AS THEIR INSTALLATION, SHALL COMPLY WITH APPLICABLE STANDARDS OF THE NATIONAL ELECTRICAL CODE, NATIONAL FIRE PROTECTION ASSOCIATION, AND LOCAL CODES HAVING AUTHORITY. ALL EQUIPMENT SHALL BE UL LISTED FOR FIRE ALARM SYSTEM USE.
3. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SHALL BE INSTALLED AND CONNECTED UNDER THE DIRECTION AND SUPERVISION OF A MANUFACTURER'S REPRESENTATIVE. UPON COMPLETION OF INSTALLATION, THE MANUFACTURER'S REPRESENTATIVE SHALL PERFORM ALL OPERATIONAL TESTS AND ADJUSTMENTS AND CERTIFY IN WRITING THAT THE SYSTEM IS PROPERLY INSTALLED AND FUNCTIONS AS SPECIFIED.
4. ALL WIRING SHALL BE SYSTEM OR UL LISTED FIRE RATED CABLE AND COLOR CODED TO ALLOW EASE OF IDENTIFICATION OF THE DIFFERENT CIRCUITRY REQUIRED FOR THE SYSTEM. NO CIRCUIT SHALL CHANGE COLOR AT ANY POINT END TO END.
5. THE. MANUFACTURER'S AUTHORIZED REPRESENTATIVE SHALL PROVIDE SUPERVISION OF FINAL SYSTEM PANEL CONNECTIONS, PERFORM A COMPLETE FUNCTIONAL TEST OF THE SYSTEM, AND A WRITTEN REPORT TO THE CONTRACTOR ATTESTING THE PROPER OPERATION OF THE COMPLETED SYSTEM.
6. THE CONTRACTOR SHALL PROVIDE A ONE YEAR WARRANTY FOR THE ALARM SYSTEM, ALONG WITH OTHER FORMS OR CERTIFICATE REQUIRED BY THE LOCAL JURISDICTION.
7. SYSTEM OPERATION

7.1 THE OPERATION OF ANY MANUAL PULL STATION, OR ANY OTHER SYSTEM ALARM INDICATOR, SHALL CAUSE ALL ALARM SIGNALS, BOTH AUDIBLE AND VISUAL TO ENERGIZE.

7.2 THE DEVICE FROM WHICH THE ALARM ORIGINATED SHALL BE INDICATED AT THE CONTROL PANEL, BOTH AUDIBLY AND VISUALLY. THE APPROPRIATE ALARM LED SHALL PULSE AND SHALL BE ILLUMINATED CONTINUOUSLY AFTER IT HAS BE ACKNOWLEDGED AT THE CONTROL PANEL.

7.3 ALL DEVICES SHALL BE COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM.

8. EQUIPMENT SHALL CONSIST OF THE FOLLOWING:

8.1 MANUAL STATIONS: MANUAL STATIONS SHALL BE CONSTRUCTED OF HIGH IMPACT, RED LEXAN WITH RAISED LETTERING. MANUAL STATIONS SHALL BE LOCATED NOT MORE THAN FOUR FEET ABOVE THE FINISHED FLOOR TO THE CENTER OF THE BOX. STATIONS SHALL BE LOCATED NOT MORE THEN FIVE FEET FROM EACH DESIGNATED EXIT-WAY AND THE TRAVEL DISTANCE SHALL NOT EXCEED 200 FEET.

8.2 COMBINATION AUDIO AND VISUAL SIGNAL: AUDIO VISUAL FIRE ALARM SIGNAL SHALL BE SURFACE MOUNTED WITH FLASHER. UNITS SHALL BE RED IN COLOR. THE LEXAN LENS SHALL BE TRIANGULAR IN SHAPE TO SIGNIFICANTLY IMPROVE SIDE VIEWING VISIBILITY. THE UNIT SHALL MOUNT ON A STANDARD FOUR INCH ELECTRICAL BOX. A MATCHING TRIM PLATE SHALL BE SUPPLIED. THE LENS SHALL BE LETTERED RED "FIRE". THE AUDIO VISUAL SIGNALS SHALL MEET REQUIREMENTS OF ADA.

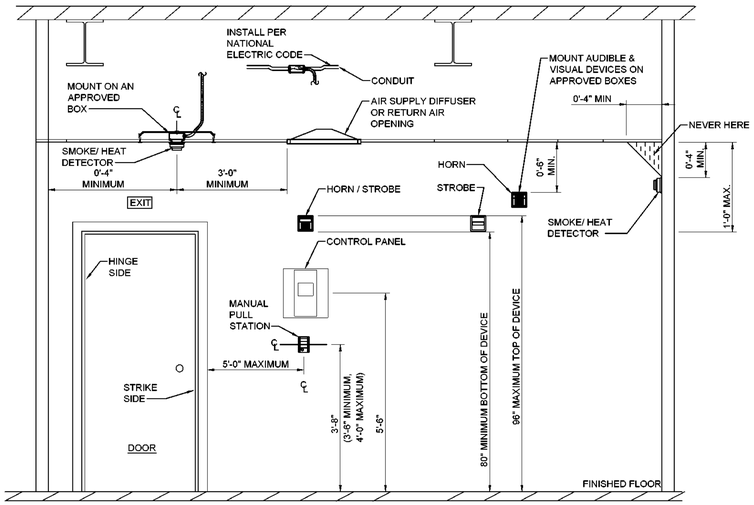
8.3 SMOKE DETECTOR: PROVIDE SOLID STATE PHOTO ELECTRIC TYPE WITH TWO WIRE OPERATION AND 360° SMOKE ENTRY FOR FACP.

9. ALL WIRING SHALL BE INSTALLED IN COMPLIANCE WITH N.E.C., NFPA 72, ALL STATE AND LOCAL REQUIREMENTS AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
10. SLEEVE AND SEAL ALL PENETRATIONS THROUGH FIRE WALLS.
11. WIRING SHALL BE A MINIMUM OF NO. 14 AWG UNLESS OTHERWISE NOTED.
12. ALL WORK PERFORMED AND ALL MATERIAL FURNISHED UNDER THIS CONTRACT SHALL BE FREE FROM DEFECTS AND SHALL REMAIN SO FOR A PERIOD OF AT LEAST ONE YEAR FROM THE DATE OF ACCEPTANCE.
13. IN CORRIDORS WHERE MORE THAN TWO VISIBLE NOTIFICATION APPLIANCES ARE IN ANY FIELD OF VIEW, THEY SHALL FLASH IN SYNCHRONIZATION.
14. FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR MODULES TO SHUTDOWN HVAC EQUIPMENT DURING ALARM CONDITION.
15. ALL FIRE ALARM WORK AND DEVICES SHALL BE INSTALLED AND TERMINATED BY A NICET LEVEL 2 FIRE ALARM TECHNICIAN.

FIRE ALARM LEGEND

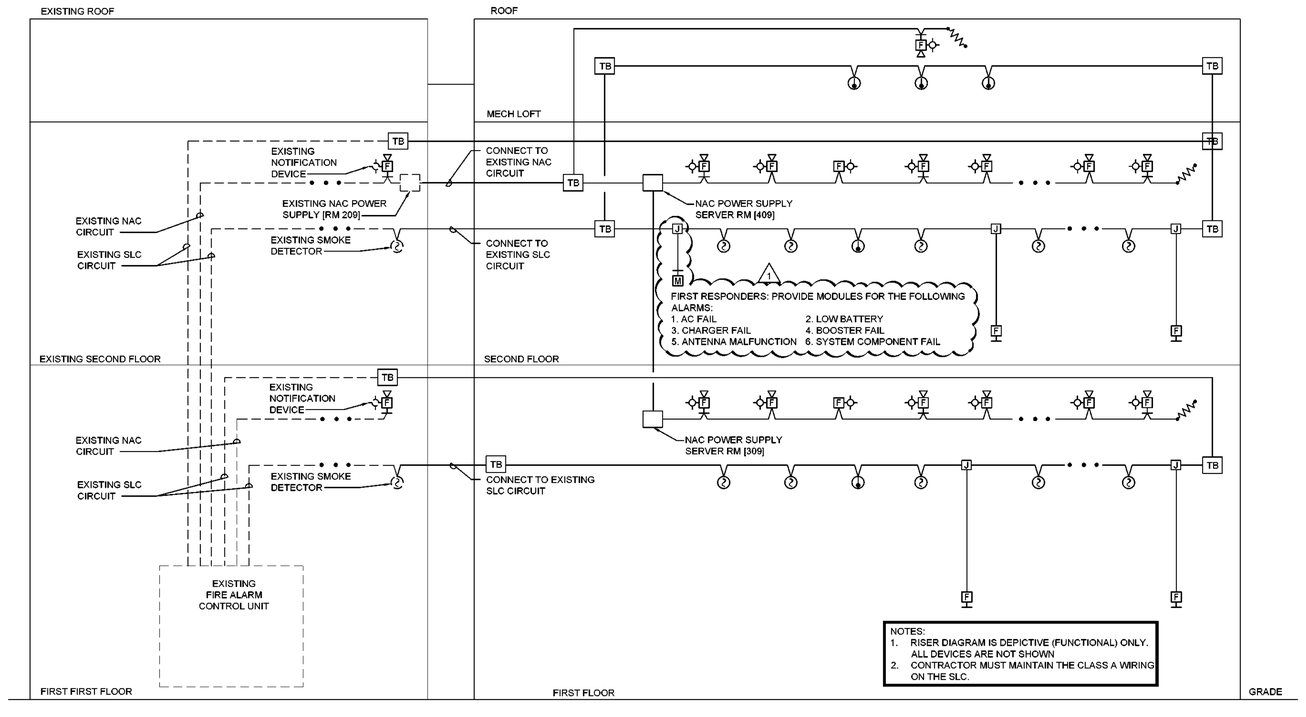
SYMBOL	DESCRIPTION
EX F	EXISTING FIRE ALARM MANUAL STATION, 48" AFF
RL F	RELOCATED EXISTING FIRE ALARM MANUAL STATION, 48" AFF
F	NEW FIRE ALARM MANUAL STATION, 48" AFF
EX HF	EXISTING FIRE ALARM HORN/STROBE DEVICE, 80" AFF
RL HF	RELOCATED EXISTING FIRE ALARM HORN/STROBE DEVICE, 80" AFF
HF 15cd	NEW FIRE ALARM HORN/STROBE DEVICE, CEILING MOUNTED, "15cd" INDICATES CANDELA RATING
F	EXISTING FIRE ALARM VISUAL (ONLY) DEVICE, 80" AFF
EX F	RELOCATED EXISTING FIRE ALARM VISUAL (ONLY) DEVICE, 80" AFF
RL F 15cd	NEW FIRE ALARM VISUAL (ONLY) CEILING MOUNTED "15cd" INDICATES CANDELA RATING
EX	EXISTING SMOKE DETECTOR, CEILING MOUNTED
RL	RELOCATED EXISTING SMOKE DETECTOR, CEILING MOUNTED
	NEW SMOKE DETECTOR, CEILING MOUNTED
EX	EXISTING HEAT DETECTOR, CEILING MOUNTED
RL	RELOCATED EXISTING HEAT DETECTOR, CEILING MOUNTED
	HEAT DETECTOR, CEILING MOUNTED
EX	EXISTING DUCT MOUNTED SMOKE DETECTOR
	SPRINKLER TAMPER SWITCH
EX	EXISTING SPRINKLER FLOW SWITCH
C	FIRE ALARM SYSTEM CONTROL MODULE
M	FIRE ALARM SYSTEM MONITOR MODULE
EX R	EXISTING DUCT SMOKE DETECTOR REMOTE INDICATING DEVICE (RAIL), CEILING MOUNTED
EX RH	EXISTING REMOTE INDICATING DEVICE (RAIL), WALL MOUNTED
EX I	EXISTING ISOLATION MODULE
FACP	FIRE ALARM CONTROL PANEL (FACP)
FA REMOTE ANN	FIRE ALARM REMOTE ANNUNCIATOR PANEL

(SYMBOLS SHOWN FOR REFERENCE ONLY AND MAY NOT IMPLY CONTRACTUAL REQUIREMENTS)



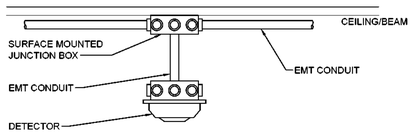
NOTE:
DETAIL SHOWN FOR REFERENCE ONLY. NOT ALL DEVICES ARE INDICATED ON PLANS.

2 DEVICE MOUNTING DETAIL
NOT TO SCALE

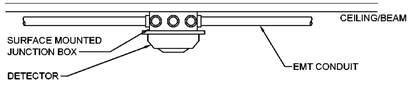


1 FUNCTIONAL FIRE ALARM RISER DIAGRAM
NOT TO SCALE

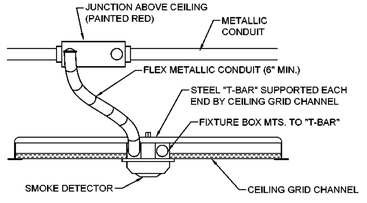
SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS



3 TYPICAL SUSPENDED DEVICE DETAIL
NOT TO SCALE



4 TYPICAL SURFACE DEVICE DETAIL
NOT TO SCALE



5 TYPICAL CEILING MOUNTED DEVICE DETAIL
NOT TO SCALE

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023311 W. ALLEN CRIBB
03/08/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Fire Alarm Legend, Notes and Details

Rev.	Date	Notes
1	03.06.24	OWNER REVIEW

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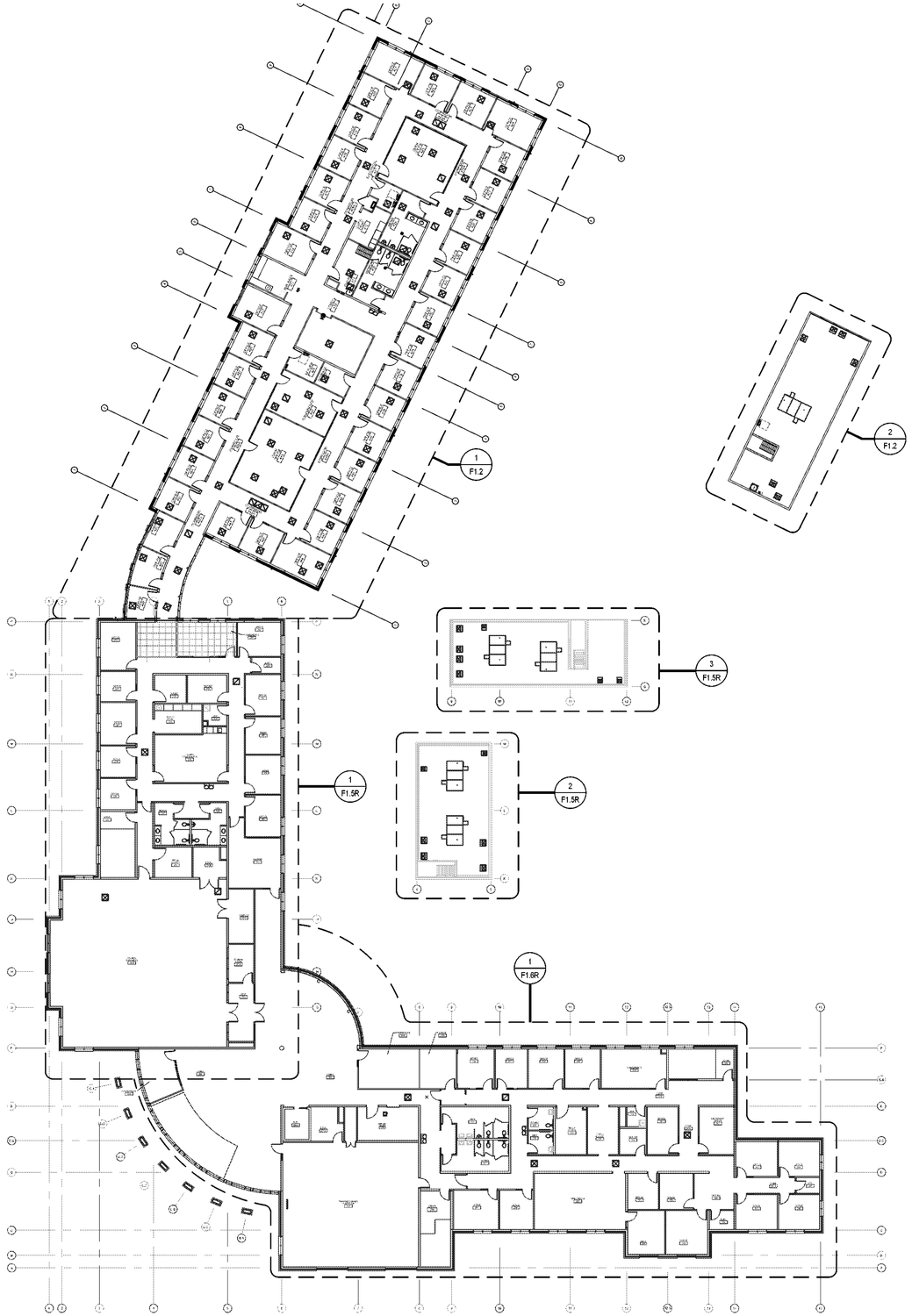

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

1 **SYSTEMS SECOND FLOOR PLAN - KEY PLAN**

3/32" = 1'-0"

0 5' 10' 20'

PLAN NORTH

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02/21/2024

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Systems Second Floor Plan - Key Plan

Rev.	Date	Notes

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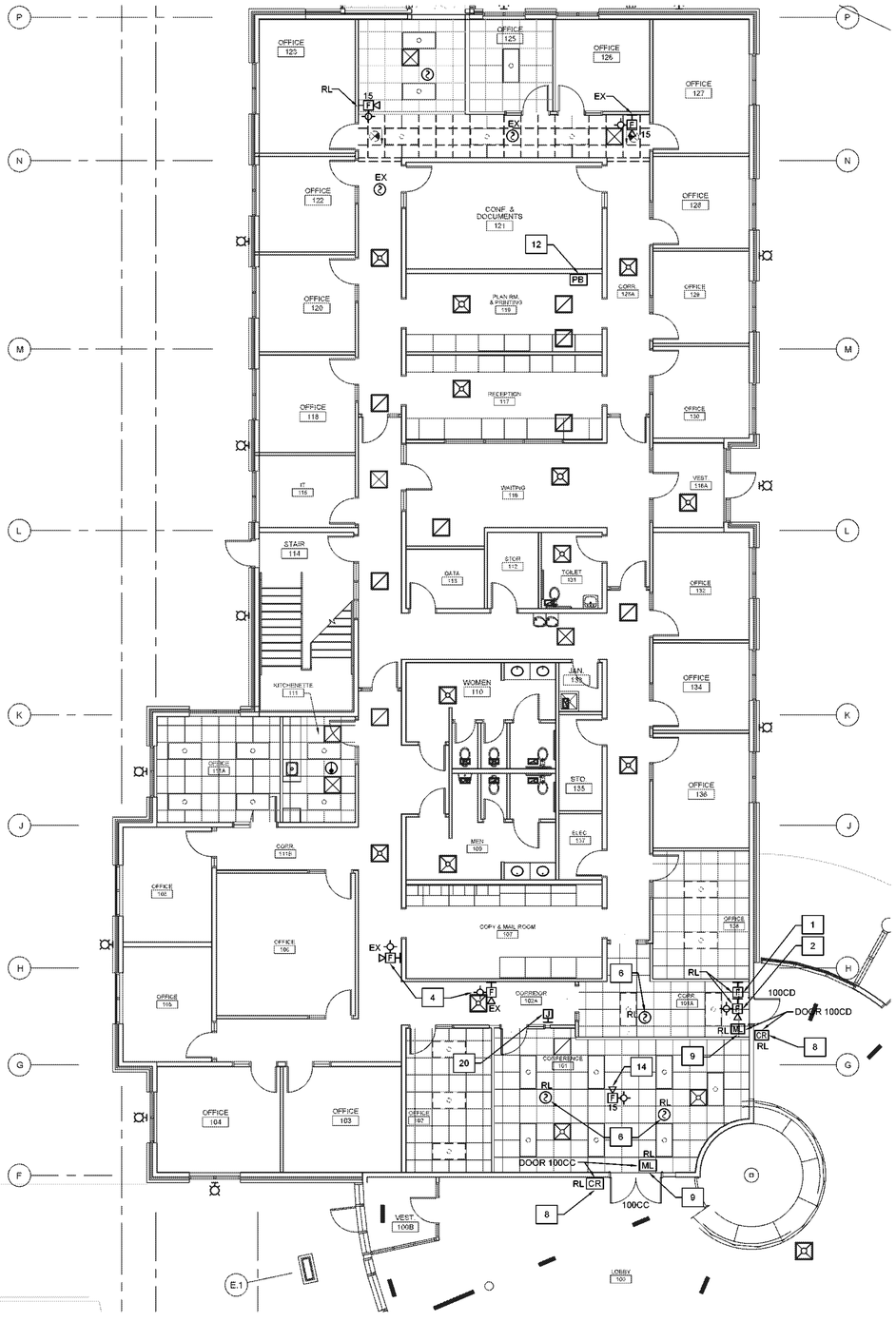

1 **SYSTEMS FIRST FLOOR PLAN - NEW WORK**
1/8" = 1'-0"

KEYED NOTES

1	RELOCATED (RL) EXISTING WALL MOUNTED FIRE ALARM MANUAL STATION, 48 "AFF
2	RELOCATED (RL) EXISTING WALL MOUNTED FIRE ALARM HORN/STROBE, 80" AFF
3	RELOCATED (RL) EXISTING WALL MOUNTED FIRE ALARM VISUAL DEVICE, 80" AFF
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02/21/2024

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Systems First Floor Plans - New Work

Rev.	Date	Notes

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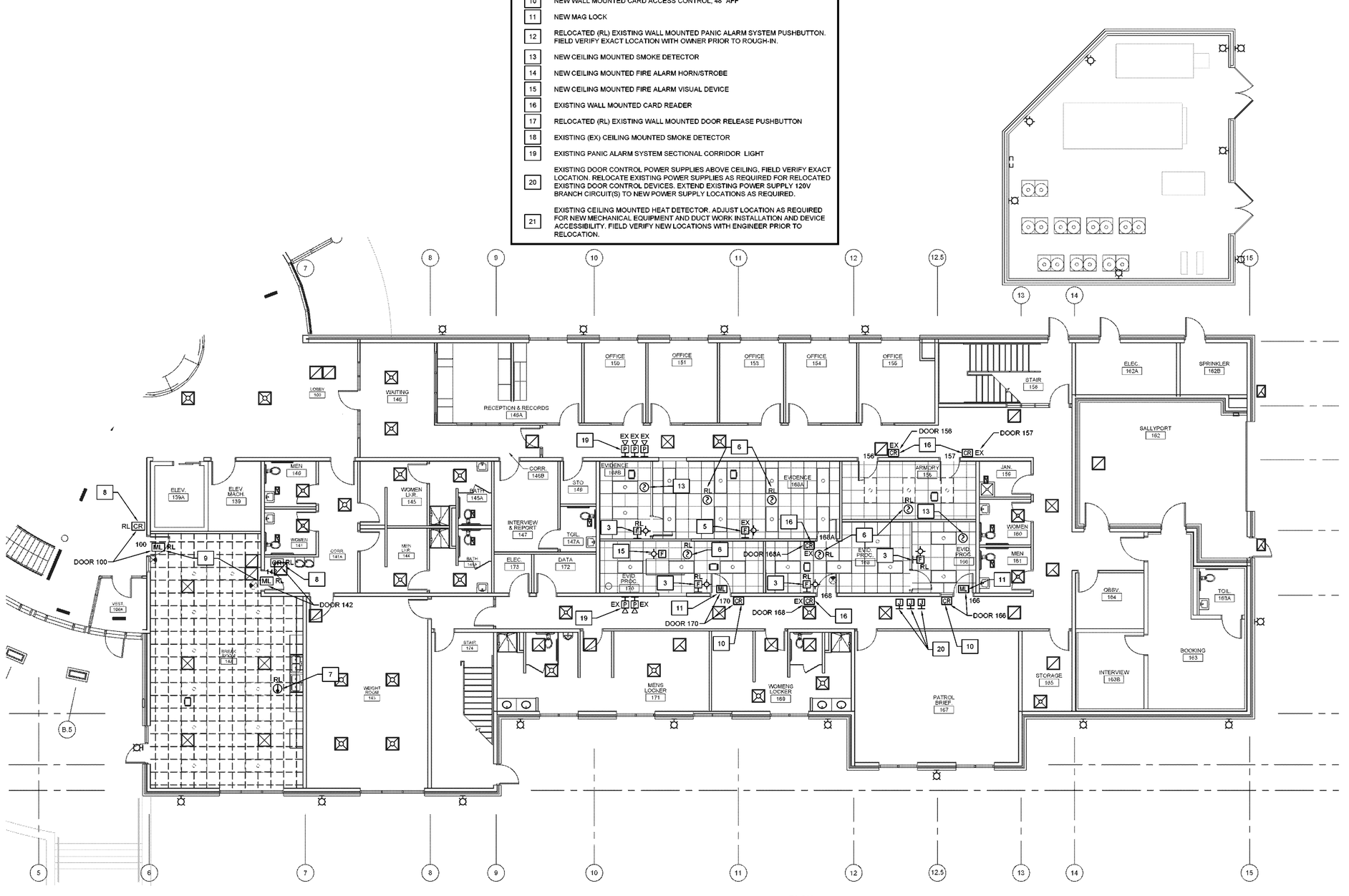

1 **SYSTEMS FIRST FLOOR PLAN - NEW WORK**
1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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02/21/2024

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Systems First Floor Plans - New Work

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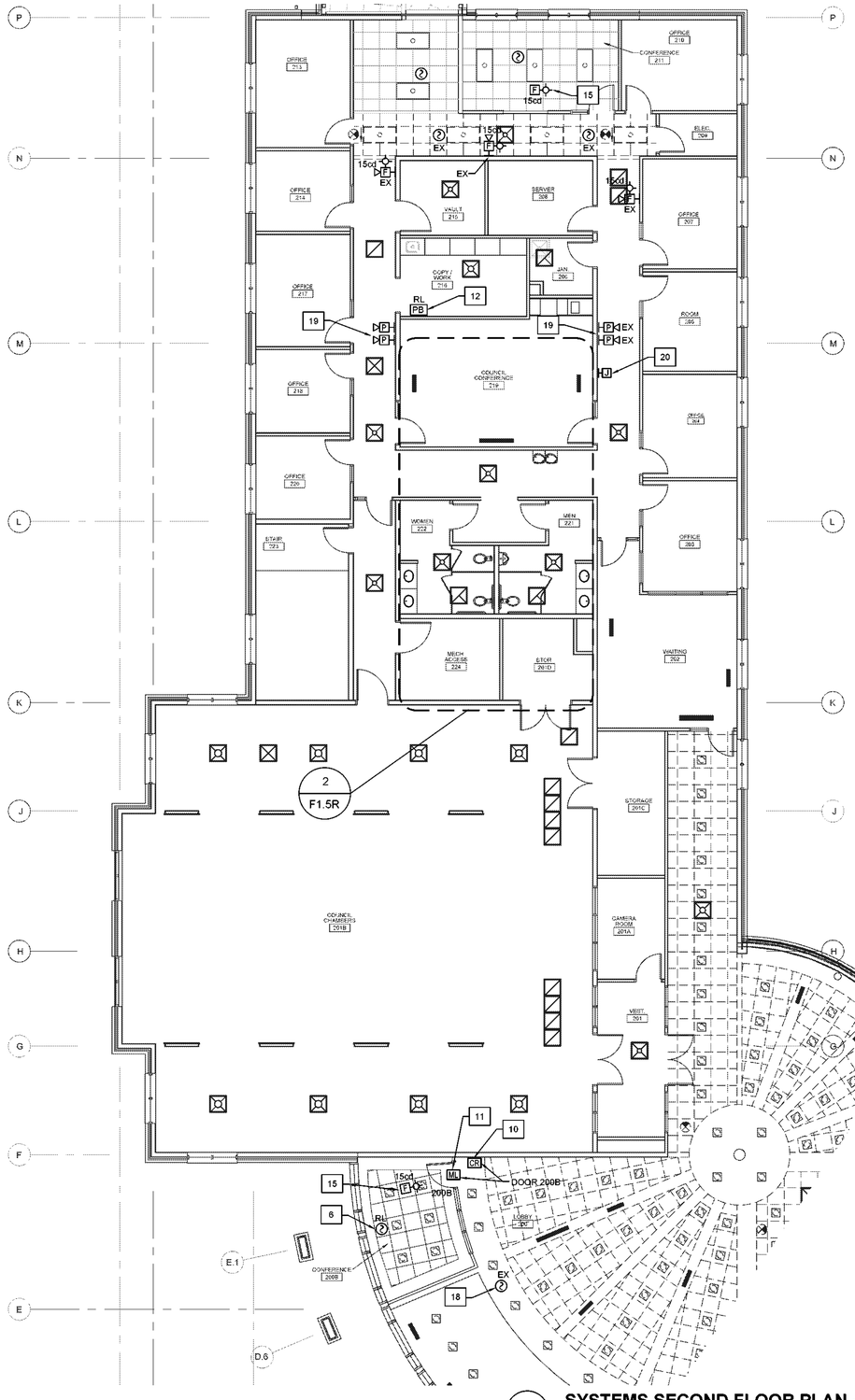
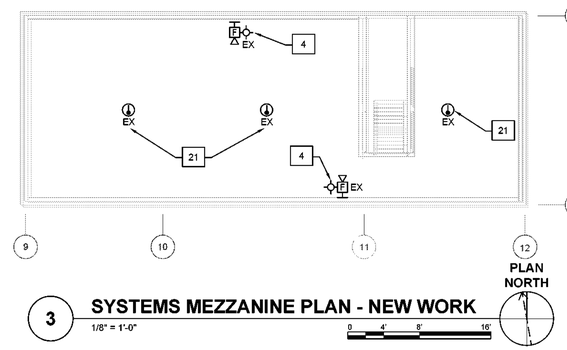


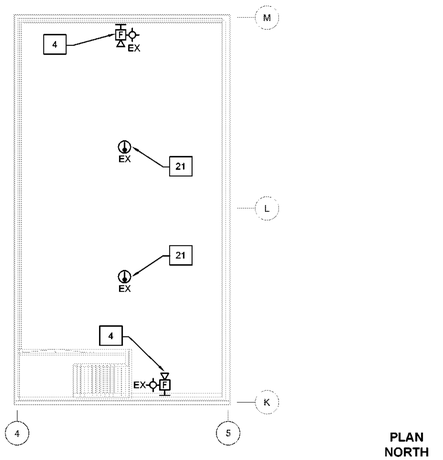
1 SYSTEMS SECOND FLOOR PLAN - NEW WORK
1/8" = 1'-0"

PLAN NORTH



3 SYSTEMS MEZZANINE PLAN - NEW WORK
1/8" = 1'-0"

PLAN NORTH



2 SYSTEMS MEZZANINE PLAN - NEW WORK
1/8" = 1'-0"

PLAN NORTH

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL SEAL 023311 ENGINEER WILLIAM ALLEN CRIBB
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Systems Second Floor Plans - New Work

Rev.	Date	Notes

F1.5R

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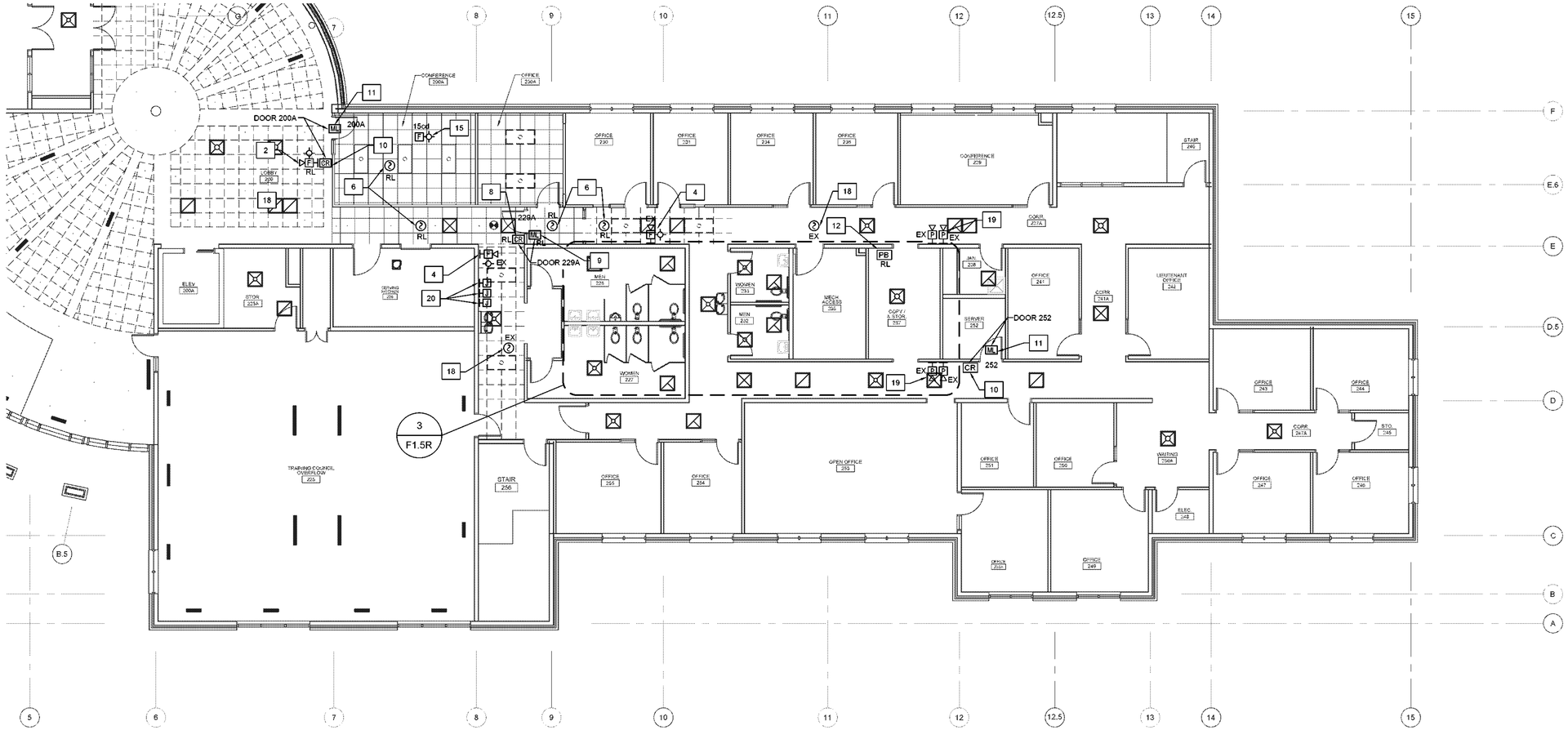

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02/21/2024

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Systems Second Floor Plans - New Work

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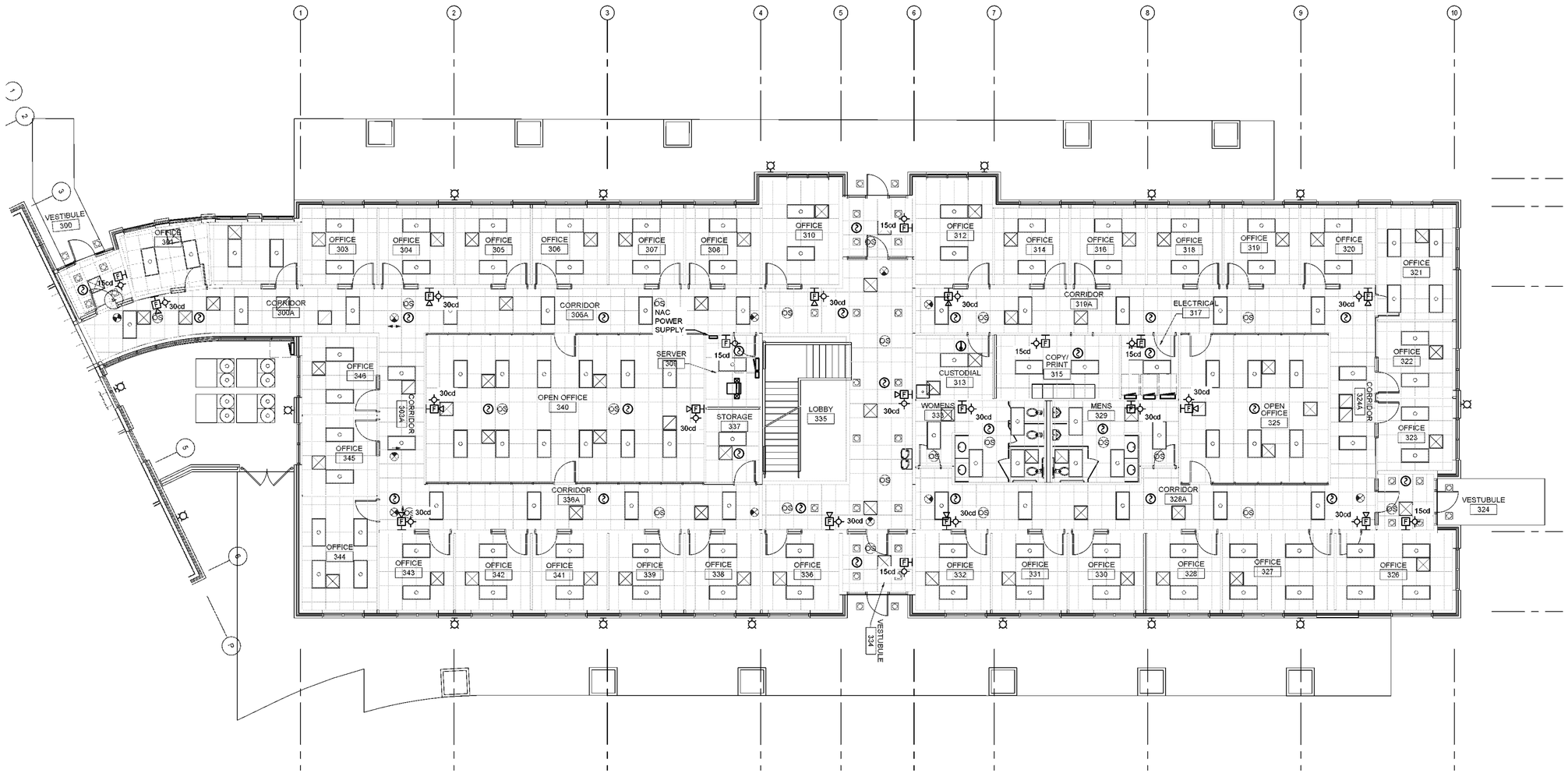

1 **FIRE ALARM FIRST FLOOR PLAN - NEW WORK**
1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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02/21/2024

Leland Town Hall Addition & Renovations

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Fire Alarm First Floor Plan - New Work

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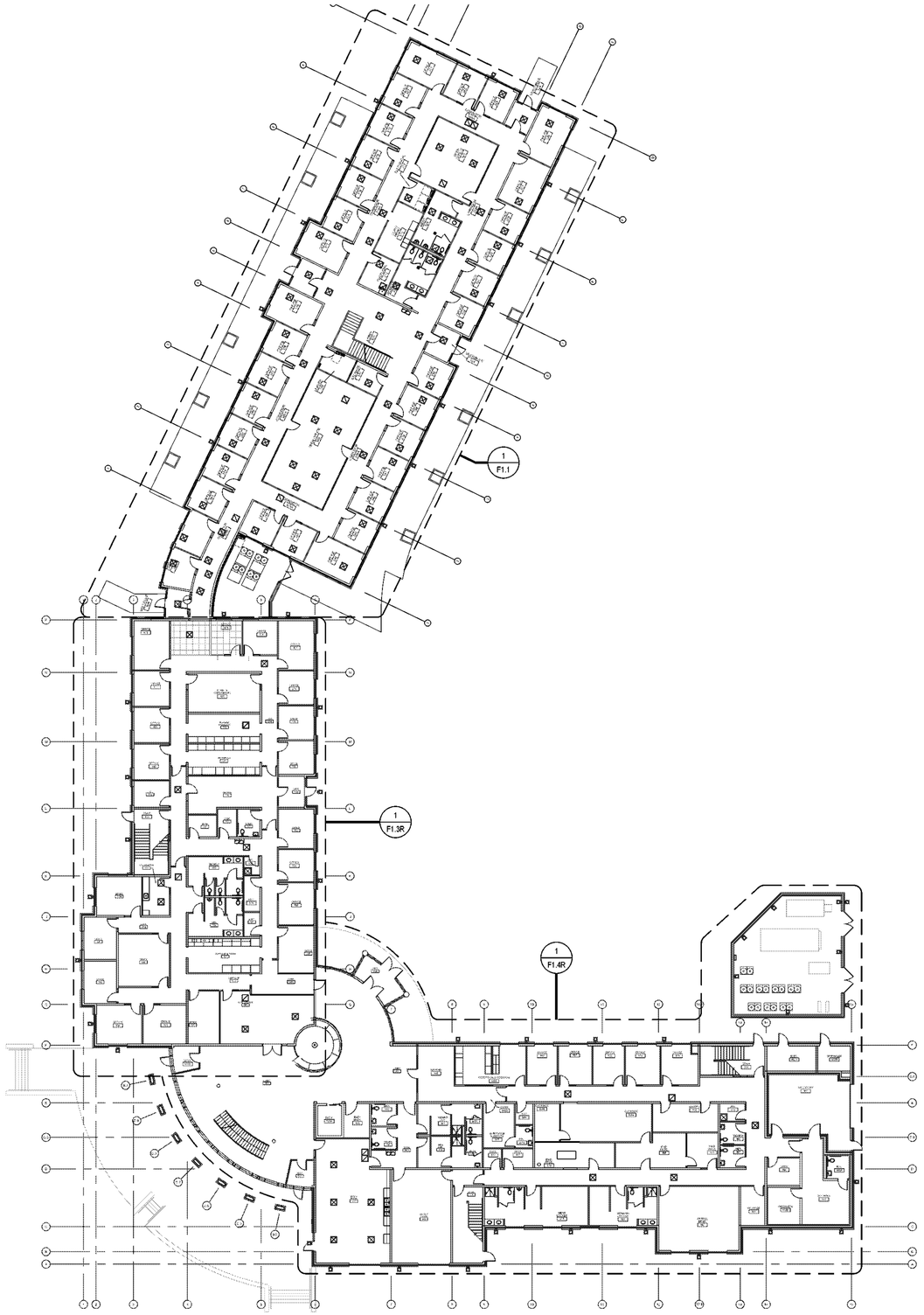

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

1 SYSTEMS FIRST FLOOR PLAN - KEY PLAN
1" = 20'-0"

PLAN NORTH

0 20 40

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02/21/2024

Leland Town Hall Addition & Renovations

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Systems First Floor Plan - Key Plan

Rev.	Date	Notes

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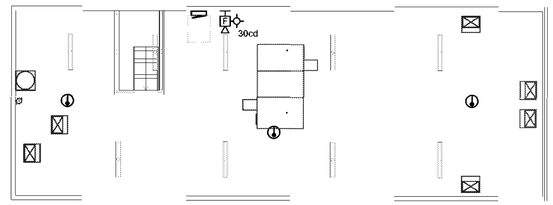
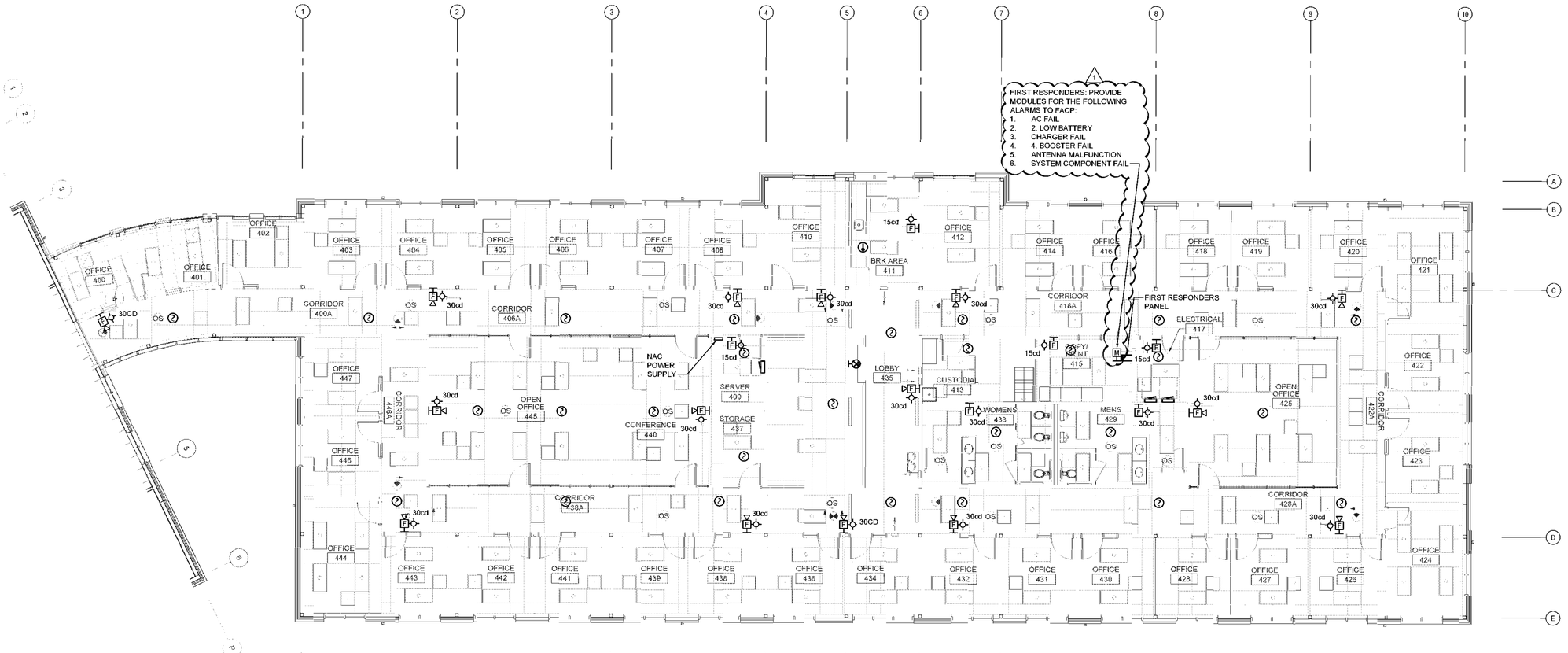


PLAN NORTH

2 FIRE ALARM MECHANICAL LOFT - NEW WORK

1/4" = 1'-0"

0 2' 4' 8'



PLAN NORTH

1 FIRE ALARM SECOND FLOOR PLAN - NEW WORK

1/8" = 1'-0"

0 4' 8' 16'

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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FIRE SPRINKLER PROJECT SCOPE

1 THE SCOPE OF THIS PROJECT INCLUDES THE ADDITION OF THE FOLLOWING FIRE PROTECTION SYSTEMS, DESIGNED TO PROTECT THE ADDITION FOR THE TWO (2) STORY OFFICE BUILDING.

2 THE CONSTRUCTION OF TWO (2) WET-PIPE FIRE SPRINKLER SYSTEMS. EACH FIRE SPRINKLER SYSTEM SHALL CONNECT TO THE EXISTING FIRE SPRINKLER SYSTEM ON EACH FLOOR. EACH FLOORS ADDITION IS APPROXIMATELY 10,000 SQFT. EXISTING FLOOR CONTROL VALVES ARE PERMITTED TO BE USED AN ADDITIONAL FLOOR CONTROL VALVE WILL BE PROVIDED FOR THE MECHANICAL MEZZANINE SPACE.

3 AN EXISTING 300 GPM @ 60 PSI FIRE PUMP IS PROVIDED FOR THE BUILDING. THE SYSTEM HAS BEEN CONFIRMED TO BE SUFFICIENT FOR THE EXTENDED SYSTEMS ON EACH FLOOR WITHOUT MODIFICATIONS TO THE FIRE PUMP.

4 RENOVATIONS TO EXISTING AREAS OF LEVEL 1 AND LEVEL 2 ARE ALSO BEING PERFORMED. THE SCOPE IN THESE AREAS INCLUDES MODIFICATIONS TO WALLS AND CEILINGS WHICH MAY REQUIRE SPRINKLER RELOCATIONS AND MODIFICATIONS. REFER TO FP1.1R, FP1.2R, FP4.1R, AND FP4.2R PREPARED BY CBHF ENGINEERS FOR MODIFICATIONS TO THE SPRINKLER SYSTEM IN THOSE AREAS.

FIRE SPRINKLER GENERAL REQUIREMENTS

1 DESIGN AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS: 2018 NORTH CAROLINA BUILDING CODE, 2018 NORTH CAROLINA FIRE CODE, NFPA 13 STANDARD FOR THE INSTALLATION OF FIRE SPRINKLER SYSTEMS (2013), NFPA 20 STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION (2013), NFPA 25 STANDARD FOR THE INSPECTION, TESTING, AND MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS (2011), NFPA 70 NATIONAL ELECTRICAL CODE (2014), NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (2013), AND ALL LOCAL AHJ REQUIREMENTS.

2 NO CHANGES TO THE "FP" SHEETS BY THE SPRINKLER SUBCONTRACTOR ARE ALLOWED EXCEPT FOR ADDING SHOP DRAWING INFORMATION. ALL REQUIRED REVISIONS TO THE "FP" SHEETS (OTHER THAN MINOR REVISIONS FOR THE PURPOSE OF COORDINATION) AND ANY ABNORMAL CONDITIONS THAT WOULD RESULT IN NON-COMPLIANCE SHALL BE SUBMITTED IN WRITING AND SHALL BE APPROVED BY PERFORMANCE BASED FIRE PROTECTION ENGINEERING, PLLC AND THE AHJ.

3 THE FIRE SPRINKLER SYSTEMS IN THIS BUILDING SHALL BE MONITORED BY A CENTRAL STATION SIGNALING SYSTEM FURNISHED AND INSTALLED BY THE FIRE ALARM CONTRACTOR. ALL TAMPER SWITCHES AND WATER FLOW INDICATORS SHALL BE INSTALLED BY THE SPRINKLER CONTRACTOR AND WIRED TO THE CENTRAL STATION SIGNALING SYSTEM BY THE ALARM CONTRACTOR.

4 ALL PIPE LENGTHS SHOWN ARE CENTER TO CENTER DIMENSIONS.

5 ALL INSPECTOR'S TEST CONNECTIONS AND LOW POINT DRAINS SHALL BE IN ACCORDANCE WITH NFPA 13 AND SHALL BE DISPLAYED ON SHOP DRAWINGS. MOUNT CONTROL VALVES FOR INSPECTOR'S TEST CONNECTION AND LOW POINT DRAINS INSIDE BUILDING AT 5'-0" A.F.F. PIPE DRAIN LINES TO EXTERIOR OF BUILDING. COORDINATE WITH THE ARCHITECT FOR ACCEPTABLE LOCATIONS.

6 SPRINKLERS IN T-BAR CEILING SHALL BE PLACED IN QUARTER POINT OR CENTER OF 2x4 TILE. IN ALL SOFFITED AREAS, SPRINKLERS SHALL BE ALIGNED WITH ADJACENT LIGHTING.

7 SIGNAGE SHALL BE PROVIDED AS REQUIRED, INCLUDING RISER ROOM IDENTIFICATION, FDC, TEST CONNECTIONS AND HYDRAULIC PLACARD.

8 REFERENCE THE CIVIL DRAWINGS FOR ADDITIONAL FIRELINE INFORMATION AND ACTUAL LENGTHS OF PIPE. THE LAYOUT SHOWN ON THE CIVIL DRAWINGS WILL SUPERCEDE WHAT IS SHOWN ON THE FIRE PROTECTION SITE PLAN. THE FIRE PROTECTION SITE PLAN IS FOR HYDRAULIC REFERENCE ONLY.

9 THIS AREA IS NOT KNOWN TO HAVE PROBLEMS WITH MICROBIAL INDUCED CORROSION. NO PREVENTATIVE MEASURES ARE DESIGNED INTO THIS SYSTEM.

10 THE FIRE DEPARTMENT CONNECTION (FDC) IS A 5" STORZ TYPE CONNECTION AND IS LOCATED ATTACHED TO THE EXTERIOR OF THE FIRE PUMP ROOM.

11 QUICK RESPONSE SPRINKLERS SHALL BE INSTALLED THROUGHOUT (UNLESS OTHERWISE NOTED).

FIRE SPRINKLER CONTRACTOR REQUIREMENTS

1 THE FIRE SPRINKLER SUBCONTRACTOR IS RESPONSIBLE FOR ALL CUTTING, SEALING, PATCHING, AND PAINTING REQUIRED FOR INSTALLATION OF THE SPRINKLER SYSTEM. ALL PENETRATIONS OF RATED ASSEMBLIES SHALL BE FIRE STOPPED WITH AN APPROVED MATERIAL AS PRESCRIBED IN THE APPLICABLE CODES AND STANDARDS.

2 THE FIRE SPRINKLER SUBCONTRACTOR SHALL BE LICENSED AS REQUIRED BY THE STATE AND LOCAL AHJ FOR THE DESIGN AND INSTALLATION OF AUTOMATIC SPRINKLER SYSTEMS.

3 ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS AS REQUIRED BY THE STATE AND LOCAL AHJ.

4 THE FIRE SPRINKLER CONTRACTOR SHALL PREPARE A SHOP DRAWING SUBMITTAL, HYDRUALIC CALCULATIONS, AND EQUIPMENT CUTSHEET PACKAGE SUBMITTAL, AND SUBMIT TO THE ENGINEER AND AUTHORITY HAVING JURISDICTION, FOR APPROVAL. APPROVAL OF SHOP DRAWINGS AND EQUIPMENT SHALL BE OBTAINED PRIOR TO STARTING WORK.

5 SPRINKLER CONTRACTOR IS RESPONSIBLE TO COORDINATE AND ADJUST SPRINKLE AND PIPING TO ACCOUNT FOR ELECTRICAL, MECHANICAL, STRUCTURE AND ALL OTHER TRADES AT NO ADDITIONAL COST.

6 CONTRACTOR SHALL PROVIDE OWNER WITH TEST CERTIFICATES, CARE & MAINTENANCE BOOK, COPY OF NFPA 25, SPARE SPRINKLER CABINET WITH SPRINKLERS, AND REQUIRED SPRINKLER WRENCHES IN ACCORDANCE WITH NFPA 13.

7 DELIVERY OF ALL MATERIALS AND EQUIPMENT TO THE JOB SITE SHALL BE SCHEDULED TO ASSURE COMPLIANCE WITH THE PREDETERMINED CONSTRUCTION SCHEDULE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STORAGE AND HANDLING ALL MATERIALS AND EQUIPMENT ON THE JOB SITE, INCLUDING FURNISHING OF ANY STORAGE FACILITIES OR STRUCTURE REQUIRED.

8 THE SYSTEM SHOWN ON THESE PLANS REQUIRES A CONNECTION TO THE UNDERGROUND FIRE PROTECTION MAIN. THE CONTRACTOR WHO INSTALLS THE UNDERGROUND PIPING FROM THE POINT OF SERVICE IS RESPONSIBLE FOR COMPLETING THE INSTALLATION TO THE ABOVE GROUND FIRE SPRINKLER SYSTEM CONNECTION FLANGE OR GROOVED CONNECTION. ALL FIRE PROTECTION UNDERGROUND DOWNSTREAM OF THE POINT OF SERVICE IDENTIFIED ON THE PLANS SHALL BE INSTALLED BY A LICENSED CLASS I, CLASS II, OR CLASS V FIRE PROTECTION CONTRACTOR AS REQUIRED BY THE STATE FIRE MARSHAL. THE UNDERGROUND CONTRACTOR IS RESPONSIBLE FOR COMPLETING THE CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING DOCUMENT. ABOVE GROUND CONTRACTORS MAY NOT COMPLETE THE CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR THE UNDERGROUND PIPING OR PORTION THEREOF WHICH HAVE BEEN INSTALLED BY OTHERS.

FIRE SPRINKLER MATERIAL REQUIREMENTS

1 ALL MATERIALS SHALL BE UL LISTED OR FM APPROVED.

2 ALL INTERIOR PIPE SHALL BE BLACK STEEL: SCHEDULE 10 FOR PIPES 2 1/2" AND LARGER AND SCHEDULE 40 FOR PIPES 2" AND SMALLER.

3 ALL EXTERIOR PIPE (INCLUDING NIPPLES OR SPOOL PIECES EXTENDING THROUGH EXTERIOR WALLS) SHALL BE SCHEDULE 40 GALVANIZED STEEL.

4 ALL INTERIOR GROOVED FITTINGS SHALL COME WITH THE FACTORY APPLIED COATING.

5 ALL INTERIOR THREADED FITTINGS SHALL BE CAST IRON, DUCTILE IRON OR MALLEABLE IRON.

6 ALL EXTERIOR FITTINGS SHALL BE GALVANIZED.

7 HANGER LOCATION FOR ALL PIPING SHALL BE IN ACCORDANCE WITH NFPA 13. ALTERNATE UL AND FM HANGER METHODS ARE ACCEPTED AT NO ADDITIONAL COST TO THE OWNER. PROVIDE UL AND FM LITERATURE TO PERFORMANCE BASED FIRE PROTECTION ENGINEERING, PLLC AND THE AHJ FOR REVIEW AND ACCEPTANCE.

FIRE SPRINKLER TESTING REQUIREMENTS

1 THE FIRE SPRINKLER SYSTEM SHALL BE HYDROSTATICALLY PRESSURE TESTED IN ACCORDANCE WITH NFPA 13.

2 ALL PIPING AND ATTACHED APPURTENANCES SUBJECTED TO SYSTEM WORKING PRESSURE SHALL BE HYDROSTATICALLY TESTED AT 200 PSI AND SHALL MAINTAIN THAT PRESSURE WITHOUT LOSS FOR 2 HOURS.

3 LOSS SHALL BE DETERMINED BY A DROP IN GAUGE PRESSURE OR VISUAL LEAKAGE.

4 THE TEST PRESSURE SHALL BE READ FROM A GAUGE LOCATED AT THE LOW POINT OF THE SYSTEM OR PORTION BEING TESTED. THE PRESSURES IN PIPING AT HIGHER ELEVATIONS SHALL BE PERMITTED TO BE LESS THAN 200 PSI WHEN ACCOUNTING FOR ELEVATION LOSSES. SYSTEMS OR PORTIONS OF SYSTEMS THAT CAN BE ISOLATED SHALL BE PERMITTED TO BE TESTED SEPARATELY.

FIRE SPRINKLER LEGEND

PLAN	PROFILE	DESCRIPTION
		FIRE SPRINKLER HEAD
		TEE
		ELBOW
		ENDCAP
		REDUCER
		BUTTERFLY VALVE
		OS&Y GATE VALVE
		2 1/2" HOSE VALVE
		CHECK VALVE
		FLOOR CONTROL VALVE

ANNOTATION LEGEND

PLAN	DESCRIPTION
X" / X' - X"	PIPE DIAMETER OVER PIPE LENGTH
X	KEY NOTE TAG
XX	HAZARD CLASSIFICATION TAG
	MATCHLINE
	REMOTE AREA

HYDRAULIC CALCULATION SUMMARY

REMOTE AREA NAME:	SYSTEM DEMAND:	SAFETY FACTOR:
RA1	357.63 GPM @ -11.08 PSI	+67.05 PSI

WATER SUPPLY INFO

Raw Flow Test Data:		
Static Pressure:	60.00 psi	(ACTUAL PRESSURE = 70 PSI)
Residual Pressure:	38.00 psi	(ACTUAL PRESSURE = 48 PSI)
Residual Flow:	895.00 GPM	(ACTUAL FLOW = 995 GPM)
Conducted By:	Brunswick Regional Water + Sewer	
Date of Test:	1/28/24	
Time of Test:	1000 hrs	

*N.C.S.C.O. GUIDELINES STATE THAT -10 PSI RESIDUAL PRESSURE, -10 PSI STATIC PRESSURE, AND -10% FLOW BE USED IN THE HYDRAULIC CALCULATIONS. THE ABOVE RESULTS ARE THE "TRUE" FLOW TEST. THE RESULTS FOUND IN THE HYDRAULIC CALCULATIONS REPRESENT THE LOSSES PER N.C.S.C.O.

SHEET LIST

SHEET NAME	SHEET NUMBER	SHEET ORDER
GENERAL FIRE SPRINKLER NOTES	FP0.1	1
SITE PLAN	FP0.2	2
LEVEL 1 FIRE SPRINKLER PLAN	FP1.1	3
LEVEL 2 FIRE SPRINKLER PLAN	FP1.2	4
MECH. LOFT FIRE SPRINKLER PLAN	FP1.3	5
RISER/PUMP ROOM PLAN	FP2.1	6

FIRE SPRINKLER EQUIPMENT SCHEDULE

EQUIPMENT	COUNT	TYPE	SIZE	LISTED RATING	POWER	MANUFACTURER	MODEL	REMARKS
BACK FLOW PREVENTOR (EXISTING)	1	EXISTING RPZ	6"	N/A	N/A	NOT SPECIFIED	NOT SPECIFIED	*
FIRE PUMP (EXISTING)	1	VERTICAL IN-LINE	300 GPM	60 psi	60 HP	NOT SPECIFIED	NOT SPECIFIED	*
JOCKEY PUMP (EXISTING)	1	EXISTING	N/A	N/A	N/A	NOT SPECIFIED	NOT SPECIFIED	*

a. SPECIFIC EQUIPMENT MANUFACTURERS AND MODELS ARE INTENTIONALLY NOT SPECIFIED SO AS NOT TO BE LOCKED IN FOR REQUIRED USE. THE FIRE SPRINKLER CONTRACTOR IS PERMITTED TO SELECT EQUIPMENT BASED ON AVAILABILITY AND IN ACCORDANCE WITH DESIGN SPECIFICATIONS ON THESE PLANS.

FIRE SPRINKLER SYSTEM DESIGN SCHEDULE

AREAS	SYSTEM TYPE	HAZARD CLASSIFICATION	SYMBOL	DENSITY (GPM/SQFT)	DESIGN AREA (SQFT)	HOSE ALLOWANCE (GPM)	DURATION (MIN)	MAX HEAD SPACING (SQFT)	SPRINKLER TYPE	K-FACTOR	POSITION	FINISH	TEMPERATURE (°F)	REMARKS
OFFICES, CORRIDOR, RESTROOMS, LOBBIES	WET-PIPE	LIGHT HAZARD	LH	0.10	1,500[a]	100	60	225	QUICK RESPONSE STANDARD SPRAY	5.6	CONCEALED PENDENT	CONCEALER TO MATCH CEILING	155	*
ELECTRICAL, CUSTODIAL, MECH, PENTHOUSE	WET-PIPE	ORDINARY HAZARD (GROUP 1)	OH1	0.15	1,500[a]	250	90	130	QUICK RESPONSE STANDARD SPRAY	8.0	UPRIGHT PENDENT	BRASS	155	*

a. DESIGN AREA IS PERMITTED TO BE REDUCED FOR QUICK RESPONSE SPRINKLER HEADS IN ACCORDANCE WITH NFPA 13 11.2.3.2.3

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Leland Town Hall Addition & Renovations

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GENERAL FIRE SPRINKLER NOTES

Rev.	Date	Notes

FP0.1

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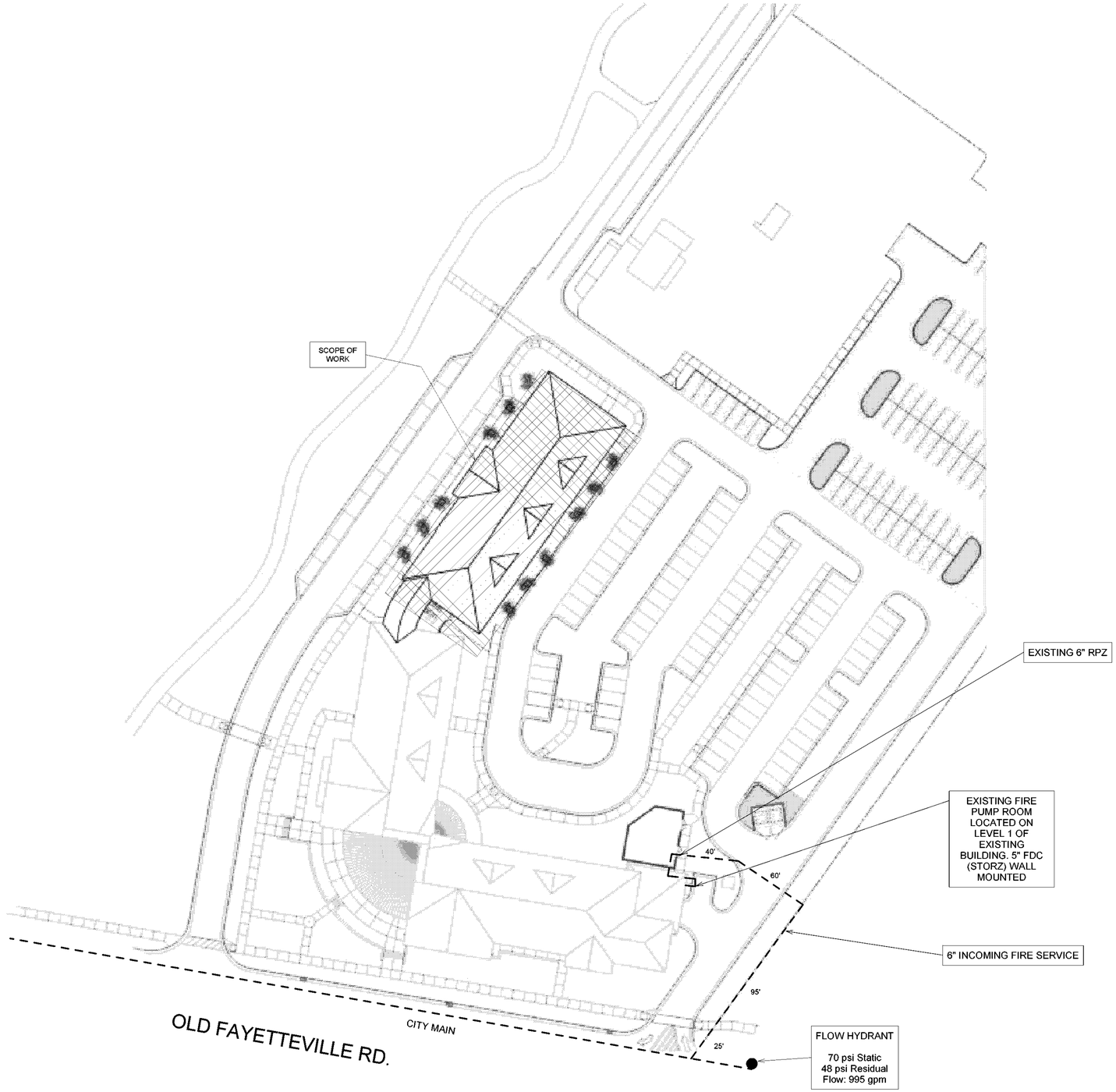

1 SITE PLAN (HYDRAULIC REFERENCE ONLY)
1" = 40'-0"

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SITE PLAN

Rev.	Date	Notes

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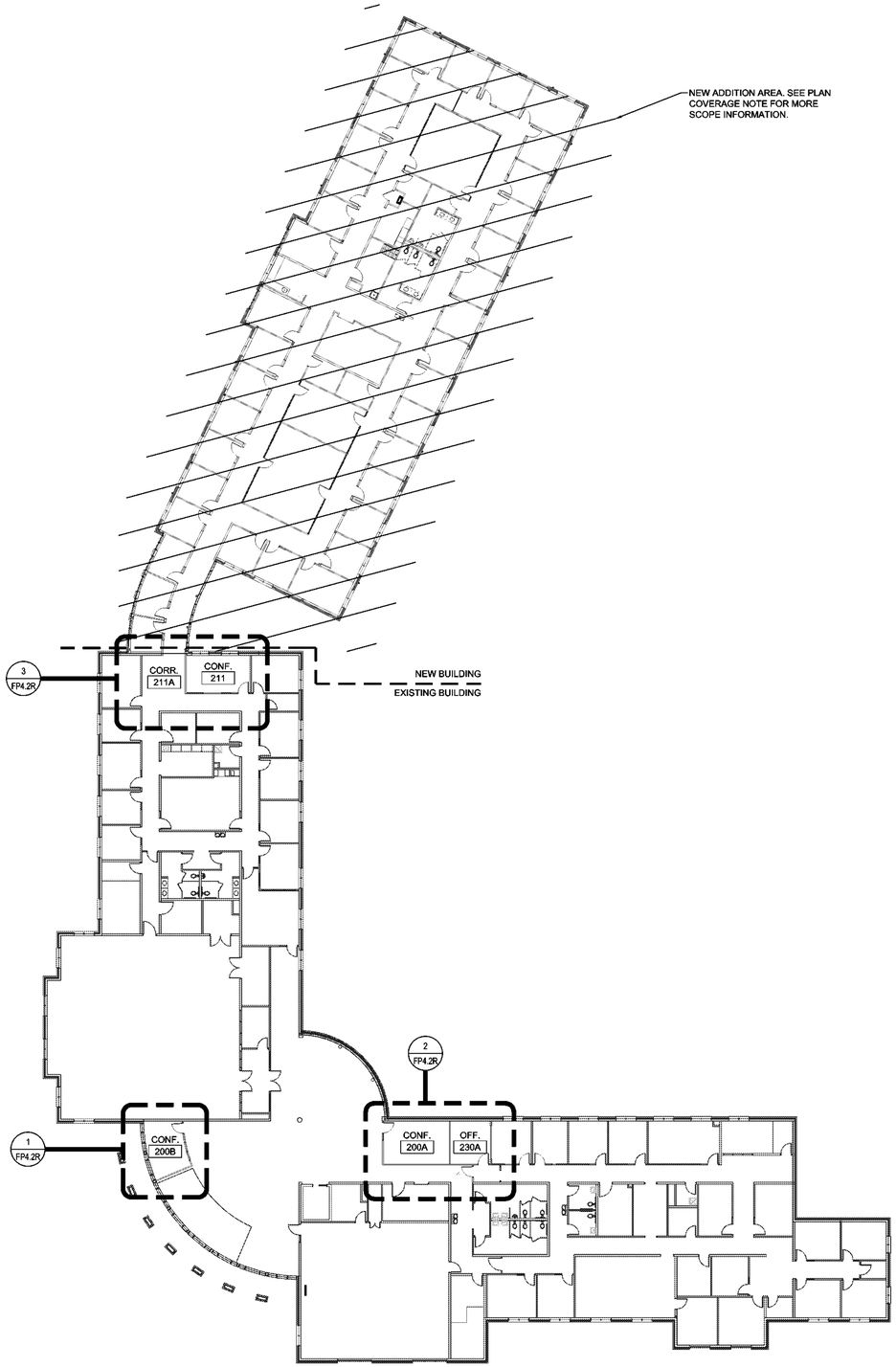
PLAN COVERAGE NOTE: THIS SHEET OF THE FIRE PROTECTION PLANS PERTAINS TO THE RENOVATION ACTIVITIES WITHIN THE EXISTING BUILDING. TO REVIEW THE FIRE PROTECTION PLAN FOR THE NEW ADDITION, PLEASE REFER TO ADDITIONAL SHEETS PROVIDED.



SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

1 **SECOND FLOOR PLAN**
1" = 20'-0"
0 20 40

PLAN NORTH

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02/21/2024

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Fire Suppression Second Floor Sprinkler Plan

Rev.	Date	Notes

FP1.2R

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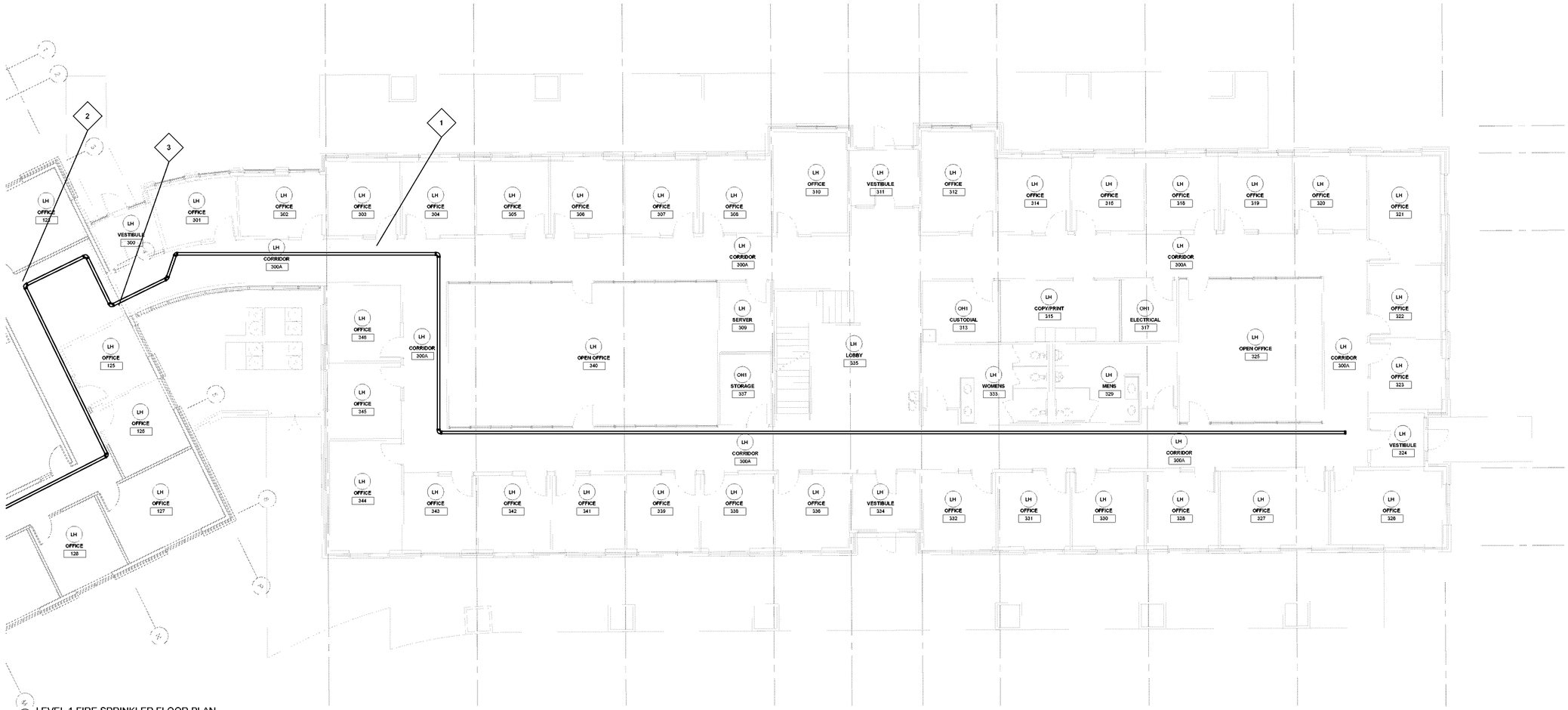
KEYNOTE LEGEND

1 NEW 4" MAIN.
2 POINT OF CONNECTION TO EXISTING 4" MAIN. A NEW 4" MAIN WILL BE EXTENDED INTO EXPANSION SPACE. THE EXISTING FLOOR CONTROL VALVE WILL STILL BE USED FOR THE LEVEL 1 SYSTEM, AS THE MAXIMUM PROTECTED AREA REMAINS BELOW 52,000 SQ.FT.
3 PROVIDE FLEXIBLE COUPLING TO CONSIDER BUILDING EXPANSION JOINT.



1 LEVEL 1 FIRE SPRINKLER FLOOR PLAN
1/8" = 1'-0"

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LEVEL 1 FIRE SPRINKLER PLAN

Rev.	Date	Notes

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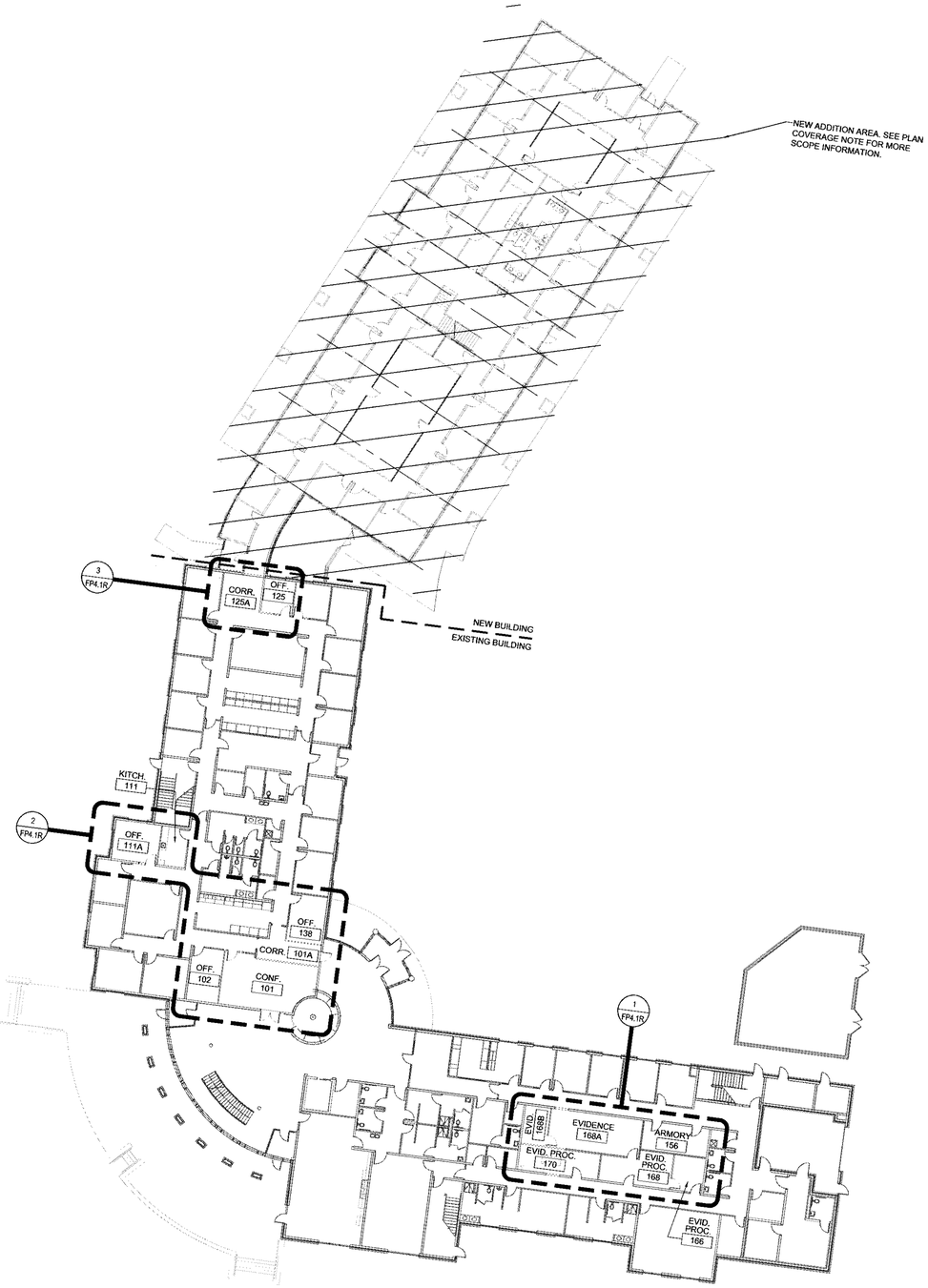

PLAN COVERAGE NOTE: THIS SHEET OF THE FIRE PROTECTION PLANS PERTAINS TO THE RENOVATION ACTIVITIES WITHIN THE EXISTING BUILDING. TO REVIEW THE FIRE PROTECTION PLAN FOR THE NEW ADDITION, PLEASE REFER TO ADDITIONAL SHEETS PROVIDED.

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

1 FIRST FLOOR KEY PLAN
1" = 20'-0"

PLAN NORTH

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Fire Suppression First Floor Sprinkler Plan

Rev.	Date	Notes

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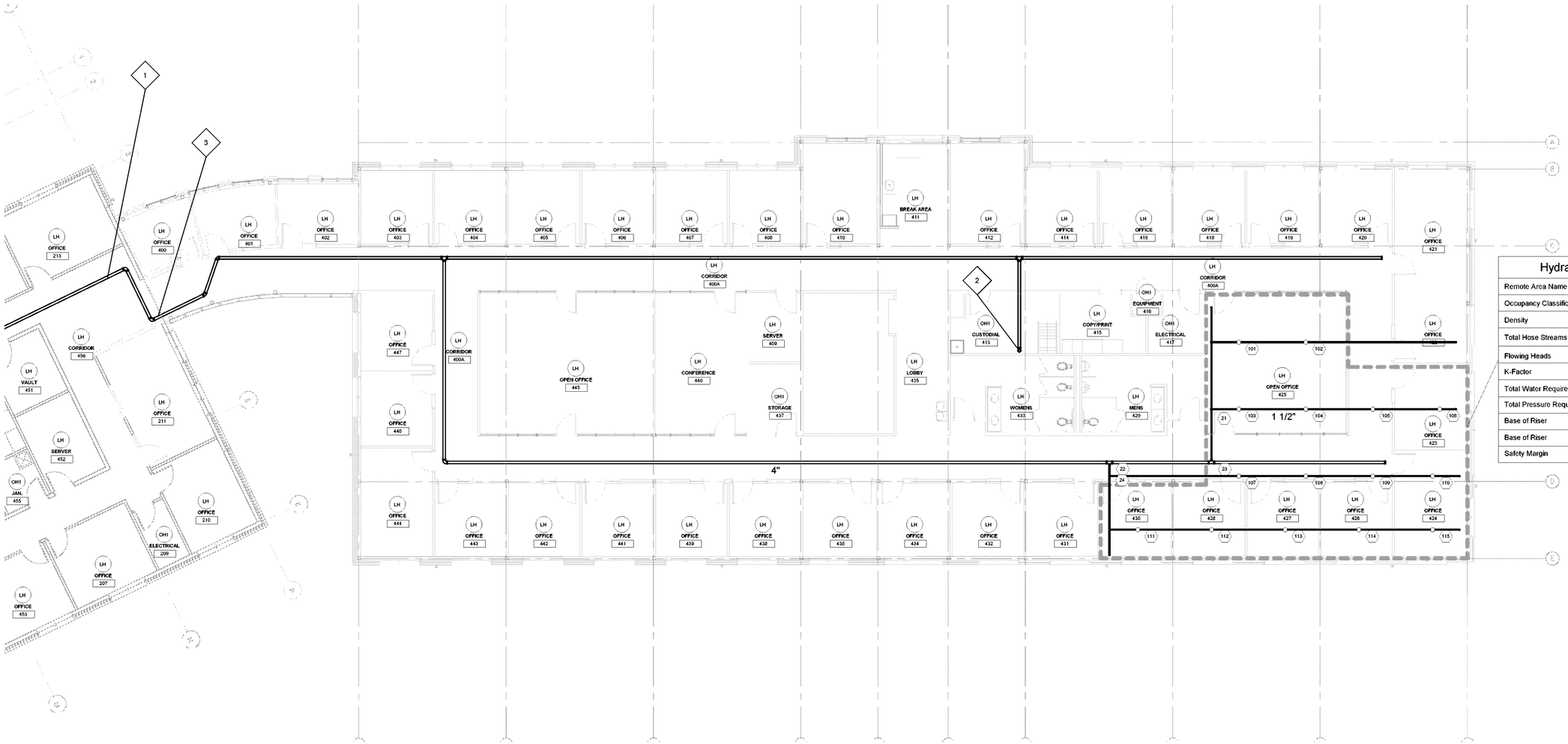
KEYNOTE LEGEND

1 POINT OF CONNECTION TO EXISTING 4" MAIN. A NEW 4" MAIN WILL BE EXTENDED INTO EXPANSION SPACE. THE EXISTING FLOOR CONTROL VALVE WILL STILL BE USED FOR THE LEVEL 1 SYSTEM, AS THE MAXIMUM PROTECTED AREA REMAINS BELOW 52,000 SQ.FT.

2 RISER UP TO MECHANICAL PENTHOUSE ABOVE.

3 PROVIDE FLEXIBLE COUPLING TO CONSIDER BUILDING EXPANSION JOINT.



1 LEVEL 2 FIRE SPRINKLER FLOOR PLAN
1/8" = 1'-0"

Hydraulic Information

Remote Area Name	RA1
Occupancy Classification	Light Hazard
Density	0.10 GPM
Total Hose Streams	100.00 GPM
Flowing Heads	15 @ 14.82 GPM
K-Factor	5.6
Total Water Required	357.63 GPM
Total Pressure Required	-11.08 psi
Base of Riser	357.63 GPM
Base of Riser	-11.08 psi
Safety Margin	+67.05 (119.8%)

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LEVEL 2 FIRE SPRINKLER PLAN

Rev.	Date	Notes

FP1.2

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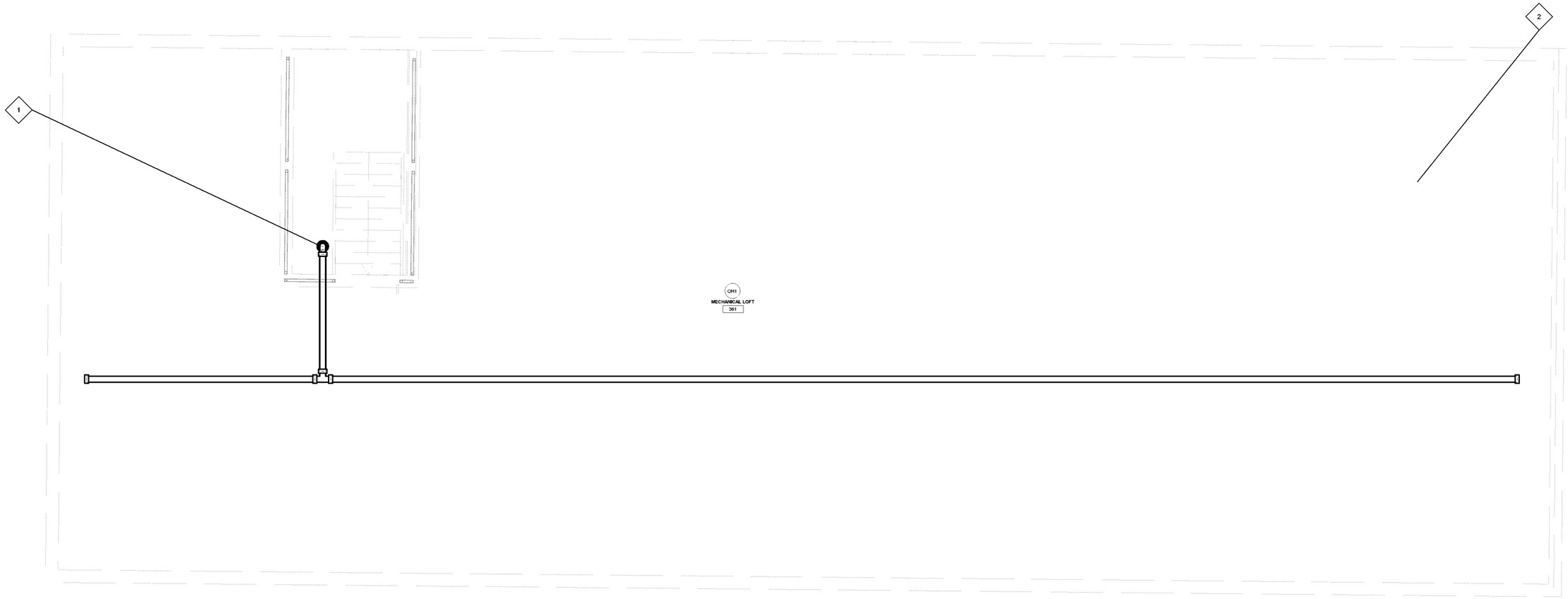
KEYNOTE LEGEND

1 RISER FROM BELOW. PROVIDE FLOOR CONTROL VALVE.
2 SPACED ASSUMED TO BE CONDITIONED AT ABOUT 40F.



1 MECHANICAL LOFT FIRE SPRINKLER PLAN
1/2" = 1'-0"

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MECH. LOFT FIRE SPRINKLER PLAN

Rev.	Date	Notes

FP1.3

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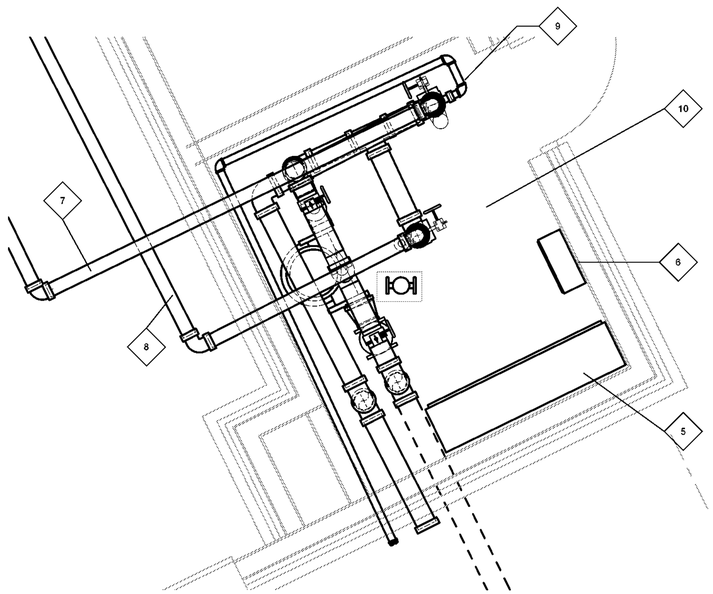
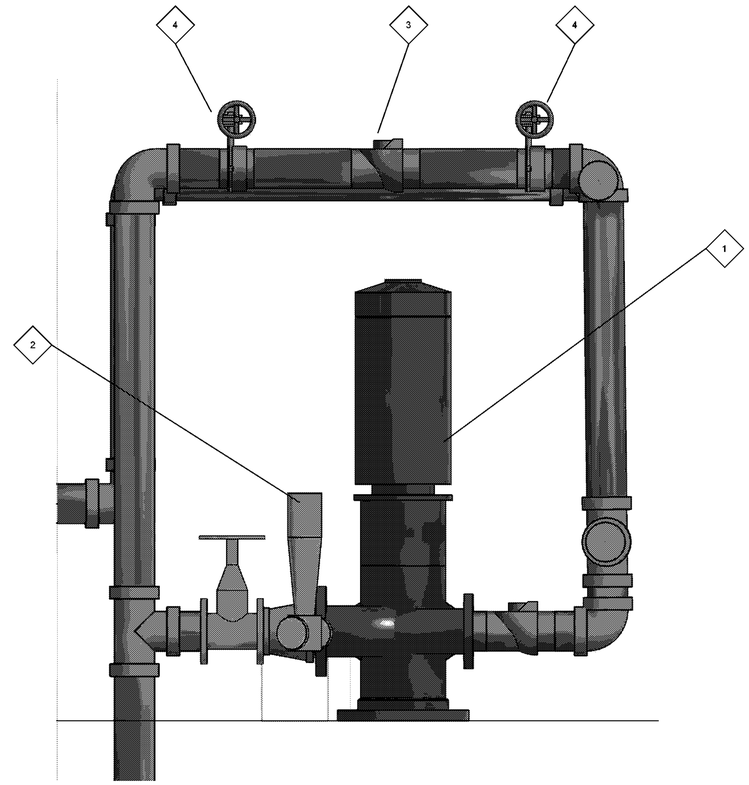
KEYNOTE LEGEND

1 FIRE PUMP.
2 JOCKEY PUMP.
3 CHECK VALVE.
4 BUTTERFLY VALVE.
5 FIRE PUMP CONTROLLER.
6 JOCKEY PUMP CONTROLLER.
7 4" TO FIRST FLOOR SPRINKLERS.
8 4" TO SECOND FLOOR AND MECHANICAL LOFT SPRINKLERS.
9 EXISTING FIRE PUMP ROOM. NO SCOPE OF SERVICE REQUIRED FOR THIS PROJECT.
10 ALL EXISTING RISER ROOM EQUIPMENT IS EXISTING, AND TO REMAIN.



1 LEVEL 1 FIRE PUMP ROOM (EXISTING, NO SCOPE)
1/2" = 1'-0"



2 RISER ROOM (EXISTING, NO SCOPE)
1" = 1'-0"

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PO BOX 1642 Pittsboro, NC 919.446.7750
adelpa.com

NORTH CAROLINA PROFESSIONAL SEAL 046319 ENGINEER DAVID F. STACY

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

RISER/PUMP ROOM PLAN

Rev.	Date	Notes

FP2.1

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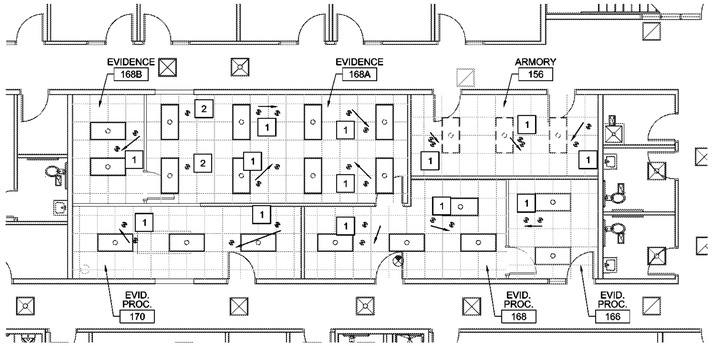
PLAN COVERAGE NOTE: THIS SHEET OF THE FIRE PROTECTION PLANS PERTAINS TO THE RENOVATION ACTIVITIES WITHIN THE EXISTING BUILDING. TO REVIEW THE FIRE PROTECTION PLAN FOR THE NEW ADDITION, PLEASE REFER TO ADDITIONAL SHEETS PROVIDED.

FIRE SPRINKLER GENERAL NOTES

1. CONTRACTOR SHALL PROVIDE COMPLETE SPRINKLER DESIGN AND INSTALLATION FOR MODIFICATION TO EXISTING SPRINKLER SYSTEMS IN RENOVATED AREAS AS INDICATED PER NFPA 13, NC STATE BLDG CODE AND LOCAL JURISDICTION REQUIREMENTS. INCLUDE ALL SUBMITTAL DATA AND DOCUMENTATION AS REQUIRED BY AUTHORITIES HAVING JURISDICTION. PROVIDE WRITTEN DOCUMENTATION OF APPROVAL OF DESIGN BY AUTHORITIES HAVING JURISDICTION. INCLUDE ALL DESIGN, MATERIALS AND LABOR FOR FULLY COMPLETE AND APPROVED INSTALLATION.
2. EXISTING BUILDING IS FULLY SPRINKLED. RENOVATION SCOPE OF WORK GENERALLY INCLUDES REWORK OF EXISTING BRANCH LINES, RELOCATION AND/OR INSTALLATION OF NEW SPRINKLER HEADS TO SUIT ARCHITECTURAL MODIFICATIONS. WHERE NEW SPRINKLER HEADS ARE REQUIRED, REPLACE WITH HEADS MATCHING THOSE CURRENTLY INSTALLED IN EXISTING FINISHED AREAS. EXISTING SPRINKLER PIPING MAY BE REUSED AS APPLICABLE TO RENOVATED WORK. CONTRACTOR IS RESPONSIBLE FOR EXISTING EQUIPMENT AND PIPING, ETC. AS REQUIRED BY JURISDICTION APPROVAL. COMPLETE, FULLY OPERATIONAL SYSTEMS IN COMPLIANCE WITH ALL APPLICABLE CODES ARE REQUIRED.
3. VERIFY EXISTING CONDITIONS AND DEVELOP ALL DOCUMENTATION FOR REVIEW AND APPROVAL BY AUTHORITY HAVING JURISDICTION.
4. REWORK PIPING AND HEAD LAYOUT TO SUIT ARCHITECTURAL RENOVATIONS. COORDINATE WITH CEILINGS, WALLS AND MILLWORK. LOCATE HEADS IN CENTER QUADRANT OF CEILING TILES.
5. COORDINATE REWORK OF SPRINKLER PIPING AND SPRINKLER HEADS WITH RENOVATION WORK OF OTHER TRADES.

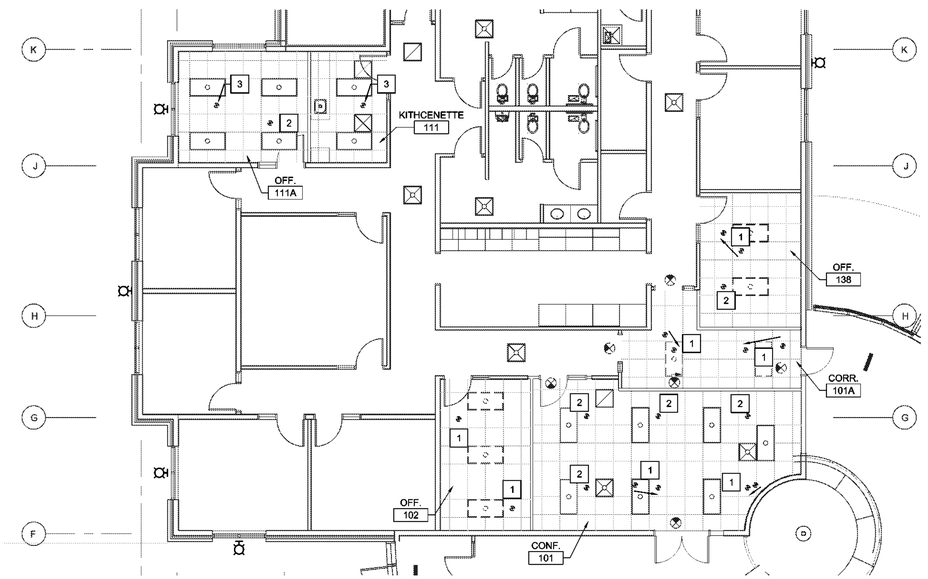
KEYED NOTES - NEW WORK

1. RELOCATE (X) SPRINKLER HEAD TO NEW LOCATION INDICATED IN NEW CEILING GRID. CENTER HEADS IN TILES. SPRINKLER HEADS SHALL BE NEW.
2. INSTALL NEW SPRINKLER HEAD IN LOCATION SHOWN. PROVIDE NEW SPRINKLER HEADS WHERE REQUIRED, EVEN IF NOT SHOWN.
3. REMOVE (X) SPRINKLER HEAD AND REPLACE WITH NEW SPRINKLER HEAD IN THE SAME LOCATION. CENTER HEADS IN TILE.



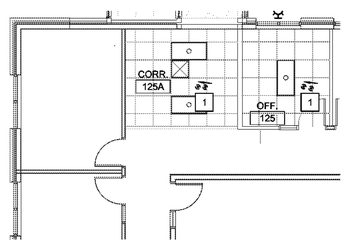
1 ROOMS 156, 166, 168, 168A,168B, 170
FIRST FLOOR PLAN - NEW WORK
1/8" = 1'-0"

PLAN NORTH



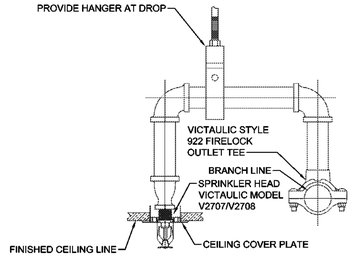
2 ROOMS 101, 101A, 102, 111, 111A, 138
FIRST FLOOR PLAN - NEW WORK
1/8" = 1'-0"

PLAN NORTH



3 ROOMS 125,125A
FIRST FLOOR PLAN - NEW WORK
1/8" = 1'-0"

PLAN NORTH



4 ARM OVER DETAIL
NOT TO SCALE

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O'GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Fire Suppression Enlarged Sprinkler Plans, Notes & Detail

Rev.	Date	Notes

FP4.1R

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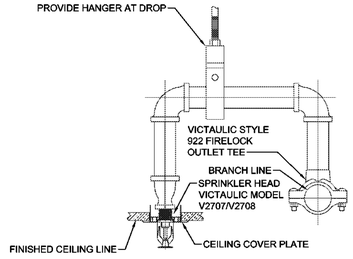
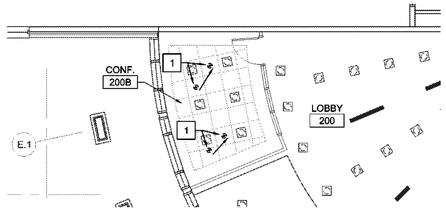
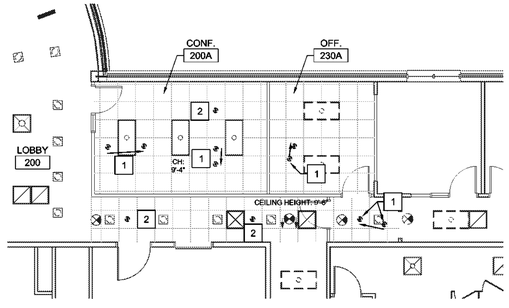


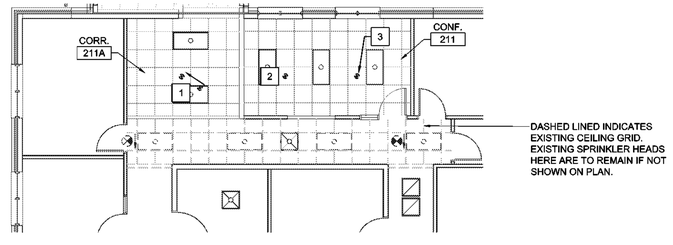
4 ARM OVER DETAIL
NOT TO SCALE



1 ROOM 200B
SECOND FLOOR PLAN - NEW WORK
1/8" = 1'-0"



2 ROOMS 200, 200A, 230A
SECOND FLOOR PLAN - NEW WORK
1/8" = 1'-0"



3 ROOMS 211, 211A
SECOND FLOOR PLAN - NEW WORK
1/8" = 1'-0"

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O'GRADY
02/21/2024

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Construction Drawings

Issue Date: February 23, 2024

Fire Suppression Enlarged Sprinkler Plans, Notes & Detail

Rev.	Date	Notes

FP4.2R

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PLUMBING GENERAL NOTES

1. SCOPE OF WORK: THESE DRAWINGS AND ACCOMPANYING SPECIFICATIONS DESCRIBE SCOPE OF WORK REQUIRED FOR PLUMBING SYSTEMS. LABOR AND MATERIAL SHALL BE PROVIDED AS REQUIRED FOR A COMPLETE, WORKMANLIKE INSTALLATION OF ALL SYSTEMS SHOWN ON DIAGRAMMATIC DRAWINGS AND/OR AS SPECIFIED HEREIN.
2. CONTRACTOR: THE WORD "CONTRACTOR", "PLUMBING CONTRACTOR", AND "P.C." AS USED HEREIN SHALL MEAN THE PLUMBING INSTALLER UNLESS OTHERWISE QUALIFIED.
3. DRAWINGS: DRAWINGS ARE DIAGRAMMATIC AND MAY NOT COMPLETELY DESCRIBE EVERY DETAIL OF THE INSTALLATION. HOWEVER, CONTRACTOR IS RESPONSIBLE FOR FURNISHING COMPLETE SYSTEMS INCLUDING ALL REQUIRED EQUIPMENT AND ACCESSORIES TO OBTAIN FULLY FUNCTIONING PLUMBING SYSTEMS.
4. CODE COMPLIANCE: COMPLY WITH THE LATEST EDITIONS OF THE FOLLOWING STANDARDS AND CODES, INSOFAR AS THEY APPLY:

   NORTH CAROLINA STATE BUILDING CODE (CODE), LATEST EDITION AND REVISIONS.

   LOCAL JURISDICTION REQUIREMENTS.
5. PERMITS AND INSPECTIONS: OBTAIN ALL PERMITS, LICENSES, INSPECTIONS, ETC., REQUIRED FOR THE WORK AND PAY FOR SAME. FURNISH A FINAL CERTIFICATE OF INSPECTION AND APPROVAL FROM THE AUTHORITY HAVING JURISDICTION PRIOR TO ACCEPTANCE OF THE WORK.
6. SUPERVISION: PROVIDE SKILLED SUPERINTENDENTS TO SUPERVISE THE WORK FROM THE BEGINNING TO COMPLETION AND FINAL INSPECTION.
7. PROGRESS OF WORK: PERFORM WORK IN ACCORDANCE WITH SCHEDULE AND REQUIREMENTS OF THE GENERAL CONTRACTOR. UNDER NO CIRCUMSTANCES SHALL THIS CONTRACTOR DELAY THE OVERALL PROJECT SCHEDULE.
8. COORDINATION: COORDINATE PLUMBING WORK WITH THE WORK OF OTHER TRADES. LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE UNLESS SPECIFICALLY DIMENSIONED. ARRANGE PLUMBING SO AS NOT TO INTERFERE WITH THE WORK OF OTHER TRADES. VERIFY ACTUAL BUILDING STRUCTURE PRIOR TO DUCT FABRICATION AND ADJUST LAYOUT AS REQUIRED. INCLUDE ALL OFFSETS IN DUCTS, FITTINGS, PIPING, ETC. AS REQUIRED TO PROPERLY INSTALL EQUIPMENT.
9. EQUIPMENT LOCATIONS: DETERMINE EXACT EQUIPMENT AND MATERIALS LOCATIONS TO PROVIDE BEST ARRANGEMENT AND TO FACILITATE PROPER MAINTENANCE AND SERVICING OF EQUIPMENT.
10. LISTING AND LABELING: ALL EQUIPMENT SHALL BE LABELED OR LISTED BY UL OR OTHER APPROVED TESTING AGENCY WHERE REQUIRED.
11. STORAGE SPACE: CONSULT WITH THE GENERAL CONTRACTOR REGARDING JOB SITE STORAGE FOR PLUMBING MATERIALS TO BE INSTALLED UNDER THIS PROJECT. STORAGE SPACE MUST BE SECURED AND CONTRACTOR'S REPRESENTATIVE MUST BE ON JOB BEFORE ANY MATERIAL MAY BE RECEIVED.
12. CLEANUP: REMOVE ALL DEBRIS GENERATED IN THE ACCOMPLISHMENT OF WORK UNDER THIS PROJECT. CLEAN, REPLACE OR REPAIR ALL SURFACES SOILED OR DAMAGED DURING THE COURSE OF THE WORK. REMOVE DEBRIS DAILY SO TO MAINTAIN SAFE WORKING CONDITIONS.
13. RECORD DRAWINGS: MAINTAIN ONE SET OF "RED-LINED" RECORD DRAWINGS ON SITE AT ALL TIMES AND PROVIDE DRAWINGS TO ARCHITECT/ENGINEER PRIOR TO FINAL INSPECTION.
14. EXISTING BUILDINGS AND CONSTRUCTION.
    - A. WORK UNDER THIS CONTRACT IS TO BE PERFORMED IN AN EXISTING BUILDING. BUILDING LAYOUT INDICATED IS DEVELOPED FROM EXISTING RECORD DOCUMENTS AND LIMITED FIELD VERIFICATION FOR THE PURPOSES OF DESCRIBING THE WORK. VERIFY ALL EXISTING CONDITIONS AND ADJUST WORK AS REQUIRED TO SUIT ACTUAL FIELD CONDITIONS.
    - B. PERFORM ALL WORK IN ACCORDANCE WITH SAFETY REGULATIONS.
    - C. DO NOT CUT ANY STRUCTURAL MEMBERS WITHOUT EXPRESS WRITTEN INSTRUCTIONS FROM (ARCHITECT/)ENGINEER. PROVIDE CUTTING AND PATCHING FOR EXISTING FINISHES AS REQUIRED.
    - D. COORDINATE INSTALLATION OF NEW PLUMBING SYSTEMS WITH EXISTING BUILDING SYSTEMS. ADJUST ARRANGEMENTS AS REQUIRED TO ACCOMMODATE INTERFERENCES.

PLUMBING ABBREVIATIONS

(X)	EXISTING
AAV	AIR ADMITTANCE VALVE
A.F.F.	ABOVE FINISHED FLOOR
A.R.C.I.	ACID RESISTANT CAST IRON
ADA	AMERICANS WITH DISABILITIES ACT
BRZ.	BRONZE
BT	BATHTUB
C.I.	CAST IRON
CO	CLEANOUT
CONC.	CONCRETE
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DIA.	DIAMETER
E.C.I.	ENAMELED CAST IRON
EC	ELECTRICAL CONTRACTOR
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FS	FLOOR SINK
GA.	GAUGE
GAL.	GALLON
GC	GENERAL CONTRACTOR
GCO	GRADE CLEANOUT
GPF	GALLONS PER FLUSH
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GWH	GAS-FIRED WATER HEATER
HB	HOSE BIBB
INCL.	INCLUDED
KS	KITCHEN SINK
LAV	LAVATORY
LP	LIQUID PROPANE
MS	MOP SERVICE BASIN
NAT.	NATURAL GAS
NKL.	NICKEL
NON SIMULT.	NON SIMULTANEOUS
O.F.L.C.	OPEN FRONT LESS COVER
OB	OUTLET BOX
OC	ON CENTER
ORDL	OVERFLOW ROOF DRAIN LEADER
PC	PLUMBING CONTRACTOR
PRESS. BAL.	PRESSURE BALANCED
RCVY.	RECOVERY
RDL	ROOF DRAIN LEADER
SA	WATER HAMMER ARRESTOR
SH	SHOWER
SK	SINK
SLD.	SLIDE
SS	STAINLESS STEEL
TDH	TOTAL DYNAMIC HEAD
UR	URINAL
V	VENT
VB	VACUUM BREAKER
VC	VITREOUS CHINA
VR	VANDAL RESISTANT
VTR	VENT THROUGH ROOF
W	WASTE
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WALL HYDRANT

NOTE: ALL ABBREVIATIONS MAY NOT BE USED IN PROJECT.

PLUMBING LEGEND

CA	COMPRESSED AIR PIPING
C	CONDENSATE PIPING
140T	DOMESTIC 140°F WATER PIPING
140R	DOMESTIC 140°F RETURN WATER PIPING
	DOMESTIC COLD WATER PIPING
	DOMESTIC HOT WATER CIRCULATION PIPING
	DOMESTIC HOT WATER PIPING
F	FILTERED WATER PIPING
SP	FIRE SPRINKLER PIPING
FM	FORCE MAIN PIPING
NG	GAS PIPING (NAT. OR LP)
GW	GREASE WASTE PIPING
N2	NITROUS OXIDE PIPING
O2	O2 (0XYGEN) PIPING
OD	OVERFLOW ROOF DRAIN PIPING
RD	ROOF DRAIN PIPING
	SANITARY VENT PIPING
	SANITARY WASTE PIPING
T	TEPID WATER PIPING
VAC	VACUUM PIPING
	BACKFLOW PREVENTION DEVICE
	BALL VALVE
	CHECK VALVE
	CIRCUIT SETTER (BALANCING VALVE)
P	CIRCULATION PUMP
	CONTROL VALVE
	EXTENT OF DEMOLITION
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FS	FLOOR SINK
	GAS-REGULATOR VALVE
	GATE VALVE
	GATE VALVE IN RISER
GCO	GRADE CLEANOUT
HB	HOSE BIBB
	PIPE CAP
	PIPE ELBOW
	PIPE ELBOW DOWN
	PIPE ELBOW UP
	PIPE TEE
	PIPE TEE DOWN
	PIPE TEE UP
SP P FM	SUMP PUMP
1	DEMOLITION KEYED NOTE TAG
1	NEW WORK KEYED NOTE
	POINT OF CONNECTION - NEW TO EXISTING
	PRESSURE REDUCING VALVE
	SOLENOID VALVE
M 140T	THERMOSTATIC MIXING VALVE
WCO	WALL CLEANOUT
WH	WALL HYDRANT
	WASHING MACHINE BOX
SA	WATER HAMMER ARRESTOR

NOTE: ALL ITEMS LISTED IN THIS SCHEDULE MAY NOT BE USED IN PROJECT

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O GRADY
02/21/2024

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Construction Drawings

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Plumbing,Legend Specifications, Abbreviations

P0.1

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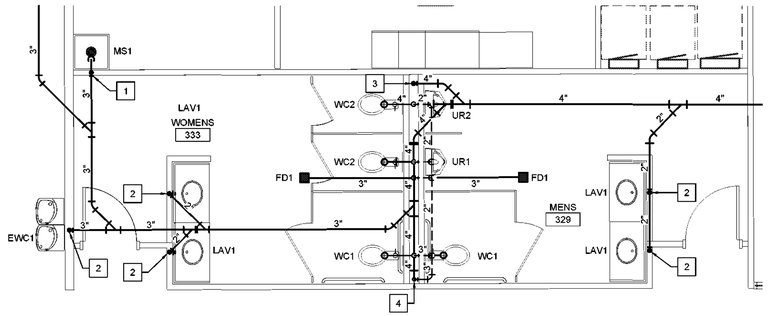
KEYED NOTES THIS SHEET

1. 3" WASTE VENT STACK; WCO
2. 2" WASTE VENT STACK; WCO
3. 4" WASTE STACK; WCO
4. 3" VENT STACK
5. 2" WASTE STACK; WCO
6. TO SANITARY SEWER.

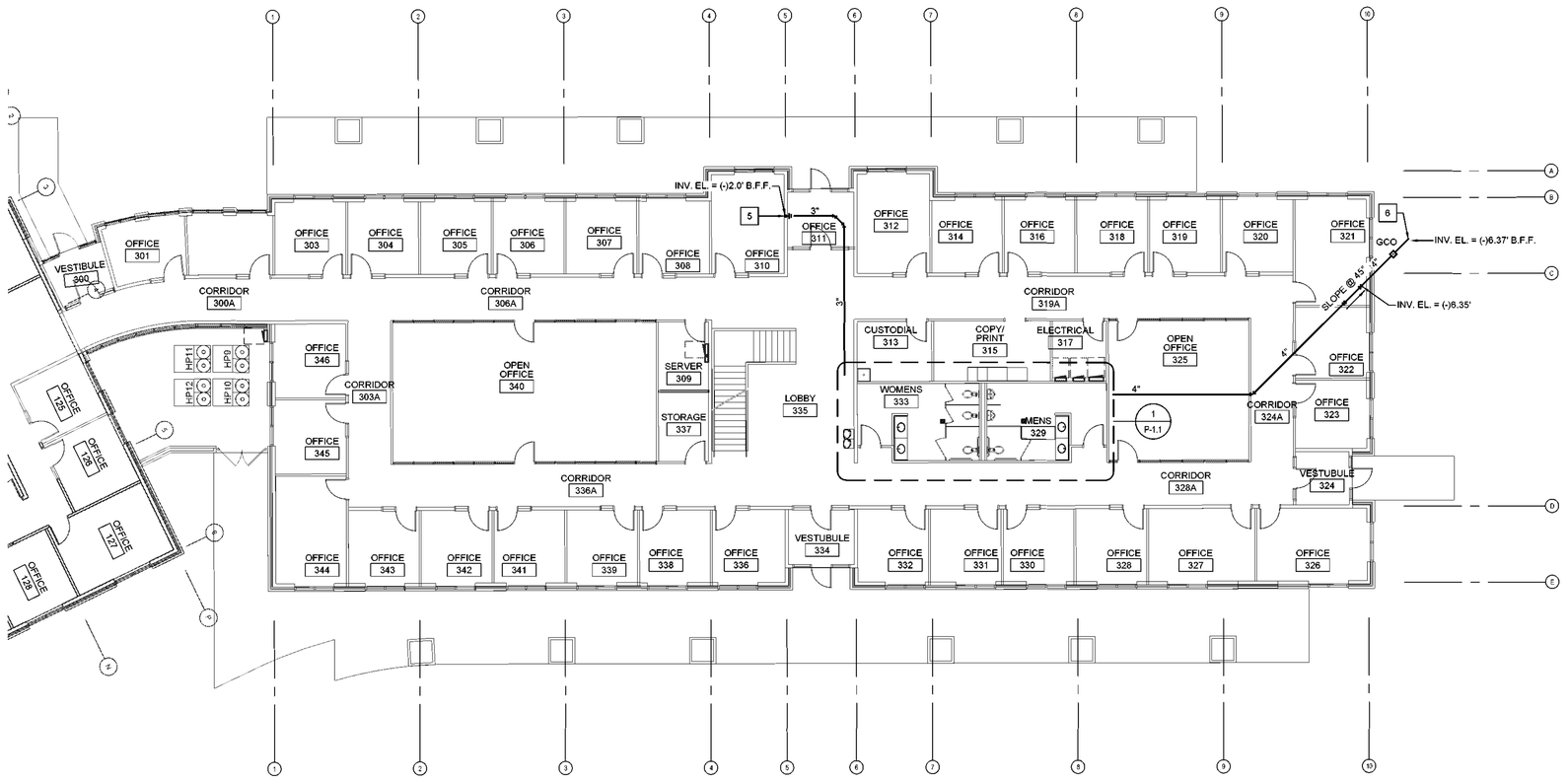


PLAN NORTH

1 FIRST FLOOR PLAN - WASTE-VENT

3/32" = 1'-0"

0 5' 10' 20'



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Plumbing First Floor Plan - Waste-Vent

P1.1

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SEE ARCHITECTURAL DRAWINGS FOR PROJECT PHASING REQUIREMENTS

KEYED NOTES

1. NOT USED.
2. NOT USED.
3. CONTRACTOR SHALL INSTALL NEW SINK AND CONNECT TO EXISTING ROUGH-IN. INSTALL NEW VENT PIPING AND CONNECT TO EXISTING VENT PIPING ABOVE CEILING.
4. 4" WASTE STACK WITH WCO. SEE SHEET P-1.2R FOR CONTINUATION
5. INSTALL NEW 2" VENT STACK AND CONNECT TO EXISTING VENT PIPING ABOVE CEILING.
6. INSTALL NEW FCO ON EXISTING BRANCH LINE TO COMPLY WITH NCPC 704.5. DEAD ENDS.
7. CONTRACTOR SHALL PROVIDE AND INSTALL DISHWASHER CONNECTION KIT.

1 FIRST FLOOR PLAN - WASTE-VENT
3/32" = 1'-0"

PLAN NORTH

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Plumbing First Floor Plan - Waste-Vent

P1.1R

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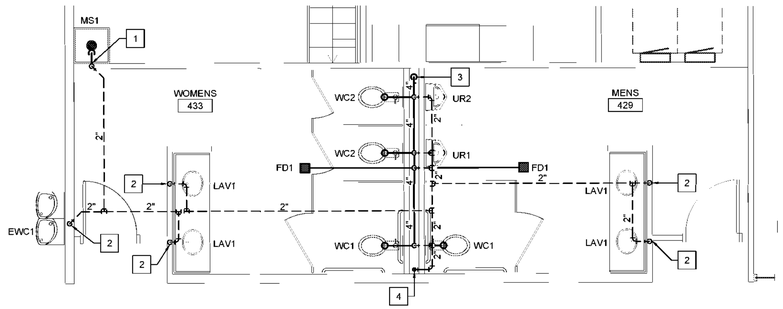
KEYED NOTES THIS SHEET

1. 3" WASTE VENT STACK; 2" VENT UP
2. 2" WASTE VENT STACK; 2" VENT UP
3. 4" WASTE STACK
4. 3" VENT STACK; 3" VTR
5. 2" WASTE VENT STACK; 2" VTR

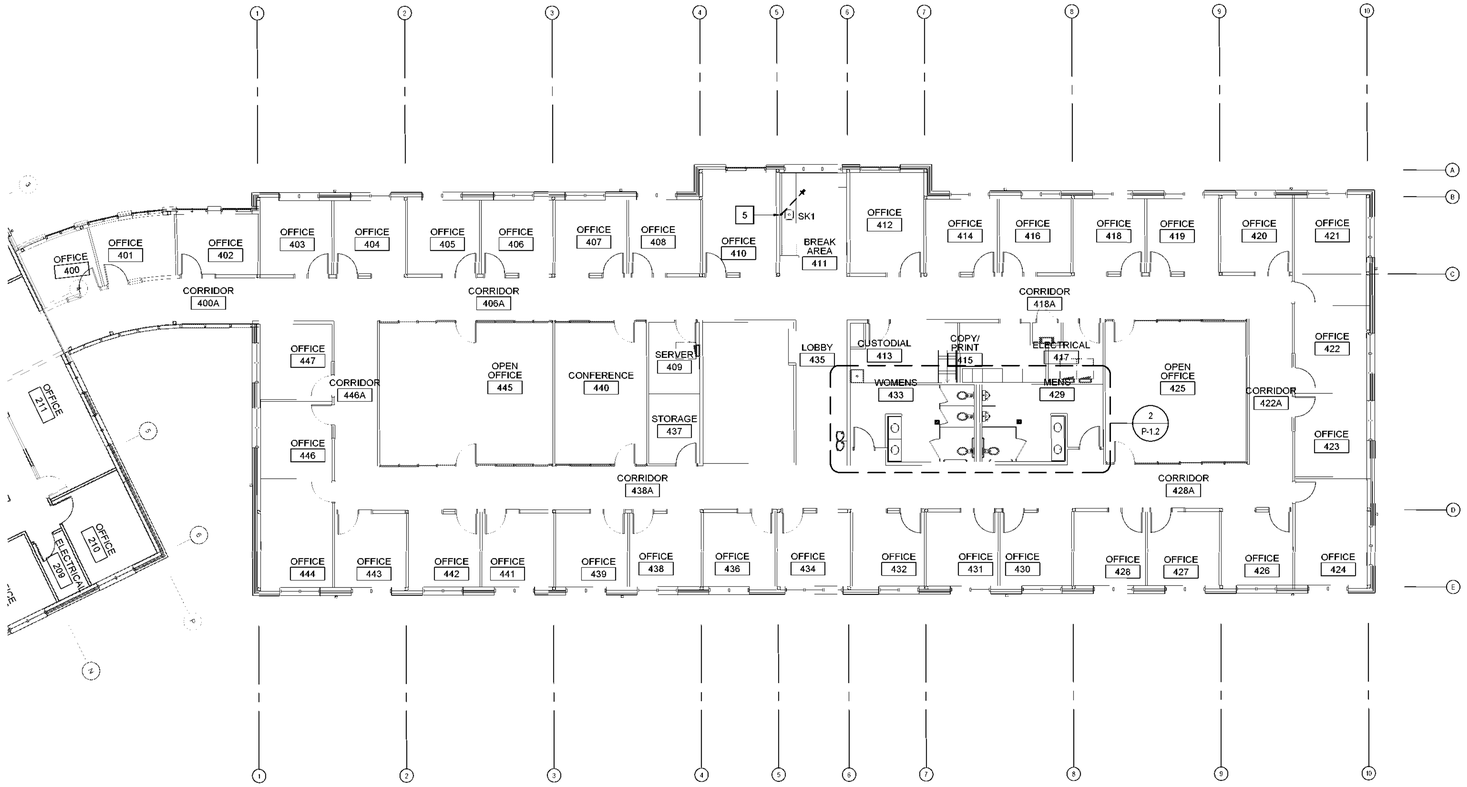


PLAN NORTH

2 ENLARGED SECOND FLOOR WASTE-VENT PLAN

1/4" = 1'-0"

0 2' 4' 8'



PLAN NORTH

1 SECOND FLOOR PLAN - WASTE-VENT

3/32" = 1'-0"

0 5' 10' 20'

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Leland Town Hall Addition & Renovations
102 Town Hall Drive
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Construction Drawings

Issue Date: February 23, 2024

Rev.	Date	Notes

Second Floor Plan - Waste-Vent

P1.2

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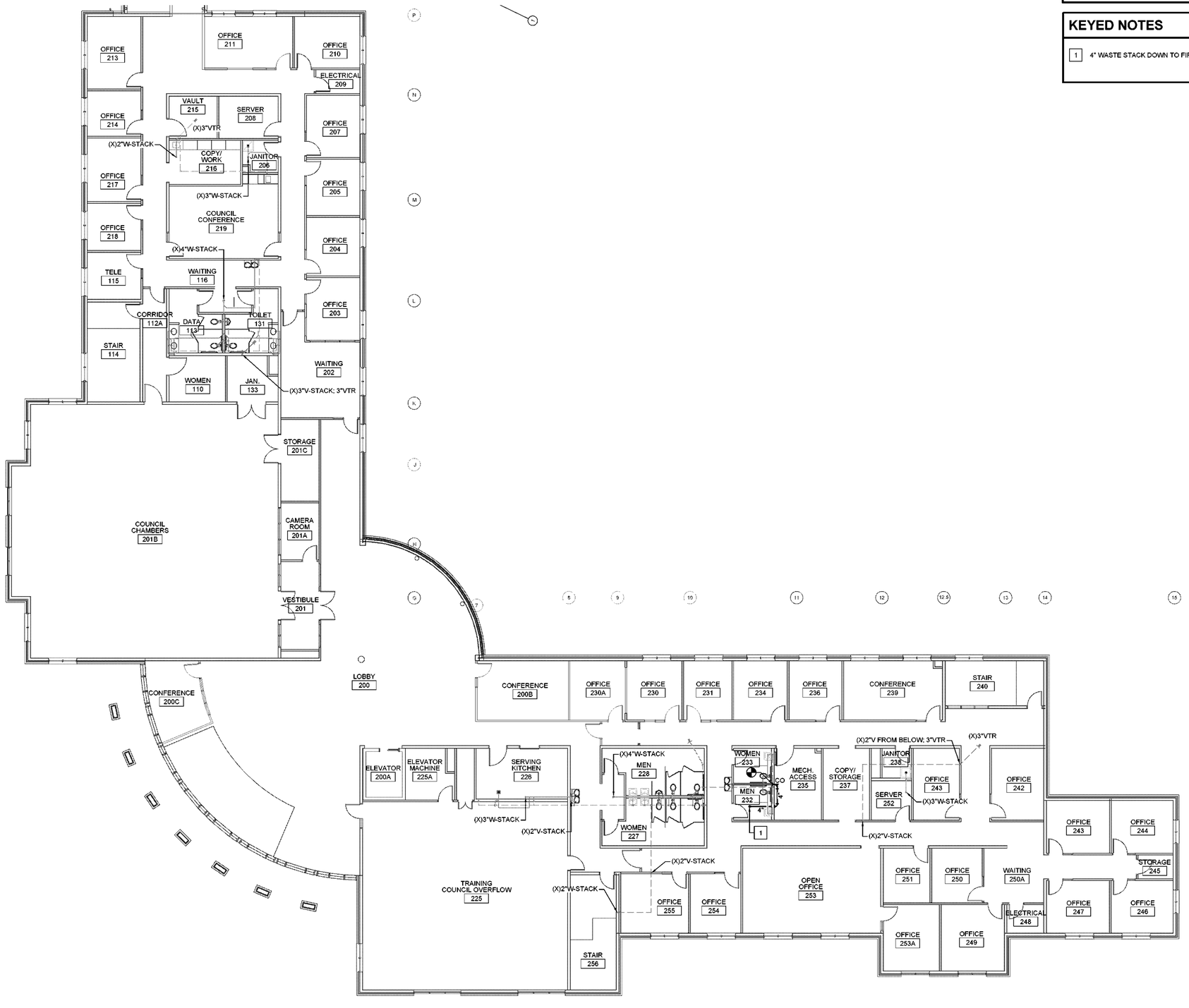

SEE ARCHITECTURAL DRAWINGS FOR PROJECT PHASING REQUIREMENTS

KEYED NOTES

1 4" WASTE STACK DOWN TO FIRST FLOOR. REFER TO DRAWING P-1.1R FOR CONTINUATION

1 **SECOND FLOOR PLAN - WASTE VENT**
3/32" = 1'-0"

PLAN NORTH

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Second Floor Plan - Waste-Vent

P1.2R

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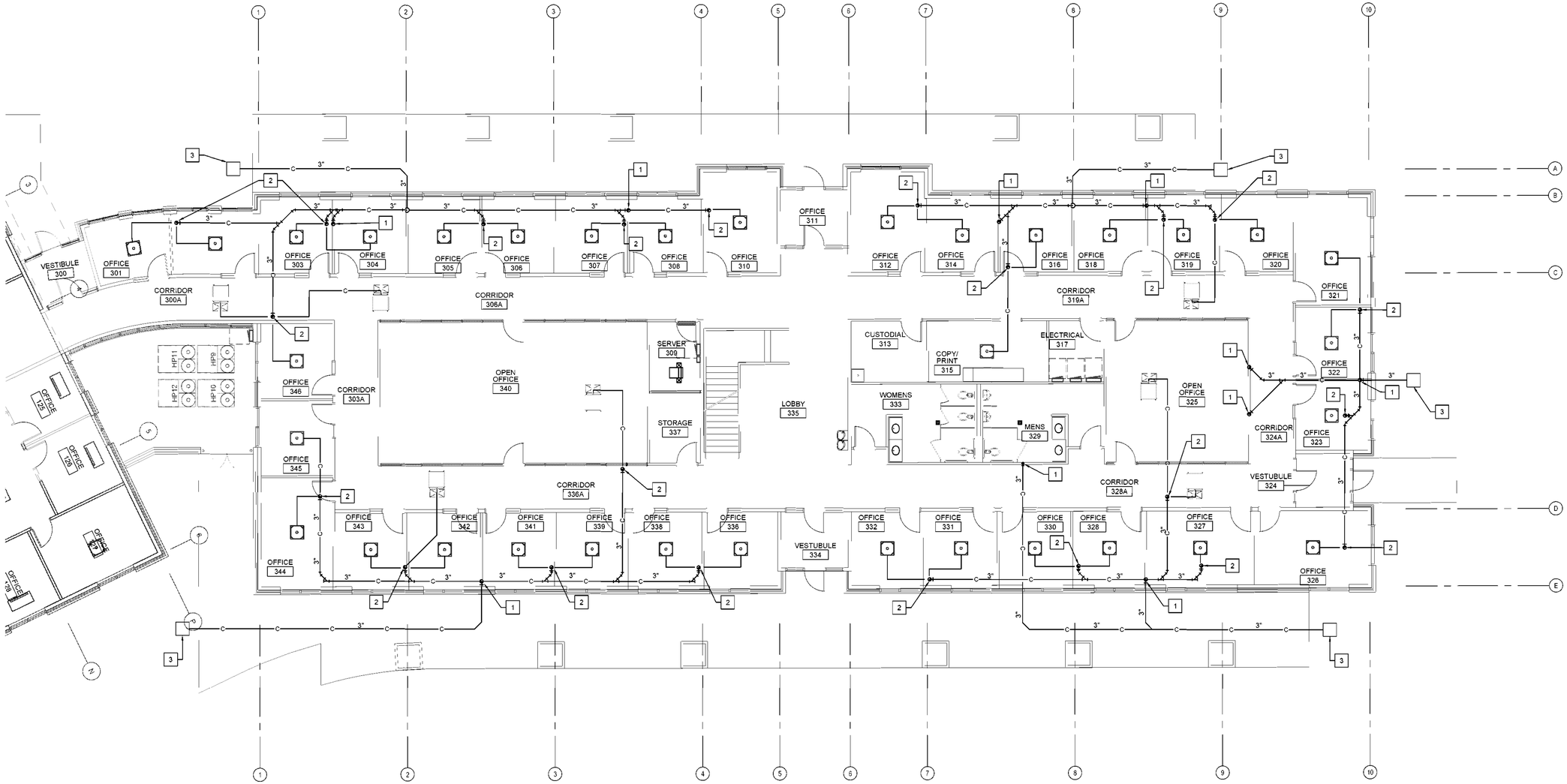
KEYED NOTES THIS SHEET

1. 3" CONDENSATE STACK FROM ABOVE
2. 3" CONDENSATE HUB DRAIN
3. CONDENSATE FRENCH DRAIN INSTALLED IN GRASSY AREA. COORDINATE EXACT LOCATION WITH GENERAL CONTRACTOR. SEE DETAIL 7/P5.2
4. 3" CONDENSATE FROM MECHANICAL MEZZANIZE.



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

PLAN NORTH

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First Floor Plan - Condensate Piping

P1.3

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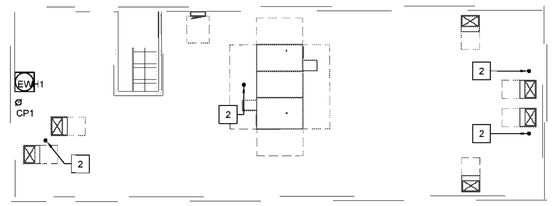


PLAN NORTH

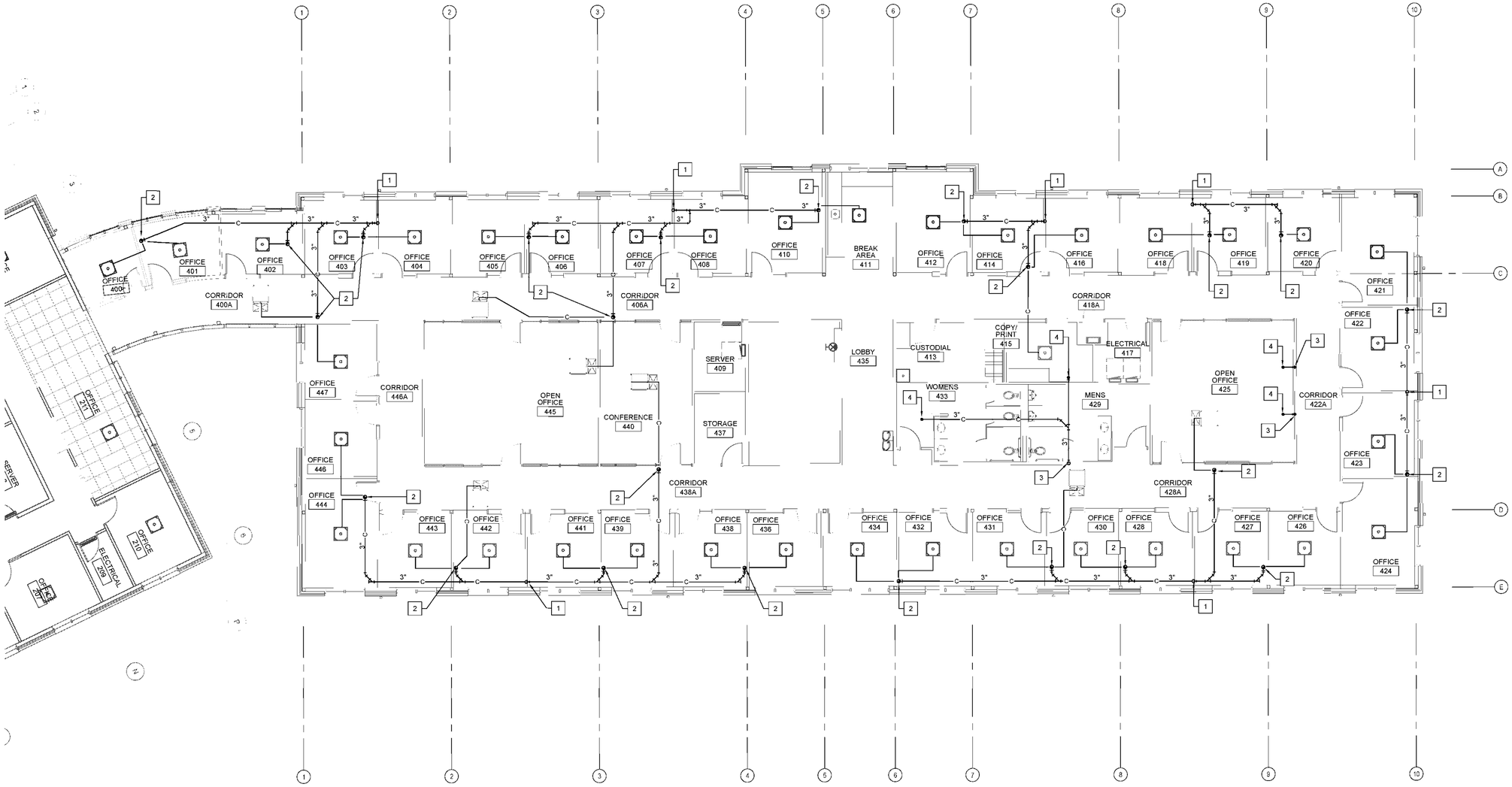
2 MEZZANINE PLAN - CONDENSATE PIPING

1/8" = 1'-0"

0 4' 8' 16'

KEYED NOTES THIS SHEET

1. 3" CONDENSATE STACK - DOWN
2. 3" CONDENSATE HUB DRAIN
3. 3" CONDENSATE PIPING DOWN TO BELOW GRADE. SEE DRAWING P-1.3 FOR CONTINUATION.
4. 3" CONDENSATE PIPING FROM HUB DRAIN ABOVE. ROUTE PIPING IN CEILING SPACE TILL TURNING DOWN IN WALL.



PLAN NORTH

1 SECOND FLOOR PLAN - CONDENSATE PIPING

1/8" = 1'-0"

0 4' 8' 16'

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Second Floor Plan-Condensate Piping

P1.4

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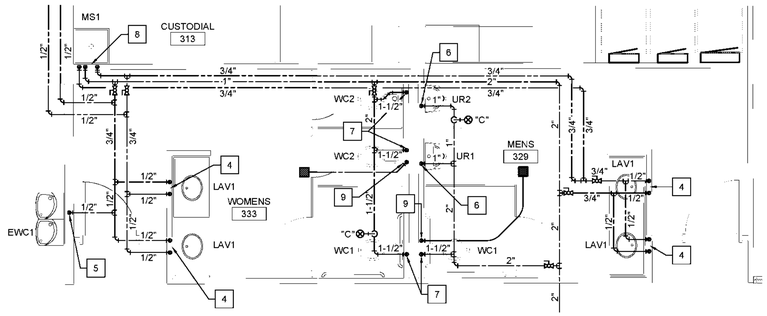
KEYED NOTES THIS SHEET

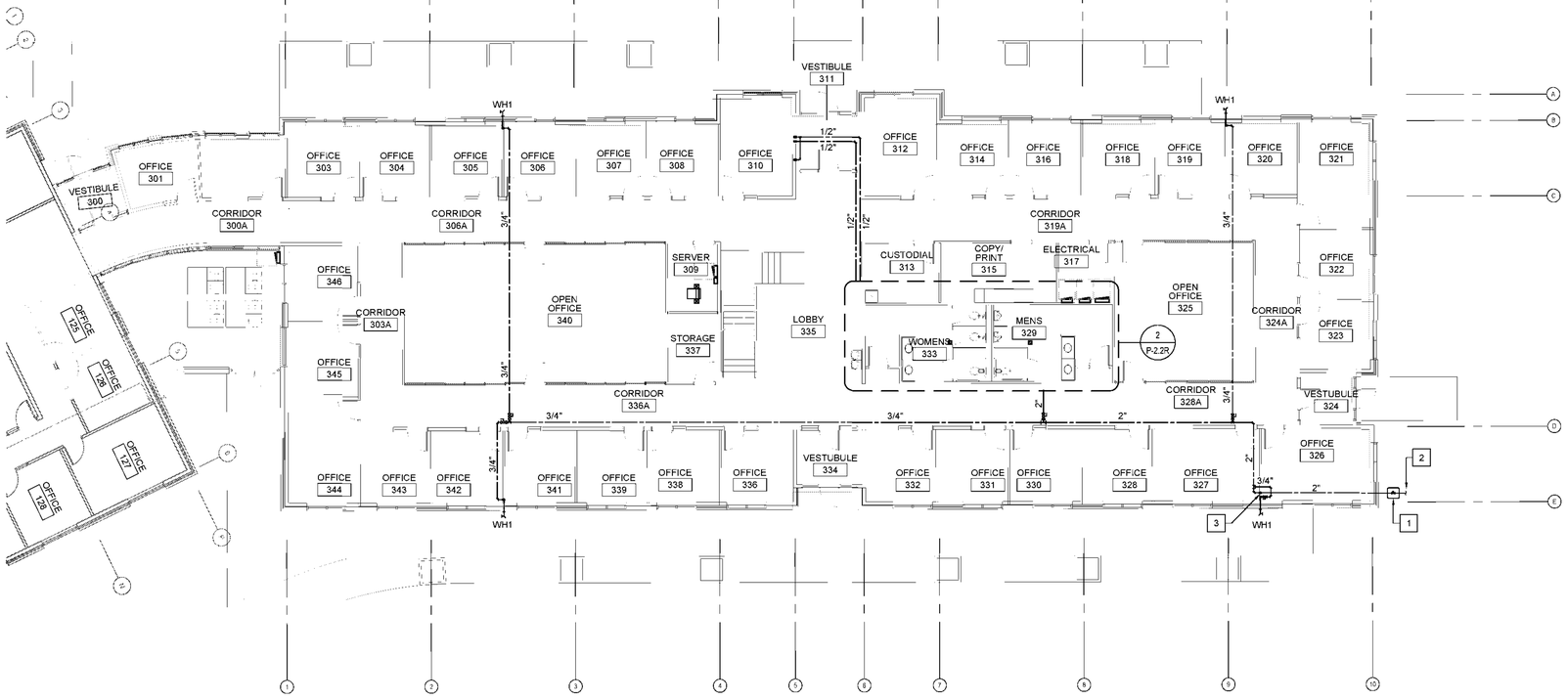
1	FULL PORT SHUTOFF VALVE IN POLY VALVE BOX PER NC PLUMBING CODE 606.1
2	2" DOMESTIC WATER SERVICE. SEE SITE UTILITY PLAN FOR CONTINUATION.
3	RISE IN WALL TO ABOVE CEILING.
4	1/2" DCW AND DHW UP AND DOWN.
5	1/2" DCW UP AND DOWN.
6	3/4" DCW UP AND DOWN.
7	1" DCW UP AND DOWN.
8	3/4" DCW, DHW, DHWR UP, 1/2" DCW AND DHW DOWN TO MS1
9	PROVIDE AND INSTALL FLUSH TUBE TRAP PRIMER.



2 ENLARGED DOMESTIC WATER PLAN

1/4" = 1'-0"

PLAN NORTH



1 FIRST FLOOR PLAN - DOMESTIC WATER

3/32" = 1'-0"

PLAN NORTH

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First Floor Plan - Domestic Water

P-2.1

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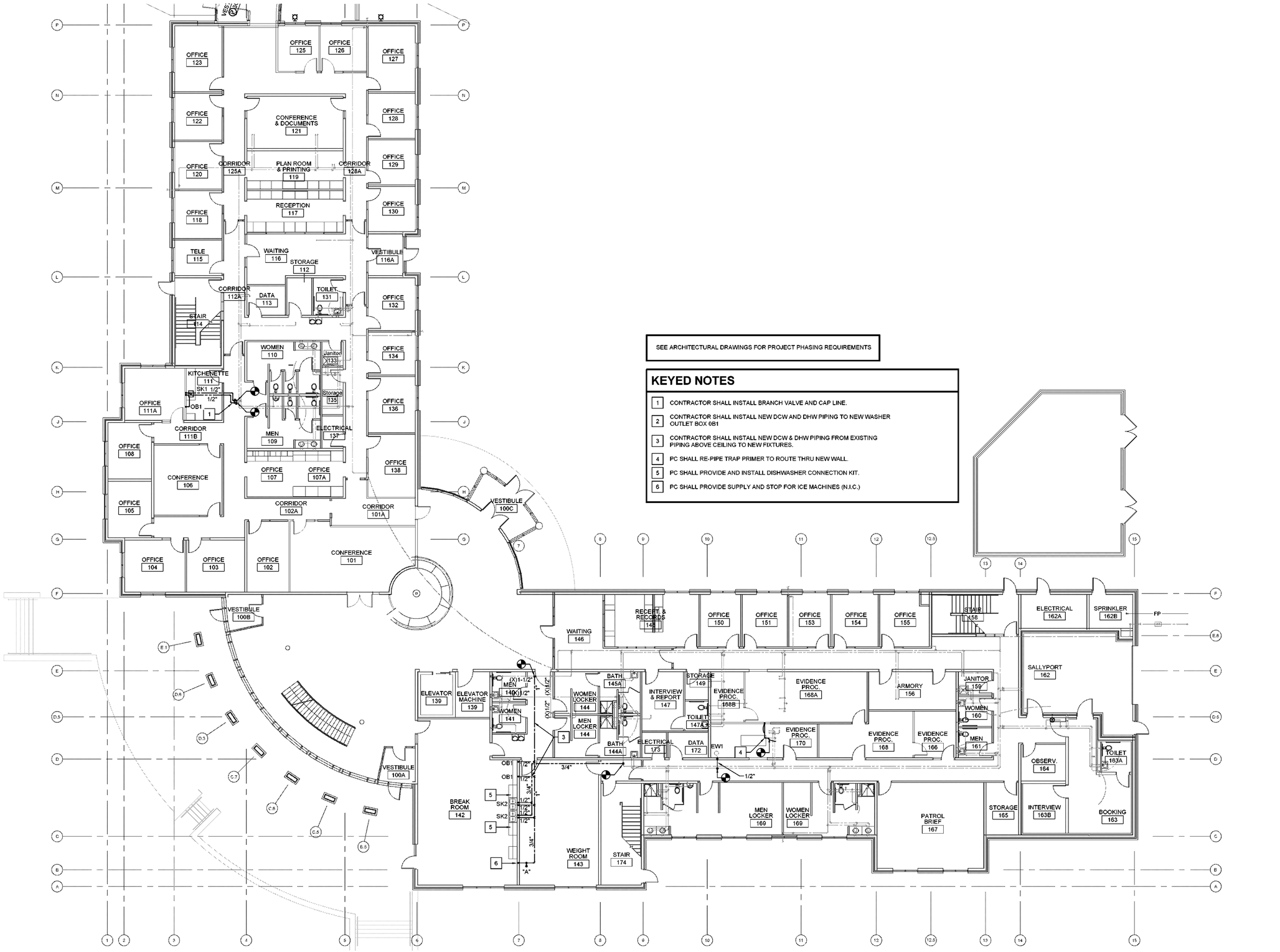

SEE ARCHITECTURAL DRAWINGS FOR PROJECT PHASING REQUIREMENTS

KEYED NOTES

1. CONTRACTOR SHALL INSTALL BRANCH VALVE AND CAP LINE.
2. CONTRACTOR SHALL INSTALL NEW DCW AND DHW PIPING TO NEW WASHER OUTLET BOX 0B1
3. CONTRACTOR SHALL INSTALL NEW DCW & DHW PIPING FROM EXISTING PIPING ABOVE CEILING TO NEW FIXTURES.
4. PC SHALL RE-PIPE TRAP PRIMER TO ROUTE THRU NEW WALL.
5. PC SHALL PROVIDE AND INSTALL DISHWASHER CONNECTION KIT.
6. PC SHALL PROVIDE SUPPLY AND STOP FOR ICE MACHINES (N.I.C.)

1 **FIRST FLOOR PLAN - DOMESTIC WATER**
3/32" = 1'-0"

PLAN NORTH

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First Floor Plan - Domestic Water

P2.1R

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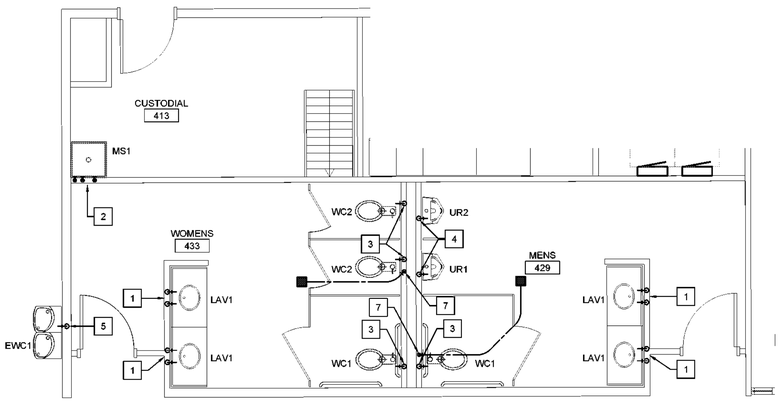
KEYED NOTES THIS SHEET

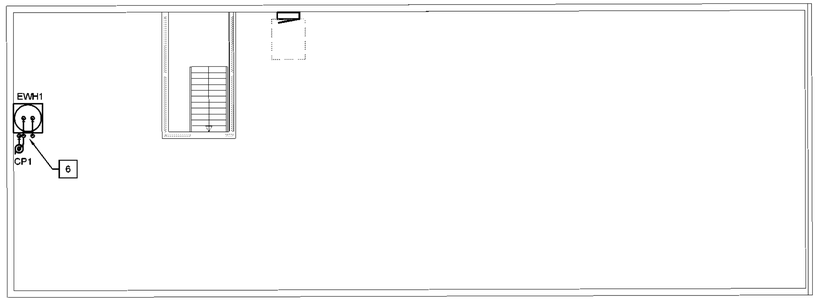
1. 1/2" DCW AND DHW FROM BELOW
2. 3/4" DCW, DHW AND DHWR UP TO WATER HEATER ON MECH. MEZZANINE AND 3/4" DCW, DHW AND DHWR DOWN TO BELOW FLOOR. REFER TO 3/P2.2 FOR CONTINUATION.
3. 1" DCW FROM BELOW.
4. 3/4" DCW FROM BELOW.
5. 1/2" DCW FROM BELOW.
6. 3/4"DCW AND DHWR FROM BELOW. 3/4" DHW DOWN TO BELOW.
7. PROVIDE AND INSTALL FLUSH TUBE TRAP PRIMER.



2 ENLARGED DOMESTIC WATER PLAN

1/4" = 1'-0"

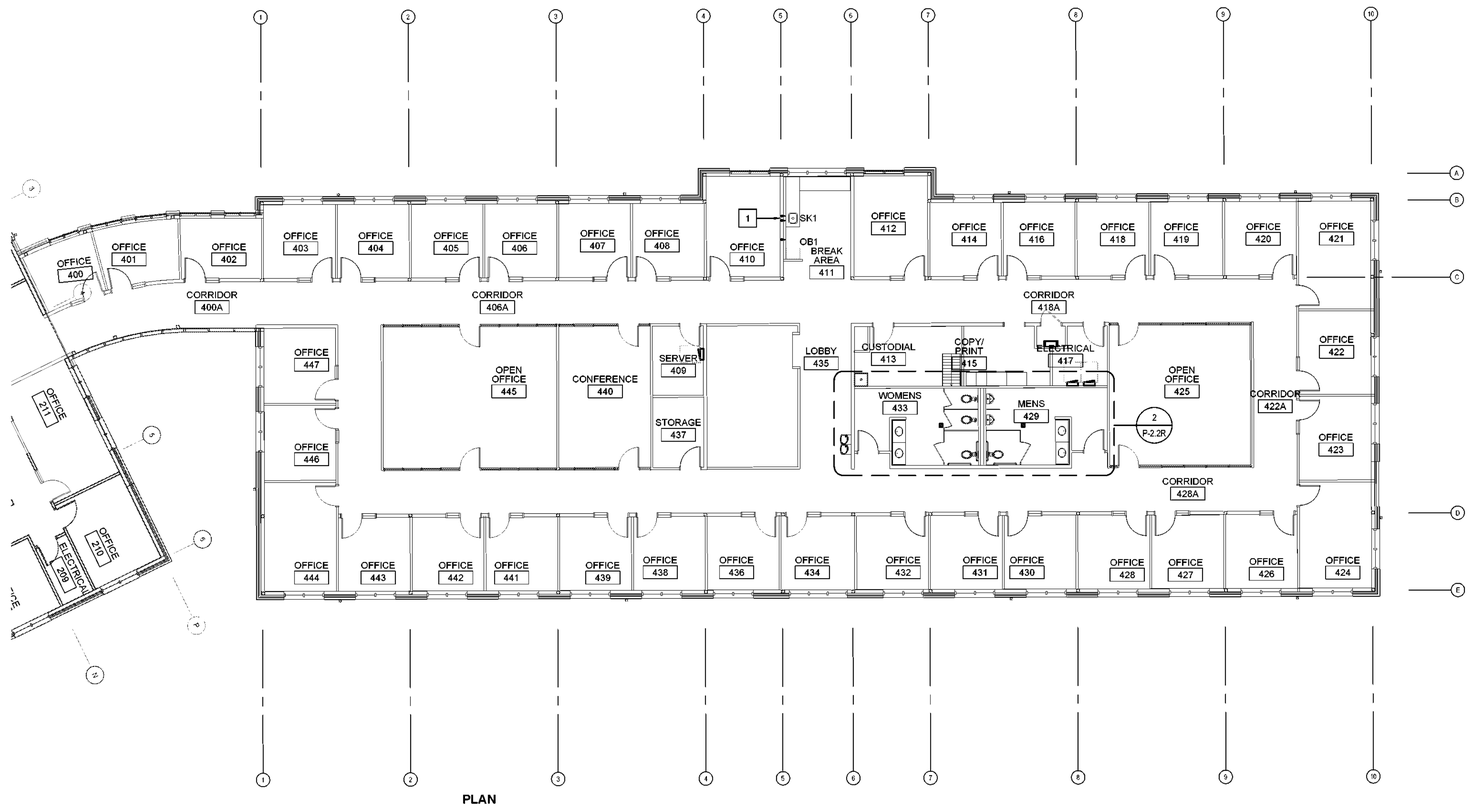
PLAN NORTH



3 MECHANICAL MEZZANINE DOMESTIC WATER PLAN

3/16" = 1'-0"

PLAN NORTH



1 SECOND FLOOR PLAN - DOMESTIC WATER

3/32" = 1'-0"

PLAN NORTH

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Construction Drawings

Issue Date: February 23, 2024

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Second Floor Plan - Domestic Water

P2.2

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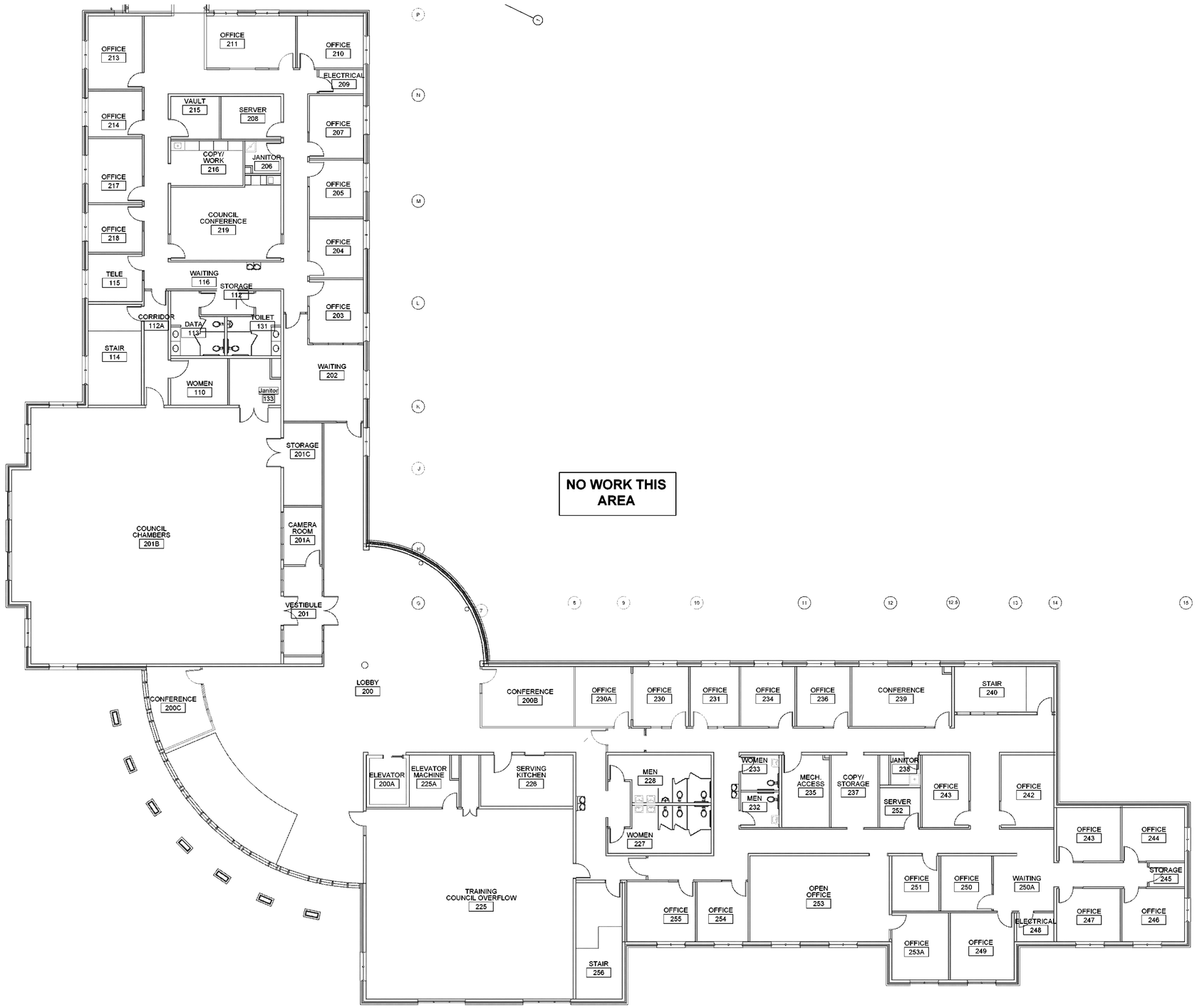

1 **SECOND FLOOR PLAN - DOMESTIC WATER**
3/32" = 1'-0"

PLAN NORTH

0 5' 10' 20'

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Second Floor Plan - Domestic Water

P2.2R

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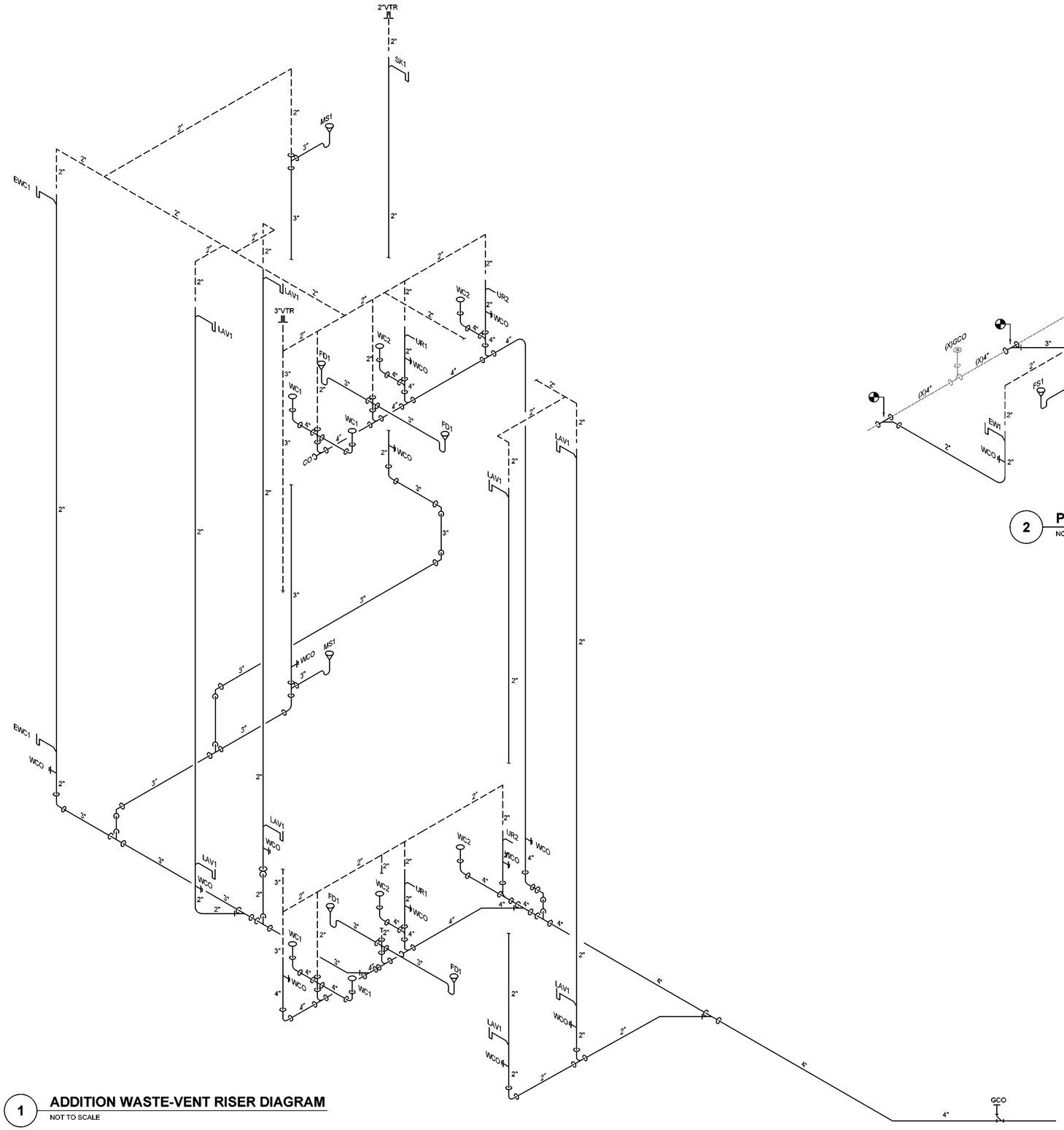
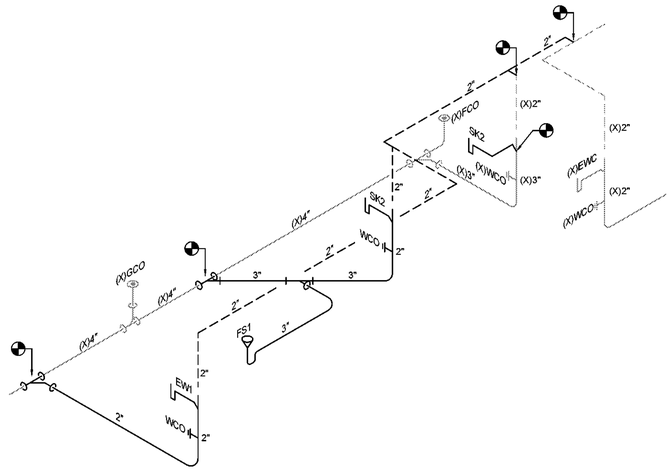


1 **ADDITION WASTE-VENT RISER DIAGRAM**
NOT TO SCALE



2 **PARTIAL WASTE-VENT RISER DIAGRAM**
NOT TO SCALE

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Plumbing Waste-Vent Riser Diagram

P5.1

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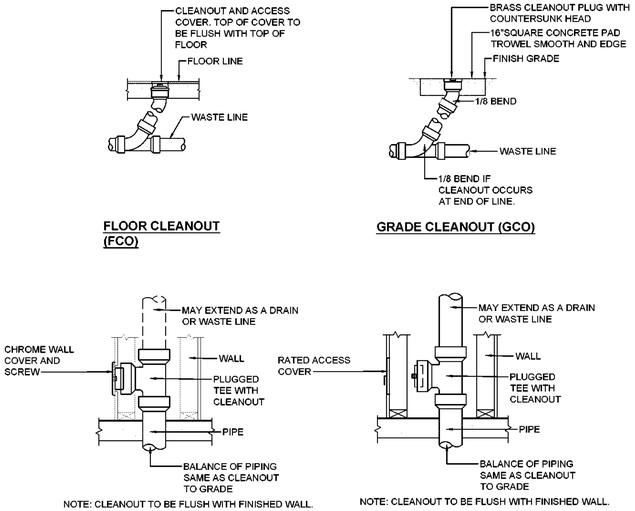
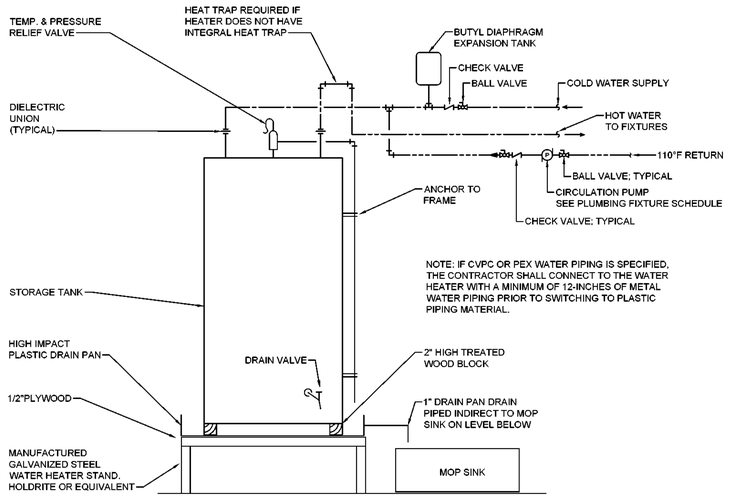
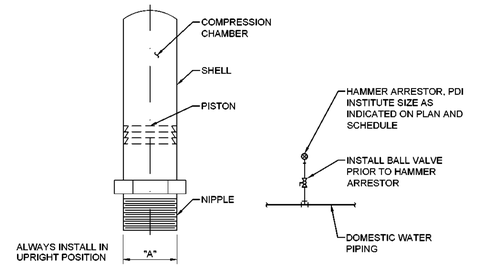


1 TYPICAL CLEANOUT DETAILS
NOT TO SCALE

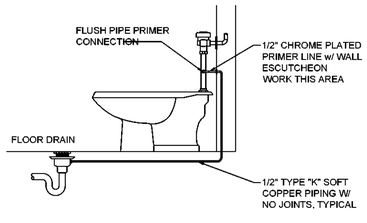


2 ELECTRIC WATER HEATER DETAIL
NOT TO SCALE

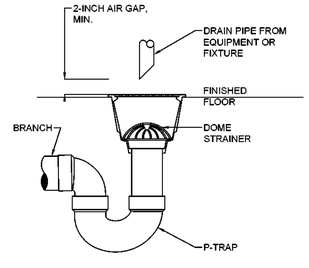


P.D.I. SYMBOL	FIXTURE UNIT RATING	A SIZE
A	1-11	1/2"
B	12-32	3/4"
C	33-60	1"
D	61-113	1"
E	114-154	1"
F	155-330	1"

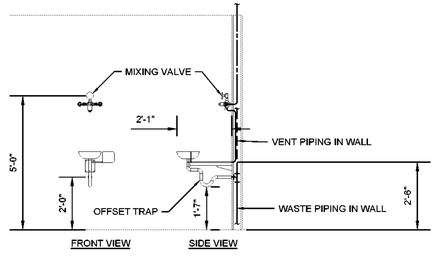
3 HAMMER ARRESTOR DETAIL
NOT TO SCALE



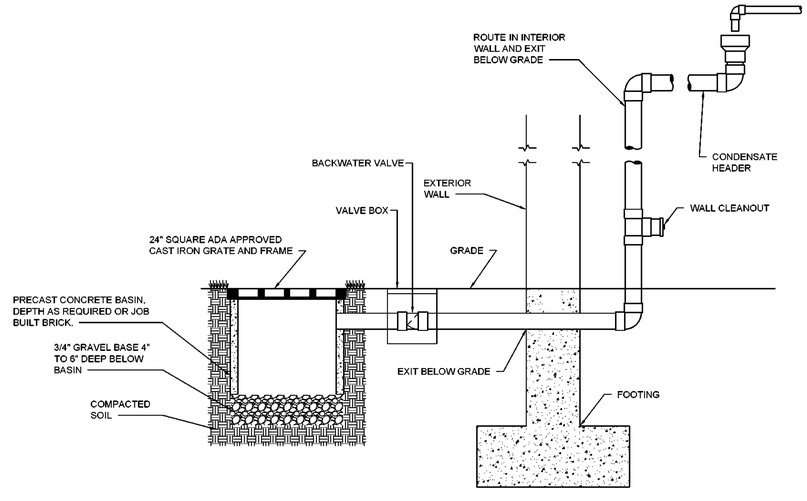
4 TRAP PRIMER DETAIL
NOT TO SCALE



5 FLOOR SINK DETAIL
NOT TO SCALE



6 FLOOR SINK DETAIL
NOT TO SCALE



7 OPEN BOTTOM CATCH BASIN
NOT TO SCALE

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02/21/2024

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Plumbing Details

P5.2

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PLUMBING FIXTURE SCHEDULE

DRAWING CODE	FIXTURE		DESCRIPTION	MANUFACTURER	MODEL	ALTERNATE APPROVED MANUFACTURERS	NOTES	PIPE SIZE			
								DCW	DHW	WASTE	VENT
WC1	FLUSH VALVE WATER CLOSET, FLOOR MTD., 1.6GPF, ADA	BOWL	16.5" HIGH BOWL, ELONGATED, V.C., 2-1/8" TRAPWAY; TOP SPUD; MADERA	AMERICAN STANDARD	3043.001	ZURN, KOHLER	6	1"	-	4"	2"
		FLUSH VALVE	11.5" HIGH, 1.6GPF	SLOAN	111-1.6 YBC	ZURN, TEC					
		SEAT	OFLC w/ SELF-SUSTAINING S.S. CHECK HINGE; HEIGHT 17-19" AFF	CHURCH	295SSCT	BEMIS, OLSONITE					
WC2	FLUSH VALVE WATER CLOSET, FLOOR MTD, 1.6GPF	BOWL	15" HIGH BOWL, ELONGATED, V.C., 2-1/8" TRAPWAY; TOP SPUD; MADERA	AMERICAN STANDARD	2234.001	ZURN, CRANE		1"	-	4"	2"
		FLUSH VALVE	16" HIGH, 1.6GPF	SLOAN	113-1.6	ZURN, TEC					
		SEAT	OFLC w/ SELF-SUSTAINING S.S. CHECK HINGE	CHURCH	295SSCT	BEMIS, OLSONITE					
UR1	URINAL WALL HUNG, 0.5GPF, ADA	BOWL	VITREOUS CHINA, WASHOUT, ELONGATED RIM MTD. 17 A.F.F. MAX., 3/4"TOP SPUD	AMERICAN STANDARD	6590.001	ZURN, KOHLER	1	3/4"	-	2"	2"
		FLUSH VALVE	11.5 HIGH	SLOAN	186-0.5	ZURN, TEC					
UR2	URINAL, WALL HUNG, 0.5GPF	BOWL	VITREOUS CHINA, WASHOUT, ELONGATED RIM MTD. 21 A.F.F. MAX., 3/4"TOP SPUD	AMERICAN STANDARD	6590.001	ZURN, KOHLER	1	3/4"	-	2"	2"
		FLUSH VALVE	11.5 HIGH	SLOAN	186-0.5	ZURN, TEC					
LAV1	COUNTERTOP LAVATORY,0.5GPM, ADA	BOWL	20"x17" VITREOUS CHINA, 34"A.F.F., MAX.	AMERICAN STANDARD	0476.028	ZURN, CRANE	2,4,5,9,	1/2"	1/2"	2"	2"
		FAUCET	4" CENTERSET, SINGLE LEVER HANDLE, SOLID BRASS CONSTRUCTION, CERAMIC CARTRIDGE, HIGH TEMP LIMIT STOP	MOEN	8413F05	ZURN, DELTA					
		DRAIN	CAST BRASS, CHROME PLATED, OPEN GRID STRAINER P.O. PLUG WITH BRASS TAILPIECE	MCGUIRE	155A	DEARBORN, DELTA					
		MIXING VALVE	LEAD FREE THERMOSTATIC MIXING VALVE - SETPOINT = 105°F INSTALL ON HOT WATER SUPPLY, ASSE 1070	CASH ACME	HG-135	LEONARD, WATTS					
SK1	BAR SINK, ADA (FRONT APPROACH)	BOWL	15"x15"x6", 18GA STAINLESS STEEL, SINGLE BOWL DROP-IN SINK	ELKAY	BLR1560	JUST, ACORN	2,4,5,9,	1/2"	1/2"	2"	2"
		FAUCET	BRASS CONSTRUCTION, CHROME PLATED FINISH, 4"CENTERSET, 3-5/8" SPOUT REACH, 4"WRIST BLADE HANDLES, VANDAL RESISTANT, 1.5GPM	MOEN	8278SMF15	DELTA, ZURN					
		DRAIN	WROUGHT BRASS CHROME PLATED STRAINER, BRASS TAILPIECE	MCGUIRE	152N	ZURN, MOEN					
SK2	2-COMPARTMENT COUNTERTOP SINK, ADA	BOWL	33X22X6.5, 18 GA S.S.	ELKAY	LRAD3322	JUST, ACORN	2,4,5	1/2"	1/2"	2"	2"
		FAUCET	GOOSENECK, LEVER HANDLE, V.P.	DELTA	140-WF	ZURN, MOEN					
		DRAIN	(2) CRUMBCUP STRAINERS	ELKAY	LK35	ZURN, MOEN					
MS1	MOP SINK	BASIN	24"x24"x10" MOLDED STONE w/ STAINLESS STEEL DRAIN	FIAT	MSB-2424	FLORESTONE, ZURN	10	1/2"	1/2"	3"	2"
		FAUCET	BRASS CONSTRUCTION, ROUGH CHROME FINISH, INTEGRAL VACUUM BREAKER, INTEGRAL CHECK STOPS, 3/4"THREADED SPOUT, SERVICE STOPS, WALL MOUNT, VANDAL RESISTANT, LEVER HANDLES	MOEN	8124	DELTA, ZURN					
		ACCESSORIES	STAINLESS STEEL, THREE STATION MOP/BROOM HOLDER	MOEN	8198	-					
		ACCESSORIES	STAINLESS STEEL, HOSE BRACKET WITH 30" HEAVY DUTY RUBBER HOSE, GHT THREADED CONNECTION	MOEN	8199	DELTA, ZURN					
ze	WALL HUNG WATER COOLER, ADA	FIXT	SPLIT LEVEL, S.S. TOP, LIGHT GREY BODY, BOTTLE FILLING STATION, 8 GPH @ 50/80/90, 120V/1PH WITH FILTER	ELKAY	LZSTL8WSLK	HALSEY TAYLOR, OASIS	1,11	1/2"	-	2"	2"
EWH1	ELECTRIC WATER HEATER, 40 GAL	FIXT	GLASS-LINED TANK, DUAL 4500W, 208V/1PH, NON-SIMULT.	A.O. SMITH	DEL-40	BRADFORD-WHITE, RHEEM	8	3/4"	3/4"	-	-
		EXP TANK	2 GAL DIAPHRAGM		PMC-5					-	-
EW1	WALL MOUNT EYE/FACE WASH	FIXT	HIGH VIS YELLOW, PLASTIC BOWL W/ DUST COVER, STAY-OPEN BALL VALVE, PUSH HANDLE ACTIVATION	BRADLEY	S19224PDCFW	GUARDIAN, ACORN		1/2"	1/2"	-	-
FCO	FLOOR CLEANOUT	FIXT	4"SCH. 40 HUB, PVC BASE ADAPTER, ROUND NICKEL-BRONZE COVER, VANDAL RESISTANT SCREWS	SIOUX CHIEF	834-4PNRV	ZURN, SMITH		-	-	MATCH	-
GCO	GRADE CLEANOUT	FIXT	4"SCH. 40 HUB, PVC BASE ADAPTER, ROUND NICKEL-BRONZE COVER, VANDAL RESISTANT SCREWS	SIOUX CHIEF	851-44NV	ZURN, SMITH		-	-	MATCH	-
WCO	WALL CLEANOUT	FIXT	ROUND S/S ACCESS COVER & SCREW, RECESS BRONZE THRD. PLUG	SIOUX CHIEF	870	ZURN, SMITH		-	-	MATCH	-
FD1	FLOOR DRAIN	FIXT	FINISHLINE ADJUSTABLE, SCH. 40 HUB CONNECTION, ABS/PVC BASE ADAPTER, SQUARE, NICKEL BRONZE STRAINER, TRAP PRIMER CONNECTION	SIOUX CHIEF	832	ZURN, SMITH	7	-	-	MATCH	-
FS1	FLOOR SINK	FIXT	PVC BODY, 14"x14" PLASTIC TOP w/ 1/2 GRATE, BEEHIVE STRAINER	SIOUX CHIEF	861	ZURN, SMITH	7	-	-	MATCH	-
CP1	HOT WATER RECIRCULATION PUMP	FIXT	IN-LINE WET ROTOR, STAINLESS STEEL VOLUTE, 3-SPEED, 115/1/60, 125W. BUILT IN THERMAL PROTECTION.	GRUNDFOS	UPS 15	B&G, MYERS		-	MATCH	-	-
WH1	WALL HYDRANT	FIXT	CHROME PLATED BRASS, ANTI-SIPHON, VACUUM BREAKER, REMOVABLE TEE HANDLE, 3/4" HOSE THREAD	WOODFORD	65	ZURN, WATTS		3/4"	-	-	-
OB1	ICE MAKER BOX	FIXT	ABS HOUSING, 1/4 TURN BALL VALVE, CHROME PLATED BRASS, SHOCK ARRESTORS	SIOUX CHIEF	696	OATEY, IPS		1/2"	-	-	-

NOTES
1. PROVIDE MATCHING WALL HANGER. COORDINATE WITH G.C. FOR WALL REINFORCING.
2. PROVIDE BRASS 1-1/2" TAILPIECE, CAST BRASS SLIP JOINT P-TRAP WITH CLEANOUT; PROVIDE ADA OFFSET ARRANGEMENT WHERE REQUIRED.
3. NOT USED.
4. COORDINATE WITH MILLWORK.
5. COORDINATE ADA MILLWORK ENCLOSURE FOR WATER AND DRAIN PIPING UNDER SINK.
6. TRIP LEVER OR FLUSH HANDLE TO BE LOCATED ON WIDE SIDE OF STALL OR TOILET ROOM.
7. PROVIDE TRAP PRIMER
8. FIELD ROUTE 1" DRAIN PAN DRAIN PIPING TO CLOSEST INDIRECT DRAIN OR SPILL TO GRADE.
9. PROVIDE 1/2" IPS X 3/8" OD ANGLE BRASS STOP(S) WITH RIGID COPPER RISERS. ALL EXPOSED PIPING SHALL BE CHROME PLATED.
10. PROVIDE INLINE CHECK VALVES FOR WATER SUPPLY LINES.
11. PROVIDE 1/2"IPS x 3/8" O.D. BRASS STOP CONCEALED BEHIND CABINET.

PLUMBING SUMMARY WORKSHEET-ADDITION

FIXTURE	OCCUPANCY	TYPE OF CONTROL	QUANTITY	DOMESTIC WATER SYSTEM (W.S.F.U.)						WASTE & VENT SYSTEM (D.F.U.)	
				INDIVIDUAL FIXTURE UNITS			TOTAL FIXTURE UNITS				
				COLD	HOT	TOTAL	COLD	HOT	TOTAL	EACH	TOTAL
DRINKING FOUNTAIN	OFFICES, ETC.	3/8" VALVE	2	0.25	0.0	0.25	0.5	0.0	0.5	0.5	1.0
KITCHEN SINK	PRIVATE	FAUCET	1	1.0	1.0	1.4	1.0	1.0	1.4	2.0	2.0
LAVATORY	PUBLIC	FAUCET	8	1.5	1.5	2.0	12.0	12.0	16.0	1.0	8.0
SERVICE SINK	OFFICES, ETC.	FAUCET	2	2.25	2.25	3.00	4.5	4.5	6.0	2.0	4.0
URINAL	PUBLIC	3/4"FLUSH VALVE	4	5.00	0.00	5.00	20.0	0.0	20.0	2.0	8.0
WATER CLOSET	PUBLIC	FLUSH VALVE	8	10.00	0.00	10.00	80.0	0.0	80.0	4.0	32.0
TOTALS							118.0	17.5	123.9		55.0

BASED ON AN ESTIMATED DEMAND OF 124 W.S.F.U.(73 GPM), PROVIDE A 2" INCOMING WATER LINE.
BASED ON A WASTE COUNT OF 55 D.F.U., PROVIDE A 4" OUTGOING WASTE LINE.

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Rev.	Date	Notes

Plumbing Schedules

P6.1

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SEE ARCHITECTURAL DRAWINGS FOR PROJECT PHASING REQUIREMENTS

DEMOLITION KEYED NOTES

1. CONTRACTOR SHALL REMOVE EXISTING SINK, TRAP, TAILPIECE, ETC. COMPLETE. REMOVE SUPPLIES, STOPS, WASTE AND VENT PIPING FROM INSIDE OF WALL TO BE DEMOLISHED FROM BELOW FLOOR TO ABOVE CEILING. CAP WATER AND VENT PIPING ABOVE CEILING. REMOVE WASTE PIPING BACK TO MAIN AND CAP TO ELIMINATE DEAD END.
2. DELETED
3. DELETED
4. CONTRACTOR SHALL REMOVE EXISTING SINK, TRAP, TAILPIECE, ETC. COMPLETE. REMOVE SUPPLIES AND STOPS AND CAP WATER PIPING INSIDE OF WALL CAVITY. INSTALL WALL CLEANOUT IN EXISTING SANITARY RISER TO MEET REQUIREMENTS OF NCPC 704.5 DEAD ENDS. REPAIR WALL AS REQUIRED TO MATCH EXISTING.
5. CONTRACTOR SHALL REMOVE EXISTING WASTE STACK FROM ABOVE CEILING TO END POINT OF DEMOLITION AS INDICATED ON DRAWING.
6. CONTRACTOR SHALL REMOVE EXISTING VENT STACK FROM WASTE BRANCH TO END POINT OF DEMOLTION ABOVE CEILING AS INDCIATED ON DRAWING.
7. CONTRACTOR SHALL REMOVE SMALL PORTION OF EXISTING WASTE BRANCH SERVING FLOOR DRAIN TO EXISTING VENT RISER.
8. CONTRACTOR SHALL REMOVE EXISTING SUPPLY LINE TO DRAIN TRAP PRIMER IN DEMOLITION WALL. SEE DRAWING P-2.1 FOR NEW WORK.
9. CONTRACTOR SHALL REMOVE EXISTING DCW AND DHW BRANCH PIPING FROM FIXTURES BACK TO MAIN AND CAP.

1 FIRST FLOOR PLAN - DEMOLITION
3/32" = 1'-0"

PLAN NORTH

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER ROY O. GRADY 02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Rev.	Date	Notes

Plumbing First Floor Plan - Demolition

PD1.1R

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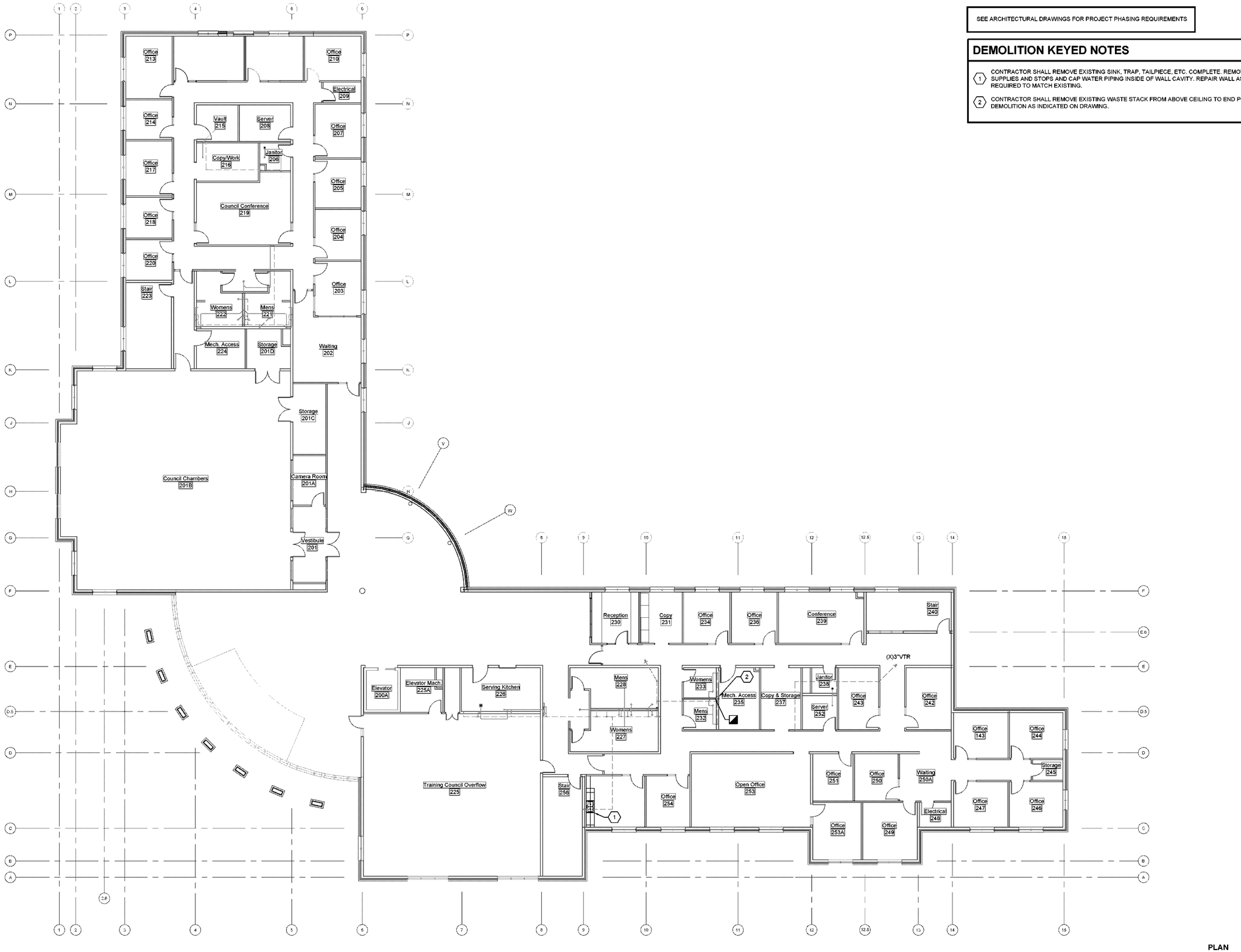

1 **SECOND FLOOR PLAN - DEMOLITION**
3/32" = 1'-0"

PLAN NORTH

SEE ARCHITECTURAL DRAWINGS FOR PROJECT PHASING REQUIREMENTS

DEMOLITION KEYED NOTES

1. CONTRACTOR SHALL REMOVE EXISTING SINK, TRAP, TAILPIECE, ETC. COMPLETE. REMOVE SUPPLIES AND STOPS AND CAP WATER PIPING INSIDE OF WALL CAVITY. REPAIR WALL AS REQUIRED TO MATCH EXISTING.
2. CONTRACTOR SHALL REMOVE EXISTING WASTE STACK FROM ABOVE CEILING TO END POINT OF DEMOLITION AS INDICATED ON DRAWING.

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Rev.	Date	Notes

Plumbing
Second Floor
Plan - Demolition
PD1.2R

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MECHANICAL DEMOLITION NOTES

1. THE MECHANICAL CONTRACTOR SHALL REVIEW THE DRAWINGS AND SPECIFICATIONS FOR DEMOLITION REQUIREMENTS AND LAYOUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER. REMOVE ALL EQUIPMENT, DUCTWORK, SUPPORTS, CONTROLS, ACCESSORIES, ETC..., AND MECHANICAL ITEMS MADE OBSOLETE BY THESE ALTERATIONS AS SHOWN IN THE MECHANICAL DRAWINGS. ALL ITEMS TO BE REMOVED OR MODIFIED MAY NOT BE SHOWN, HOWEVER, THIS CONTRACTOR SHALL REMOVE ANY MECHANICAL WORK AS REQUIRED BY THE CONSTRUCTION OR AS DIRECTED BY THE OWNER OR THE ENGINEER. SURVEY THE AFFECTED AREAS BEFORE SUBMITTING A BID.
2. SCHEDULING OF DEMOLITION - COORDINATE SCHEDULING OF MECHANICAL DEMOLITION WORK WITH THE OWNER AND GENERAL CONTRACTOR SO AS TO MINIMIZE DISRUPTION OF THE OWNER'S USE OF THE FACILITIES AND MAINTAIN THE CONSTRUCTION SEQUENCE OF THE GENERAL CONTRACTOR. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INSTRUCTIONS CONCERNING PHASING AND SEQUENCE OF WORK.
3. EXISTING MECHANICAL SYSTEMS - VERIFY CONDITION OF EXISTING MECHANICAL SYSTEMS TO BE REUSED SO THAT COMPLETE, FULLY OPERATIONAL AND RELIABLE SYSTEMS ARE OBTAINED AT THE COMPLETION OF THE WORK. NOTIFY ARCHITECT OF ANY SYSTEMS FOUND TO BE OF QUESTIONABLE CONDITION.
4. ALL EXISTING MECHANICAL EQUIPMENT AND DEVICES SHALL REMAIN UNLESS SPECIFICALLY NOTED TO BE REMOVED.
5. DEMOLISHED MATERIALS - UNLESS SPECIFICALLY REQUESTED BY THE OWNER, ALL DEMOLISHED MECHANICAL MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.
6. CUTTING AND PATCHING - PERFORM CUTTING AND PATCHING FOR MECHANICAL WORK SO AS TO MINIMIZE DAMAGE TO CEILINGS, FLOORS AND WALLS. REFER TO ARCHITECTURAL DRAWINGS AND GENERAL SPECIFICATIONS SECTIONS FOR SPECIFIC RESPONSIBILITIES REGARDING CUTTING AND PATCHING.
7. THESE DRAWINGS ARE COMPILED BY THE ARCHITECT FROM THE OWNER'S AS-BUILT RECORD DRAWINGS AND LIMITED FIELD VERIFICATION OF EXISTING CONDITIONS FOR THE PURPOSE OF INDICATING THE WORK REQUIRED AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DUCTWORK, EQUIPMENT LOCATIONS, DIMENSIONS AND ALL FIELD CONDITIONS AFFECTING HIS WORK.
8. WHERE MECHANICAL SYSTEMS PASS THROUGH THE DEMOLITION AREAS TO SERVE OTHER PORTIONS OF THE PREMISES, THEY SHALL REMAIN OR BE SUITABLY RELOCATED AND THE SYSTEM RESTORED TO NORMAL OPERATION. ADVISE THE ARCHITECT IMMEDIATELY IF SUCH CONDITIONS ARE UNCOVERED BEFORE PROCEEDING WITH ADDITIONAL WORK.
9. PROTECT ALL EXISTING LIFE SAFETY SYSTEMS, FIRE ALARM AND PUBLIC ADDRESS SYSTEMS AND MAINTAIN THEM IN OPERATION THROUGHOUT THE PROGRESS OF THE WORK. NOTIFY THE OWNER AND ARCHITECT IN WRITING OF SHUTDOWNS ARE REQUIRED PRIOR TO ANY OUTAGE OF SERVICE. WHERE THE DURATION OF A PROPOSED OUTAGE CANNOT BE TOLERATED BY THE OWNER, PROVIDE TEMPORARY CONNECTIONS AS REQUIRED MAINTAINING SERVICE.
10. SURVEY THE EFFECTED AREAS BEFORE SUBMITTING A BID AS ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DEPICTED ON THE DRAWINGS AND SOME UNUSUAL CONDITIONS EXIST.
11. IF ANY UNUSUAL STRUCTURAL OR ARCHITECTURAL CONDITIONS ARE ENCOUNTERED DURING DEMOLITION, CONTACT THE ARCHITECT.
12. REMOVE AIR CONDITIONING, REFRIGERATION, AND OTHER EQUIPMENT CONTAINING REFRIGERANTS WITHOUT RELEASING CHLOROFLUOROCARBON REFRIGERANTS TO THE ATMOSPHERE IN ACCORDANCE WITH THE CLEAN AIR ACT AMENDMENT OF 1990. RECOVER ALL REFRIGERANTS PRIOR TO REMOVING AIR CONDITIONING, REFRIGERATION, AND OTHER EQUIPMENT CONTAINING REFRIGERANTS AND DISPOSE OF IN ACCORDANCE WITH THE PARAGRAPH ENTITLED "DISPOSAL OF OZONE DEPLETING SUBSTANCE (ODS)." TURN IN SALVAGED CLASS I ODS REFRIGERANTS AS SPECIFIED IN PARAGRAPH, "SALVAGED MATERIALS AND EQUIPMENT."

MECHANICAL GENERAL NOTES:

1. ALL MECHANICAL WORK SHALL BE IN STRICT COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND STANDARDS.
2. ALL DIMENSIONS AND ELEVATIONS FOR NEW EQUIPMENT, DUCTWORK, PIPING AND APPARATUS ARE APPROXIMATE AND ARE ONLY FOR CONTRACTOR'S GUIDANCE. CONTRACTOR SHALL SUBMIT DIMENSIONS AND ELEVATIONS VERIFIED IN THE FIELD. DUCTWORK AND PIPING INDICATED ON THE DRAWINGS, SECTIONS AND PROSPECTIVE VIEWS ARE SHOWN DIAGRAMMATICALLY. DUCT AND PIPE ELEVATIONS IN EXACT LOCATIONS SHALL BE DETERMINED BY THE INSTALLING CONTRACTOR AND DETAILED ON THE SHOP DRAWINGS.
3. ALL DUCT DIMENSIONS INDICATED ON PLAN ARE CLEAR INSIDE DIMENSIONS. CONTRACTOR MUST ACCOUNT FOR THE THICKNESS OF EXTERIOR INSULATION WHEN DETERMINING INSTALLATION CLEARANCES.
4. THE CONTRACTOR SHALL TEMPORARILY COVER ALL EXPOSED DUCT AND PIPE OPENINGS WITH A NON-COMBUSTIBLE MATERIAL, AND SEAL THEM AIR TIGHT TO PREVENT CONTAMINATION OF THE RESPECTIVE SYSTEMS DURING CONSTRUCTION.
5. CONTRACTOR SHALL REMOVE AND DISPOSE OF OFFSITE ALL DEMOLISHED WORK IN ACCEPTABLE AND SAFE MANNER AND SHALL KEEP ALL NON-WORK AREAS CLEAN AND SAFE.
6. ALL EXISTING EQUIPMENT AND CONNECTIONS THAT NEED TO BE TEMPORARILY DEMOLISHED FOR RIGGING AND / OR INSTALLATION SHALL BE REINSTALLED AND BROUGHT BACK TO ORIGINAL CONDITIONS PRIOR TO TEMPORARY REMOVAL.
7. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.

MECHANICAL LEGEND

	CEILING EXHAUST AIR GRILLE
	CEILING RETURN AIR / TRANSFER AIR GRILLE
	CEILING SUPPLY AIR DIFFUSER / GRILLE
C	CONDENSATE PIPING
(X)C	CONDENSATE PIPING - EXISTING
AIR TYPE DESIGNATOR / AIRFLOW, CFM	DIFFUSER / REGISTER / GRILLE TAG
	EXTENT OF DEMOLITION
FD	FIRE DAMPER
	INDICATES TO DEMOLISH
	MANUAL VOLUME DAMPER
M	MOTORIZED DAMPER
	POINT OF CONNECTION
R	REFRIGERANT LINE-SET PIPING
(X)R	REFRIGERANT LINE-SET PIPING - EXISTING
	RETURN, EXHAUST OR TRANSFER AIR FLOW
	SUPPLY AIR FLOW
T	THERMOSTAT / TEMPERATURE SENSOR
TH	T-STAT / HUMIDISTAT OR TEMP/HUMIDITY SENSOR

NOTE: ALL ITEMS LISTED MAY NOT BE USED IN THIS PROJECT.

FIRE RATED WALL LEGEND

	1 HOUR RATED WALL
(X)	1 HOUR RATED WALL - EXISTING

PROJECT PHASING NOTE:

THIS PROJECT WILL BE BUILT IN PHASES. REFER TO ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS.

MECHANICAL SUMMARY (EXISTING BUILDING ONLY)

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

CLIMATE ZONE	3A - WARM/HUMID
WINTER DRY BULB:	23 °F
SUMMER DRY BULB	93 °F
INTERIOR DESIGN CONDITIONS	
WINTER DRY BULB	70 °F
SUMMER DRY BULB	75 °F
RELATIVE HUMIDITY	60°RH*
	*DESIGN- NOT CONTROLLED
BUILDING HEATING LOAD:	409.4 MBH
BUILDING COOLING LOAD:	1137.7 MBH
MECHANICAL SPACING CONDITIONING SYSTEM	
UNITARY	
DESCRIPTION OF UNIT:	SEE SCHEDULES
HEATING EFFICIENCY:	SEE SCHEDULES
COOLING EFFICIENCY:	SEE SCHEDULES
SIZE CATEGORY OF UNIT:	SEE SCHEDULES
BOILER	
SIZE CATEGORY, IF OVERSIZED STATE REASON:	N/A
CHILLER	
SIZE CATEGORY, IF OVERSIZED STATE REASON:	N/A
LIST EQUIPMENT EFFICIENCIES:	SEE SCHEDULES

MECHANICAL SUMMARY (ADDITION ONLY)

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

CLIMATE ZONE	3A - WARM/HUMID
WINTER DRY BULB:	23 °F
SUMMER DRY BULB	93 °F
INTERIOR DESIGN CONDITIONS	
WINTER DRY BULB	70 °F
SUMMER DRY BULB	75 °F
RELATIVE HUMIDITY	60°RH*
	*DESIGN- NOT CONTROLLED
BUILDING HEATING LOAD:	187.3 MBH
BUILDING COOLING LOAD:	455.1 MBH
MECHANICAL SPACING CONDITIONING SYSTEM	
UNITARY	
DESCRIPTION OF UNIT:	SEE SCHEDULES
HEATING EFFICIENCY:	SEE SCHEDULES
COOLING EFFICIENCY:	SEE SCHEDULES
SIZE CATEGORY OF UNIT:	SEE SCHEDULES
BOILER	
SIZE CATEGORY, IF OVERSIZED STATE REASON:	N/A
CHILLER	
SIZE CATEGORY, IF OVERSIZED STATE REASON:	N/A
LIST EQUIPMENT EFFICIENCIES:	SEE SCHEDULES

ABBREVIATIONS

TERM	ABBREVIATION	TERM	ABBREVIATION
ABOVE FINISHED FLOOR	AFF	INCH OF WATER GAUGE	INWG
ABOVE GROUND	AG	INDOOR UNIT	IDU
ABOVE SEA LEVEL	ASL	IRON PIPE SIZE	IPS
ACROSS THE LINE	ACL	KILOVOLT-AMP	KVA
AIR ADMITTANCE VALVE	AAV	KILOWATT	KW
AIR CONDITION(-ING, -ED)	AIR COND	KILOWATT HOUR	KWH
AIR-HANDLING UNIT	AHU OR AH	LEAVING AIR TEMPERATURE	LAT
AIR FLOW MEASURING STATION	AFMA	LEAVING WATER TEMPERATURE	LWT
AMBIENT	AMB	LENGTH	LG
AMPERE (AMP, AMPS)	AMP	LINEAR FEET	LF
ANALOG INPUT	AI	MAXIMUM	MAX
ANALOG OUTPUT	AO	MAXIMUM OVERCURRENT PROTECTION	MOCP
AND	&	MEDIUM-PRESSURE STEAM	MPS
APPARATUS DEW POINT	ADP	MILES PER HOUR	MPH
APPROXIMATE	APPROX	MINIMUM	MIN.
ARCHITECT	ARCH	MINIMUM CIRCUIT AMPERES	MCA
ATMOSPHERE	ATM	MINUTE	MIN
AVERAGE	AVG	MANUFACTURER	MFR
BRAKE HORSEPOWER	BHP	MOTOR CONTROL CENTER	MCC
BROWN & SHARPE WIRE GAGE	B&S	NOISE CRITERIA	NC
BRITISH THERMAL UNIT	BTU	NON-STANDARD PART LOAD	NPLV
BRITISH THERMAL UNIT PER HOUR	MBH	NORMALLY OPEN	NO
1000 BRITISH THERMAL UNIT	MBH	NORMALLY CLOSED	NC
BUILDING	BLDG	NOT APPLICABLE	N/A
BUILDING AUTOMATION SYSTEM	BAS	NOT IN CONTRACT	N I C
CELSIUS	°C	NOT TO SCALE	NTS
CHILLED WATER RETURN	CHWR	NUMBER	NO
CHILLED WATER SUPPLY	CHWS	ON CENTER	OC
COEFFICIENT, VALVE FLOW	CV	OUNCE	OZ
COEFFICIENT OF PERFORMANCE FACTOR	COP	OUTDOOR UNIT	ODU
COMPRESSOR	COMP	OUTSIDE AIR	OA
CONCRETE	CONC	PACKAGE UNIT	PU
CONDENS(-ER, -ING, -ATION)	COND	PACKAGE TERMINAL AIR CONDITIONER	PTAC
CONNECTION	CONN	PARTS PER MILLION	PPM
CONTINUATION	CONT	PERCENT	%
COOLING LOAD	CLG LOAD	PHASE	PH
CUBIC FEET	CU FT	POUNDS	LBS
CUBIC INCH	CU IN	POUNDS PER SQUARE FOOT	PSF
CUBIC FEET PER MINUTE	CFM	POWER VENTILATOR	PV
CFM, STANDARD CONDITIONS	SCFM	PRESSURE	PRESS
DECIBEL	DB	PRESSURE REDUCING VALVE	PRV
DEGREE	DEG OR °	PRESSURE SAFETY VALVE	PSV
DEDICATED OUTDOOR AIR SYSTEM	DOAS	PUMPED CONDENSATE	PC
DEGREES FAHRENHEIT	DEG. F	QUANTITY	QTY
DETAIL	DET	RATED LOAD AMPS	RLA
DEW-POINT TEMPERATURE	DPT	RECIRCULATE	RECIRC
DIAMETER	DIA	REDUCED PRESSURE BACKFLOW PREVENTER	RPZ
DIAMETER, INSIDE	ID	REFRIGERANT (12, 22, ETC.)	R22, R410
DIAMETER, OUTSIDE	OD	REFRIGERANT LIQUID	RL
DIFFERENCE OR DELTA	DIFF	REFRIGERANT SUCTION	RS
DIGITAL INPUT	DI	REQUIRED	REQD OR REQ'D
DIGITAL OUTPUT	DO	RELATIVE HUMIDITY	RH
DOMESTIC HOT WATER	DHW	RETURN AIR	RA
DOMESTIC HOT WATER RECIRCULATION	DHWR	REVOLUTIONS PER MINUTE	RPM
DRY-BULB TEMPERATURE	DBT	REVOLUTIONS PER SECOND	RPS
DUCTLESS SPLIT SYSTEM AIR HANDLER	DAH	ROOF VENTILATOR	RV
DUCTLESS SPLIT SYSTEM HEAT PUMP	DHP	ROOF TOP UNIT	RTU
ENERGY EFFICIENCY RATING	ERR	SAFETY FACTOR	SF
EFFICIENCY	EFF	SEASONAL ENERGY EFFICIENCY RATIO	SEER
ELECTRIC UNIT HEATER	EUH	SECOND	S
ELEVATION	EL	SHADING COEFFICIENT	SC
ENTERING	ENT	SPECIFICATION	SPEC
ENTERING WATER TEMPERATURE	EWT	SQUARE	SQ
ENTERING AIR TEMPERATURE	EAT	STANDARD	STD
EXISTING	(X)	STATIC PRESSURE	SP
EXTERNAL AMBIENT TEMPERATURE	EAT	SUPPLY	SPLY
EXTERNAL STATIC PRESSURE	ESP	SUPPLY AIR	SA
EXHAUST AIR	EA	TEMPERATURE	TEMP
EXHAUST FAN	EF	TEMPERATURE DIFFERENCE	TD
FACE VELOCITY	FVEL	THERMOSTAT	T STAT
FAHRENHEIT	°F	TONS OF REFRIGERATION	TONS
FEET PER MINUTE	FPM	TO BE DETERMINED	TBD
FEET PER SECOND	FPS	TOP OF STEEL	TOS
FLOOR	FLR	TOTAL DYNAMIC HEAD	TDH
FOOT OR FEET	FT	TYPICAL	TYP
FRESH AIR	FA	U-FACTOR	U
FULL LOAD AMPS	FLA	UNDER GROUND	UG
GAGE OR GAUGE	GA	UNLESS OTHERWISE NOTED	UON
GALLONS	GAL	UNIT HEATER - ELECTRIC	UH
GALLONS PER HOUR	GPH	VARIABLE AIR VOLUME	VAV
GALLONS PER MINUTE	GPM	VARIABLE FREQUENCY DRIVE	VFD
GALLONS PER DAY	GPD	VELOCITY	VEL
GRAINS	GR	VENTILATION, VENT	VENT
HEAD	HD	VENT THRU ROOF	VTR
HEAT EXCHANGER	HX	VERTICAL	VERT
HEATING AND VENTILATION UNIT	HV	VOLT	V
HEATING, VENTILATION AND AIR CONDITIONING	HVAC	VOLT AMPERE	VA
HEIGHT	HGT	VOLUME	VOL
HERTZ	HZ	WATER PRESSURE DROP	WPD
HIGH DENSITY POLYPROPYLENE	HDPE	WATER GAUGE	WG
HIGH-PRESSURE STEAM	HPS	WATT	W
HORSEPOWER, HEAT PUMP	HP	WATT-HOUR	WH
HOT WATER COIL	HWC	WITH	W/
HOUR(S)	HR	WEIGHT	WT
HUMIDITY, RELATIVE	RH	WET BULB	WB
INTEGRATED PART LOAD VALUES	IPLV	YARD	YD
INCH	IN.	YEAR	YR

NOTE: ALL ABBREVIATIONS MAY NOT BE USED IN PROJECT.

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Legends, Notes, Summaries and Abbreviations

Rev.	Date	Notes

M0.1

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VENTILATION SUMMARY DOAS5

SYSTEM/SPACE NAME	AIR HANDLER		SUPPLY AIR (CFM)	SPACE FLOOR AREA (FT^2)	AREA OUTDOOR AIR RATE (CFM/FT^2)	TIME AVERAGED OCCUPANCY (OCCUPANTS)	PEOPLE OUTDOOR AIR RATE (CFM/PERSON)	BREATHING ZONE OUTDOOR AIR (CFM)	AIR DISTRIBUTION EFFECTIVENESS	SPACE OUTDOOR AIR (CFM)	SPACE VENTILATION EFFICIENCY	OUTDOOR AIR DELIVERED (CFM)
		Mult.	**(Vpz)**	**(Az)**	**(Ra)**	**(Pz)**	**(Rp)**	**(Vbz)**	**(Ez)**	**(Voz)**	**(Evz)**	
DOAS5 (HP9, HP10, HP11, HP12)												
300 VESTIBULE	AH900	1	176	68	0.06	0	0	4	0.8	5	1.003	0
300A CORRIDOR	AH900	1	535	202	0.06	0	0	12	0.8	15	1.004	0
301 OFFICE	AH901	1	274	113	0.06	1	5	12	0.8	15	0.978	15
302 OFFICE	AH902	1	276	124	0.06	1	5	12	0.8	16	0.976	15
303 OFFICE	AH903	1	172	125	0.06	1	5	13	0.8	16	0.941	15
304 OFFICE	AH904	1	173	125	0.06	1	5	13	0.8	16	0.942	15
305 OFFICE	AH905	1	173	125	0.06	1	5	13	0.8	16	0.942	15
306 OFFICE	AH906	1	173	125	0.06	1	5	13	0.8	16	0.942	15
307 OFFICE	AH907	1	173	125	0.06	1	5	13	0.8	16	0.942	15
308 OFFICE	AH908	1	173	125	0.06	1	5	13	0.8	16	0.942	15
309 SERVER	AH909	1	74	85	0	0	0	0	0.8	0	1.032	0
310 OFFICE	AH910	1	290	174	0.06	1	5	15	0.8	19	0.966	15
340 OPEN OFFICE	AH911	1	603	860	0.06	12	5	112	0.8	140	0.801	110
336 OFFICE	AH912	1	180	127	0.06	1	5	13	0.8	16	0.944	15
338 OFFICE	AH913	1	178	123	0.06	1	5	12	0.8	15	0.945	15
339 OFFICE	AH914	1	178	123	0.06	1	5	12	0.8	15	0.945	15
341 OFFICE	AH915	1	178	123	0.06	1	5	12	0.8	15	0.945	15
342 OFFICE	AH916	1	178	123	0.06	1	5	12	0.8	15	0.945	15
303A CORRIDOR	AH917	1	25	142	0.06	0	0	9	0.8	11	0.606	0
334 VESTIBULE	AH917	1	189	89	0	0	0	0	0.8	0	1.032	0
336A CORRIDOR	AH917	1	94	543	0.06	0	0	33	0.8	41	0.599	30
337 STORAGE	AH917	1	15	86	0	0	0	0	0.8	0	1.032	0
343 OFFICE	AH918	1	178	123	0.06	1	5	12	0.8	15	0.945	15
344 OFFICE	AH919	1	216	178	0.06	1	5	16	0.8	20	0.941	15
345 OFFICE	AH920	1	197	125	0.06	1	5	13	0.8	16	0.953	15
346 OFFICE	AH921	1	197	126	0.06	1	5	13	0.8	16	0.952	15
306A CORRIDOR	AH922	1	114	656	0.06	0	0	39	0.8	49	0.600	40
311 VESTIBULE	AH922	1	180	89	0.06	0	0	5	0.8	7	0.995	0
312 OFFICE	AH1000	1	290	174	0.06	1	5	15	0.8	19	0.966	15
314 OFFICE	AH1001	1	173	125	0.06	1	5	13	0.8	16	0.942	15
316 OFFICE	AH1002	1	173	125	0.06	1	5	13	0.8	16	0.942	15
318 OFFICE	AH1003	1	173	125	0.06	1	5	13	0.8	16	0.942	15
319 OFFICE	AH1004	1	173	125	0.06	1	5	13	0.8	16	0.942	15
319A CORRIDOR	AH1005	1	90	521	0.06	0	0	31	0.8	39	0.598	35
313 CUSTODIAL	AH1005	1	17	102	0	0	0	0	0.8	0	1.032	0
317 ELECTRICAL	AH1005	1	19	110	0	0	0	0	0.8	0	1.032	0
320 OFFICE	AH1006	1	173	125	0.06	1	5	13	0.8	16	0.942	15
321 OFFICE	AH1007	1	262	176	0.06	1	5	16	0.8	19	0.958	15
322 OFFICE	AH1008	1	143	120	0.06	1	5	12	0.8	15	0.925	15
323 OFFICE	AH1009	1	143	116	0.06	1	5	12	0.8	15	0.928	15
326 OFFICE	AH1010	1	249	187	0.06	1	5	16	0.8	20	0.951	15
324A CORRIDOR	AH1011	1	12	70	0.06	0	0	4	0.8	5	0.595	0
324 VESTIBULE	AH1011	1	137	71	0.06	0	0	4	0.8	5	0.993	0
328A CORRIDOR	AH1011	1	80	462	0.06	0	0	28	0.8	35	0.599	30
329 MENS	AH1011	1	39	225	0	0	0	0	0.8	0	1.032	0
333 WOMENS	AH1011	1	39	225	0	0	0	0	0.8	0	1.032	0
327 OFFICE	AH1012	1	192	182	0.06	1	5	16	0.8	20	0.928	15
328 OFFICE	AH1013	1	178	123	0.06	1	5	12	0.8	15	0.945	15
330 OFFICE	AH1014	1	178	123	0.06	1	5	12	0.8	15	0.945	15
331 OFFICE	AH1015	1	178	123	0.06	1	5	12	0.8	15	0.945	15
332 OFFICE	AH1016	1	145	123	0.06	1	5	12	0.8	15	0.925	15
315 COPY/PRINT	AH1017	1	95	139	0.06	0.5	5	11	0.8	14	0.889	0
325 OPEN OFFICE	AH1018	1	308	465	0.06	6	5	58	0.8	72	0.797	60
400 OFFICE	AH1100	1	222	106	0.06	1	5	11	0.8	14	0.968	15
401 OFFICE	AH1101	1	223	115	0.06	1	5	12	0.8	15	0.965	15
402 OFFICE	AH1102	1	219	103	0.06	1	5	11	0.8	14	0.968	15
403 OFFICE	AH1103	1	173	125	0.06	1	5	13	0.8	16	0.942	15
404 OFFICE	AH1104	1	172	125	0.06	1	5	13	0.8	16	0.941	15
405 OFFICE	AH1105	1	172	125	0.06	1	5	13	0.8	16	0.941	15
406 OFFICE	AH1106	1	172	125	0.06	1	5	13	0.8	16	0.941	15
407 OFFICE	AH1107	1	172	125	0.06	1	5	13	0.8	16	0.941	15
408 OFFICE	AH1108	1	172	125	0.06	1	5	13	0.8	16	0.941	15
409 SERVER	AH1109	1	15	85	0	0	0	0	0.8	0	1.032	0
410 OFFICE	AH1110	1	245	168	0.06	1	5	15	0.8	19	0.955	15
411 BREAK AREA	AH1111	1	199	174	0.06	0	5	10	0.8	13	0.966	0
434 OFFICE	AH1112	1	177	123	0.06	1	5	12	0.8	15	0.945	15
436 OFFICE	AH1113	1	177	123	0.06	1	5	12	0.8	15	0.945	15
438 OFFICE	AH1114	1	177	123	0.06	1	5	12	0.8	15	0.945	15
439 OFFICE	AH1115	1	177	123	0.06	1	5	12	0.8	15	0.945	15
441 OFFICE	AH1116	1	177	123	0.06	1	5	12	0.8	15	0.945	15
442 OFFICE	AH1117	1	177	123	0.06	1	5	12	0.8	15	0.945	15
443 OFFICE	AH1118	1	177	122	0.06	1	5	12	0.8	15	0.945	15
444 OFFICE	AH1119	1	205	178	0.06	1	5	16	0.8	20	0.936	15
446 OFFICE	AH1120	1	93	123	0.06	1	5	12	0.8	15	0.866	15
447 OFFICE	AH1121	1	93	126	0.06	1	5	13	0.8	16	0.863	15
400A CORRIDOR	AH1122	1	889	304	0.06	0	0	18	0.8	23	1.006	0
406A CORRIDOR	AH1123	1	143	828	0.06	0	0	50	0.8	62	0.598	30
437 STORAGE	AH1124	1	15	86	0	0	0	0	0.8	0	1.032	0
438A CORRIDOR	AH1124	1	59	339	0.06	0	0	20	0.8	25	0.601	30
446A CORRIDOR	AH1124	1	16	94	0.06	0	0	6	0.8	7	0.591	0
445 OPEN OFFICE	AH1125	1	400	561	0.06	8	5	74	0.8	92	0.802	75
440 CONFERENCE	AH1126	1	159	299	0.06	6	5	48	0.8	60	0.655	50
412 OFFICE	AH1200	1	245	168	0.06	1	5	15	0.8	19	0.955	15
414 OFFICE	AH1201	1	172	124	0.06	1	5	12	0.8	16	0.942	15
416 OFFICE	AH1202	1	172	125	0.06	1	5	13	0.8	16	0.941	15
418 OFFICE	AH1203	1	172	125	0.06	1	5	13	0.8	16	0.941	15
419 OFFICE	AH1204	1	172	125	0.06	1	5	13	0.8	16	0.941	15
420 OFFICE	AH1205	1	172	125	0.06	1	5	13	0.8	16	0.941	15
421 OFFICE	AH1206	1	259	176	0.06	1	5	16	0.8	19	0.957	15
422 OFFICE	AH1207	1	146	139	0.06	1	5	13	0.8	17	0.918	15
423 OFFICE	AH1208	1	146	139	0.06	1	5	13	0.8	17	0.918	15
424 OFFICE	AH1209	1	241	174	0.06	1	5	15	0.8	19	0.952	15
426 OFFICE	AH1210	1	177	123	0.06	1	5	12	0.8	15	0.945	15
427 OFFICE	AH1211	1	177	123	0.06	1	5	12	1.8	7	0.993	15
428 OFFICE	AH1212	1	177	123	0.06	1	5	12	2.8	4	1.007	15
430 OFFICE	AH1213	1	177	123	0.06	1	5	12	3.8	3	1.014	15
431 OFFICE	AH1214	1	177	123	0.06	1	5	12	4.8	3	1.017	15
432 OFFICE	AH1215	1	177	123	0.06	1	5	12	5.8	2	1.020	15
415 COPY/PRINT	AH1216	1	92	122	0.06	0.5	5	10	6.8	1	1.016	0
425 OPEN OFFICE	AH1217	1	383	465	0.06	8	5	68	7.8	9	1.009	70
429 MENS	AH1218	1	39	225	0	0	0	0	8.8	0	1.032	0
433 WOMENS	AH1218	1	39	225	0	0	0	0	9.8	0	1.032	0
SOUTH ATTIC SPACE	AH1219	1	880	4382	0	0	0	0	10.8	0	1.032	0
413 CUSTODIAL	AH1220	1	20	118	0	0	0	0	11.8	0	1.032	0
417 ELECTRICAL	AH1220	1	19	110	0	0	0	0	12.8	0	1.032	0
418A CORRIDOR	AH1220	1	90	519	0.06	0	0	31	13.8	2	1.007	30
422A CORRIDOR	AH1221	1	20	115	0.06	0	0	7	14.8	0	1.009	0
428A CORRIDOR	AH1221	1	72	414	0.06	0	0	25	15.8	2	1.010	30
MECHANICAL MEZZANINE	AH1222	1	483	1257	0	0	0	0	16.8	0	1.032	0
435 LOBBY	AH1223	1	268	789	0.06	0	0	47	17.8	3	1.022	50
NORTH ATTIC SPACE	AH1224	1	693	3186	0	0	0	0	0.8	0	1.032	0
TOTALS			**20,745**					**1,654**			**0.59**	**1,705**

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O. GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Addition Ventilation Summary

Rev.	Date	Notes

M0.2

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VENTILATION SUMMARY DOAS1

SYSTEM/SPACE NAME	AIR HANDLER	SUPPLY AIR (CFM)	SPACE FLOOR AREA (FT²)	AREA OUTDOOR AIR RATE (CFM/FT²)	TIME AVERAGED OCCUPANCY (OCCUPANTS)	PEOPLE OUTDOOR AIR RATE (CFM/PERSON)	BREATHING ZONE OUTDOOR AIR (CFM)	AIR DISTRIBUTION EFFECTIVENESS	SPACE OUTDOOR AIR (CFM)	SPACE VENTILATION EFFICIENCY	OUTDOOR AIR DELIVERED (CFM)
		(Vpz)	**(Az)**	**(Ra)**	**(Pz)**	**(Rp)**	**(Vbz)**	**(Ez)**	**(Voz)**	**(Evz)**	
DOAS1 (HP3, HP4, HP8)											
100B - VESTIBULE	AH301	281	75	0.06	0	0	5	0.8	6	1.042	5
100 - LOBBY_W	AH301	1114	861	0.06	6	5	82	0.8	102	0.970	85
101 - CONFERENCE	AH302	388	469	0.06	4	5	48	0.8	60	1	60
102 - OFFICE	AH303	89	183	0.06	1	5	16	0.8	20	1	20
103 - OFFICE	AH304	224	194	0.06	1	5	17	0.8	21	1	20
104 - OFFICE	AH305	350	221	0.06	1	5	18	0.8	23	1	20
105 - OFFICE	AH306	237	173	0.06	1	5	15	0.8	19	1	20
108 - OFFICE	AH307	235	161	0.06	1	5	15	0.8	18	1	20
107 - COPY MAIL CENTER	AH308	161	137	0.06	0	0	8	0.8	10	1	10
107A - OFFICE	AH309	63	135	0.06	1	5	13	0.8	16	1	20
106 - CONFERENCE	AH310	183	286	0.06	6	5	47	0.8	59	1	60
137 - ELECTRIC	AH311	270	46	0	0	0	0	0.8	0	1	0
138 OFFICE	AH312	120	174	0.06	1	5	15	0.8	19	1	20
136 - OFFICE	AH313	194	175	0.06	1	5	16	0.8	19	1	20
134 - OFFICE	AH314	177	135	0.06	1	5	13	0.8	16	1	20
132 - OFFICE	AH315	198	169	0.06	1	5	15	0.8	19	1	20
101A HALL	AH316	63	165	0.06	0	0	10	0.8	12	0.931	15
102A - CORR	AH316	80	258	0.06	0	0	15	0.8	19	0.886	25
108A - CORR.	AH316	80	235	0.06	0	0	14	0.8	18	0.907	20
109 - MEN	AH316	75	207	0	0	0	0	0.8	0	1.128	0
110 - WOMEN	AH316	75	217	0	0	0	0	0.8	0	1.128	0
133 - JANITOR	AH316	12	34	0	0	0	0	0.8	0	1.128	0
133A - CORR.	AH316	71	229	0.06	0	0	14	0.8	17	0.886	20
135 - STORAGE	AH316	12	65	0.06	0	5	4	0.8	5	0.721	5
114A - CORR.	AH316	36	177	0.06	0	0	11	0.8	13	0.759	20
112A - CORR.	AH316	36	137	0.06	0	0	8	0.8	10	0.842	15
111 - KITCHENETTE	AH316	112	120	0.06	0	5	7	0.8	9	1.047	10
111A - OFFICE	AH317	235	161	0.06	1	5	15	0.8	18	1	20
115 - IT	AH401	169	103	0.06	1	5	11	0.8	14	1	0
118 - OFFICE	AH402	216	150	0.06	1	5	14	0.8	18	1	20
120 - OFFICE	AH403	210	149	0.06	1	5	14	0.8	17	1	20
122 - OFFICE	AH404	210	147	0.06	1	5	14	0.8	17	1	20
123 - OFFICE	AH405	265	218	0.06	1	5	18	0.8	23	1	25
113 - DATA	AH406	455	66	0	0	0	0	0.8	0	1	0
125 - OFFICE	AH407	127	140	0.06	1	5	13	0.8	17	1	20
126 - OFFICE	AH408	127	141	0.06	1	5	13	0.8	17	1	20
127 - OFFICE	AH409	246	218	0.06	1	5	18	0.8	23	1	25
128 - OFFICE	AH410	178	141	0.06	1	5	13	0.8	17	1	20
129 - OFFICE	AH411	178	141	0.06	1	5	13	0.8	17	1	20
130 - OFFICE	AH412	183	147	0.06	1	5	14	0.8	17	1	20
119 - PLAN RM & PRINT.	AH413	186	226	0.06	0	0	14	0.8	17	1.077	20
125A - CORR.	AH413	89	261	0.06	0	0	16	0.8	20	0.973	20
116 - HALL	AH413	24	111	0.06	0	0	7	0.8	8	0.847	10
131 - LAUNDRY	AH413	91	73	0.12	0	0	9	0.8	11	1.073	15
128A - CORR.	AH413	20	260	0.06	0	0	16	0.8	20	0.846	20
117 - RECEPTION	AH413	132	245	0.06	2	5	25	0.8	31	0.960	35
125 CORR N	AH413	12	140	0.06	0	0	8	0.8	11	0.870	5
121 - CONF. & DOCS.	AH414	208	311	0.06	4	5	39	0.8	48	1	50
116A - VESTIBULE	AH415	128	96	0.06	0	0	6	0.8	7	1	10
116 - WAITING	AH415	171	375	0.06	3	5	38	0.8	47	1	50
201A - CAMERA RM	AH801	323	106	0.06	1	5	11	0.8	14	1	15
202 - WAITING	AH802	402	325	0.06	3	5	35	0.8	43	1	45
219 - COUNCIL CONF.	AH803	412	391	0.06	6	5	53	0.8	67	1	70
203 - OFFICE	AH804	245	173	0.06	1	5	15	0.8	19	1	15
204 - OFFICE	AH805	239	162	0.06	1	5	15	0.8	18	1	15
205 - OFFICE	AH806	235	155	0.06	1	5	14	0.8	18	1	15
207 - OFFICE	AH807	244	172	0.06	1	5	15	0.8	19	1	15
208 - SERVER	AH808	513	122	0	0	0	0	0.8	0	1	0
202 CORRIDOR	AH809	157	241	0.06	0	0	14	0.8	18	0.966	20
204A - CORR.	AH809	86	251	0.06	0	0	15	0.8	19	0.862	20
206 - JAN.	AH809	37	58	0	0	0	0	0.8	0	1.081	0
211A - CORR.	AH809	67	197	0.06	0	0	12	0.8	15	0.861	15
216 - COPY/VAULT	AH809	212	152	0.06	0	5	9	0.8	11	1.027	10
216A - CORR.	AH809	145	225	0.06	0	0	14	0.8	17	0.965	20
220A - CORR.	AH809	120	201	0.06	0	0	12	0.8	15	0.955	15
221 - MEN	AH809	100	132	0	1	0	0	0.8	0	1.081	0
222 - WOMEN	AH809	101	136	0	1	0	0	0.8	0	1.081	0
224A CORR.	AH809	80	135	0.06	0	0	8	0.8	10	0.955	10
212 - CORR	AH809	92	216	0.06	0	0	13	0.8	16	0.905	20
209 - ELECTRIC	AH810	308	58	0	0	0	0	0.8	0	1	0
210 - OFFICE	AH811	264	186	0.06	1	5	16	0.8	20	1	20
211 - CONFERENCE	AH812	192	178	0.06	3	5	26	0.8	32	1	45
224 - MECH ACCESS	AH813	61	130	0	0	0	0	0.8	0	1	0
213 - OFFICE	AH814	304	211	0.06	1	5	18	0.8	22	1	20
214 - OFFICE	AH815	238	127	0.06	1	5	13	0.8	16	1	20
217 - OFFICE	AH816	270	175	0.06	1	5	16	0.8	19	1	20
218 - OFFICE	AH817	239	131	0.06	1	5	13	0.8	16	1	20
220 - OFFICE	AH818	240	132	0.06	1	5	13	0.8	16	1	20
114 - STAIR	AH819	133	275	0	0	0	0	0.8	0	1	0
223 - STAIR	AH819	267	275	0	0	0	0	0.8	0	1	0
Totals		**15,122**					**1,142**			**0.72**	**1,500**

VENTILATION SUMMARY DOAS2

SYSTEM/SPACE NAME	AIR HANDLER	SUPPLY AIR (CFM)	SPACE FLOOR AREA (FT²)	AREA OUTDOOR AIR RATE (CFM/FT²)	TIME AVERAGED OCCUPANCY (OCCUPANTS)	PEOPLE OUTDOOR AIR RATE (CFM/PERSON)	BREATHING ZONE OUTDOOR AIR (CFM)	AIR DISTRIBUTION EFFECTIVENESS	SPACE OUTDOOR AIR (CFM)	SPACE VENTILATION EFFICIENCY	OUTDOOR AIR DELIVERED (CFM)
		(Vpz)	**(Az)**	**(Ra)**	**(Pz)**	**(Rp)**	**(Vbz)**	**(Ez)**	**(Voz)**	**(Evz)**	
DOAS2 (HP7)											
201B - COUNCIL CHAMBERS	AH701	6050	3068	0.06	201	5	1189.08	0.8	1486.35	1	1500
Totals		**6,050**					**1,189**			**1**	**1,500**

VENTILATION SUMMARY DOAS3

SYSTEM/SPACE NAME	AIR HANDLER	SUPPLY AIR (CFM)	SPACE FLOOR AREA (FT²)	AREA OUTDOOR AIR RATE (CFM/FT²)	TIME AVERAGED OCCUPANCY (OCCUPANTS)	PEOPLE OUTDOOR AIR RATE (CFM/PERSON)	BREATHING ZONE OUTDOOR AIR (CFM)	AIR DISTRIBUTION EFFECTIVENESS	SPACE OUTDOOR AIR (CFM)	SPACE VENTILATION EFFICIENCY	OUTDOOR AIR DELIVERED (CFM)
		(Vpz)	**(Az)**	**(Ra)**	**(Pz)**	**(Rp)**	**(Vbz)**	**(Ez)**	**(Voz)**	**(Evz)**	
DOAS3 (HP1, HP2)											
162B - SPRINKLER	AH101	125	120	0	0	0	0	0.8	0	1	0
162A - ELECTRIC	AH102	369	179	0	0	0	0	0.8	0	1	0
162 - SALLYPORT	AH103	452	567	0	0	0	0	0.8	0	1	0
163 - BOOKING	AH104	300	396	0.06	3	5	39	0.8	48	0.946	65
163A - TOILET	AH104	59	74	0	0	0	0	0.8	0	1.108	0
163B - INTERVIEW	AH105	111	148	0.06	2	5	19	0.8	24	1	40
164 - OBSERVATION	AH106	28	110	0.06	1	5	12	0.8	15	1	30
146B - CORR.	AH107	48	157	0.06	0	0	9	0.8	12	0.918	30
151A - CORR.	AH107	107	340	0.06	0	0	20	0.8	26	0.925	40
159 - JANITOR	AH107	18	52	0	0	0	0	0.8	0	1.163	0
160 - WOMEN	AH107	33	64	0	1	0	0	0.8	0	1.163	0
161A - CORR.	AH107	122	394	0.06	0	0	24	0.8	30	0.921	50
161 - MEN	AH108	33	65	0	1	0	0	0.8	0	1.146	0
165 - ARMORY	AH108	59	116	0.06	0	5	7	0.8	9	0.998	15
166A - CORR.	AH108	160	497	0.06	0	0	30	0.8	37	0.913	55
167 - PATROL BRIEF	AH109	1106	590	0.06	7	5	70	0.8	88	1	120
166 EVIDENCE PROC.	AH110	63	120	0.06	1	5	12	0.8	15	1	20
156 ARMORY	AH111	53	204	0.12	0	0	24	0.8	31	1	50
168 EVIDENCE PROC.	AH112	76	229	0.06	1	5	19	0.8	23	1	35
169 - WOMENS LOCKER	AH113	336	297	0	2	0	0	0.8	0	1	25
171 - MENS LOCKER	AH114	571	448	0	3	0	0	0.8	0	1	35
170 EVIDENCE PROCESSI	AH115	76	222	0.06	1	5	18	0.8	23	1	40
168A EVIDENCE	AH116	60	372	0.12	0	5	45	0.8	56	1	80
168B HIGH VALUE EVIDEN	AH117	16	106	0.12	0	5	13	0.8	16	1	25
155 - LIEUTENANT	AH118	142	171	0.06	1	5	15	0.8	19	1	25
150 - CRIME PREV.	AH119	134	138	0.06	1	5	13	0.8	17	1	25
151 - BIKE OFF.	AH120	137	154	0.06	1	5	14	0.8	18	1	25
153 - EVID/UNIF. OFFICE	AH121	134	145	0.06	1	5	14	0.8	17	1	25
154 - STREET CRIME	AH122	138	159	0.06	1	5	15	0.8	18	1	25
100 - LOBBY_S	AH201	1114	803	0.06	6	5	78	0.8	98	0.971	130
100A - VESTIBULE	AH201	300	75	0.06	0	0	5	0.8	6	1.040	15
100 - LOBBY_NE	AH202	1095	997	0.06	12	5	120	0.8	150	0.957	195
100C - VESTIBULE	AH202	266	138	0.06	0	0	8	0.8	10	1.055	15
139 - ELEV. MACH.	AH203	449	98	0.06	0	0	6	0.8	7	1	15
142 - BREAK RM	AH204	1868	970	0.06	10	5	108	0.8	135	1	185
143 - WEIGHT RM	AH205	832	613	0.06	10	20	237	0.8	296	1	390
140 - MEN	AH206	18	65	0	0	0	0	0.8	0	1.079	0
141 - WOMEN	AH206	18	64	0	0	0	0	0.8	0	1.079	0
141A - CORR.	AH206	53	190	0.06	0	0	11	0.8	14	0.810	25
144/144A - MEN LKR/BTH	AH206	108	219	0	3	0	0	0.8	0	1.079	0
145/145A - WMEN LKR/BTH	AH206	92	220	0	2	0	0	0.8	0	1.079	0
147 - INTERVW & REPORT	AH207	80	155	0.06	2	5	19	0.8	24	0.778	35
147A - TOILET	AH207	18	45	0	0	0	0	0.8	0	1.079	0
149 - STORAGE	AH208	18	43	0.12	0	0	5	0.8	6	0.721	15
172 - DATA	AH209	455	66	0	0	0	0	0.8	0	1	0
148 - RECPTION	AH210	144	164	0.06	2	5	20	0.8	25	1	30
148 - RECORDS	AH211	122	150	0.06	0	5	9	0.8	11	1	25
146 - WAITING	AH212	173	310	0.06	2	5	29	0.8	36	1	45
Totals		**12,289**					**1,087**			**0.72**	**2,000**

VENTILATION SUMMARY DOAS4

SYSTEM/SPACE NAME	AIR HANDLER	SUPPLY AIR (CFM)	SPACE FLOOR AREA (FT²)	AREA OUTDOOR AIR RATE (CFM/FT²)	TIME AVERAGED OCCUPANCY (OCCUPANTS)	PEOPLE OUTDOOR AIR RATE (CFM/PERSON)	BREATHING ZONE OUTDOOR AIR (CFM)	AIR DISTRIBUTION EFFECTIVENESS	SPACE OUTDOOR AIR (CFM)	SPACE VENTILATION EFFICIENCY	OUTDOOR AIR DELIVERED (CFM)
		(Vpz)	**(Az)**	**(Ra)**	**(Pz)**	**(Rp)**	**(Vbz)**	**(Ez)**	**(Voz)**	**(Evz)**	
DOAS4 (HP5, HP6)											
241A - CORR.	AH501	342	378	0.06	0	0	23	0.8	28	1.010	25
245 - STORAGE	AH501	47	48	0	0	0	0	0.8	0	1.093	0
247A - CORR.	AH501	70	105	0.06	0	0	6	0.8	8	0.981	10
250A - WAITING	AH501	237	347	0.06	3	5	36	0.8	45	0.904	40
232 - MEN	AH502	53	66	0	1	0	0	0.8	0	1.069	0
233 - WOMEN	AH502	54	67	0	1	0	0	0.8	0	1.069	0
237 - COPY & STOR.	AH502	214	158	0.06	0	5	9	0.8	12	1.013	10
237A - CORR.	AH502	192	314	0.06	0	0	19	0.8	24	0.946	20
253A - CORR.	AH502	259	411	0.06	0	0	25	0.8	31	0.950	30
244 - OFFICE	AH503	262	181	0.06	1	5	16	0.8	20	1	20
243 - OFFICE	AH504	136	172	0.06	1	5	15	0.8	19	1	20
246 - OFFICE	AH505	368	182	0.06	1	5	16	0.8	20	1	20
247 - OFFICE	AH506	272	173	0.06	1	5	15	0.8	19	1	20
248 - ELECTRIC	AH507	315	61	0	0	0	0	0.8	0	1	0
249 - OFFICE	AH508	297	220	0.06	1	5	18	0.8	23	1	25
253A - OFFICE	AH509	282	198	0.06	1	5	17	0.8	21	1	25
250 - OFFICE	AH510	107	133	0.06	1	5	13	0.8	16	1	15
251 - OFFICE	AH511	104	124	0.06	1	5	12	0.8	16	1	15
253 - OPEN OFFICE	AH512	865	575	0.06	8	5	75	0.8	93	1	95
254 - OFFICE	AH513	261	153	0.06	1	5	14	0.8	18	1	20
255 - OFFICE	AH514	281	210	0.06	1	5	18	0.8	22	1	20
256 - STAIR	AH515	175	278	0	0	0	0	0.8	0	1	0
174 - STAIR	AH515	128	278	0	0	0	0	0.8	0	1	0
242 - OFFICE	AH516	151	190	0.06	1	5	16	0.8	21	1	20
241 - OFFICE	AH517	116	159	0.06	1	5	15	0.8	18	1	20
252 - SERVER	AH518	481	78	0	0	0	0	0.8	0	1	0
235 - MECH ACCESS	AH519	90	164	0	0	0	0	0.8	0	1	0
240 - STAIR	AH520	234	243	0	0	0	0	0.8	0	1	0
158 - STAIR	AH520	114	232	0	0	0	0	0.8	0	1	0
239 - CONFERENCE	AH521	472	282	0.06	4	5	37	0.8	46	1	45
236 - OFFICE	AH522	183	162	0.06	1	5	15	0.8	18	1	20
234 - OFFICE	AH523	184	163	0.06	1	5	15	0.8	18	1	20
231 - OFFICE	AH524	177	147	0.06	1	5	14	0.8	17	1	20
225 EAST TRNG CNCLOVRFLW	AH525	1208	906	0.06	15	5	129	0.8	162	1	160
200B - CONFERENCE	AH601	906	193	0.06	8	5	52	0.8	64	1	65
200A - LOBBY	AH602	2701	1476	0.06	12	5	149	0.8	186	1	185
200B - LOBBY	AH603	1075	852	0.06	13	3	84	0.8	105	0.991	110
200C - LOBBY	AH603	525	449	0.06	12	3	57	0.8	71	0.953	60
201 - VESTIBULE	AH603	111	177	0.06	0	0	11	0.8	13	0.969	10
225 WEST TRNG CNCLOVRFLW	AH604	1502	936	0.06	15	5	131	0.8	164	0.980	140
225A - STORAGE	AH604	91	168	0.06	0	5	10	0.8	13	0.950	15
226 - SERVING KITCHEN	AH605	499	221	0.06	2	5	23	0.8	29	1	30
227 - WOMEN	AH606	119	207	0	3	0	0	0.8	0	1.053	0
227A - CORR.	AH606	162	276	0.06	0	0	17	0.8	21	0.925	20
227B - CORR.	AH606	134	192	0.06	0	0	12	0.8	14	0.945	20
228 - MEN	AH606	119	207	0	3	0	0	0.8	0	1.053	0
200A CONF.	AH607	346	254	0.06	8	5	55	0.8	69	1	70
225 EAST SUPPLEMENTAL	AH608	567	906	0	0	0	0	0.8	0	1	0
225 WEST SUPPLEMENTAL	AH609	567	936	0	0	0	0	0.8	0	1	0
230 - OFFICE	AH610	185	166	0.06	1	5	15	0.8	19	1	20
230A - OFFICE	AH611	132	166	0.06	1	5	15	0.8	19	1	20
Totals		**18,472**					**1,217**			**0.90**	**1,500**

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O. GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Ventilation Summaries

Rev.	Date	Notes

M0.2R

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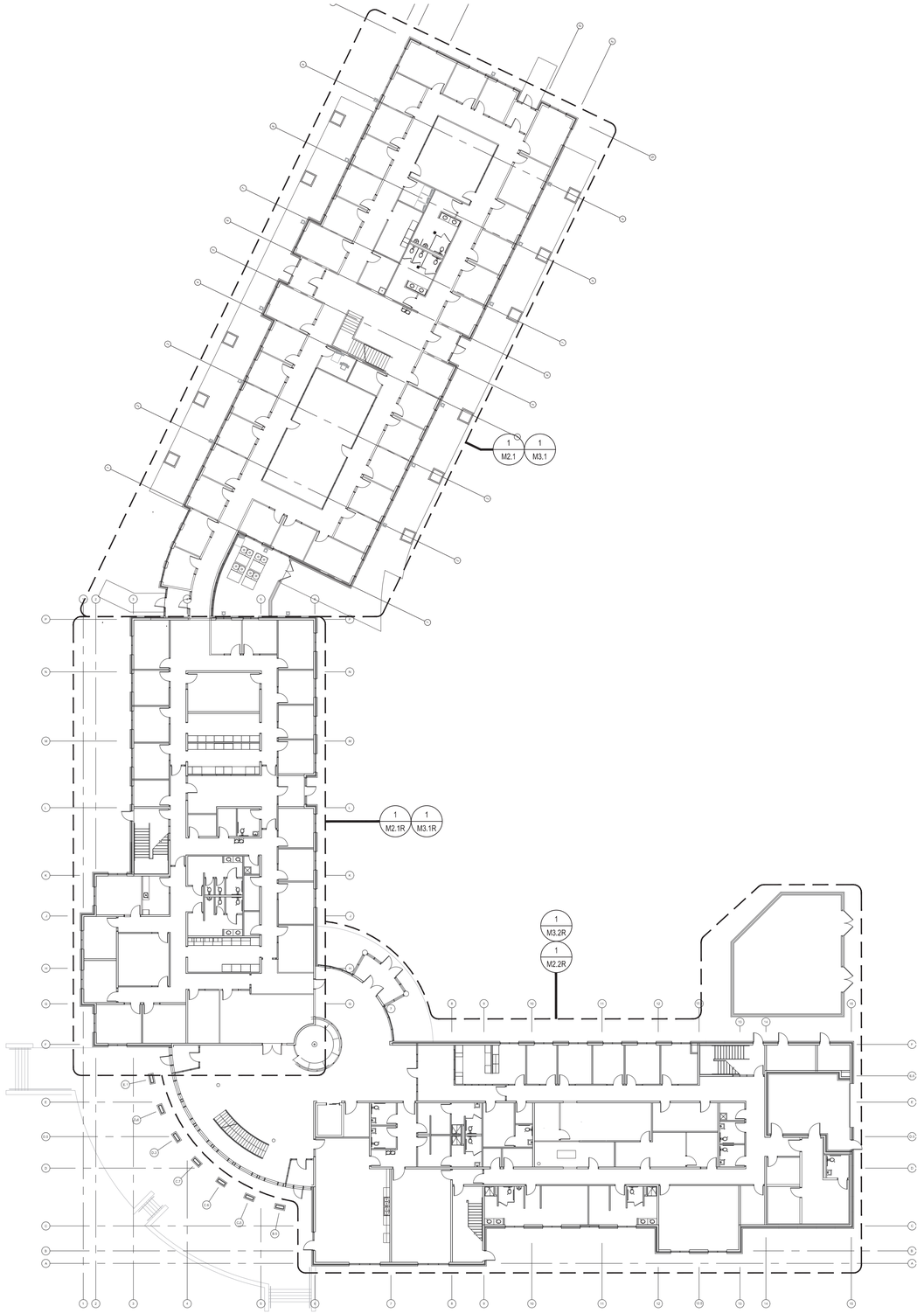

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

1 **FIRST FLOOR KEY PLAN**
1" = 20'-0"
0 20 40

PLAN NORTH

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02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

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Mechanical HVAC First Floor Key Plan New Work

Rev.	Date	Notes

M1.1

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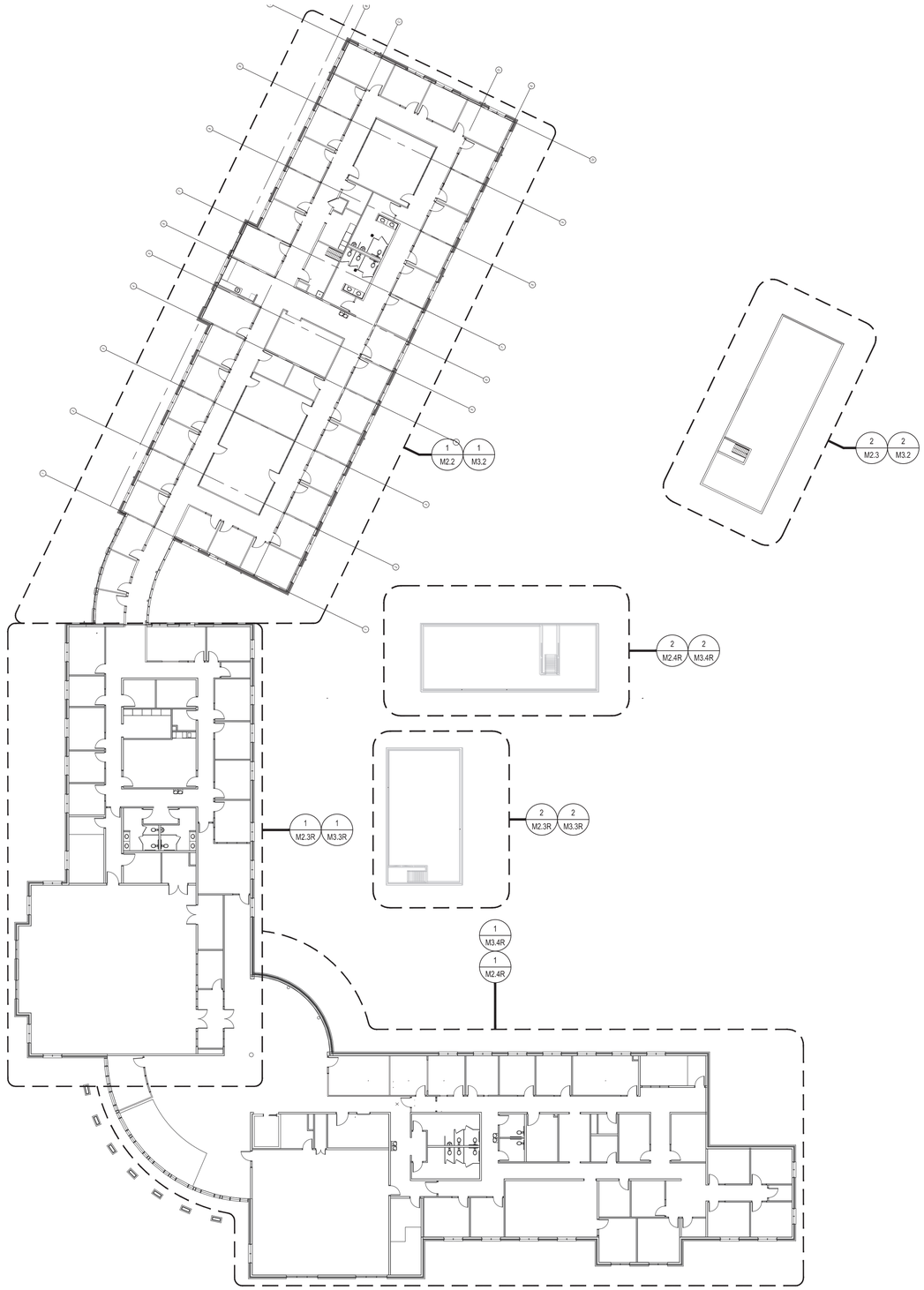

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

1 **SECOND FLOOR PLAN**
1" = 20'-0"
0 20 40

PLAN NORTH

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02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
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Construction Drawings

Issue Date: February 23, 2024

Mechanical HVAC Second Floor Key Plan New Work

Rev.	Date	Notes

M1.2

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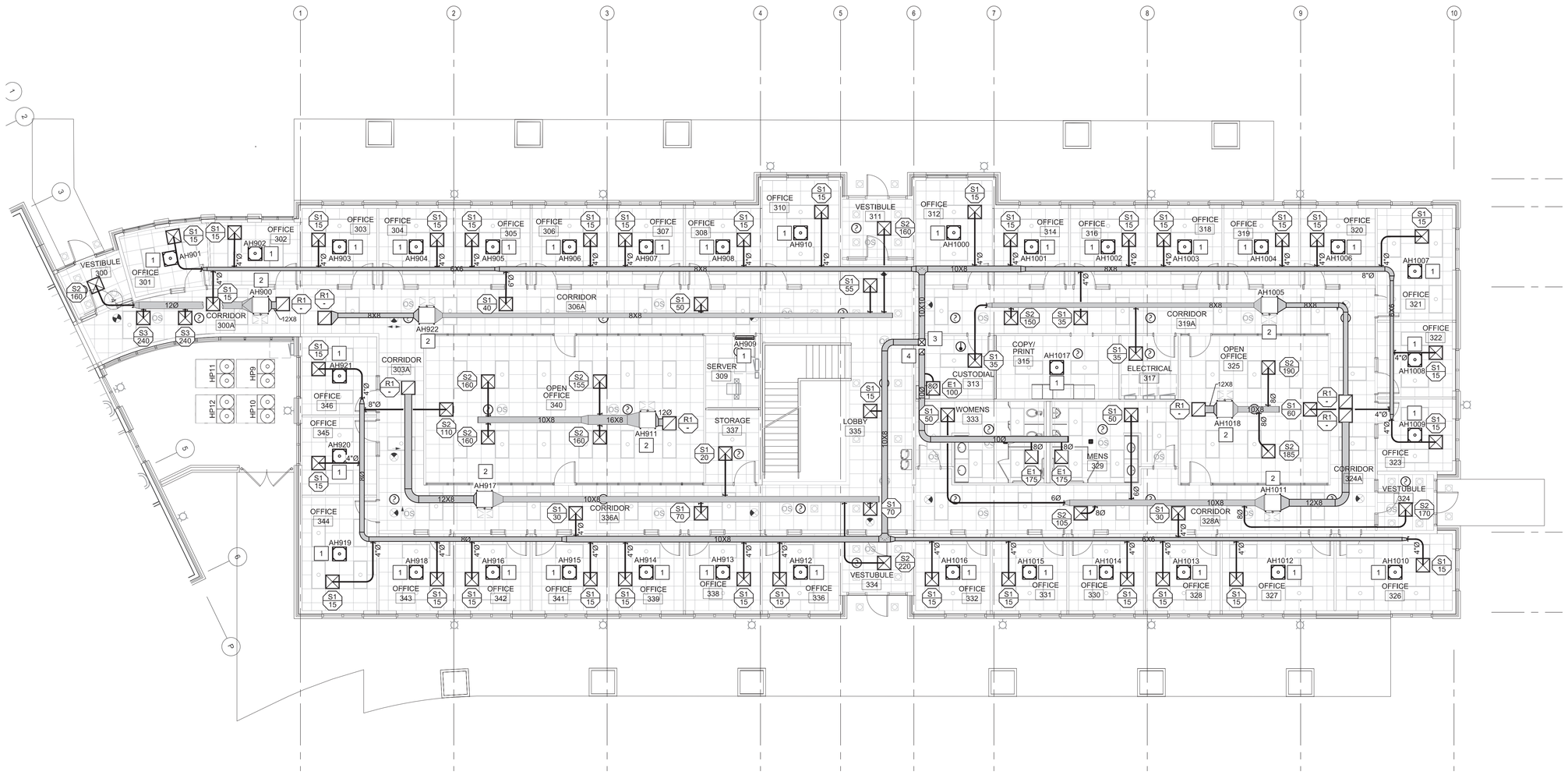
KEYED NOTES - NEW WORK

1. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES.
2. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES.
3. VENTILATION AIR DUCT (12" X 12") ROUTED UP THROUGH CEILING EN ROUTE TO MECHANICAL MEZZANINE ABOVE.
4. EXHAUST AIR DUCT (10" X 10") ROUTED UP THROUGH CEILING EN ROUTE TO MECHANICAL MEZZANINE ABOVE.



1 **FIRST FLOOR PLAN - NEW WORK**
1/8" = 1'-0"

PLAN NORTH

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
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Construction Drawings

Issue Date: February 23, 2024

Mechanical HVAC Addition First Floor Enlarged Plan

Rev.	Date	Notes

M2.1

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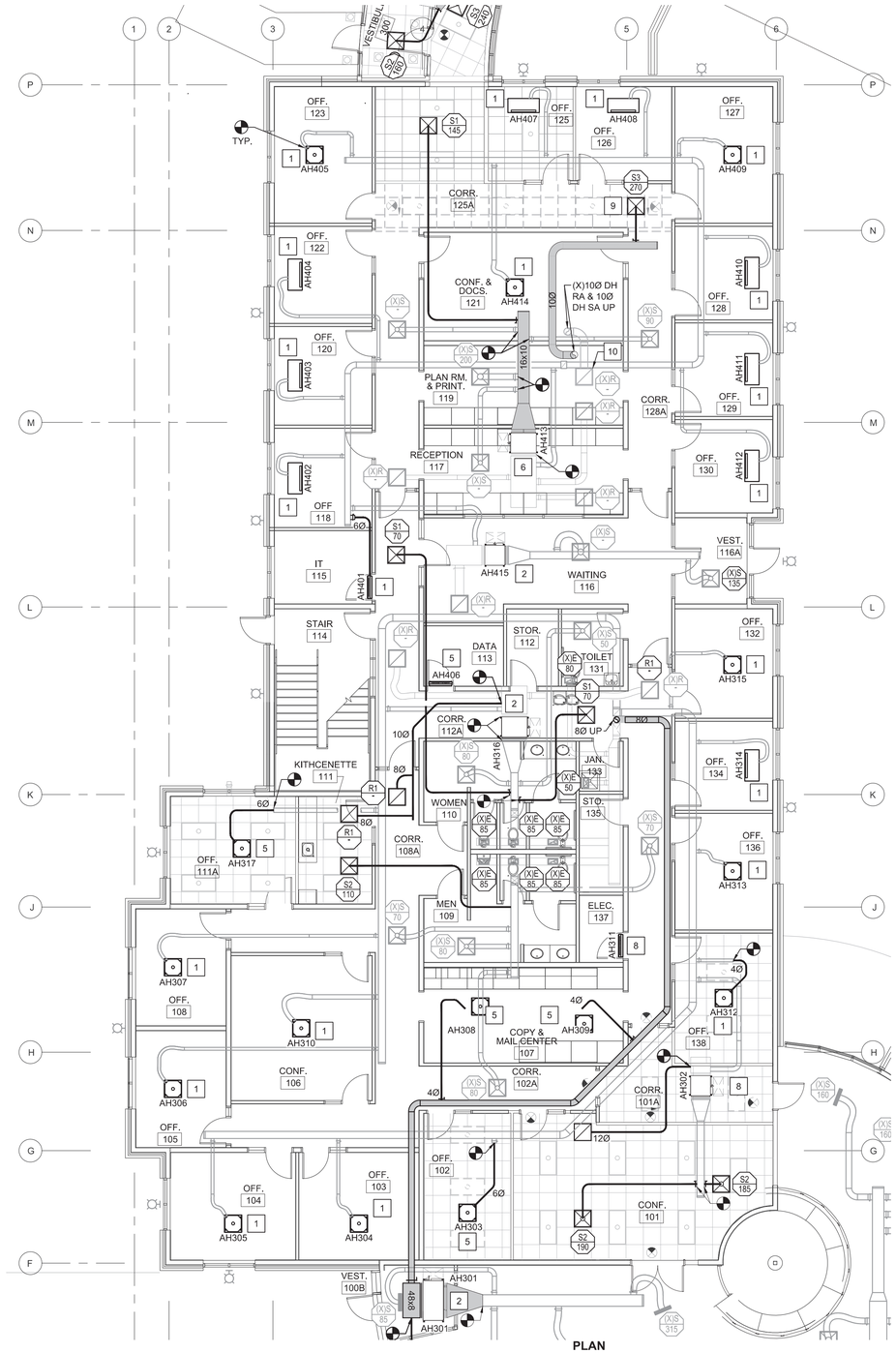

1 **ENLARGED FLOOR PLAN**

1/8" = 1'-0"

0 4' 8' 16'

PLAN NORTH

KEYED NOTES - NEW WORK

1. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES IN SAME LOCATION AS DEMOLISHED (X)DAHU. RECONNECT TO EXISTING FA DUCTWORK (IF APPLICABLE) AS INDICATED ON PLANS. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
2. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES IN SAME LOCATION AS DEMOLISHED (X)DAHU. RECONNECT TO EXISTING RA, SA, AND FA DUCTWORK AS INDICATED ON PLANS. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
3. NOT USED
4. INSTALL NEW POWER VENTILATOR. ROUTE EXHAUST DUCTWORK TO NEW SIDEWALL LOUVER.
5. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES, INSTALL NEW FA DUCTWORK AS INDICATED ON PLANS TO CONNECT TO EXISTING FA DUCTWORK. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
6. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. INSTALL NEW RA, SA, AND FA DUCTWORK AS INDICATED ON PLANS TO CONNECT TO EXISTING DUCTWORK. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
7. NOT USED
8. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
9. INSTALL NEW SA DIFFUSER FOR EXISTING DEHUMIDIFIER. ROUTE NEW DUCTWORK AS INDICATED ON PLANS
10. EXISTING RA GRILLE FOR EXISTING DEHUMIDIFIER.

NOTE: ALL NOTES MAY NOT BE USED ON THIS SHEET.

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER JOHN O. GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
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Construction Drawings

Issue Date: February 23, 2024

Mechanical HVAC First Floor Enlarged Plans

Rev.	Date	Notes

M2.1R

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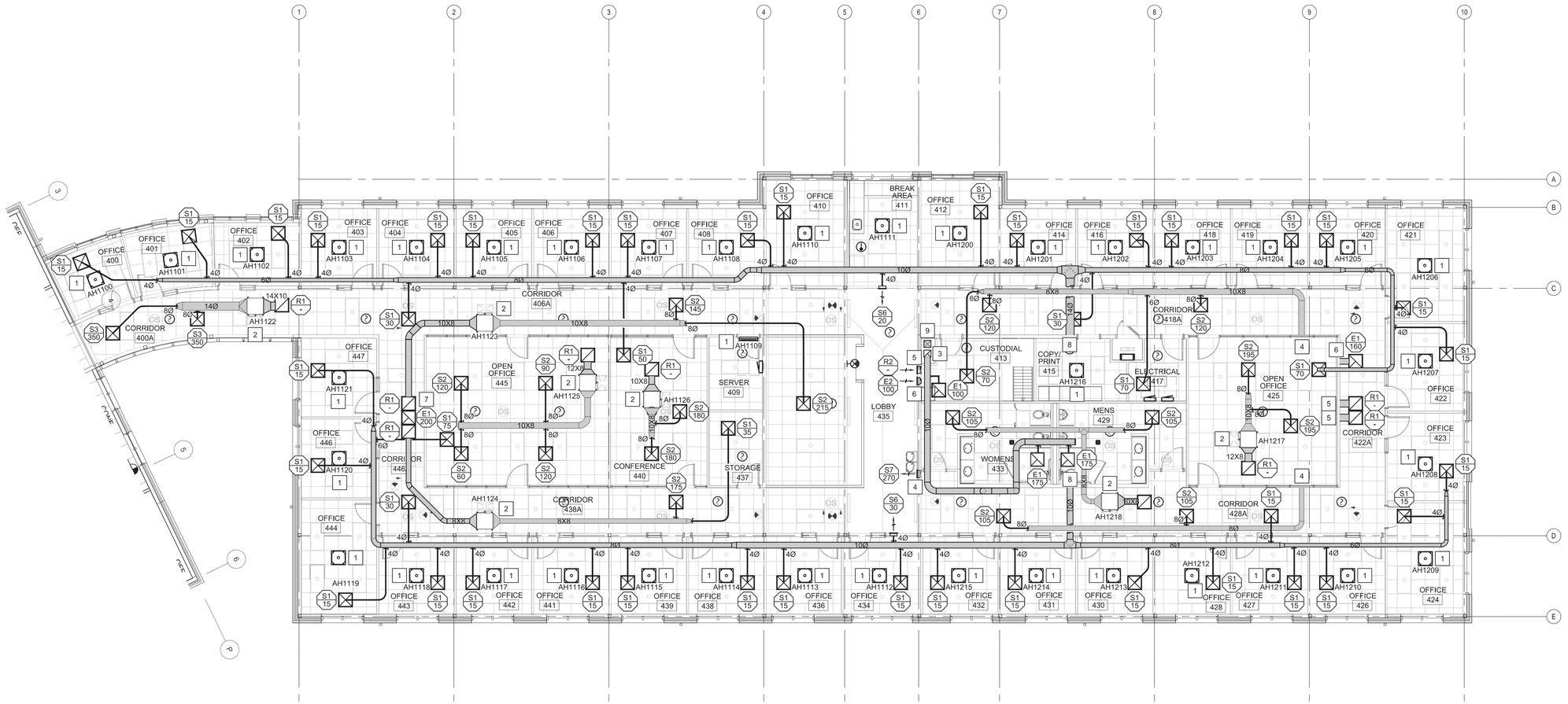
KEYED NOTES - NEW WORK

1. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES.
2. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES.
3. EXHAUST AIR DUCTWORK FROM SECOND FLOOR RESTROOMS MANIFOLDS INTO 12" X 12" EXHAUST AIR RISER OVERHEAD. RISER TRANSITIONS TO 10" X 10" BELOW MANIFOLD AND CONTINUES THROUGH FLOOR TO FIRST FLOOR.
4. SUPPLY AIR CONTINUED INTO MECHANICAL MEZZANINE, SEE 2/M2.3 FOR CONTINUATION.
5. RETURN AIR CONTINUED INTO MECHANICAL MEZZANINE, SEE 2/M2.3 FOR CONTINUATION.
6. EXHAUST AIR CONTINUED INTO MECHANICAL MEZZANINE, SEE 2/M2.3 FOR CONTINUATION.
7. EXHAUST AIR DUCT CONTINUES UP INTO ATTIC SPACE, SEE 1/M2.3 FOR CONTINUATION.
8. VENTILATION AIR FROM MEZZANINE, SEE 2/M2.3 FOR CONTINUATION.
9. VENTILATION AIR DUCTWORK RISER (12" X 12") CONTINUES THROUGH 413 CUSTODIAL.



1 **SECOND FLOOR PLAN - NEW WORK**
1/8" = 1'-0"

PLAN NORTH

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043801 TROY O. GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical HVAC Addition Second Floor Enlarged Plan

Rev.	Date	Notes

M2.2

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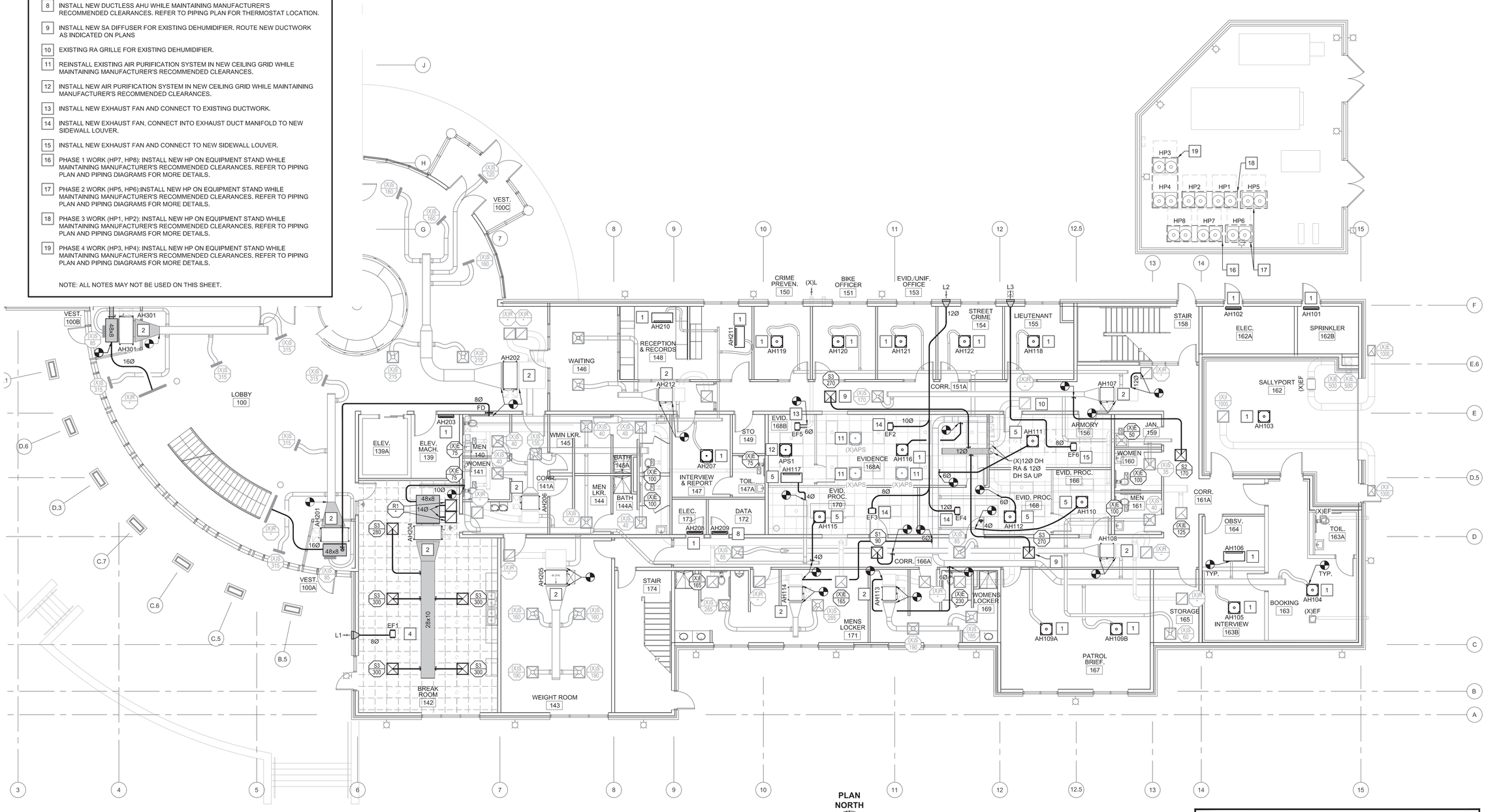
KEYED NOTES - NEW WORK

1. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES IN SAME LOCATION AS DEMOLISHED (X)DAHU. RECONNECT TO EXISTING FA DUCTWORK (IF APPLICABLE) AS INDICATED ON PLANS. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
2. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES IN SAME LOCATION AS DEMOLISHED (X)DAHU. RECONNECT TO EXISTING RA, SA, AND FA DUCTWORK AS INDICATED ON PLANS. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
3. NOT USED
4. NOT USED.
5. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. INSTALL NEW FA DUCTWORK AS INDICATED ON PLANS TO CONNECT TO EXISTING FA DUCTWORK. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
6. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. INSTALL NEW RA, SA, AND FA DUCTWORK AS INDICATED ON PLANS TO CONNECT TO EXISTING DUCTWORK. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
7. NOT USED.
8. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
9. INSTALL NEW SA DIFFUSER FOR EXISTING DEHUMIDIFIER. ROUTE NEW DUCTWORK AS INDICATED ON PLANS
10. EXISTING RA GRILLE FOR EXISTING DEHUMIDIFIER.
11. REINSTALL EXISTING AIR PURIFICATION SYSTEM IN NEW CEILING GRID WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES.
12. INSTALL NEW AIR PURIFICATION SYSTEM IN NEW CEILING GRID WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES.
13. INSTALL NEW EXHAUST FAN AND CONNECT TO EXISTING DUCTWORK.
14. INSTALL NEW EXHAUST FAN, CONNECT INTO EXHAUST DUCT MANIFOLD TO NEW SIDEWALL LOUVER.
15. INSTALL NEW EXHAUST FAN AND CONNECT TO NEW SIDEWALL LOUVER.
16. PHASE 1 WORK (HP7, HP8): INSTALL NEW HP ON EQUIPMENT STAND WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING PLAN AND PIPING DIAGRAMS FOR MORE DETAILS.
17. PHASE 2 WORK (HP5, HP6):INSTALL NEW HP ON EQUIPMENT STAND WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING PLAN AND PIPING DIAGRAMS FOR MORE DETAILS.
18. PHASE 3 WORK (HP1, HP2): INSTALL NEW HP ON EQUIPMENT STAND WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING PLAN AND PIPING DIAGRAMS FOR MORE DETAILS.
19. PHASE 4 WORK (HP3, HP4): INSTALL NEW HP ON EQUIPMENT STAND WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING PLAN AND PIPING DIAGRAMS FOR MORE DETAILS.

NOTE: ALL NOTES MAY NOT BE USED ON THIS SHEET.



1 **ENLARGED FLOOR PLAN**
1/8" = 1'-0"
0 4' 8' 16'

PLAN NORTH

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O GRADY
02/21/2024

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical HVAC First Floor Enlarged Plans

Rev.	Date	Notes

M2.2R

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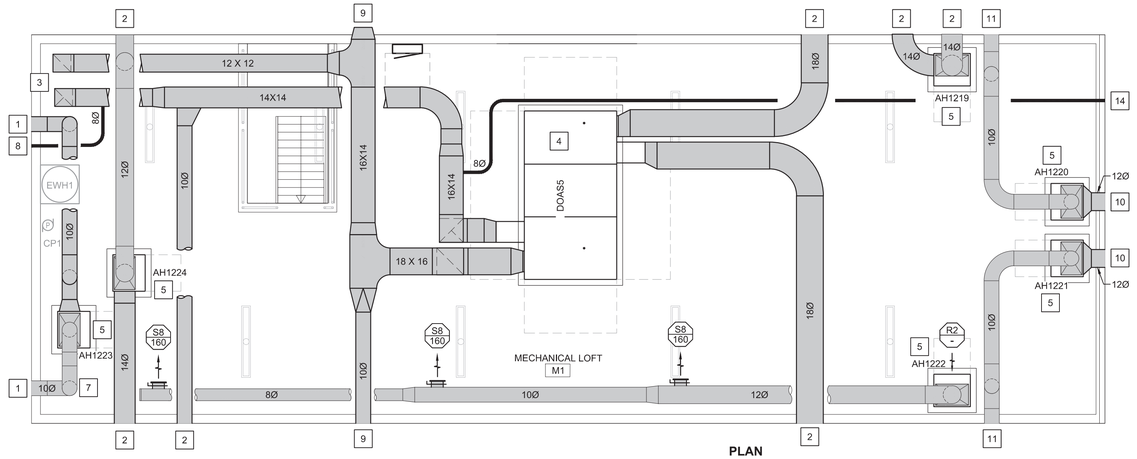
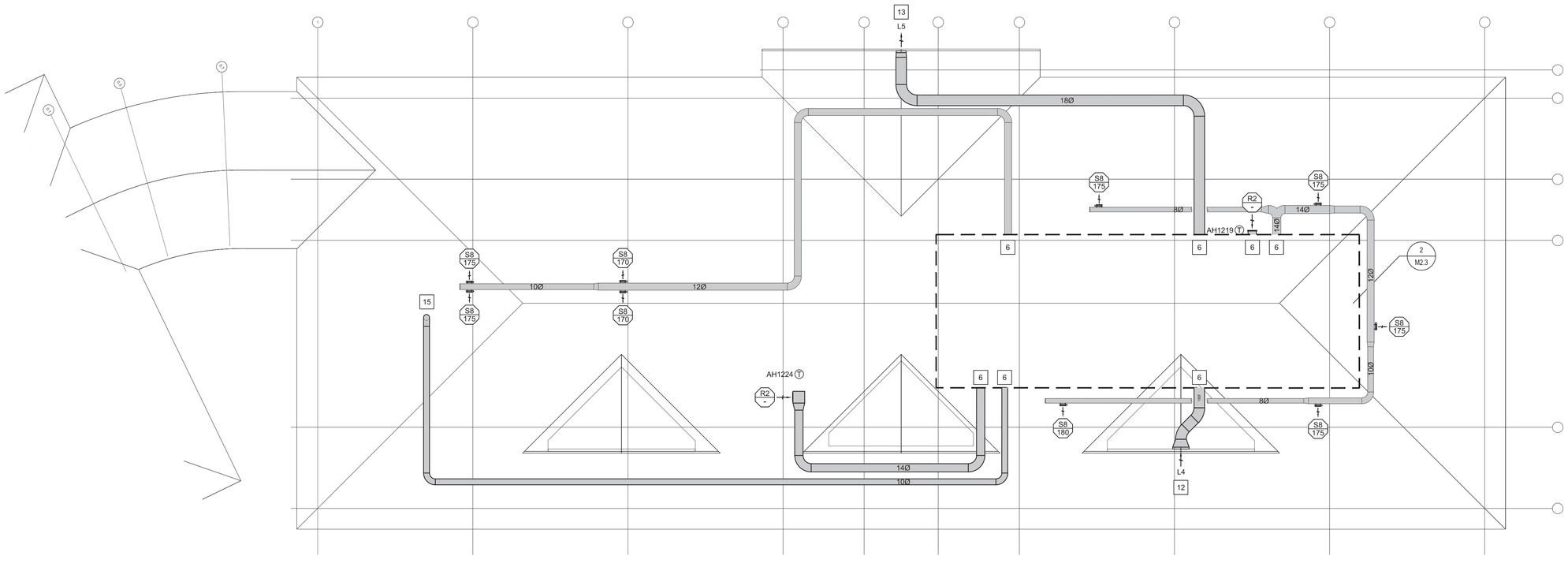


2 **MECHANICAL LOFT - NEW WORK**
1/4" = 1'-0"

PLAN NORTH



1 **ATTIC PLAN - NEW WORK**
1/8" = 1'-0"

PLAN NORTH

KEYED NOTES - NEW WORK

1. SUPPLY AND RETURN GRILLES MOUNTED HIGH IN 435 LOBBY SPACE DIRECTLY ON OTHER SIDE OF WALL FROM MECHANICAL LOFT, SEE 1/M2.2 FOR CONTINUATION.
2. DUCTWORK CONTINUED INTO ATTIC SPACE, SEE 1/M2.3 FOR CONTINUATION.
3. VENTILATION AIR AND EXHAUST AIR DOWN THROUGH CUSTODIAN 413 EN ROUTE TO FIRST FLOOR ABOVE CEILING SPACE.
4. INSTALL DOAS AIR HANDLER ON CONCRETE HOUSEKEEPING PAD WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES.
5. INSTALL AIR HANDLER ON CONCRETE HOUSEKEEPING PAD WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES.
6. DUCTWORK CONTINUED THROUGH WALL INTO MECHANICAL MEZZANINE, SEE 2/M2.3 FOR CONTINUATION.
7. INSTALL BALANCE DAMPER IN SUPPLY DUCT RISER.
8. EXHAUST DUCTWORK CONTINUES TO EXHAUST GRILLE MOUNTED HIGH IN 435 LOBBY, SEE 1/M2.2 FOR CONTINUATION.
9. VENTILATION AIR CONTINUED INTO SECOND FLOOR ABOVE CEILING SPACE, SEE 1/M2.2 FOR CONTINUATION.
10. RETURN AIR CONTINUED INTO SECOND FLOOR ABOVE CEILING SPACE, SEE 1/M2.2 FOR CONTINUATION.
11. SUPPLY AIR CONTINUED INTO SECOND FLOOR ABOVE CEILING SPACE, SEE 1/M2.2 FOR CONTINUATION.
12. OUTSIDE AIR INTAKE LOUVER IN DORMER LOCATED BEHIND TRIANGULAR ARCHITECTURAL LOUVER SELECTED BY ARCHITECT, BLANK OFF UNUSED PORTION OF ARCHITECTURAL LOUVER.
13. EXHAUST RELIEF LOUVER IN DORMER LOCATED BEHIND CIRCULAR ARCHITECTURAL LOUVER SELECTED BY ARCHITECT, BLANK OFF UNUSED PORTION OF ARCHITECTURAL LOUVER.
14. EXHAUST DUCTWORK CONTINUED INTO SECOND FLOOR ABOVE CEILING SPACE, SEE 1/M2.2 FOR CONTINUATION.
15. EXHAUST DUCT TURNS DOWN INTO SECOND FLOOR ABOVE CEILING SPACE, SEE 1/M2.2 FOR CONTINUATION.

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02/21/2024

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Mechanical HVAC Addition Attic & Loft Enlarged Plans

Rev.	Date	Notes

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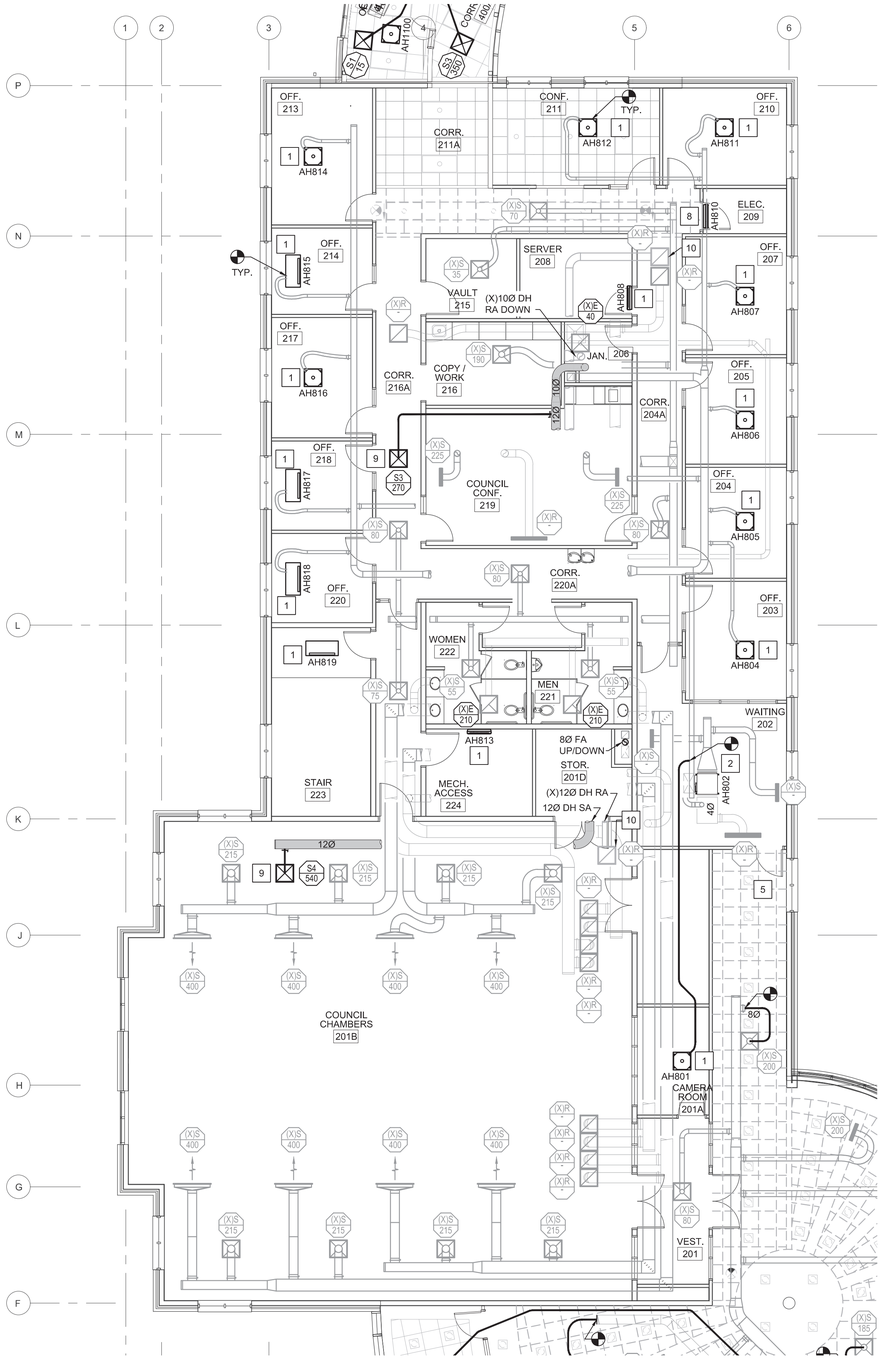
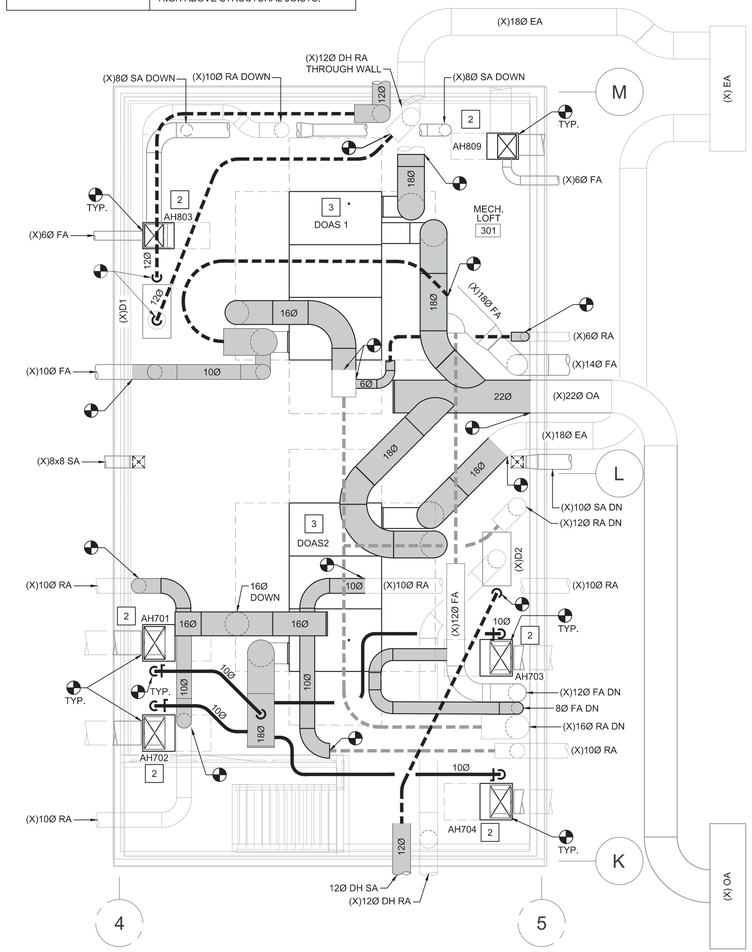


1 **ENLARGED FLOOR PLAN**

1/8" = 1'-0"

PLAN NORTH

DASHED LINE INDICATES DUCT ROUTED HIGH ABOVE STRUCTURAL JOISTS.



2 **ENLARGED FLOOR PLAN - 301 MECH. LOFT**

1/4" = 1'-0"

PLAN NORTH

KEYED NOTES - NEW WORK

1. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES IN SAME LOCATION AS DEMOLISHED (X)DAHU. RECONNECT TO EXISTING FA DUCTWORK (IF APPLICABLE) AS INDICATED ON PLANS. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
2. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES IN SAME LOCATION AS DEMOLISHED (X)DAHU. RECONNECT TO EXISTING RA, SA, AND FA DUCTWORK AS INDICATED ON PLANS. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
3. INSTALL NEW DOAS ON NEW CONCRETE PAD WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. CONNECT TO EXISTING OA, FA, EA, AND RA DUCT AS INDICATED ON PLANS.
4. NOT USED.
5. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. INSTALL NEW FA DUCTWORK AS INDICATED ON PLANS TO CONNECT TO EXISTING FA DUCTWORK. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
6. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. INSTALL NEW RA, SA, AND FA DUCTWORK AS INDICATED ON PLANS TO CONNECT TO EXISTING DUCTWORK. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
7. NOT USED.
8. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
9. INSTALL NEW SA DIFFUSER FOR EXISTING DEHUMIDIFIER. ROUTE NEW DUCTWORK AS INDICATED ON PLANS
10. EXISTING RA GRILLE FOR EXISTING DEHUMIDIFIER.

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02/21/2024

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Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical HVAC Second Floor & Loft Enlarged Plans

Rev.	Date	Notes

M2.3R

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KEYED NOTES - NEW WORK

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3. INSTALL NEW DOAS ON NEW CONCRETE PAD WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. CONNECT TO EXISTING OA, FA, EA, AND RA DUCT AS INDICATED ON PLANS.
4. NOT USED.
5. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. INSTALL NEW FA DUCTWORK AS INDICATED ON PLANS TO CONNECT TO EXISTING FA DUCTWORK. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
6. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. INSTALL NEW RA, SA, AND FA DUCTWORK AS INDICATED ON PLANS TO CONNECT TO EXISTING DUCTWORK. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
7. NOT USED.
8. INSTALL NEW DUCTLESS AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING PLAN FOR THERMOSTAT LOCATION.
9. INSTALL NEW SA DIFFUSER FOR EXISTING DEHUMIDIFIER. ROUTE NEW DUCTWORK AS INDICATED ON PLANS
10. EXISTING RA GRILLE FOR EXISTING DEHUMIDIFIER.

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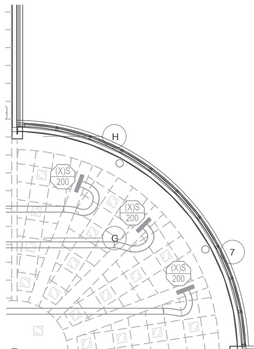
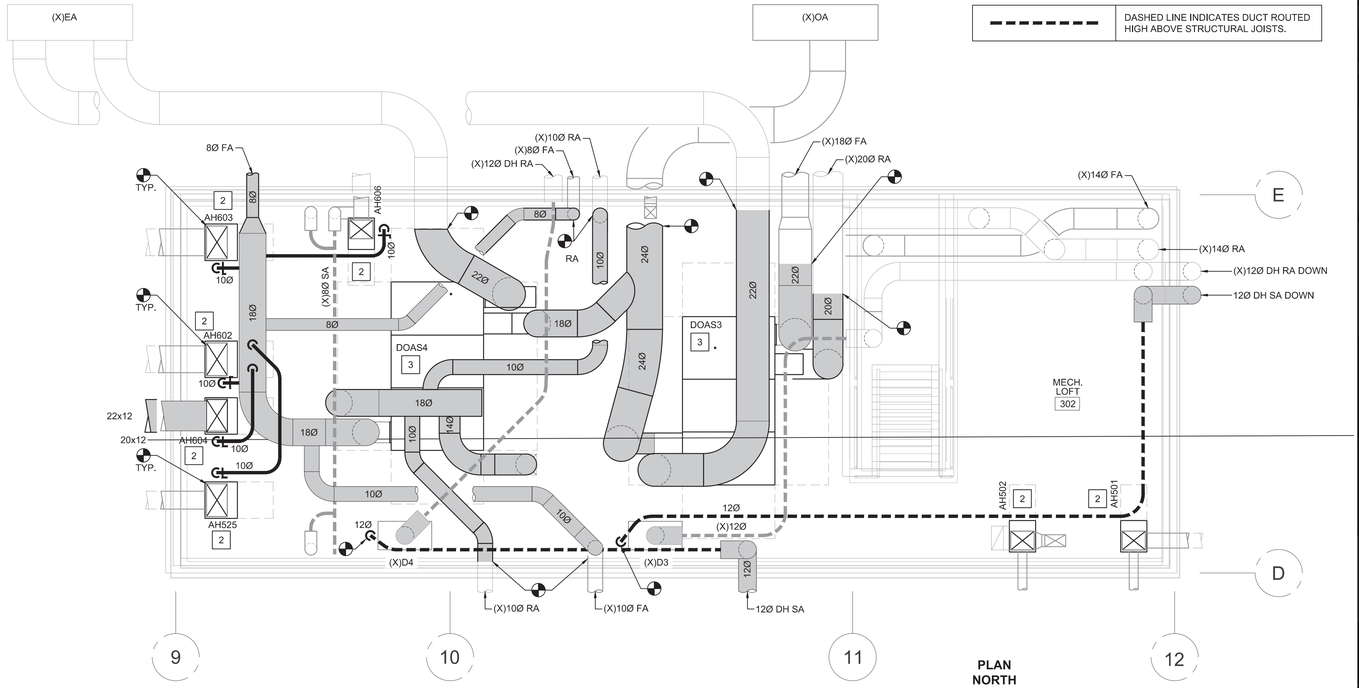
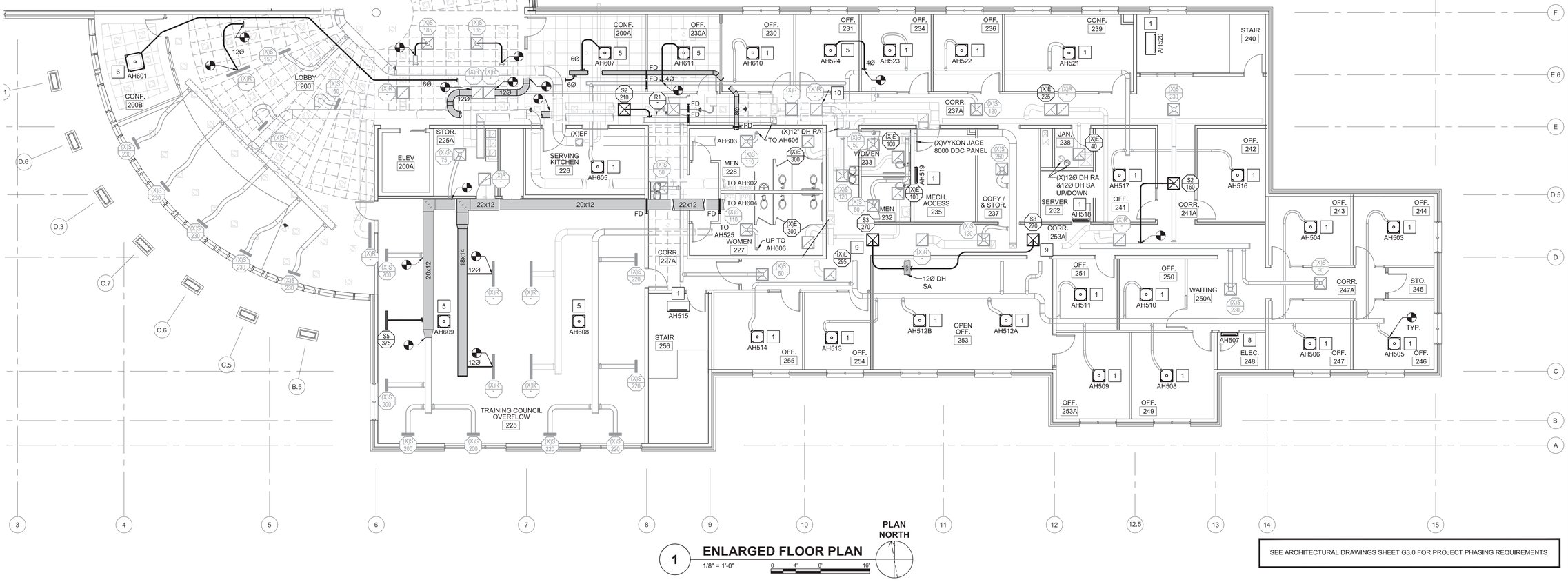




2 ENLARGED FLOOR PLAN - 302 MECH. LOFT

1/4" = 1'-0"

PLAN NORTH



1 ENLARGED FLOOR PLAN

1/8" = 1'-0"

PLAN NORTH

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043801 ROY O. GRADY 02/21/2024

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Issue Date: February 23, 2024

Mechanical HVAC Second Floor & Loft Enlarged Plans

Rev.	Date	Notes

M2.4R

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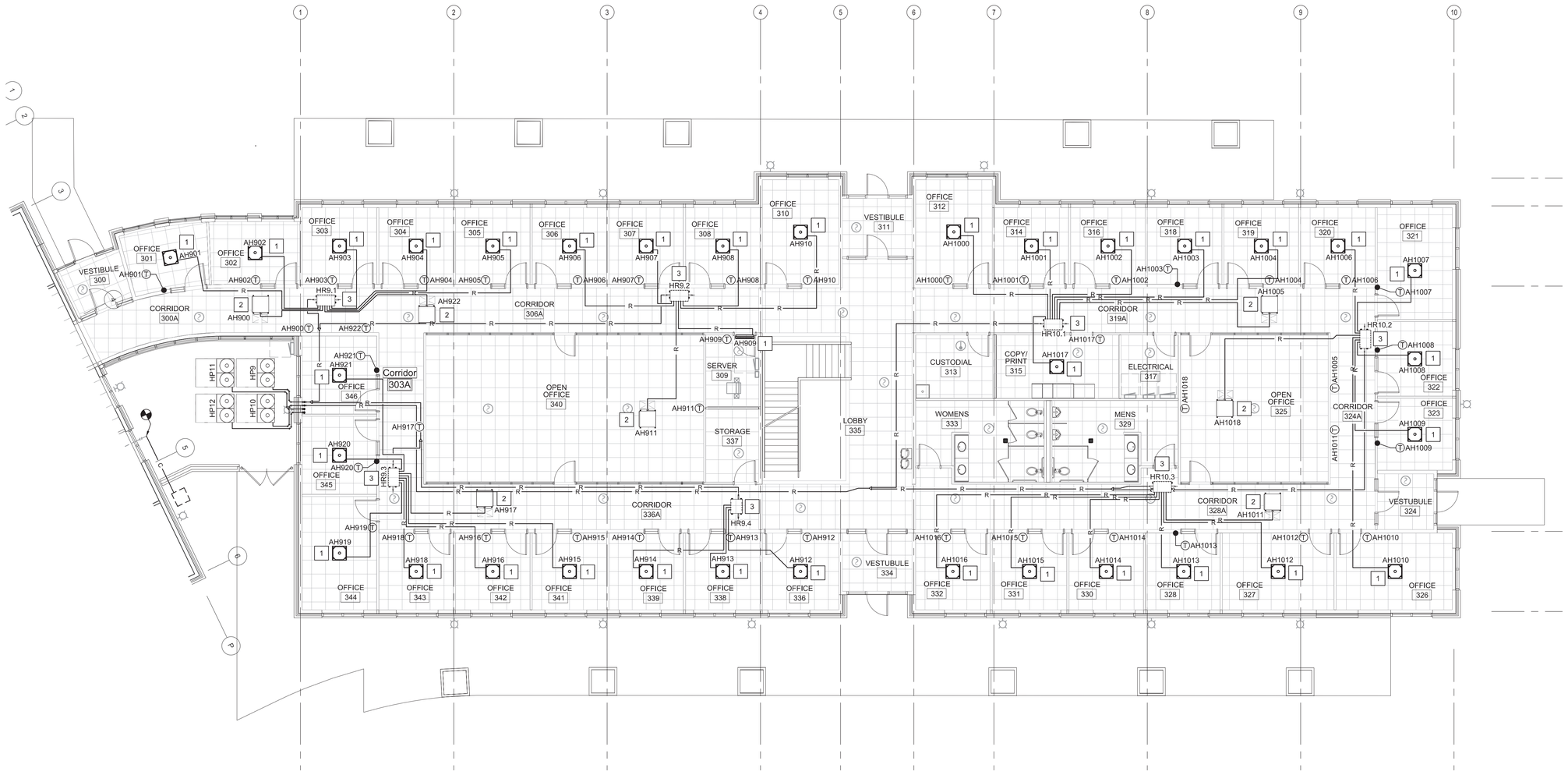
GENERAL NOTE

1. REFER TO PLUMBING DRAWING P1.3 FOR CONDENSATE ROUTING.

KEYED NOTES - NEW WORK

1. INSTALL NEW AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
2. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
3. INSTALL NEW HRU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. ROUTE NEW REFRIGERANT PIPING FROM HRU TO AHU, FIELD ROUTE AROUND OBSTRUCTIONS AS NECESSARY. EACH BRANCH MUST HAVE ISOLATION VALVES. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.



1 **FIRST FLOOR PLAN - NEW WORK**
1/8" = 1'-0"

PLAN NORTH

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Mechanical Piping First Floor Enlarged Plans

Rev.	Date	Notes

M3.1

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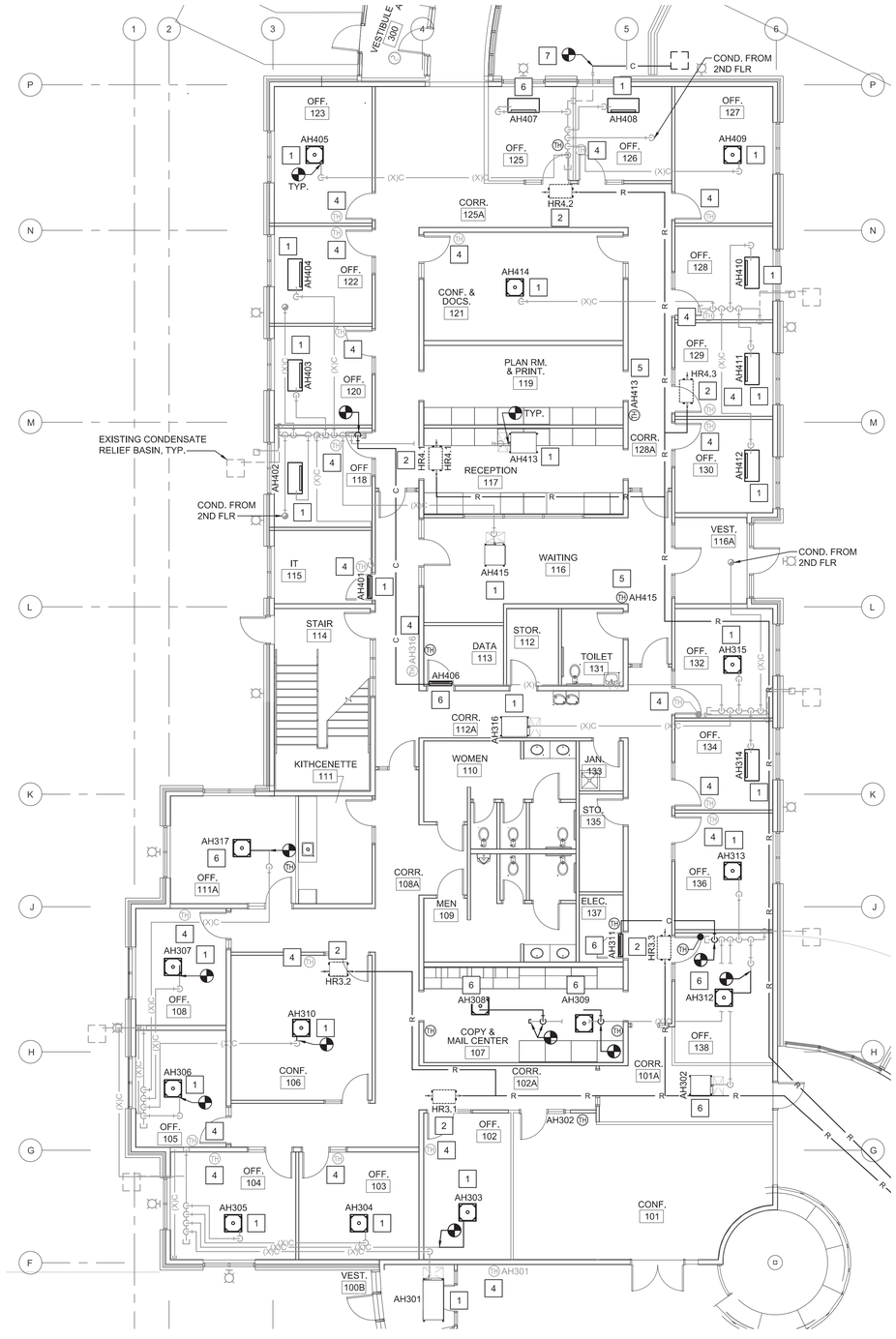

1 ENLARGED FLOOR PLAN

1/8" = 1'-0"

0 4' 8' 16'

PLAN NORTH

KEYED NOTES - NEW WORK

1. INSTALL NEW AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. CONNECT TO EXISTING THERMOSTATS AND EXISTING CONDENSATE PIPING AS INDICATED ON PLANS. FIELD ROUTE NEW REFRIGERANT PIPING FROM AHU TO HRU (NOT SHOWN). RE-USE EXISTING PIPE HANGERS WHERE POSSIBLE DURING THE INSTALLATION. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
2. INSTALL NEW HRU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. FIELD ROUTE NEW REFRIGERANT PIPING FROM HRU TO AHU (NOT SHOWN). EACH BRANCH MUST HAVE ISOLATION VALVES. RE-USE EXISTING PIPE HANGERS WHERE POSSIBLE DURING THE INSTALLATION. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
3. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. CONNECT TO EXISTING THERMOSTATS AND EXISTING CONDENSATE PIPING AS INDICATED ON PLANS. FIELD ROUTE NEW REFRIGERANT PIPING FROM AHU TO HRU (NOT SHOWN), RE-USE EXISTING PIPE HANGERS WHERE POSSIBLE DURING THE INSTALLATION. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
4. CONNECT EXISTING THERMOSTAT TO NEW AHU.
5. INSTALL RELOCATED THERMOSTAT, CONNECT TO NEW AHU.
6. INSTALL NEW AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. INSTALL NEW THERMOSTATS. FIELD ROUTE NEW CONDENSATE PIPING AS INDICATED ON PLANS. FIELD ROUTE NEW REFRIGERANT PIPING FROM AHU TO HRU (NOT SHOWN). RE-USE EXISTING PIPE HANGERS WHERE POSSIBLE DURING THE INSTALLATION. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
7. INSTALL RELOCATED CONDENSATE RELIEF BASIN AND EXTEND EXISTING CONDENSATE PIPING AS INDICATED.

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02/21/2024

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M3.1R

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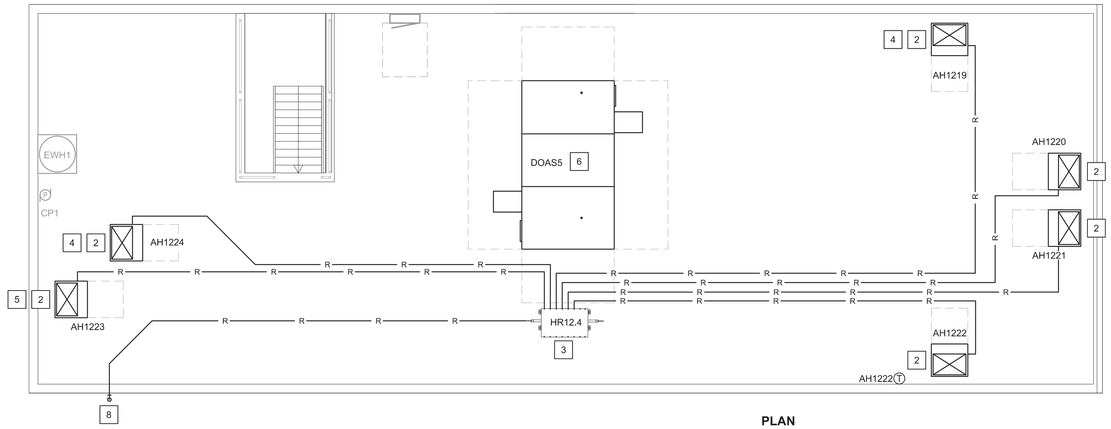
GENERAL NOTE

1. REFER TO PLUMBING DRAWING P1.4 FOR CONDENSATE ROUTING.

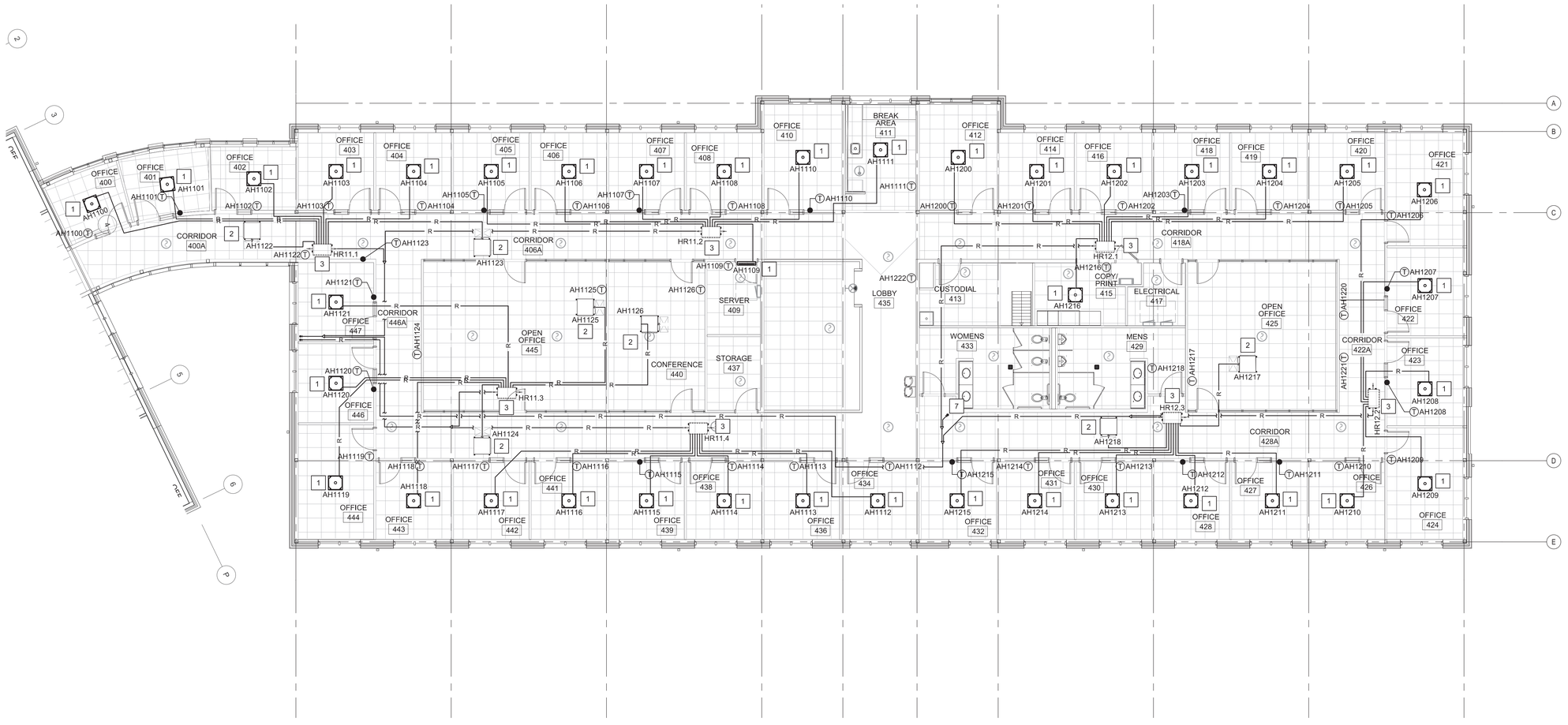
KEYED NOTES - NEW WORK

1. INSTALL NEW AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
2. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
3. INSTALL NEW HRU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. ROUTE NEW REFRIGERANT PIPING FROM HRU TO AHU, FIELD ROUTE AROUND OBSTRUCTIONS AS NECESSARY. EACH BRANCH MUST HAVE ISOLATION VALVES. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
4. THERMOSTAT FOR DUCTED AHU INSTALLED IN ATTIC SPACE NEAR UNIT RETURN GRILLE, SEE 1/M2.3 FOR LOCATION.
5. THERMOSTAT FOR DUCTED AHU INSTALLED IN 435 LOBBY AT 4' ABOVE FINISHED FLOOR, SEE 1/M3.2 FOR LOCATION.
6. INSTALL DOAS AIR HANDLER ON CONCRETE HOUSEKEEPING PAD WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES.
7. REFRIGERANT LINESET CONTINUED UP AND INTO THE MECHANICAL LOFT, SEE 2/M3.2 FOR CONTINUATION.
8. REFRIGERANT LINESET CONTINUED DOWN INTO ABOVE-CEILING SPACE, SEE 1/M3.2 FOR CONTINUATION.



PLAN NORTH

2 MECHANICAL LOFT - NEW WORK
1/4" = 1'-0"
0 2' 4' 8'



PLAN NORTH

1 SECOND FLOOR PLAN - NEW WORK
1/8" = 1'-0"
0 4' 8' 16'

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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CBHF Engineers, PLLC
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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER ROY O. GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Piping Second Floor & Loft Enlarged Plans

Rev.	Date	Notes

M3.2

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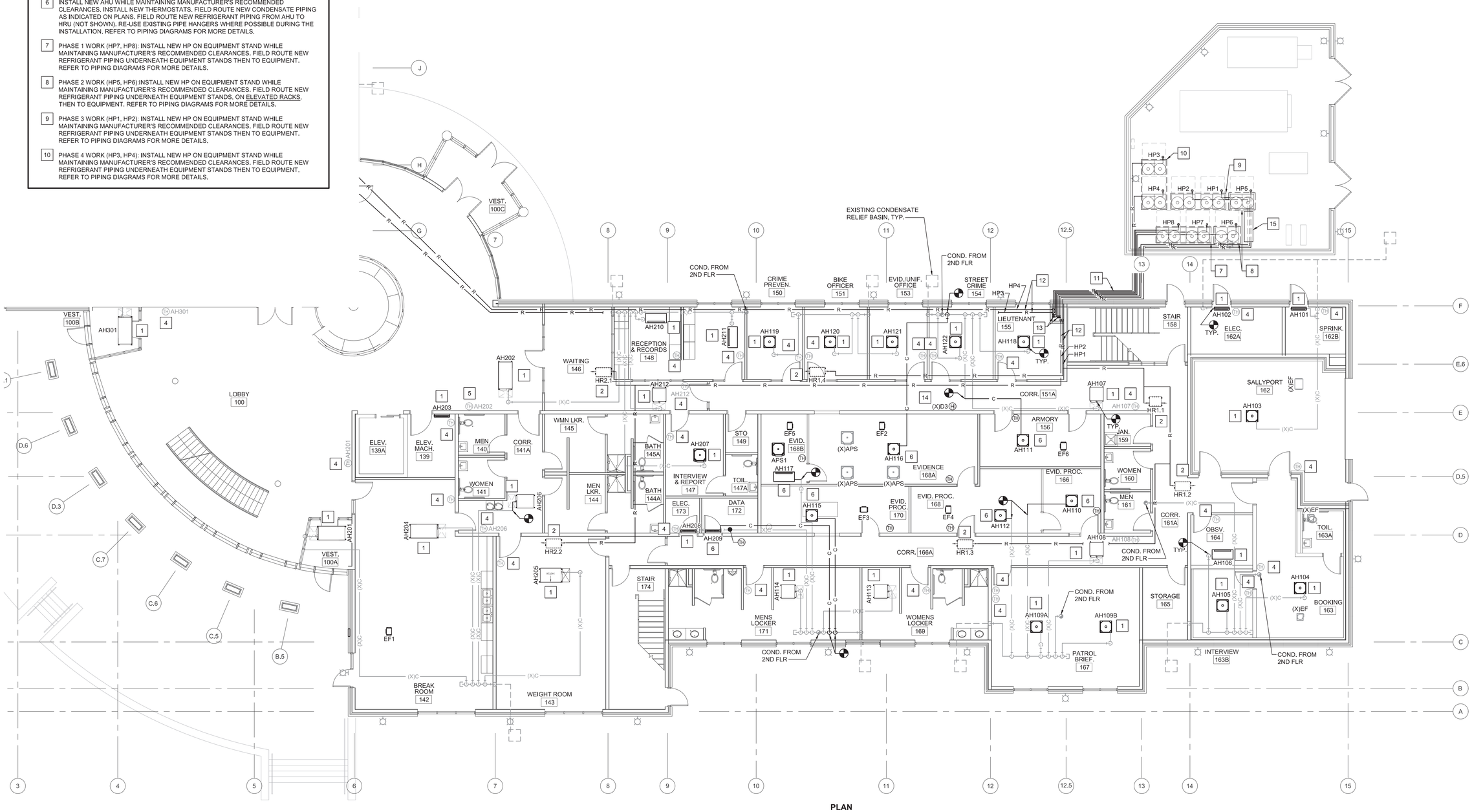
KEYED NOTES - NEW WORK

1. INSTALL NEW AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. CONNECT TO EXISTING THERMOSTATS AND EXISTING CONDENSATE PIPING AS INDICATED ON PLANS. FIELD ROUTE NEW REFRIGERANT PIPING FROM AHU TO HRU (NOT SHOWN). RE-USE EXISTING PIPE HANGERS WHERE POSSIBLE DURING THE INSTALLATION. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
2. INSTALL NEW HRU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. FIELD ROUTE NEW REFRIGERANT PIPING FROM HRU TO AHU (NOT SHOWN). EACH BRANCH MUST HAVE ISOLATION VALVES. RE-USE EXISTING PIPE HANGERS WHERE POSSIBLE DURING THE INSTALLATION. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
3. INSTALL NEW DUCTED AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. CONNECT TO EXISTING THERMOSTATS AND EXISTING CONDENSATE PIPING AS INDICATED ON PLANS. FIELD ROUTE NEW REFRIGERANT PIPING FROM AHU TO HRU (NOT SHOWN). RE-USE EXISTING PIPE HANGERS WHERE POSSIBLE DURING THE INSTALLATION. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
4. CONNECT EXISTING THERMOSTAT TO NEW AHU.
5. INSTALL RELOCATED THERMOSTAT, CONNECT TO NEW AHU.
6. INSTALL NEW AHU WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. INSTALL NEW THERMOSTATS. FIELD ROUTE NEW CONDENSATE PIPING AS INDICATED ON PLANS. FIELD ROUTE NEW REFRIGERANT PIPING FROM AHU TO HRU (NOT SHOWN). RE-USE EXISTING PIPE HANGERS WHERE POSSIBLE DURING THE INSTALLATION. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
7. PHASE 1 WORK (HP7, HP8): INSTALL NEW HP ON EQUIPMENT STAND WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. FIELD ROUTE NEW REFRIGERANT PIPING UNDERNEATH EQUIPMENT STANDS THEN TO EQUIPMENT. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
8. PHASE 2 WORK (HP5, HP6):INSTALL NEW HP ON EQUIPMENT STAND WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. FIELD ROUTE NEW REFRIGERANT PIPING UNDERNEATH EQUIPMENT STANDS, ON ELEVATED RACKS, THEN TO EQUIPMENT. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
9. PHASE 3 WORK (HP1, HP2): INSTALL NEW HP ON EQUIPMENT STAND WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. FIELD ROUTE NEW REFRIGERANT PIPING UNDERNEATH EQUIPMENT STANDS THEN TO EQUIPMENT. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.
10. PHASE 4 WORK (HP3, HP4): INSTALL NEW HP ON EQUIPMENT STAND WHILE MAINTAINING MANUFACTURER'S RECOMMENDED CLEARANCES. FIELD ROUTE NEW REFRIGERANT PIPING UNDERNEATH EQUIPMENT STANDS THEN TO EQUIPMENT. REFER TO PIPING DIAGRAMS FOR MORE DETAILS.

KEYED NOTES - NEW WORK

11. ROUTE REFRIGERANT PIPING FROM THE MECHANICAL YARD TO THE EXISTING CHASE IN ROOM 155 EITHER RE-USING EXISTING, OR IN A NEW ABOVE GROUND CHASE. WEATHER PROOF ALL PENETRATIONS, SEAL WEATHER TIGHT.
12. ROUTE HP1, HP2, HP3, HP4 REFRIGERANT PIPING IN CHASE TO ABOVE THE 1ST FLOOR CEILING BEFORE ROUTING TO NEW HRU'S.
13. ROUTE HP5, HP6, HP7, HP8 REFRIGERANT PIPING UP TO ABOVE THE 2ND FLOOR CEILING.
14. INSTALL NEW HUMIDISTAT FOR EXISTING DEHUMIDIFIER. HUMIDISTAT TO INTERLOCK WITH DEHUMIDIFIER. DEHUMIDIFIER WILL ONLY RUN WHEN RELATIVE HUMIDITY IS OVER 55%.
15. PROVIDE AND INSTALL METAL PLATFORM TO PROTECT REFRIGERANT PIPING AND ALLOW PERSONNEL TO SAFELY STEP OVER PIPING. PLATFORM TO HAVE REMOVABLE TOP TO ACCESS PIPING.



1 **ENLARGED FLOOR PLAN**
1/8" = 1'-0"
0 4' 8' 16'

PLAN NORTH

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02/21/2024

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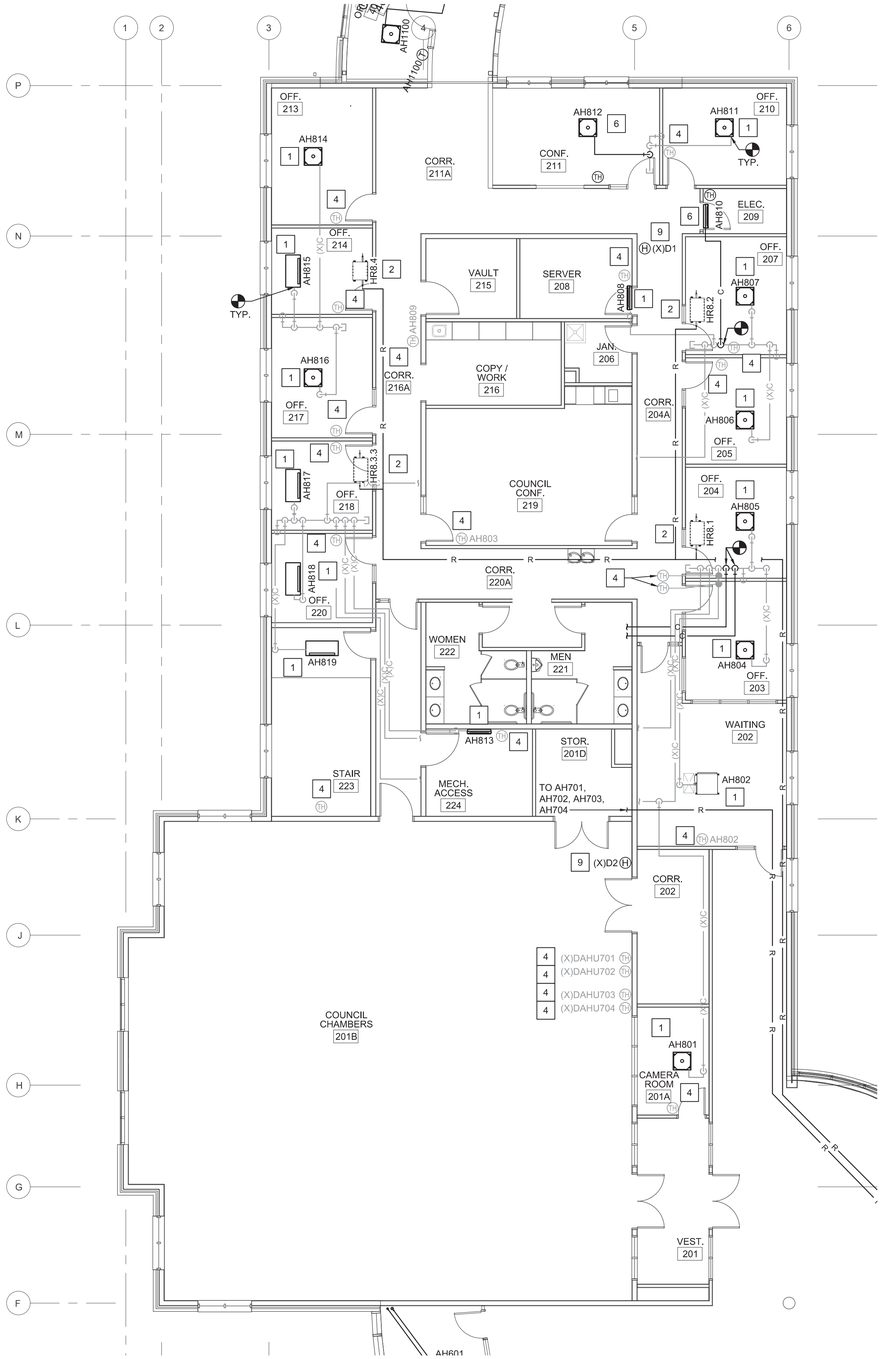

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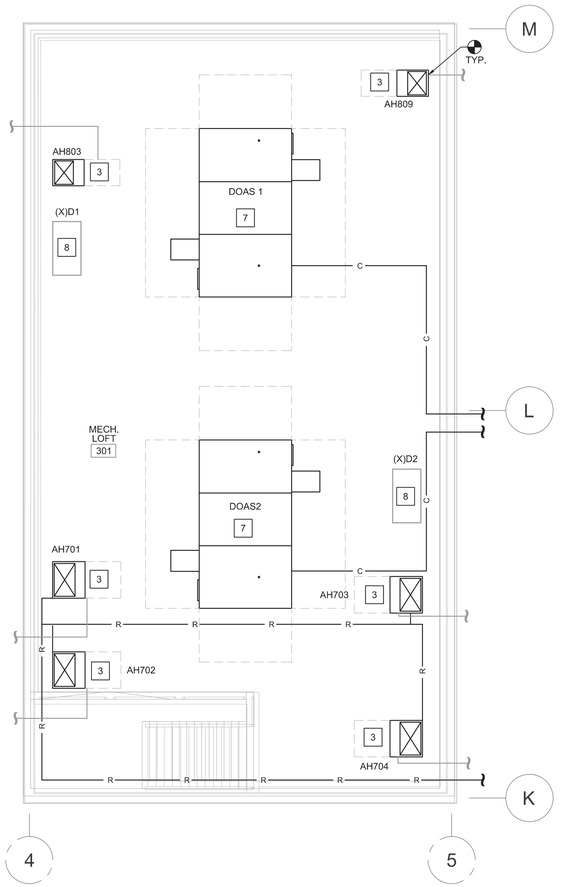

2 **ENLARGED FLOOR PLAN - 301 MECH. LOFT**
1/4" = 1'-0"
0 2' 4' 8'
PLAN NORTH

KEYED NOTES - NEW WORK

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8. EXISTING DEHUMIDIFIER TO REMAIN. INSTALL NEW STANDALONE HUMIDISTAT AT LOCATION SHOWN ON PLANS.
9. INSTALL NEW HUMIDISTAT FOR EXISTING DEHUMIDIFIER. HUMIDISTAT TO INTERLOCK WITH DEHUMIDIFIER. DEHUMIDIFIER WILL ONLY RUN WHEN RELATIVE HUMIDITY IS OVER 55%.

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O. GRADY
02/21/2024

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102 Town Hall Drive
Leland, NC 28451

Construction Drawings

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Rev.	Date	Notes

M3.3R

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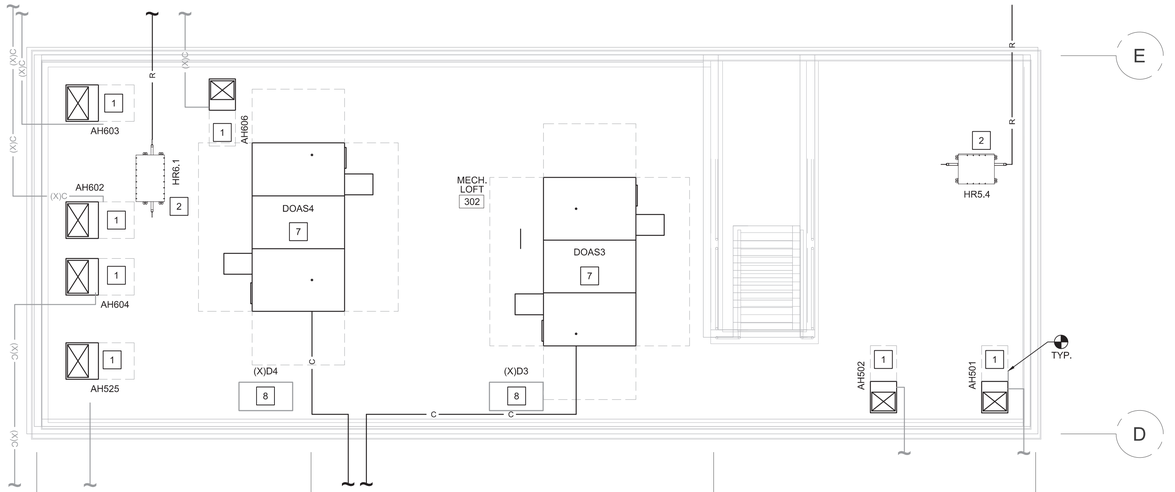
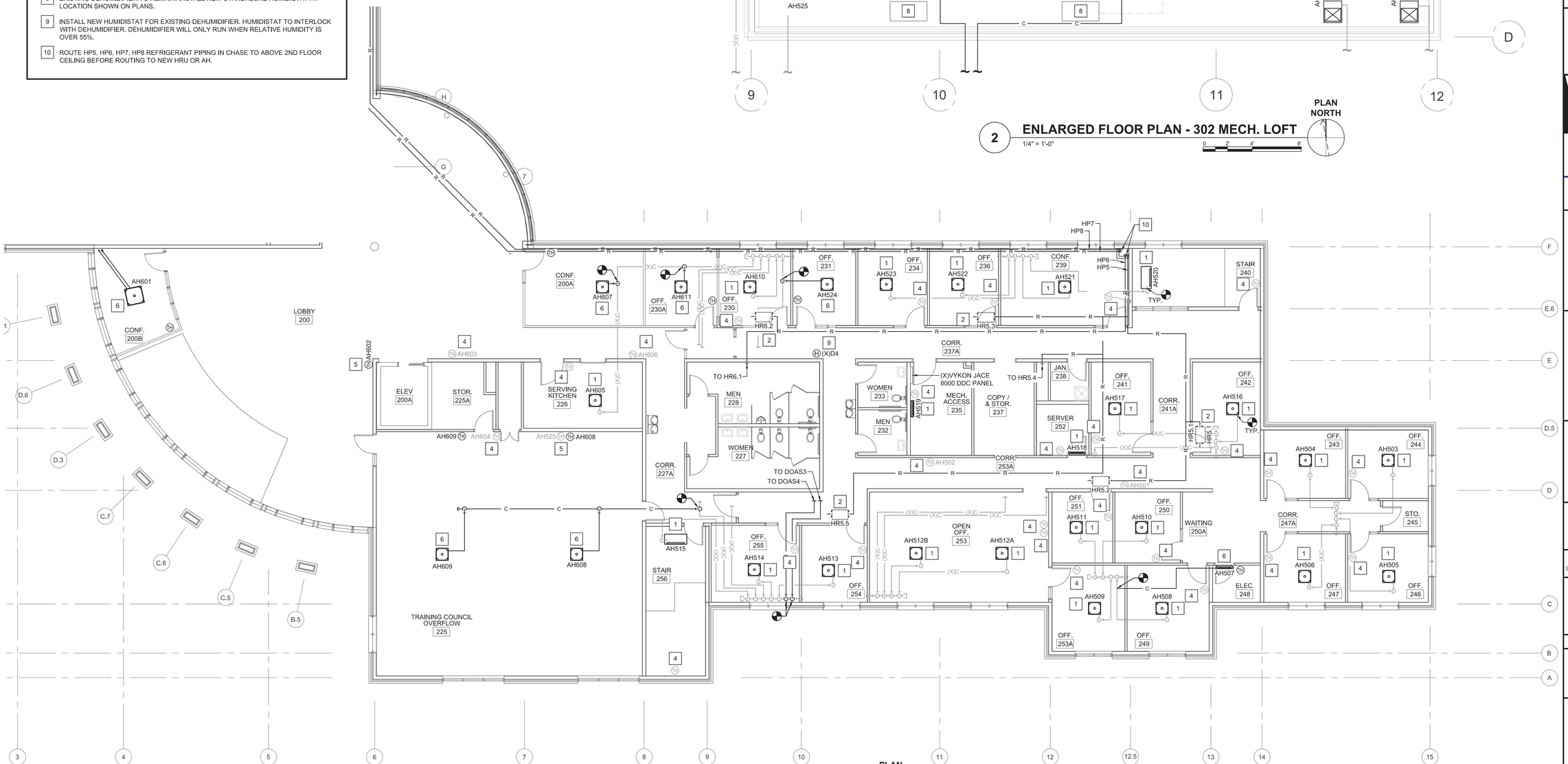


2 ENLARGED FLOOR PLAN - 302 MECH. LOFT
1/4" = 1'-0"

PLAN NORTH



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M3.4R

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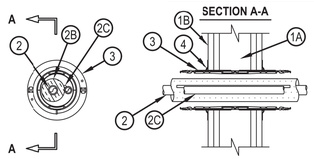
System No. W-L-8085

WL 8085

CLASSIFIED C UL US

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 1 and 2 Hr (See Item 1)	F Rating — 1 and 2 Hr (See Item 1)
T Rating — 0 and 3/4 Hr (See Item 1)	FT Rating — 0 and 3/4 Hr (See Item 1)
	FH Rating — 1 and 2 Hr (See Item 1)
	FTH Rating — 0 and 3/4 Hr (See Item 1)



1. Wall Assembly — The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described within the individual U300, U400 or V400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall incorporate the following construction features:
   A. Studs — Wall framing shall consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced max 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.
   B. Gypsum Board* — Nom 5/8 ir. (16 mm) thick gypsum board as specified in the individual Wall and Partition Design. Opening in gypsum board to be max 2-1/2 in. (64 mm) diam for 2 in. (51 mm) device and max 4-1/2 in. (114 mm) diam for 4 in. (102 mm) device.
   The hourly F, FH Rating of the firestop system is dependent upon the hourly rating of the wall in which it is installed. The T, FT and FTH Rating is 0 and 3/4 hr for 1 and 2 hr rated wall assemblies, respectively.
2. Air Conditioning (AC) Line Sets — AC line set consists of two pipes or tubes (Item 2A), tubing insulation (Item 2B) and a thermostat cable (Item 2C). The AC line sets shall be rigidly supported on both sides of the floor or wall assembly.
   2A. Metallic Penetrants — A max of two pipes or tubes to be installed in each AC line set. Of the two pipes or tubes, only one may have a nom diam greater than 3/4 in. (19 mm). The following types and sizes of through penetrants may be used:
      A. Steel Pipe — Nom 1 in. (25 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.
      B. Iron Pipe — Nom 1 in. (25 mm) diam (or smaller) cast or ductile iron pipe.
      C. Copper Pipe — Nom 1 in. (25 mm) diam (or smaller) Regular (or heavier) copper pipe.
      D. Copper Tube — Nom 1 in. (25 mm) diam (or smaller) Type L (or heavier) copper tube.
   2B. Tube Insulation - Plastics# — Nom 3/4 in. (19 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. The tube insulation may be installed on one max 1 in. (25 mm) diam pipe or tube in each AC line set. The space between the insulated and uninsulated pipes or tubes within each AC line set shall be 0 in. (point contact).
   See Plastics# (QMFZ2) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation meeting the above specifications and having a UL 94 Flammability Classification of 945VA may be used.
   2C. Cable — One 4 pair No. 18 AWG (or smaller) thermostat cable with polyvinyl chloride (PVC) insulation and jacket materials may be installed with each AC line set.

Hilti Firestop Systems

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System No. W-L-8085

WL 8085

3. Firestop Device* — Firestop device consists of a corrugated steel tube with an inner plastic housing, intumescent material rings, tightly twisted inner fabric smoke seal, flanges and gasketing material (not shown). Firestop device to be installed in accordance with the accompanying installation instructions. Device slid into wall such that ends project an equal distance from the approximate centerline of the wall assembly. The annular space between the device and the periphery of the opening shall be min 0 in. (point contact). Device provided with flanges that are spun clockwise onto device threads, over gasketing material butting tightly to both sides of wall. As an alternate to gasket material, sealant (Item 4) may be used.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 653 and CP 653 BA 2" Speed Sleeve, CP 653 and CP 653 BA 4" Speed Sleeve, CFS-SL GA L Speed Sleeves, CP 653 4" BA ILS and CFS-SL GA L ILS Speed Sleeve
   The CFS-SL GA L and CFS-SL GA L ILS Speed Sleeves shall only be used in wall thickness of 8 in. (203 mm) or greater.
4. Fill, Void or Cavity Material* - Sealant — As an alternate to gasket material (see Item 3), min 1/2 in. (13 mm) thickness of fill material applied within the annulus between firestop device and wall, flush with both surfaces of wall, and an additional 1/4 in. (6 mm) bead applied around periphery of device.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE MAX Intumescent Sealant or CP 606 Sealant

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

Hilti Firestop Systems

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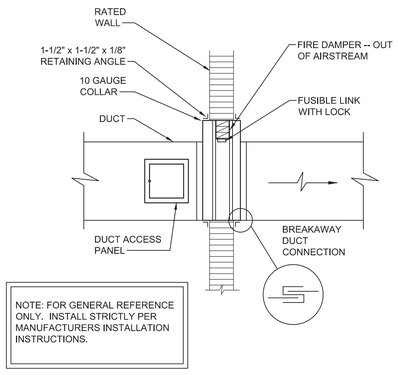
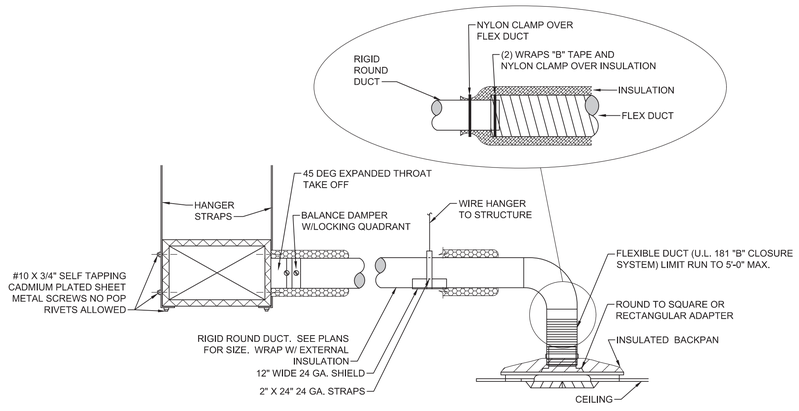
3 1 AND 2 HOUR FIRE PENETRATION DETAIL

NOT TO SCALE



2 FIRE DAMPER DETAIL

NOT TO SCALE



1 TYPICAL DIFFUSER CONNECTION DETAIL

NOT TO SCALE

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02/21/2024

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Mechanical Details

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M5.1

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VARIABLE REFRIGERANT FLOW AIR HANDLER SCHEDULE

DRAWING CODE	SPACE SERVED	HEAT RECOVERY UNIT	OUTDOOR UNIT	ASSOCIATED ERV/DOAS UNIT	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MFRS	INDOOR UNIT CONFIGURATION	NOMINAL COOLING CAPACITY (MBH)	NOMINAL HEATING CAPACITY (MBH)	SUPPLY AIRFLOW MAX (CFM)	OUTSIDE AIR AIRFLOW (CFM)	ELECTRICAL			WEIGHT (LBS)	NOTES	ACCESSORIES
													VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOP (AMPS)			
AH901	301 OFFICE	SEE DIAGRAM				ARNU073TRD4		CASSETTE 4WAY	7.5	8.5	265-215	15		0.25	15	29	1-4,8,9	B,C
AH902	302 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	15		0.25	15	29	1-4,8,9	B,C
AH903	303 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH904	304 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH905	305 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH900	MULTIPLE SPACES	SEE DIAGRAM				ARNU183M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	19.1	13.9	640-390	5		2.00	15	70	1-4,8,9	B,C
AH922	MULTIPLE SPACES	SEE DIAGRAM				ARNU073M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	7.5	8.5	360-210	50		2.00	15	70	1-4,8,9	B,C
AH906	306 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH907	307 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH908	308 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH909	309 SERVER	SEE DIAGRAM				ARNU053SJS4		WALL MOUNTED	5.5	6.1	240-208	-		0.31	15	25	1-4,8,9	B,D,E
AH910	310 OFFICE	SEE DIAGRAM	HP9	DOAS5	LG	ARNU073TRD4	TRANE, DAIKIN	CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20	208/1/60	0.25	15	29	1-4,8,9	B,C
AH911	340 OPEN OFFICE	SEE DIAGRAM				ARNU183M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	19.1	13.9	640-390	140		2.00	15	70	1-4,8,9	B,C
AH917	MULTIPLE SPACES	SEE DIAGRAM				ARNU093M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	9.6	10.9	375-230	10		2.00	15	70	1-4,8,9	B,C
AH918	MULTIPLE SPACES	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	15		0.25	15	29	1-4,8,9	B,C
AH919	344 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	29	1-4,8,9	B,C
AH920	345 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH921	346 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH915	341 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH916	342 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH912	336 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH913	338 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH914	339 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1000	312 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	29	1-4,8,9	B,C
AH1001	314 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1017	315 COPY/PRINT	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1002	316 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1003	318 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1004	319 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1005	319A CORRIDOR	SEE DIAGRAM				ARNU073M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	7.5	8.5	360-210	40		2.00	15	70	1-4,8,9	B,C
AH1006	320 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1007	321 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	29	1-4,8,9	B,C
AH1008	322 OFFICE	SEE DIAGRAM	HP10	DOAS5	LG	ARNU053TRD4	TRANE, DAIKIN	CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15	208/1/60	0.25	15	29	1-4,8,9	B,C
AH1009	323 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1018	325 OPEN OFFICE	SEE DIAGRAM				ARNU093M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	9.6	10.9	375-230	70		2.00	15	70	1-4,8,9	B,C
AH1010	326 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	29	1-4,8,9	B,C
AH1011	MULTIPLE SPACES	SEE DIAGRAM				ARNU093M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	9.6	10.9	375-230	5		2.00	15	70	1-4,8,9	B,C
AH1012	327 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	29	1-4,8,9	B,C
AH1013	328 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1014	330 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1015	331 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1016	332 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1100	400 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1101	401 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1102	402 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1103	403 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1104	404 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1122	400A CORRIDOR	SEE DIAGRAM				ARNU243M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	24.2	27.3	703-555	25		2.00	15	70	1-4,8,9	B,C
AH1123	406A CORRIDOR	SEE DIAGRAM				ARNU073M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	7.5	8.5	360-210	60		2.00	15	70	1-4,8,9	B,C
AH1105	405 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1106	406 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1107	407 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1108	408 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1109	409 SERVER	SEE DIAGRAM				ARNU053SJS4		WALL MOUNTED	5.5	6.1	240-208	-		0.31	15	25	1-4,8,9	B,D,E
AH1110	410 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	29	1-4,8,9	B,C
AH1111	411 BREAK AREA	SEE DIAGRAM	HP11	DOAS5	LG	ARNU053TRD4	TRANE, DAIKIN	CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15	208/1/60	0.25	15	29	1-4,8,9	B,C
AH1124	MULTIPLE SPACES	SEE DIAGRAM				ARNU073M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	7.5	8.5	360-210	-		2.00	15	70	1-4,8,9	B,C
AH1126	440 CONFERENCE	SEE DIAGRAM				ARNU073M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	7.5	8.5	360-210	60		2.00	15	70	1-4,8,9	B,C
AH1118	443 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1119	444 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1125	445 OPEN OFFICE	SEE DIAGRAM				ARNU123M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	12.3	13.6	392	60		2.00	15	56	1-4,8,9	B,C
AH1120	446 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	10		0.25	15	29	1-4,8,9	B,C
AH1121	447 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	10		0.25	15	29	1-4,8,9	B,C
AH1112	434 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1113	436 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1114	438 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1115	439 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1116	441 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1117	442 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C

NOTES:
1. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2. PROVIDE MANUFACTURER'S EXTENDED PARTS WARRANTY PERIOD OF TEN (10) YEARS FROM DATE OF START-UP.
3. PROVIDE TRAINING PER SPECIFICAITONS ONCE COMMISSIONING IS COMPLETE.
4. REFER TO SCHEMATIC PIPING/CONTROL DIAGRAM ON MECHANICAL DRAWINGS FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION DEVICES.
5. NOT USED.
6. NOT USED.
7. NOT USED.
8. CERTIFIED FACTORY STARTUP.
9. INTEGRATE INTO EXISTING CONTROL SYSTEM. PROVIDE EMAIL NOTIFICATION OF ALARMS.

ACCESSORIES:
A. NOT USED.
B. NEW WIRED WALL-MOUNTED REMOTE CONTROLLER WITH HUMIDITY DISPLAY. LG MODEL # CRC2.
C. BUILT-IN CONDENSATE LIFT MECHANISM
D. PROVIDE ASPEN PUMPS MINI BLANC CONDENSATE PUMP OR APPROVED EQUAL.
E. PROVIDE PLASTIC COVER FOR ALL EXPOSED REFRIGERANT PIPING.

SAWYER SHERWOOD & ASSOCIATE ARCHITECTURE
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mcgill Shaping Communities Together

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043801 ROY O. GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Schedules

Rev.	Date	Notes

M6.1

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100% OUTSIDE AIR - DX AIR SOURCE HEAT PUMP WITH ENERGY RECOVERY (PART 1 OF 2)

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	OUTSIDE AIR	RETURN/ EXHAUST AIR	PERCENT OA	ESP	SUMMER DESIGN DAY - HOT																			
								ER WHEEL - DEHUMIDIFICATION										DX COIL - COOLING						REHEAT			
								OUTSIDE AIR TEMP				RETURN AIR TEMP				WHEEL SUPPLY AIR TEMP				COIL SUPPLY AIR TEMP				TOTAL	SENS	UNIT SUPPLY AIR TEMP				CAPACITY
				CFM	CFM	%	IN. H2O	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	MBH	MBH	DB °F	WB °F	RH %	DP °F	MBH
DOAS1	UNITED COOLAIR	AAH200G#ASTA1	-	1500	1200	100	1.0	97.0	79.0	45.7	72.6	75.0	62.5	49.8	55.0	81.4	68.4	51.8	62.0	53.5	52.6	94.3	51.9	139.0	70.5	75.0	61.0	44.5	51.9	35.3
DOAS2	UNITED COOLAIR	AAH200G#ASTA1	-	1500	1200	100	1.0	97.0	79.0	45.7	72.6	75.0	62.5	49.8	55.0	81.4	68.4	51.8	62.0	53.5	52.6	94.3	51.9	139.0	70.5	75.0	61.0	44.5	51.9	35.3
DOAS3	UNITED COOLAIR	AAH200G#ASTA1	-	2000	1600	100	1.0	97.0	79.0	45.7	72.6	75.0	62.5	49.8	55.0	82.0	68.9	51.8	62.5	53.6	53.1	97.2	52.8	182.5	93.8	75.0	61.4	45.9	52.8	47.0
DOAS4	UNITED COOLAIR	AAH200G#ASTA1	-	1500	1380	100	1.0	97.0	79.0	45.7	72.6	75.0	62.5	49.8	55.0	80.0	67.2	52.0	60.8	51.6	50.9	95.4	50.3	145.6	73.6	75.0	60.2	41.9	50.3	38.4

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER REQUIREMENTS.
2 ENTHALPY ENERGY RECOVERY WHEEL
3 ECM FANS - SUPPLY AND EXHAUST
4 SOLID DOUBLE WALL LINER W/ 1" THERMAL / ACCOUSTIC FIBERGLASS INSULATION
5 SUBCOOLING COIL FOR INCREASED EFFICIENCY
6 STAINLESS STEEL DRAIN PANS - EVAPORATOR AND CONDENSER
7 BUILT-IN PRESSURE TRANSDUCERS FOR AIRFLOW MEASUREMENT

NOTES:
8 2" MERV 13 PLEATED THROWAWAY SUPPLY FILTER
9 2" MERV 8 PLEATED THROWAWAY RETURN FILTER
10 QUICK-CONNECT REFRIGERANT FITTINGS TO SHIP SPLIT; FIELD ASSEMBLED
11 ISOLATED ELECTRICAL CONTROL BOX
12 MICROPROCESSOR W/ BUILT-IN DISPLAY INTERFACE AND BACNET
13 MODULATING HOT GAS REHEAT

100% OUTSIDE AIR - DX AIR SOURCE HEAT PUMP WITH ENERGY RECOVERY (PART 2 OF 2)

DRAWING CODE	SUMMER DESIGN DAY - HUMID																				WINTER DESIGN DAY																ELECTRICAL												WEIGHT	NOTES	ACCESSORIES
	ER WHEEL - DEHUMIDIFICATION												DX COIL - COOLING						REHEAT				ER WHEEL - HEATING								HEATING																			
	OUTSIDE AIR TEMP				RETURN AIR TEMP				WHEEL SUPPLY AIR TEMP				COIL SUPPLY AIR TEMP				TOTAL	SENS	UNIT SUPPLY AIR TEMP				CAPACITY	OUTSIDE AIR TEMP				RETURN AIR TEMP				WHEEL SUPPLY AIR TEMP				UNIT SUPPLY AIR TEMP				CAPACITY	VOLTAGE	SUPPLY FAN MOTOR		EXHAUST FAN MOTOR		COMP RESSOR			ERW (EACH)	ERW QTY	UNIT MCA	UNIT MOP			
	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	MBH	MBH	DB °F	WB °F	RH %	DP °F	MBH	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	MBH	V-PH-HZ	KW	AMPS	KW	AMPS	LRA	RLA	AMPS		AMPS	AMPS	LBS		
DOAS1	84.0	78.6	79.0	76.8	75.0	62.5	49.8	55.0	77.6	68.4	62.9	64.0	52.5	51.9	96.3	51.5	139.8	51.1	75.0	60.7	43.7	51.5	37.0	23.0	19.2	53.1	10.0	70.0	51.5	25.0	32.6	56.4	43.4	31.1	26.9	75.0	51.9	16.3	26.9	96.7	460-3-60	4.4	6.0	4.4	6.0	62.0	9.7	0.18	2	24.5	30.0	2,000	1-13	-
DOAS2	84.0	78.6	79.0	76.8	75.0	62.5	49.8	55.0	77.6	68.4	62.9	64.0	52.5	51.9	96.3	51.5	139.8	51.1	75.0	60.7	43.7	51.5	37.0	23.0	19.2	53.1	10.0	70.0	51.5	25.0	32.6	56.4	43.4	31.1	26.9	75.0	51.9	16.3	26.9	96.7	460-3-60	4.4	6.0	4.4	6.0	62.0	9.7	0.18	2	24.5	30.0	2,000	1-13	-
DOAS3	84.0	78.6	79.0	76.8	75.0	62.5	49.8	55.0	77.8	68.8	63.9	64.6	52.7	52.5	98.5	52.3	183.4	67.6	75.0	61.1	45.1	52.3	48.9	23.0	19.2	53.1	10.0	70.0	51.5	25.0	32.6	55.1	42.5	31.7	26.3	75.0	51.8	15.8	26.3	128.2	460-3-60	4.4	6.0	4.4	6.0	100.0	12.8	0.18	2	28.4	40.0	2,000	1-13	-
DOAS4	84.0	78.6	79.0	76.8	75.0	62.5	49.8	55.0	77.0	67.3	60.8	62.5	50.6	50.2	97.4	49.9	146.2	54.1	75.0	60.0	41.3	49.9	40.1	23.0	19.2	53.1	10.0	70.0	51.5	25.0	32.6	59.5	45.3	29.4	28.1	75.0	52.3	17.2	28.1	98.0	460-3-60	4.4	6.0	4.4	6.0	62.0	9.7	0.18	2	24.5	30.0	2,000	1-13	-

ACCESSORIES: N/A.

POWER VENTILATOR SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	FAN TYPE	FAN WHEEL	SERVICE	DRIVE TYPE	DAMPER	MOTOR ENCLOSURE	CAPACITIES			ELECTRICAL							SONES	WEIGHT (LBS.)	NOTES	ACCESSORIES
										AIRFLOW (CFM)	ESP (IN. WG.)	FAN RPM	MOTOR TYPE	MOTOR SIZE (W)	V/PH/HZ	FLA	MCA	MOCP					
EF1	GREENHECK	SP-A125	TWIN CITY, PENNBARRY	CEILING-MOUNTED VENTILATORS	STEEL HUB AND BLADES	EXHAUST	DIRECT	BACKDRAFT	ODP	100	0.25	1,053	PSC	18	120/1/60	0.2	-	-		0.5	17	1,2	A
EF2	GREENHECK	SP-A190	TWIN CITY, PENNBARRY	CEILING-MOUNTED VENTILATORS	STEEL HUB AND BLADES	EXHAUST	DIRECT	BACKDRAFT	ODP	175	0.30	1,400	PSC	49	120/1/60	0.5	-	-		1.5	17	1,2	A
EF3	GREENHECK	SP-A125	TWIN CITY, PENNBARRY	CEILING-MOUNTED VENTILATORS	STEEL HUB AND BLADES	EXHAUST	DIRECT	BACKDRAFT	ODP	100	0.30	1,100	PSC	20	120/1/60	0.2	-	-		0.8	17	1,2	A
EF4	GREENHECK	SP-A125	TWIN CITY, PENNBARRY	CEILING-MOUNTED VENTILATORS	STEEL HUB AND BLADES	EXHAUST	DIRECT	BACKDRAFT	ODP	100	0.30	1,100	PSC	20	120/1/60	0.2	-	-		0.8	17	1,2	A
EF5	GREENHECK	SP-A125	TWIN CITY, PENNBARRY	CEILING-MOUNTED VENTILATORS	STEEL HUB AND BLADES	EXHAUST	DIRECT	BACKDRAFT	ODP	50	0.25	1,053	PSC	18	120/1/60	0.2	-	-		0.5	17	1,3,4,5	A,B
EF6	GREENHECK	SP-A200	TWIN CITY, PENNBARRY	CEILING-MOUNTED VENTILATORS	STEEL HUB AND BLADES	EXHAUST	DIRECT	BACKDRAFT	ODP	200	0.29	900	PSC	44	120/1/60	0.5	-	-		1.5	24	1,3,4,5	A,B

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 CONTROLLED VIA ON/OFF SWITCH. REFER TO ELECTRICAL PLANS.
3 CONTINUOUS OPERATION.
4 REFER TO CONTROL DIAGRAMS.
5 CONTROLS TO INCLUDE MEANS OF MONITORING PROPER FUNCTION OF FAN.

ACCESSORIES:
A UNIT MOUNTED SPEED CONTROLLER
B SAIL SWITCH

AIR PURIFICATION SYSTEM SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	MOUNTING	DIMENSIONS (L x W x H) (IN)	CABINET MATERIAL	SERVICE	CAPACITIES	ELECTRICAL				SOUND (dBA)	WEIGHT (LBS.)	NOTES	ACCESSORIES
								AIRFLOW (CFM)	MOTOR TYPE	V/PH/HZ	FLA	MOCP				
APS1	ABATEMENT TECHNOLOGIES	HEPA-CARE, HC500CD	HEALTHY AIR, HONEYWELL	CEILING	22.9 x 22.9 x 16.3	ALUMINUM	CIRCULATION	200 - 500	ECM	120/1/60	6.0	15	35 - 59	50	1,2,3,4	A,B,C,D
(X)APS1	ACTIVE AIR SOLUTIONS	AAS-300	-	CEILING	23.8 x 23.8 x 16	-	CIRCULATION	100 - 300	-	120/1/60	-	-	-	65	-	-

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 CONTROLS TO INCLUDE MEANS OF MONITORING PROPER FUNCTION OF FAN.
3 SUSPENDS INTO 2' x 2' DROP CEILING GRID.
4 HINGED FRONT DOOR.

ACCESSORIES:
A VAPOR-LOCK PREFILTER, HC1802CF. THIS IS A HIGH CAPACITY ACTIVATED CARBON FILTER AND REPLACES THE STANDARD 2" PARTICULATE PRE-FILTER.
B HEPA FILTER.
C UV400C-PT, CEILING MOUNTED AIR DISINFECTION MODULE.
D WALL MOUNTED LCD TOUCH SCREEN CONTROL PANEL BOX.

DIFFUSERS, REGISTERS AND GRILLES SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	TYPE	SERVICE	NECK SIZE (IN.)	MODULE SIZE (IN.)	MATERIAL	FINISH	MOUNTING	NOTES	ACCESSORIES
S1	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	6Ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	A
S2	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	8Ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	A
S3	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	10Ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	A
S4	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	12Ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	-
S5	PRICE	LBP-16B	METALAIRE, TITUS	LINEAR BAR GRILLES	SUPPLY	10Ø	36 X 4	ALUMINUM	WHITE	CEILING SURFACE	1	-
R1	PRICE	630	METALAIRE, TITUS	FIXED FACE GRILLE	RETURN	22 X 22	24 X 24	ALUMINUM	WHITE	T-BAR	1	-

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 DUCT BRANCH CONNECTION SIZE TO BE EQUAL TO THE NECK SIZE OF DIFFUSER UNLESS NOTED OTHERWISE ON PLANS.

ACCESSORIES:
A VOLUME DAMPER

LOUVER SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	TYPE	FRAME	DESCRIPTION	MATERIAL	LOUVER DEPTH	SIZE (W X H)	SERVICE	AIRFLOW	PERFORMANCE RATINGS			NOTES	ACCESSORIES
												FREE AREA	S.P. LOSS	WATER PENETRATION		
								(IN.)	(IN.)		(CFM)	(SF)	(IN. H20)	(OZ./SF)		
L1	RUSKIN	EME3625DFL-HP	VENT PRODUCTS, POTTORFF	FIXED	CHANNEL	VERTICAL, WIND-DRIVEN-RAIN-RESISTANT	ALUMINUM	3	12 X 12	EXHAUST	100	0.29	0.02	0.00	1,2	A
L2	RUSKIN	EME3625DFL-HP	VENT PRODUCTS, POTTORFF	FIXED	CHANNEL	VERTICAL, WIND-DRIVEN-RAIN-RESISTANT	ALUMINUM	3	16 X 16	EXHAUST	375	0.63	0.06	0.00	1,2	A
L3	RUSKIN	EME3625DFL-HP	VENT PRODUCTS, POTTORFF	FIXED	CHANNEL	VERTICAL, WIND-DRIVEN-RAIN-RESISTANT	ALUMINUM	3	16 X 16	EXHAUST	200	0.63	0.02	0.00	1,2	A

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 FINISH AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OF COLOR AND GLOSS.

ACCESSORIES:
A BIRD SCREENING (MATERIAL TO MATCH LOUVER MATERIAL)

VARIABLE REFRIGERANT FLOW OUTDOOR UNIT SCHEDULE

DRAWING CODE	INDOOR UNIT(S)	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MFRS	COOLING		HEATING		MIN IEER (SEER)	MIN COP (HSPF)	ELECTRICAL			REFRIGERANT			WEIGHT (LBS)	NOTES	ACCESSORIES
					TOTAL (MBH)	OAT (°F)	TOTAL (MBH)	OAT (°F)			VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOP (AMPS)	TYPE	CAPACITY - ODU (LBS)	CAPACITY - SYSTEM (EST) (LBS)			
HP1	SEE AHU SCHEDULE	LG	ARUM144DTE5	TRANE, DAIKIN	144.0	92.0	162.0	23.0	28.6	3.8	460/3/60	26.4	35	R410A	26.5	53.1	670	1-7	A,B,C,D
HP2	SEE AHU SCHEDULE	LG	ARUM168DTE5	TRANE, DAIKIN	168.0	92.0	189.0	23.0	25.4	3.6	460/3/60	28.4	35	R410A	26.5	43.6	670	1-7	A,B,C,D
HP3	SEE AHU SCHEDULE	LG	ARUM144DTE5	TRANE, DAIKIN	144.0	92.0	162.0	23.0	28.6	3.8	460/3/60	26.4	35	R410A	26.5	45.9	670	1-7	A,B,C,D
HP4	SEE AHU SCHEDULE	LG	ARUM121DTE5	TRANE, DAIKIN	119.7	92.0	135.0	23.0	29.6	4.0	460/3/60	18.4	25	R410A	23.2	43.4	535	1-7	A,B,C,D
HP5	SEE AHU SCHEDULE	LG	ARUM192DTE5	TRANE, DAIKIN	192.0	92.0	216.0	23.0	25.9	3.8	460/3/60	35.7	50	R410A	30.9	64.6	670	1-7	A,B,C,D
HP6	SEE AHU SCHEDULE	LG	ARUM192DTE5	TRANE, DAIKIN	192.0	92.0	216.0	23.0	25.9	3.8	460/3/60	35.7	50	R410A	30.0	50.8	670	1-7	A,B,C,D
HP7	SEE AHU SCHEDULE	LG	ARUM144DTE5	TRANE, DAIKIN	144.0	92.0	162.0	23.0	28.6	3.8	460/3/60	26.4	35	R410A	26.5	36.0	670	1-7,8	A,B,C,D
HP8	SEE AHU SCHEDULE	LG	ARUM168DTE5	TRANE, DAIKIN	168.0	92.0	189.0	23.0	25.4	3.6	460/3/60	28.4	35	R410A	26.5	52.0	670	1-7	A,B,C,D

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 PROVIDE MANUFACTURER'S EXTENDED PARTS WARRANTY PERIOD OF TEN (10) YEARS FROM DATE OF START-UP.
3 PROVIDE TRAINING PER SPECIFICAITONS ONCE COMMISSIONING IS COMPLETE.
4 REFER TO SCHEMATIC PIPING/CONTROL DIAGRAM ON MECHANICAL DRAWINGS FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION DEVICES.
5 CERTIFIED FACTORY STARTUP.
6 CONTROL CONTRACTOR TO MAP IN POINTS FROM VRS TO BUILDING AUTOMATION SYSTEM.
7 INTEGRATE INTO EXISTING CONTROL SYSTEM. PROVIDE EMAIL NOTIFICATION OF ALARMS. IF ALTERNATE MANUFACTURER IS USED, SYSTEM CONTROLLER AND ALL THERMOSTATS MUST BE REPLACED.
8 HEAT PUMP SYSTEM, NOT A HEAT RECOVERY SYSTEM, NO HEAT RECOVERY BOXES NEEDED.

ACCESSORIES:
A SEACOAST COATING PROTECTION ON OUTDOOR UNIT.
B PROVIDE (2) CENTAL CONTROLLERS PACS5A000 WITH BACNET INTERFACE.
C MOUNT OUTDOOR VRF UNIT ON QUICK-SLING EQUIPMENT STANDS OR APPROVE EQUAL. STANDS TO BE ANCHORED TO CONCRETE AND VRF UNITS TO BE ANCHORED TO STANDS.
D PROVIDE ICM CONTOLS LINE VOLTAGE MONITOR ICM450A+ OR EQUAL AND CONTACTOR TO MONITOR PHASE AND VOLTAGE

VARIABLE REFRIGERANT FLOW HEAT RECOVERY UNIT SCHEDULE

DRAWING CODE	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	ASSOCIATED OUTDOOR UNIT	ALTERNATE APPROVED MFRS	POWER INPUT (RATED) COOLING (KW)	POWER INPUT (RATED) HEATING (KW)	ELECTRICAL			WEIGHT (LBS)	NOTES	ACCESSORIES
							VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOCP (AMPS)			
HR1.1	LG	PRHR043A	HP1	TRANE, DAIKIN	0.040	0.037	208/1/60	1.0	15	50	1,2	A
HR1.2	LG	PRHR083A	HP1	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR1.3	LG	PRHR063A	HP1	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR1.4	LG	PRHR083A	HP1	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR2.1	LG	PRHR083A	HP2	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR2.2	LG	PRHR063A	HP2	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR3.1	LG	PRHR083A	HP3	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR3.2	LG	PRHR043A	HP3	TRANE, DAIKIN	0.040	0.037	208/1/60	1.0	15	50	1,2	A
HR3.3	LG	PRHR083A	HP3	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR4.1	LG	PRHR063A	HP4	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR4.2	LG	PRHR083A	HP4	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR4.3	LG	PRHR063A	HP4	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR5.1	LG	PRHR083A	HP5	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR5.2	LG	PRHR063A	HP5	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR5.3	LG	PRHR063A	HP5	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR5.4	LG	PRHR043A	HP5	TRANE, DAIKIN	0.040	0.037	208/1/60	1.0	15	50	1,2	A
HR5.5	LG	PRHR063A	HP5	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR6.1	LG	PRHR063A	HP6	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR6.2	LG	PRHR083A	HP6	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR8.1	LG	PRHR083A	HP8	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR8.2	LG	PRHR083A	HP8	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR8.3	LG	PRHR063A	HP8	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR8.4	LG	PRHR043A	HP8	TRANE, DAIKIN	0.040	0.037	208/1/60	1.0	15	50	1,2	A

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 IF ALTERNATE MANUFACTURER IS USED, CONTRACTOR SHALL PROVIDE CONDENSATE DRAINS.

ACCESSORIES:
A SUCTION AND LIQUID LINES SERVICE ISOLATION VALVES FOR ALL PORTS.

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043801 ROY O. GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Schedules

Rev.	Date	Notes

M6.1R

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VARIABLE REFRIGERANT FLOW AIR HANDLER SCHEDULE

DRAWING CODE	SPACE SERVED	HEAT RECOVERY UNIT	OUTDOOR UNIT	ASSOCIATED ERV/DOAS UNIT	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MFRS	INDOOR UNIT CONFIGURATION	NOMINAL COOLING CAPACITY (MBH)	NOMINAL HEATING CAPACITY (MBH)	SUPPLY AIRFLOW MAX (CFM)	OUTSIDE AIR AIRFLOW (CFM)	ELECTRICAL			WEIGHT (LBS)	NOTES	ACCESSORIES
													VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOP (AMPS)			
AH1200	412 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	29	1-4,8,9	B,C
AH1201	414 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1216	415 COPY/PRINT	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	10		0.25	15	29	1-4,8,9	B,C
AH1202	416 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1203	418 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1204	419 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1205	420 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1206	421 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	29	1-4,8,9	B,C
AH1207	422 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1208	423 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1209	424 OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	29	1-4,8,9	B,C
AH1210	426 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1217	425 OPEN OFFICE	SEE DIAGRAM	HP12	DOAS5	LG	ARNU123M1A4	TRANE, DAIKIN	HORIZONTAL DUCTED - MEDIUM STATIC	12.3	13.6	392	85	208/1/60	2.00	15	56	1-4,8,9	B,C
AH1211	427 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1212	428 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1218	429 MENS	SEE DIAGRAM				ARNU073M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	7.5	8.5	360-210	-		2.00	15	70	1-4,8,9	B,C
AH1213	430 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1214	431 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1215	432 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	29	1-4,8,9	B,C
AH1220	MULTIPLE SPACES	SEE DIAGRAM				ARNU123NJA4		MULTI-POSITION AIR HANDLER	12.0	13.5	530-380	-		1.40	15	130	1-4,8,9	B
AH1221	MULTIPLE SPACES	SEE DIAGRAM				ARNU123NJA4		MULTI-POSITION AIR HANDLER	12.0	13.5	530-380	10		1.40	15	130	1-4,8,9	B
AH1224	MULTIPLE SPACES	SEE DIAGRAM				ARNU243NJA4		MULTI-POSITION AIR HANDLER	24.0	27.0	710-480	-		1.40	15	130	1-4,8,9	B
AH1222	MECHANICAL MEZZANINE	SEE DIAGRAM				ARNU123NJA4		MULTI-POSITION AIR HANDLER	12.0	13.5	530-380	-		1.40	15	130	1-4,8,9	B
AH1219	NORTH ATTIC SPACE	SEE DIAGRAM				ARNU183NJA4		MULTI-POSITION AIR HANDLER	18.0	20.0	579	-		1.40	15	117	1-4,8,9	B
AH1223	435 LOBBY	SEE DIAGRAM				ARNU123NJA4		MULTI-POSITION AIR HANDLER	12.0	13.5	530-380	40		1.40	15	130	1-4,8,9	B

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 PROVIDE MANUFACTURER'S EXTENDED PARTS WARRANTY PERIOD OF TEN (10) YEARS FROM DATE OF START-UP.
3 PROVIDE TRAINING PER SPECIFICAITONS ONCE COMMISSIONING IS COMPLETE.
4 REFER TO SCHEMATIC PIPING/CONTROL DIAGRAM ON MECHANICAL DRAWINGS FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION DEVICES.
5 NOT USED.
6 NOT USED.
7 NOT USED.
8 CERTIFIED FACTORY STARTUP.
9 INTEGRATE INTO EXISTING CONTROL SYSTEM. PROVIDE EMAIL NOTIFICATION OF ALARMS.

ACCESSORIES:
A NOT USED.
B NEW WIRED WALL-MOUNTED REMOTE CONTROLLER WITH HUMIDITY DISPLAY. LG MODEL # CRC2.
C BUILT-IN CONDENSATE LIFT MECHANISM
D PROVIDE ASPEN PUMPS MINI BLANC CONDENSATE PUMP OR APPROVED EQUAL.
E PROVIDE PLASTIC COVER FOR ALL EXPOSED REFRIGERANT PIPING.

VARIABLE REFRIGERANT FLOW OUTDOOR UNIT SCHEDULE

DRAWING CODE	INDOOR UNIT(S)	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MFRS	COOLING		HEATING		MIN IEER (SEER)	MIN COP (HSPF)	ELECTRICAL			REFRIGERANT			WEIGHT (LBS)	NOTES	ACCESSORIES
					TOTAL (MBH)	OAT (°F)	TOTAL (MBH)	OAT (°F)			VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOP (AMPS)	TYPE	CAPACITY - ODU (LBS)	CAPACITY - SYSTEM (EST) (LBS)			
HP9	SEE AHU SCHEDULE	LG	ARUM144BTE5	TRANE, DAIKIN	144.0	92.0	162.0	23.0	28.6	3.8	208/3/60	51.1	70	R410A	26.5	23.8	639	1-4,8,9,10	A,B,C,D
HP10	SEE AHU SCHEDULE	LG	ARUM121BTE5	TRANE, DAIKIN	119.7	92.0	135.0	23.0	29.6	4.0	208/3/60	30.9	40	R410A	23.2	19.7	507	1-4,8,9,10	A,B,C,D
HP11	SEE AHU SCHEDULE	LG	ARUM216BTE5	TRANE, DAIKIN	216.0	92.0	243.0	23.0	24.8	3.5	208/3/60	60.3	80	R410A	37.5	28.3	666	1-4,8,9,10	A,B,C,D
HP12	SEE AHU SCHEDULE	LG	ARUM168BTE5	TRANE, DAIKIN	168.0	92.0	189.0	23.0	25.4	3.6	208/3/60	53.6	70	R410A	26.5	30.7	639	1-4,8,9,10	A,B,C,D

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 PROVIDE MANUFACTURER'S EXTENDED PARTS WARRANTY PERIOD OF TEN (10) YEARS FROM DATE OF START-UP.
3 PROVIDE TRAINING PER SPECIFICAITONS ONCE COMMISSIONING IS COMPLETE.
4 REFER TO SCHEMATIC PIPING/CONTROL DIAGRAM ON MECHANICAL DRAWINGS FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION DEVICES.
5 NOT USED.
6 NOT USED.
7 NOT USED.
8 CERTIFIED FACTORY STARTUP.
9 CONTROL CONTRACTOR TO MAP IN POINTS FROM VRS TO BUILDING AUTOMATION SYSTEM.
10 INTEGRATE INTO EXISTING CONTROL SYSTEM.

ACCESSORIES:
A SEACOAST COATING PROTECTION ON OUTDOOR UNIT.
B PROVIDE (2) CENTAL CONTROLLERS PACS5A000 WITH BACNET INTERFACE.
C MOUNT OUTDOOR VRF UNIT ON QUICK-SLING EQUIPMENT STANDS OR APPROVE EQUAL. STANDS TO BE ANCHORED TO CONCRETE AND VRF UNITS TO BE ANCHORED TO STANDS.
D PROVIDE ICM CONTOLS LINE VOLTAGE MONITOR ICM450A+ OR EQUAL AND CONTACTOR TO MONITOR PHASE AND VOLTAGE

VARIABLE REFRIGERANT FLOW HEAT RECOVERY UNIT SCHEDULE

DRAWING CODE	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	ASSOCIATED OUTDOOR UNIT	ALTERNATE APPROVED MFRS	POWER INPUT (RATED) COOLING (KW)	POWER INPUT (RATED) HEATING (KW)	ELECTRICAL			WEIGHT (LBS)	NOTES	ACCESSORIES
							VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOCP (AMPS)			
HR9.1	LG	PRHR083A	HP9	TRANE, DAIKIN	0.076	0.072	208/3/60	1.0	15	80	1,2	A
HR9.2	LG	PRHR083A	HP9	TRANE, DAIKIN	0.076	0.072	208/3/60	1.0	15	80	1,2	A
HR9.3	LG	PRHR083A	HP9	TRANE, DAIKIN	0.076	0.072	208/3/60	1.0	15	80	1,2	A
HR9.4	LG	PRHR043A	HP9	TRANE, DAIKIN	0.040	0.037	208/3/60	1.0	15	50	1,2	A
HR10.1	LG	PRHR083A	HP10	TRANE, DAIKIN	0.076	0.072	208/3/60	1.0	15	80	1,2	A
HR10.2	LG	PRHR083A	HP10	TRANE, DAIKIN	0.076	0.072	208/3/60	1.0	15	80	1,2	A
HR10.3	LG	PRHR083A	HP10	TRANE, DAIKIN	0.076	0.072	208/3/60	1.0	15	80	1,2	A
HR11.1	LG	PRHR083A	HP11	TRANE, DAIKIN	0.076	0.072	208/3/60	1.0	15	80	1,2	A
HR11.2	LG	PRHR083A	HP11	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR11.3	LG	PRHR083A	HP11	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR11.4	LG	PRHR083A	HP11	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR12.1	LG	PRHR083A	HP12	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR12.2	LG	PRHR063A	HP12	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	75	1,2	A
HR12.3	LG	PRHR083A	HP12	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A
HR12.4	LG	PRHR083A	HP12	TRANE, DAIKIN	0.076	0.072	208/1/60	1.0	15	80	1,2	A

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 IF ALTERNATE MANUFACTURER IS USED, CONTRACTOR SHALL PROVIDE CONDENSATE DRAINS.

ACCESSORIES:
A SUCTION AND LIQUID LINES SERVICE ISOLATION VALVES FOR ALL PORTS.

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043801 ROY O. GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Schedules

Rev.	Date	Notes

M6.2

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VARIABLE REFRIGERANT FLOW AIR HANDLER SCHEDULE

DRAWING CODE	SPACE SERVED	HEAT RECOVERY UNIT	OUTDOOR UNIT	ASSOCIATED ERV/DOAS UNIT	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MFRS	INDOOR UNIT CONFIGURATION	NOMINAL COOLING CAPACITY (MBH)	NOMINAL HEATING CAPACITY (MBH)	SUPPLY AIRFLOW MAX (CFM)	OUTSIDE AIR AIRFLOW (CFM)	ELECTRICAL			WEIGHT (LBS)	NOTES	ACCESSORIES
													VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOP (AMPS)			
AH101	162B - SPRINKLER	SEE DIAGRAM	HP1	DOAS3	LG	ARNU053SJS4	TRANE, DAIKIN	WALL MOUNTED	5.5	6.1	240-208	-	208/1/60	0.31	15	25	1 - 6	A,D,E
AH102	162A - ELECTRIC	SEE DIAGRAM				ARNU093SJS4		WALL MOUNTED	9.6	10.9	275-210	-		0.31	15	25	1 - 6	A,D,E
AH103	162 - SALLYPORT	SEE DIAGRAM				ARNU123TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	12.3	13.6	305-245	-		0.25	15	50	1 - 6	A,C
AH104	163 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU093TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	9.6	10.9	280-250	65		0.25	15	50	1 - 6	A,C
AH105	163B - INTERVIEW	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	40		0.25	15	45	1 - 6	A,C
AH106	164 - OBSERVATION	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	30		0.23	15	55	1 - 6	A,C
AH107	160 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU093M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	9.6	10.9	375-230	120		2.00	15	70	1 - 6	A
AH108	161 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU073M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	7.5	8.5	360-210	70		2.00	15	70	1 - 6	A
AH109A	167 - PATROL BRIEF	SEE DIAGRAM				ARNU153TQD4		CEILING CASSETTE - 4 WAY (2' X 2')	15.4	17.1	390-330	60		0.25	15	50	1 - 6	A,C
AH109B	167 - PATROL BRIEF	SEE DIAGRAM				ARNU153TQD4		CEILING CASSETTE - 4 WAY (2' X 2')	15.4	17.1	390-330	60		0.25	15	50	1 - 6	A,C
AH110	166 EVIDENCE PROC.	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	B,C
AH111	156 ARMORY	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	50		0.25	15	45	1 - 6	B,C
AH112	168 EVIDENCE PROC.	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	35		0.25	15	45	1 - 6	B,C
AH113	169 - WOMENS LOCKER	SEE DIAGRAM				ARNU093M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	9.6	10.9	375-230	25		2.00	15	70	1 - 6	A
AH114	171 - MENS LOCKER	SEE DIAGRAM				ARNU153M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	15.4	17.1	570-330	35		2.00	15	70	1 - 6	A
AH115	170 EVIDENCE PROCESSI	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	40		0.25	15	45	1 - 6	B,C
AH116	168A EVIDENCE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	80		0.25	15	45	1 - 6	B,C
AH117	168B HIGH VALUE EVIDEN	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	25		0.23	15	55	1 - 6	B,C
AH118	155 - LIEUTENANT	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	25		0.25	15	45	1 - 6	A,C
AH119	150 - CRIME PREV.	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	25		0.25	15	45	1 - 6	A,C
AH120	151 - BIKE OFF.	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	25		0.25	15	45	1 - 6	A,C
AH121	153 - EVID/UNIF. OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	25		0.25	15	45	1 - 6	A,C
AH122	154 - STREET CRIME	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	25		0.25	15	45	1 - 6	A,C
AH201	100 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM	HP2	DOAS3	LG	ARNU363M2A4	TRANE, DAIKIN	HORIZONTAL DUCTED - MEDIUM STATIC	36.2	40.6	1030-676	145	208/1/60	2.90	15	100	1 - 6	A
AH202	100 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU363M2A4		HORIZONTAL DUCTED - MEDIUM STATIC	36.2	40.6	1030-676	210		2.90	15	100	1 - 6	A
AH203	139 - ELEV. MACH.	SEE DIAGRAM				ARNU123SJS4		WALL MOUNTED	12.3	13.6	300-240	15		0.31	15	25	1 - 6	A,D,E
AH204	142 - BREAK RM	SEE DIAGRAM				ARNU483M3A4		HORIZONTAL DUCTED - MEDIUM STATIC	48.1	54.2	1480-918	185		3.10	15	110	1 - 6	A
AH205	143 - WEIGHT RM	SEE DIAGRAM				ARNU243M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	24.2	27.3	703-555	390		2.00	15	70	1 - 6	A
AH206	140 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU093M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	9.6	10.9	375-230	25		2.00	15	70	1 - 6	A
AH207	147 - INTERVW & REPORT	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	35		0.25	15	45	1 - 6	A,C
AH208	149 - STORAGE	SEE DIAGRAM				ARNU053SJS4		WALL MOUNTED	5.5	6.1	240-208	15		0.31	15	25	1 - 6	A,D,E
AH209	172 - DATA	SEE DIAGRAM				ARNU123SJS4		WALL MOUNTED	12.3	13.6	300-240	-		0.31	15	25	1 - 6	B,D,E
AH210	148 - RECPTION	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	30		0.23	15	55	1 - 6	A,C
AH211	148 - RECORDS	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	25		0.23	15	55	1 - 6	A,C
AH212	146 - WAITING	SEE DIAGRAM				ARNU073M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	7.5	8.5	360-210	45		2.00	15	70	1 - 6	A
AH301	100 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM	HP3	DOAS1	LG	ARNU363M2A4	TRANE, DAIKIN	HORIZONTAL DUCTED - MEDIUM STATIC	36.2	40.6	1030-676	90	208/1/60	2.90	15	100	1 - 6	A
AH302	101 - CONFERENCE	SEE DIAGRAM				ARNU093M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	9.6	10.9	375-230	60		2.00	15	70	1 - 6	A
AH303	102 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH304	103 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH305	104 - OFFICE	SEE DIAGRAM				ARNU093TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	9.6	10.9	280-250	20		0.25	15	50	1 - 6	A,C
AH306	105 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH307	108 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH308	107 - COPY MAIL CENTER	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	10		0.25	15	45	1 - 6	B,C
AH309	107A - OFFICE*	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	B,C
AH310	106 - CONFERENCE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	60		0.25	15	45	1 - 6	A,C
AH311	137 - ELECTRIC	SEE DIAGRAM				ARNU073SJS4		WALL MOUNTED	7.5	8.5	255-210	-		0.31	15	25	1 - 6	B,D,E
AH312	138 OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	B,C
AH313	136 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH314	134 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH315	132 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH316	110 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU183M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	19.1	13.9	640-390	130		2.00	15	70	1 - 6	A
AH317	111A - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	B,C
AH401	115 - IT	SEE DIAGRAM	HP4	DOAS1	LG	ARNU053SJS4	TRANE, DAIKIN	WALL MOUNTED	5.5	6.1	240-208	-	208/1/60	0.31	15	25	1 - 6	A,D,E
AH402	118 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH403	120 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH404	122 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH405	123 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	25		0.25	15	45	1 - 6	A,C
AH406	113 - DATA	SEE DIAGRAM				ARNU123SJS4		WALL MOUNTED	12.3	13.6	300-240	-		0.31	15	25	1 - 6	B,D,E
AH407	125 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH408	126 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH409	127 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	25		0.25	15	45	1 - 6	A,C
AH410	128 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH411	129 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH412	130 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH413	119 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU153M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	15.4	17.1	570-330	125		2.00	15	70	1 - 6	A
AH414	121 - CONF. & DOCS.	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	50		0.25	15	45	1 - 6	A,C
AH415	116 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU073M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	7.5	8.5	360-210	60		2.00	15	70	1 - 6	A

NOTES:
1. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2. PROVIDE MANUFACTURER'S EXTENDED PARTS WARRANTY PERIOD OF TEN (10) YEARS FROM DATE OF START-UP.
3. PROVIDE TRAINING PER SPECIFICAITONS ONCE COMMISSIONING IS COMPLETE.
4. REFER TO SCHEMATIC PIPING/CONTROL DIAGRAM ON MECHANICAL DRAWINGS FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION DEVICES.
5. CERTIFIED FACTORY STARTUP.
6. INTEGRATE INTO EXISTING CONTROL SYSTEM. PROVIDE EMAIL NOTIFICATION OF ALARMS. IF ALTERNATE MANUFACTURER IS USED, SYSTEM CONTROLLER AND ALL THERMOSTATS MUST BE REPLACED.
7. HEAT PUMP SYSTEM, NOT A HEAT RECOVERY SYSTEM. NO HEAT RECOVERY BOXES NEEDED.

ACCESSORIES:
A. EXISTING WIRED WALL-MOUNTED REMOTE CONTROLLER WITH HUMIDITY DISPLAY TO REMAIN. LG MODEL # CRC1+
B. NEW WIRED WALL-MOUNTED REMOTE CONTROLLER WITH HUMIDITY DISPLAY. LG MODEL # CRC2.
C. BUILT-IN CONDENSATE LIFT MECHANISM
D. PROVIDE ASPEN PUMPS MINI BLANC CONDENSATE PUMP OR APPROVED EQUAL.
E. PROVIDE PLASTIC COVER FOR ALL EXPOSED REFRIGERANT PIPING.

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Schedules

Rev.	Date	Notes

M6.2R

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100% OUTSIDE AIR - DX AIR SOURCE HEAT PUMP WITH ENERGY RECOVERY (PART 1 OF 2)

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	OUTSIDE AIR	RETURN/ EXHAUST AIR	PERCENT OA	ESP	SUMMER DESIGN DAY - HOT																					
								ER WHEEL - DEHUMIDIFICATION												DX COIL - COOLING						REHEAT			
								OUTSIDE AIR TEMP				RETURN AIR TEMP				WHEEL SUPPLY AIR TEMP				COIL SUPPLY AIR TEMP				TOTAL	SENS	UNIT SUPPLY AIR TEMP				CAPACITY
				CFM	CFM	%	IN. H2O	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	MBH	MBH	DB °F	WB °F	RH %	DP °F	MBH
DOAS5	UNITED COOLAIR	AAH200G#ASTA1	-	1700	1360	100	1.0	97.0	79.0	45.7	72.6	75.0	62.5	49.8	55.0	81.5	68.5	51.8	62.1	51.4	50.9	97.1	50.6	164.8	83.8	75.0	60.3	42.3	50.6	44.0

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER REQUIREMENTS.
2 ENTHALPY ENERGY RECOVERY WHEEL
3 ECM FANS - SUPPLY AND EXHAUST
4 SOLID DOUBLE WALL LINER W/ 1" THERMAL / ACCOUSTIC FIBERGLASS INSULATION
5 SUBCOOLING COIL FOR INCREASED EFFICIENCY
6 STAINLESS STEEL DRAIN PANS - EVAPORATOR AND CONDENSER
7 BUILT-IN PRESSURE TRANSDUCERS FOR AIRFLOW MEASUREMENT
8 2" MERV 13 PLEATED THROWAWAY SUPPLY FILTER
9 2" MERV 8 PLEATED THROWAWAY RETURN FILTER
10 QUICK-CONNECT REFRIGERANT FITTINGS TO SHIP SPLIT; FIELD ASSEMBLED
11 ISOLATED ELECTRICAL CONTROL BOX
12 MICROPROCESSOR W/ BUILT-IN DISPLAY INTERFACE AND BACNET
13 MODULATING HOT GAS REHEAT

100% OUTSIDE AIR - DX AIR SOURCE HEAT PUMP WITH ENERGY RECOVERY (PART 2 OF 2)

DRAWING CODE	SUMMER DESIGN DAY - HUMID																				WINTER DESIGN DAY																ELECTRICAL												WEIGHT	NOTES	ACCESSORIES
	ER WHEEL - DEHUMIDIFICATION								DX COIL - COOLING						REHEAT				ER WHEEL - HEATING								HEATING																										
	OUTSIDE AIR TEMP				RETURN AIR TEMP				WHEEL SUPPLY AIR TEMP				COIL SUPPLY AIR TEMP				TOTAL	SENS	UNIT SUPPLY AIR TEMP				CAPACITY		OUTSIDE AIR TEMP				RETURN AIR TEMP				WHEEL SUPPLY AIR TEMP				UNIT SUPPLY AIR TEMP				CAPACITY		VOLTAGE	SUPPLY FAN MOTOR		EXHAUST FAN MOTOR		COMPRESSOR		ERW (EACH)	ERW QTY	UNIT MCA	UNIT MOP				
	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	MBH	MBH	DB °F	WB °F	RH %	DP °F	MBH		DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	DB °F	WB °F	RH %	DP °F	MBH		V-PH-HZ	KW	AMPS	KW	AMPS	LRA	RLA	AMPS		AMPS	AMPS	LBS			
DOAS5	84.0	78.6	79.0	76.8	75.0	62.5	49.8	55.0	77.7	68.6	63.3	64.2	50.6	50.3	98.4	50.1	165.3	63.4	75.0	60.1	41.6	50.1	45.5		23.0	19.2	53.1	10.0	70.0	51.5	25.0	32.6	55.9	43.0	31.3	26.7	75.0	51.9	16.1	26.7	109.4		230-3-60	4.4	13.7	4.4	13.7	191.0	27.6	0.40	2	62.7	90.0	2,000		1-13	-

ACCESSORIES: N/A.

LOUVER SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	TYPE	FRAME	DESCRIPTION	MATERIAL	LOUVER DEPTH	SIZE (W X H)	SERVICE	AIRFLOW	PERFORMANCE RATINGS			NOTES	ACCESSORIES
												FREE AREA	S.P. LOSS	WATER PENETRATION		
								(IN.)	(IN.)		(CFM)	(SF)	(IN. H20)	(OZ./SF)		
L4	RUSKIN	EME3625DFLHP	VENT PRODUCTS, POTTORFF	FIXED	CHANNEL	VERTICAL, WIND-DRIVEN-RAIN-RESISTANT	ALUMINUM	3-1/8"	28 X 24	INTAKE	1,700	2.09	0.10	0.00	1,2,3	-
L5	RUSKIN	EME3625DFLHP	VENT PRODUCTS, POTTORFF	FIXED	CHANNEL	VERTICAL, WIND-DRIVEN-RAIN-RESISTANT	ALUMINUM	3-1/8"	17 X 17	EXHAUST	1,360	0.73	0.55	N/A	1,2,3	-

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 LOUVER TO BE INSTALLED BEHIND ARCHITECTURAL LOUVER SELECTED BY ARCHITECT.
3 FINISH AS SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OF COLOR AND GLOSS.

ACCESSORIES: A N/A.

DIFFUSERS, REGISTERS AND GRILLES SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	TYPE	SERVICE	NECK SIZE (IN.)	MODULE SIZE (IN.)	MATERIAL	FINISH	MOUNTING	NOTES	ACCESSORIES
S1	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	6Ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	A
S2	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	8Ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	A
S3	PRICE	ASCD	METALAIRE, TITUS	SQUARE CEILING DIFFUSER	SUPPLY	10Ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	A
S6	PRICE	610	METALAIRE, TITUS	FIXED FACE GRILLE	SUPPLY	8 X 4	10 X 6	ALUMINUM	WHITE	WALL SURFACE	1,2	A
S7	PRICE	610	METALAIRE, TITUS	LINEAR BAR GRILLES	SUPPLY	10 X 8	12 X 10	ALUMINUM	WHITE	WALL SURFACE	1,2	A
S8	PRICE	610	METALAIRE, TITUS	LINEAR BAR GRILLES	SUPPLY	10 X 8	12 X 10	ALUMINUM	WHITE	DUCT SURFACE	1,2	A
R1	PRICE	630	METALAIRE, TITUS	FIXED FACE GRILLE	RETURN	22 X 22	24 X 24	ALUMINUM	WHITE	T-BAR	1	-
R2	PRICE	630	METALAIRE, TITUS	FIXED FACE GRILLE	RETURN	12 X 8	14 X 10	ALUMINUM	WHITE	WALL SURFACE	1	-
E1	PRICE	630	METALAIRE, TITUS	FIXED FACE GRILLE	RETURN	22 X 22	24 X 24	ALUMINUM	WHITE	T-BAR	1	A
E2	PRICE	630	METALAIRE, TITUS	FIXED FACE GRILLE	RETURN	8 X 6	10 X 8	ALUMINUM	WHITE	WALL SURFACE	1	A

NOTES:
1 REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2 DUCT BRANCH CONNECTION SIZE TO BE EQUAL TO THE NECK SIZE OF DIFFUSER UNLESS NOTED OTHERWISE ON PLANS.

ACCESSORIES: A VOLUME DAMPER

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O GRADY
02/21/2024

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102 Town Hall Drive
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Construction Drawings

Issue Date: February 23, 2024

Mechanical Schedules

Rev.	Date	Notes

M6.3

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VARIABLE REFRIGERANT FLOW AIR HANDLER SCHEDULE

DRAWING CODE	SPACE SERVED	HEAT RECOVERY UNIT	OUTDOOR UNIT	ASSOCIATED ERV/DOAS UNIT	BASIS OF DESIGN MFR	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MFRS	INDOOR UNIT CONFIGURATION	NOMINAL COOLING CAPACITY (MBH)	NOMINAL HEATING CAPACITY (MBH)	SUPPLY AIRFLOW MAX (CFM)	OUTSIDE AIR AIRFLOW (CFM)	ELECTRICAL			WEIGHT (LBS)	NOTES	ACCESSORIES
													VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOP (AMPS)			
AH501	245 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM	HP5	DOAS4	LG	ARNU243NJA4	TRANE, DAIKIN	MULTI-POSITION AIR HANDLER	24.0	27.0	710-480	75	208/1/60	1.40	15	130	1 - 6	A
AH502	237 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU243NJA4		MULTI-POSITION AIR HANDLER	24.0	27.0	710-480	60		1.40	15	130	1 - 6	A
AH503	244 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH504	243 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH505	246 - OFFICE	SEE DIAGRAM				ARNU093TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	9.6	10.9	280-250	20		0.25	15	50	1 - 6	A,C
AH506	247 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH507	248 - ELECTRIC	SEE DIAGRAM				ARNU073SJS4		WALL MOUNTED	7.5	8.5	255-210	-		0.31	15	25	1 - 6	B,D,E
AH508	249 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	25		0.25	15	45	1 - 6	A,C
AH509	253A - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	25		0.25	15	45	1 - 6	A,C
AH510	250 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	45	1 - 6	A,C
AH511	251 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	15		0.25	15	45	1 - 6	A,C
AH512A	253 - OPEN OFFICE	SEE DIAGRAM				ARNU123TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	12.3	13.6	305-245	50		0.25	15	50	1 - 6	A,C
AH512B	253 - OPEN OFFICE	SEE DIAGRAM				ARNU123TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	12.3	13.6	305-245	45		0.25	15	50	1 - 6	A,C
AH513	254 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH514	255 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH515	256 - STAIR	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	-		0.23	15	55	1 - 6	A,C
AH516	242 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH517	241 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH518	252 - SERVER	SEE DIAGRAM				ARNU123SJS4		WALL MOUNTED	12.3	13.6	300-240	-		0.31	15	25	1 - 6	A,D,E
AH519	235 - MECH ACCESS	SEE DIAGRAM				ARNU053SJS4		WALL MOUNTED	5.5	6.1	240-208	-		0.31	15	25	1 - 6	A,D,E
AH520	240 STAIRS - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	-		0.23	15	55	1 - 6	A,C
AH521	239 - CONFERENCE	SEE DIAGRAM				ARNU123TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	12.3	13.6	305-245	45		0.25	15	50	1 - 6	A,C
AH522	236 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH523	234 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH524	231 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH525	225 EAST TRNG CNCLOVRFLW	SEE DIAGRAM				ARNU303NJA4		MULTI-POSITION AIR HANDLER	30.0	34.0	880-630	160		1.40	15	130	1 - 6	A
AH601	200B - CONFERENCE	SEE DIAGRAM	HP6	DOAS4	LG	ARNU243TNA4	TRANE, DAIKIN	CEILING CASSETTE - 4 WAY (3' X 3')	24.2	27.3	740-600	65	208/1/60	0.71	15	85	1 - 6	B,C
AH602	200A - LOBBY	SEE DIAGRAM				ARNU543NKA4		MULTI-POSITION AIR HANDLER	54.0	60.0	1475-1260	185		2.25	15	180	1 - 6	A
AH603	200 - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU483NKA4		MULTI-POSITION AIR HANDLER	48.0	54.0	1402-999	180		2.25	15	180	1 - 6	A
AH604	225 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU423NKA4		MULTI-POSITION AIR HANDLER	42.0	46.0	1250-999	155		2.25	15	180	1 - 6	A
AH605	226 - SERVING KITCHEN	SEE DIAGRAM				ARNU153TQD4		CEILING CASSETTE - 4 WAY (2' X 2')	15.4	17.1	390-330	30		0.25	15	50	1 - 6	A,C
AH606	227 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU123NJA4		MULTI-POSITION AIR HANDLER	12.0	13.5	530-380	40		1.40	15	130	1 - 6	A
AH607	200A CONF.	SEE DIAGRAM				ARNU093TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	9.6	10.9	280-250	70		0.25	15	50	1 - 6	A,C
AH608	225 EAST SUPPLEMENTAL	SEE DIAGRAM				ARNU153TQD4		CEILING CASSETTE - 4 WAY (2' X 2')	15.4	17.1	390-330	-		0.25	15	50	1 - 6	B,C
AH609	225 WEST SUPPLEMENTAL	SEE DIAGRAM				ARNU153TQD4		CEILING CASSETTE - 4 WAY (2' X 2')	15.4	17.1	390-330	-		0.25	15	50	1 - 6	B,C
AH610	230 - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH611	230A - OFFICE	SEE DIAGRAM				ARNU053TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	5.5	6.1	265-215	20		0.25	15	45	1 - 6	A,C
AH701	201B - COUNCIL CHAMBERS	SEE DIAGRAM	HP7	DOAS2	LG	ARNU423NKA4	TRANE, DAIKIN	MULTI-POSITION AIR HANDLER	42.0	46.0	1250-999	375	208/1/60	2.25	15	180	1 - 7	A
AH702	201B - COUNCIL CHAMBERS	SEE DIAGRAM				ARNU423NKA4		MULTI-POSITION AIR HANDLER	42.0	46.0	1250-999	375		2.25	15	180	1 - 7	A
AH703	201B - COUNCIL CHAMBERS	SEE DIAGRAM				ARNU423NKA4		MULTI-POSITION AIR HANDLER	42.0	46.0	1250-999	375		2.25	15	180	1 - 7	A
AH704	201B - COUNCIL CHAMBERS	SEE DIAGRAM				ARNU423NKA4		MULTI-POSITION AIR HANDLER	42.0	46.0	1250-999	375		2.25	15	180	1 - 7	A
AH801	201A - CAMERA RM	SEE DIAGRAM	HP8	DOAS1	LG	ARNU093TRD4	TRANE, DAIKIN	CEILING CASSETTE - 4 WAY (2' X 2')	9.6	10.9	280-250	20	208/1/60	0.25	15	50	1 - 6	A,C
AH802	202 - WAITING	SEE DIAGRAM				ARNU093M1A4		HORIZONTAL DUCTED - MEDIUM STATIC	9.6	10.9	375-230	45		2.00	15	70	1 - 6	A
AH803	219 - COUNCIL CONF.	SEE DIAGRAM				ARNU123NJA4		MULTI-POSITION AIR HANDLER	12.0	13.5	530-380	70		1.40	15	130	1 - 6	A
AH804	203 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH805	204 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	15		0.25	15	45	1 - 6	A,C
AH806	205 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	15		0.25	15	45	1 - 6	A,C
AH807	207 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	15		0.25	15	45	1 - 6	A,C
AH808	208 - SERVER	SEE DIAGRAM				ARNU153SJS4		WALL MOUNTED	15.4	17.1	370-240	-		0.31	15	25	1 - 6	A,D,E
AH809	221 ZONE - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU303NJA4		MULTI-POSITION AIR HANDLER	30.0	34.0	880-630	120		1.40	15	130	1 - 6	A
AH810	209 - ELECTRIC	SEE DIAGRAM				ARNU073SJS4		WALL MOUNTED	7.5	8.5	255-210	-		0.31	15	25	1 - 6	B,D,E
AH811	210 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH812	211 - CONF	SEE DIAGRAM				ARNU123TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	12.3	13.6	305-245	45		0.25	15	50	1 - 6	B,C
AH813	224 - MECH ACCESS	SEE DIAGRAM				ARNU053SJS4		WALL MOUNTED	5.5	6.1	240-208	-		0.31	15	25	1 - 6	A,D,E
AH814	213 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH815	214 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH816	217 - OFFICE	SEE DIAGRAM				ARNU073TRD4		CEILING CASSETTE - 4 WAY (2' X 2')	7.5	8.5	265-215	20		0.25	15	45	1 - 6	A,C
AH817	218 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH818	220 - OFFICE	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	20		0.23	15	55	1 - 6	A,C
AH819	223 STAIRS - (MULTIPLE SPACES)	SEE DIAGRAM				ARNU073TUD4		CEILING CASSETTE - 1 WAY	7.5	8.5	290-225	-		0.23	15	55	1 - 6	A,C

NOTES:
1. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
2. PROVIDE MANUFACTURER'S EXTENDED PARTS WARRANTY PERIOD OF TEN (10) YEARS FROM DATE OF START-UP.
3. PROVIDE TRAINING PER SPECIFICAITONS ONCE COMMISSIONING IS COMPLETE.
4. REFER TO SCHEMATIC PIPING/CONTROL DIAGRAM ON MECHANICAL DRAWINGS FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION DEVICES.
5. CERTIFIED FACTORY STARTUP.
6. INTEGRATE INTO EXISTING CONTROL SYSTEM. PROVIDE EMAIL NOTIFICATION OF ALARMS. IF ALTERNATE MANUFACTURER IS USED, SYSTEM CONTROLLER AND ALL THERMOSTATS MUST BE REPLACED.
7. HEAT PUMP SYSTEM, NOT A HEAT RECOVERY SYSTEM. NO HEAT RECOVERY BOXES NEEDED.

ACCESSORIES:
- A EXISTING WIRED WALL-MOUNTED REMOTE CONTROLLER WITH HUMIDITY DISPLAY TO REMAIN. LG MODEL # CRC1+
- B NEW WIRED WALL-MOUNTED REMOTE CONTROLLER WITH HUMIDITY DISPLAY, LG MODEL # CRC2.
- C BUILT-IN CONDENSATE LIFT MECHANISM
- D PROVIDE ASPEN PUMPS MINI BLANC CONDENSATE PUMP OR APPROVED EQUAL.
- E PROVIDE PLASTIC COVER FOR ALL EXPOSED REFRIGERANT PIPING.

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O. GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Schedules

Rev.	Date	Notes

M6.3R

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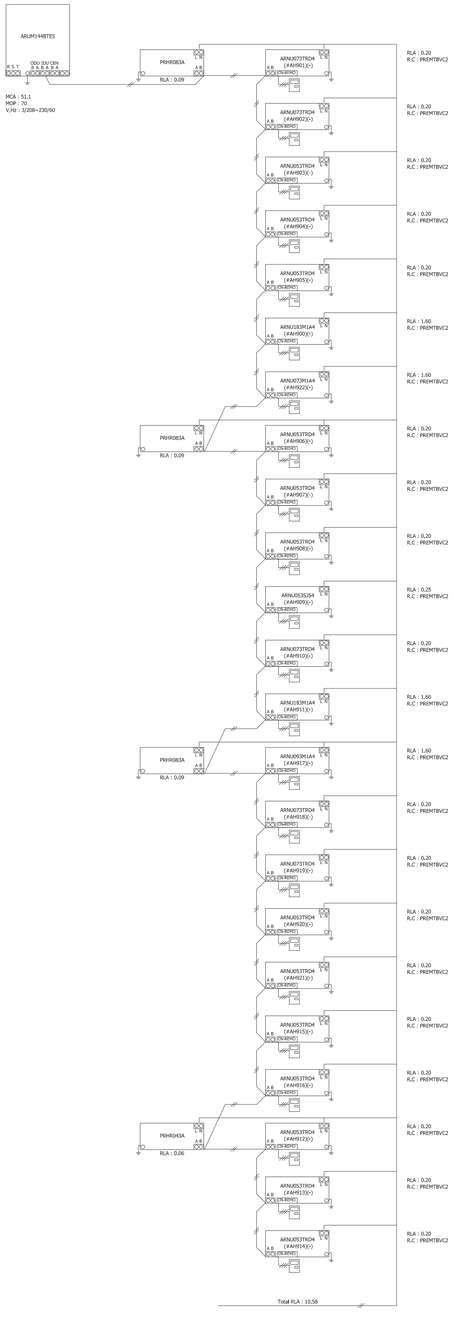
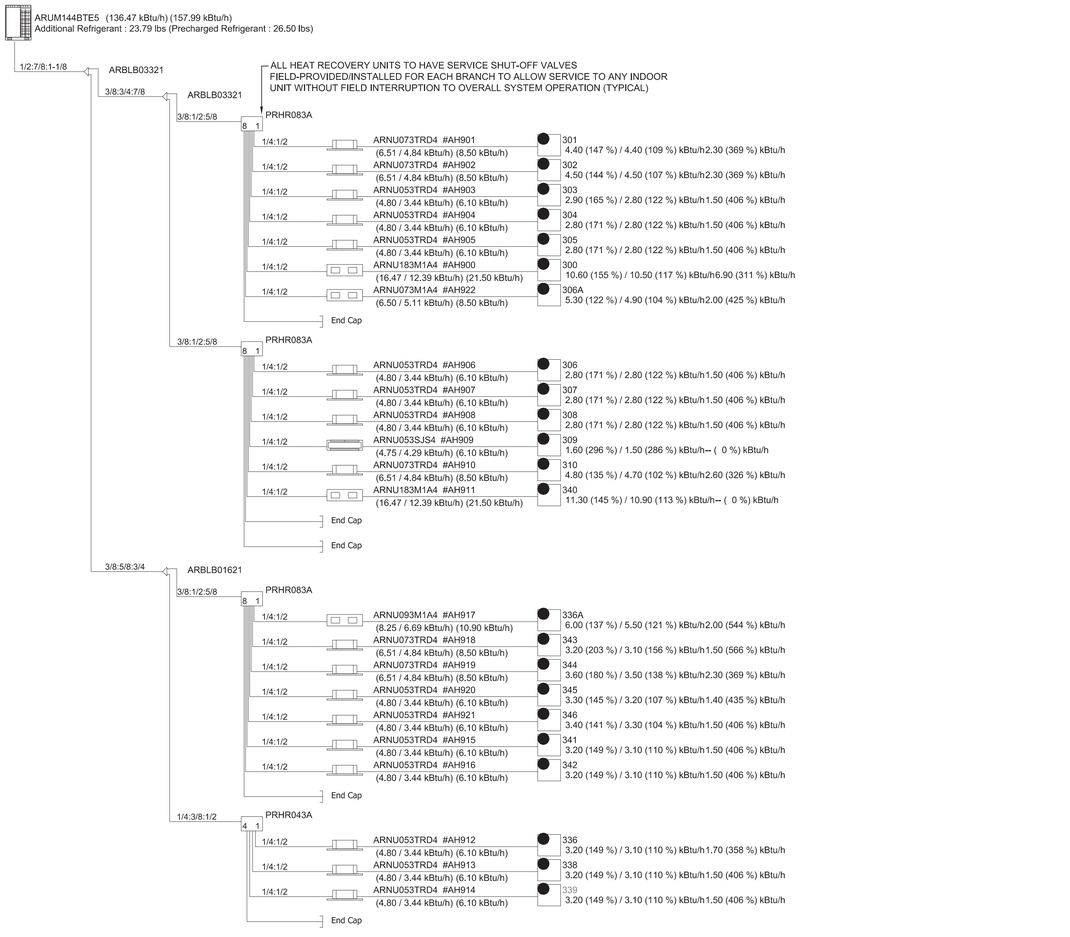
Note :
Power wiring, breaker size, and disconnects should follow local code and NEC.
Multi-frame outdoor units require a separate power connection for each frame.
Refer to the most up-to-date submittal sheets for applicable electrical data.
.

Power line(Outdoor unit)
Power line(Indoor unit / HR unit)
Communication line (ODU-IDU / ODU-ODU) : Twisted, Stranded and shielded AWG 18 x 2C
Communication line (ODU-CEN) : Twisted, Stranded and shielded AWG 18 x 2C
Communication line(Remote controller) : Twisted and stranded AWG 22 x 3C
Ground shield wire at ODU only
Note : Polarity matters: Always connect 'A' to 'A' and 'B' to 'B'



1 VRF SYSTEM SCHEMATIC - HP9
NOT TO SCALE



2 VRF PIPING DIAGRAM - HP9
NOT TO SCALE

NOTE: VRF SYSTEM SCHEMATIC SHOWN IS FOR REFERENCE ONLY AND IS FOR BASIS OF DESIGN MANUFACTURER. IF APPROVED ALTERNATE MANUFACTURER IS USED THE SYSTEM SCHEMATIC AND RECOMMENDED INSTALLATION REQUIREMENTS SHOULD BE FOLLOWED AND APPROVED BY GENERAL CONTRACTOR, ARCHITECT AND ENGINEER. APPROVED ALTERNATE MANUFACTURERS CAN BE FOUND IN EQUIPMENT SCHEDULES.

NOTE: PIPING LENGTHS NOT SHOWN ON THESE DIAGRAMS. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR DETERMINING PIPING LENGTHS USING MOST DIRECT ROUTING WHILE MAINTAINING ACCEPTABLE CONCEALMENT. PIPE ROUTING SHALL BE APPROVED BY GENERAL CONTRACTOR, ARCHITECT AND ENGINEER.

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER JOHN O. GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical VRF System Schematic & Piping Diagram

Rev.	Date	Notes

M7.1

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Note :
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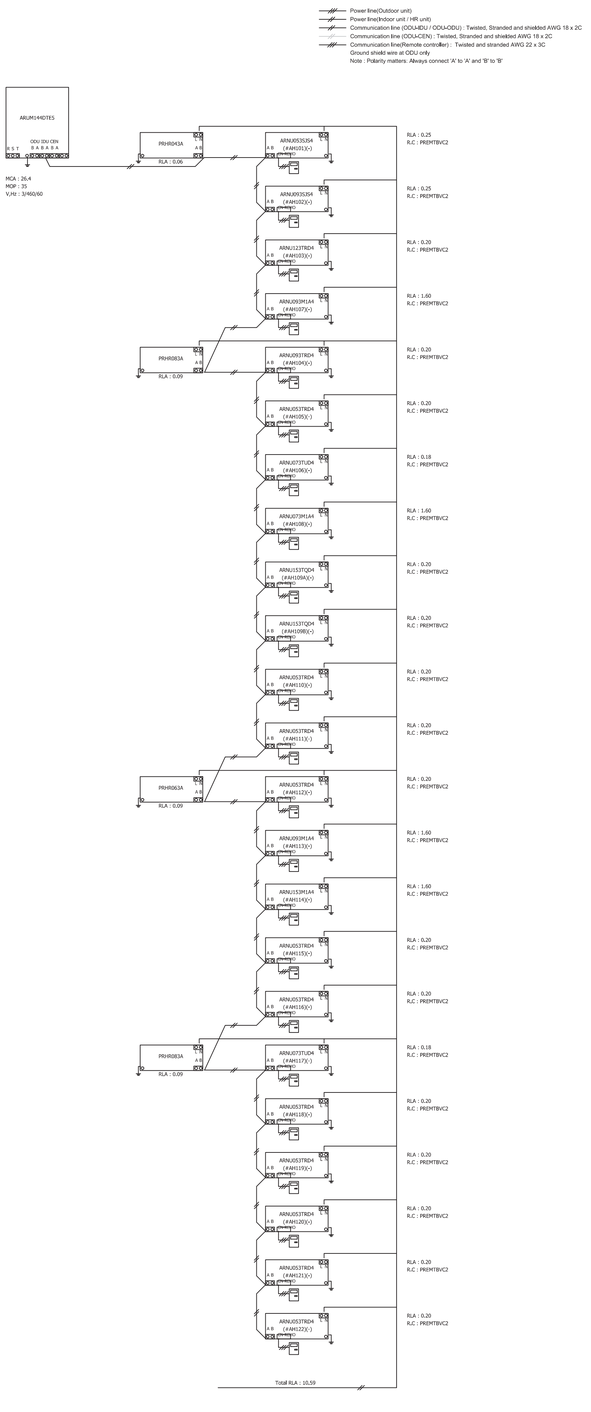
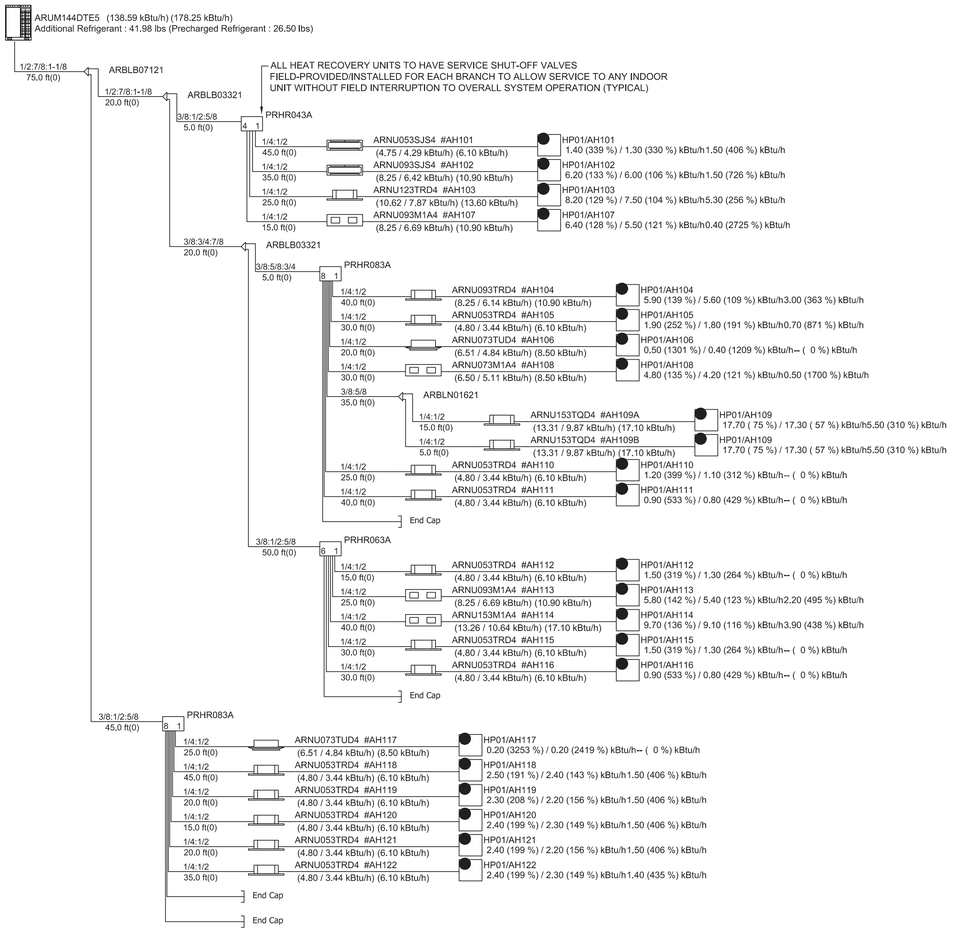


1 VRF SYSTEM SCHEMATIC - HP1
NOT TO SCALE



2 VRF PIPING DIAGRAM - HP1
NOT TO SCALE

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SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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Construction Drawings

Issue Date: February 23, 2024

Mechanical VRF System Schematic & Piping Diagram

Rev.	Date	Notes

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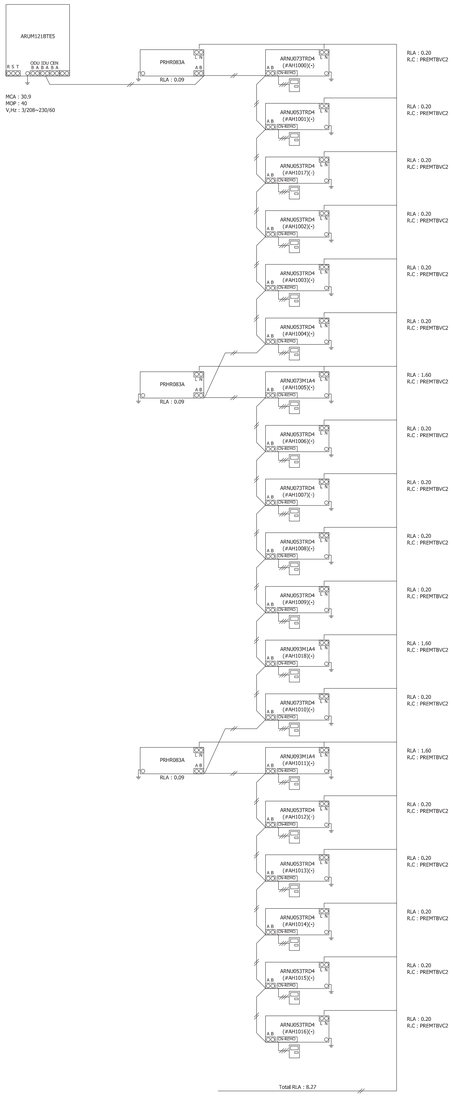

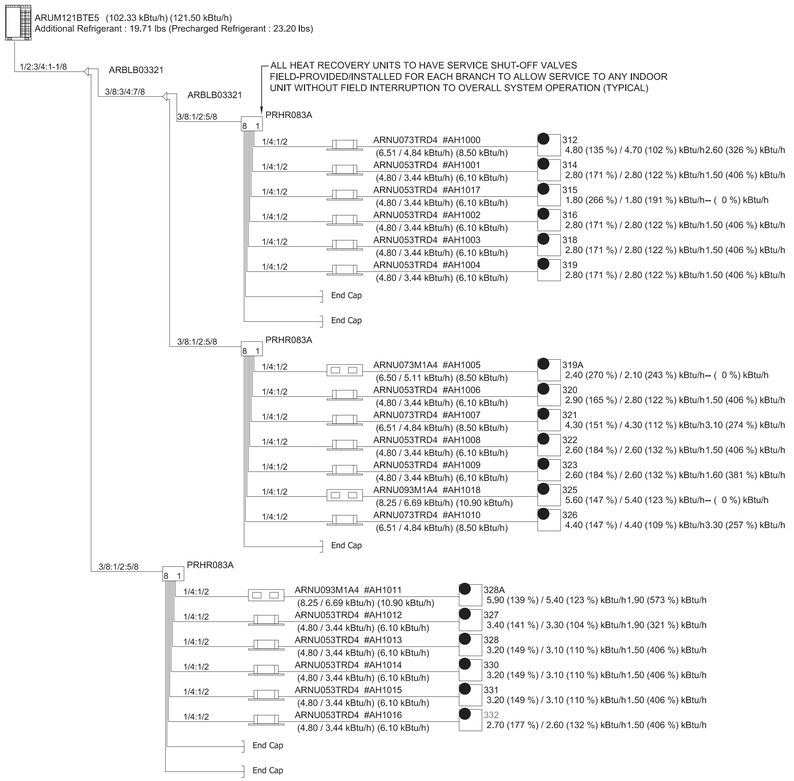

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1 VRF SYSTEM SCHEMATIC - HP10
NOT TO SCALE

2 VRF PIPING DIAGRAM - HP10
NOT TO SCALE

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02/21/2024

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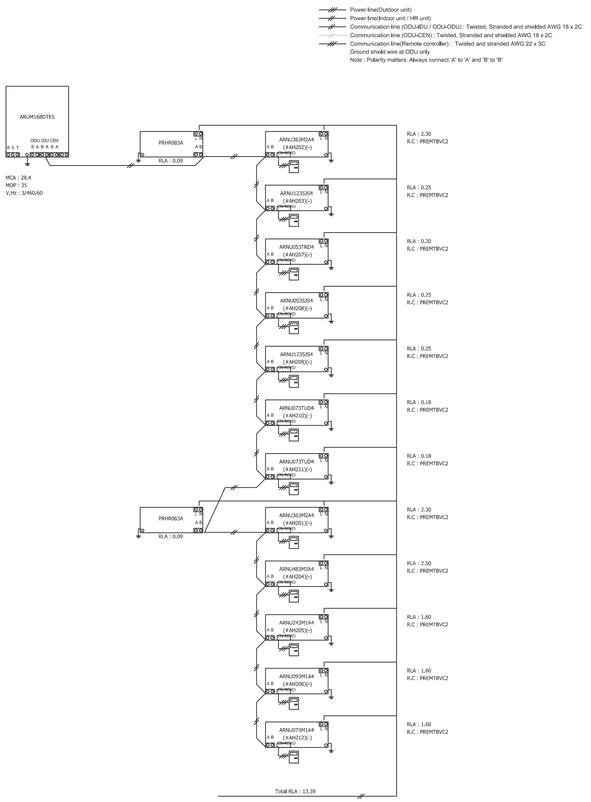
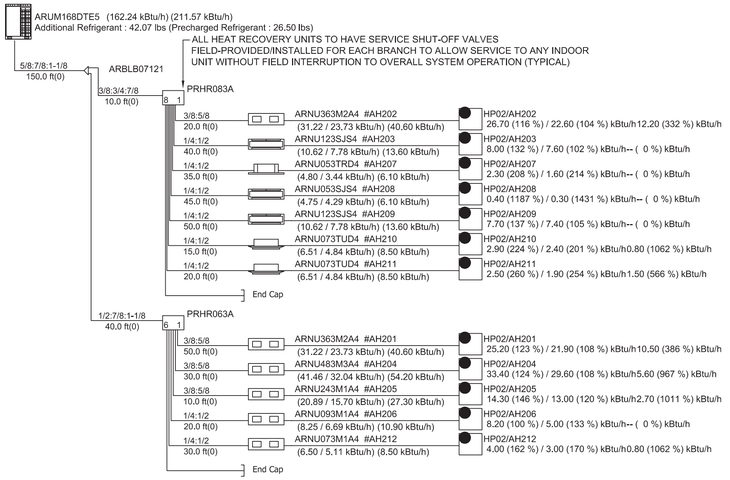


1 VRF SYSTEM SCHEMATIC - HP2
NOT TO SCALE



2 VRF PIPING DIAGRAM - HP2
NOT TO SCALE

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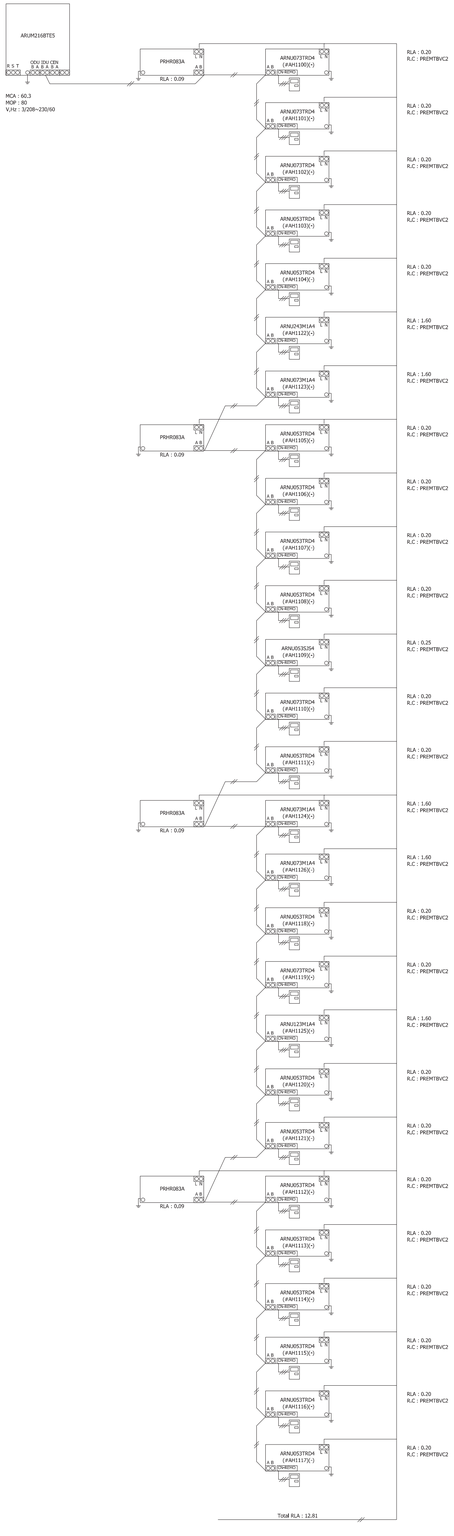

1 **VRF SYSTEM SCHEMATIC - HP11**
NOT TO SCALE

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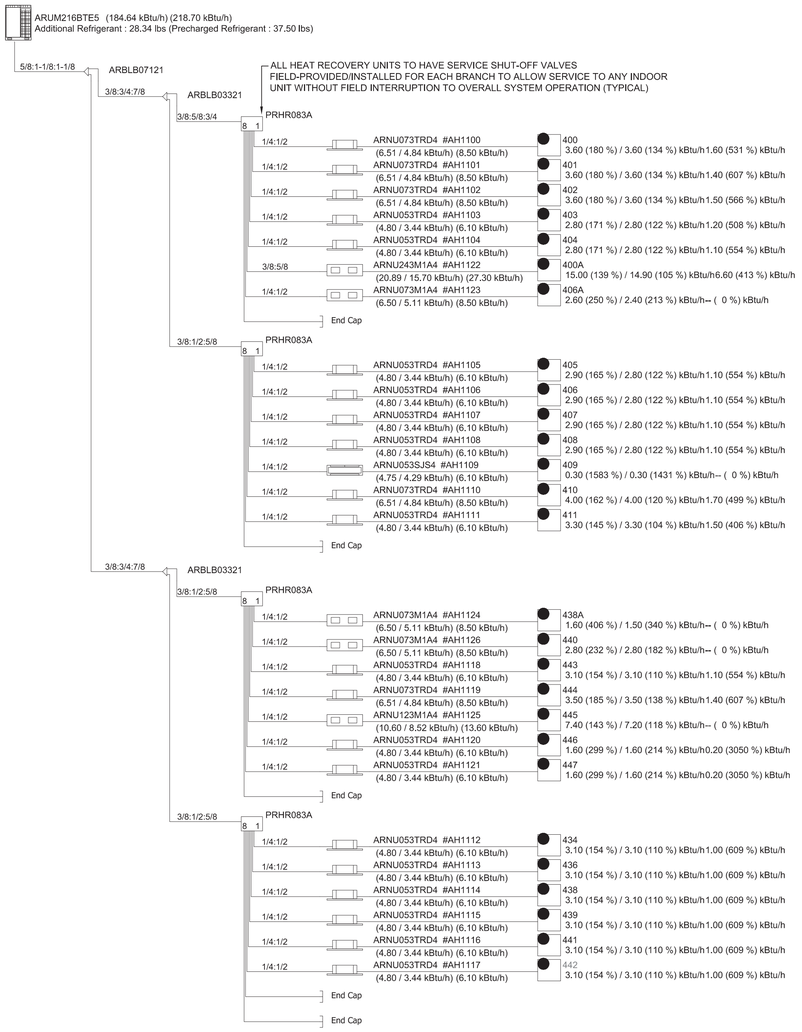

2 **VRF PIPING DIAGRAM - HP11**
NOT TO SCALE

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Mechanical VRF System Schematic & Piping Diagram

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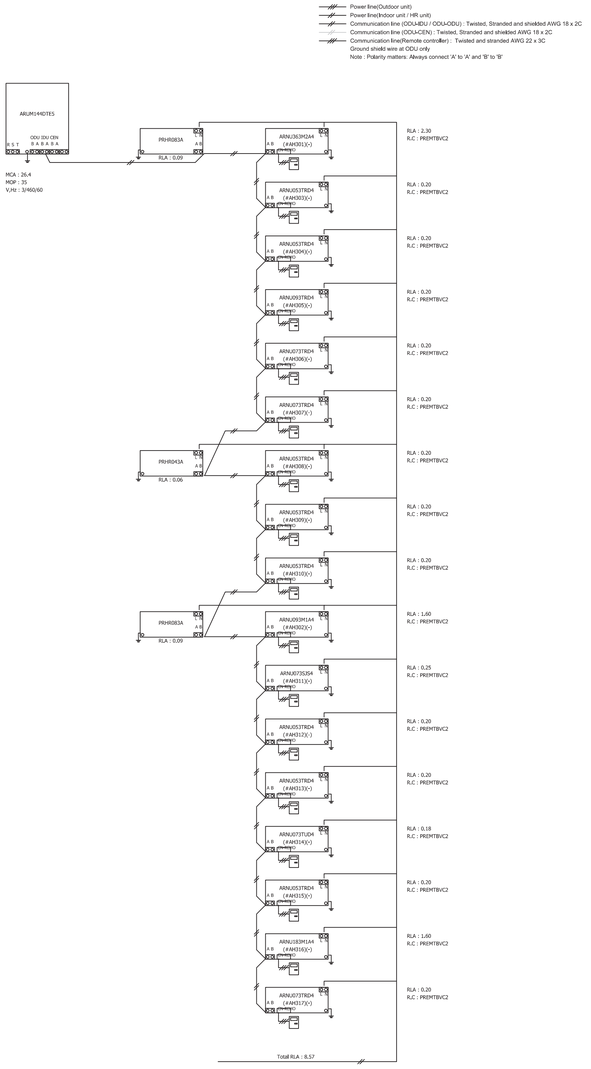
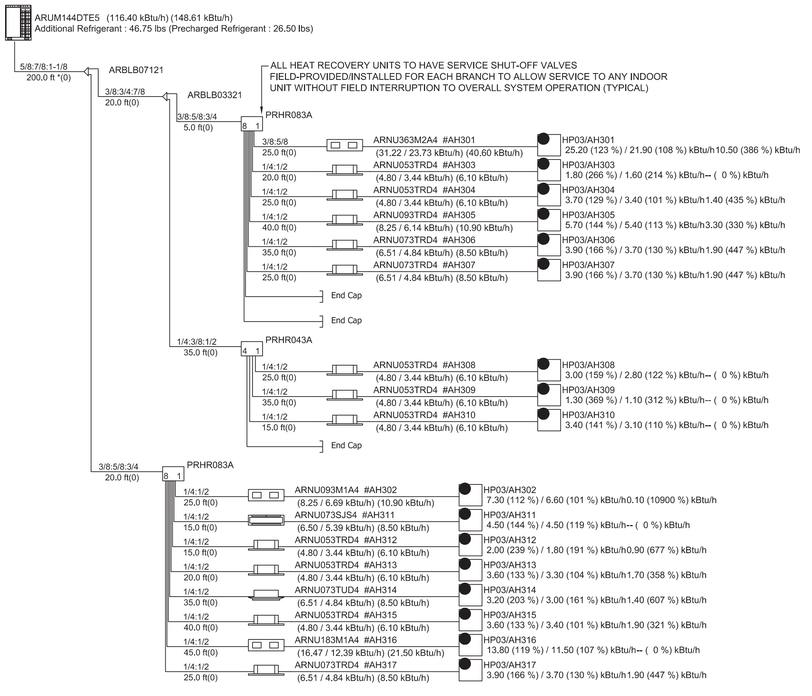


1 VRF SYSTEM SCHEMATIC - HP3
NOT TO SCALE



2 VRF PIPING DIAGRAM - HP3
NOT TO SCALE

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Mechanical VRF System Schematic & Piping Diagram

Rev.	Date	Notes

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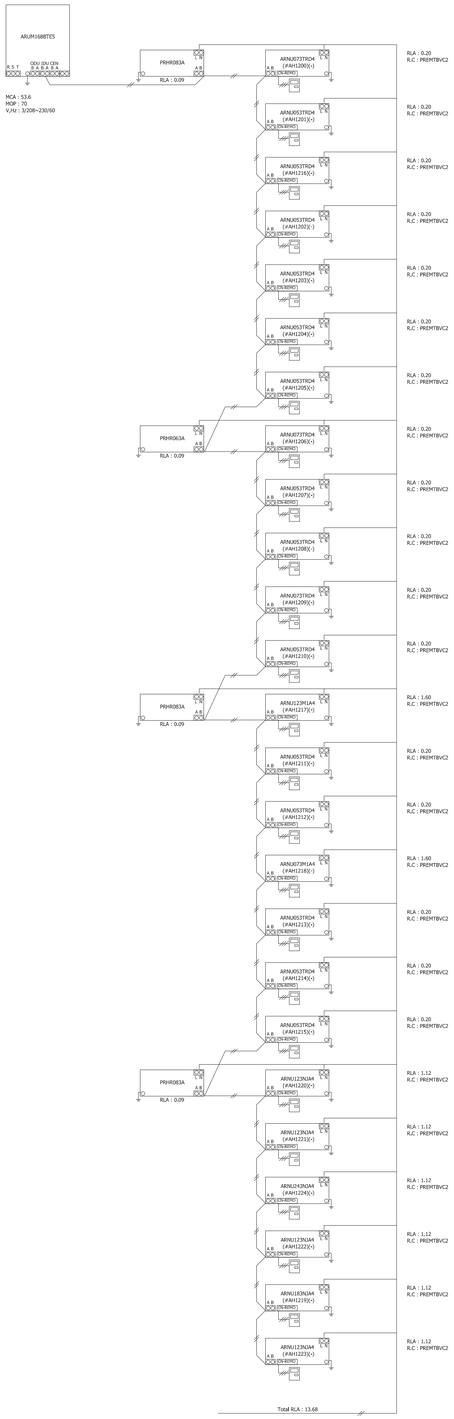

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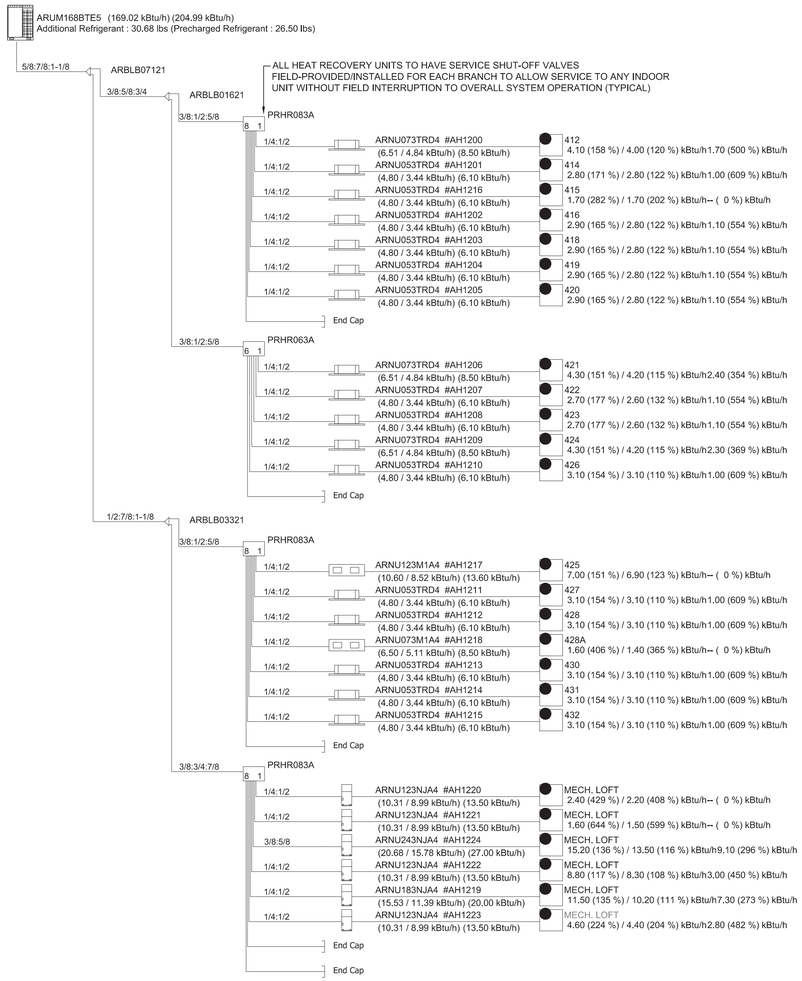
1 VRF SYSTEM SCHEMATIC - HP12
NOT TO SCALE



2 VRF PIPING DIAGRAM - HP12
NOT TO SCALE

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M7.4

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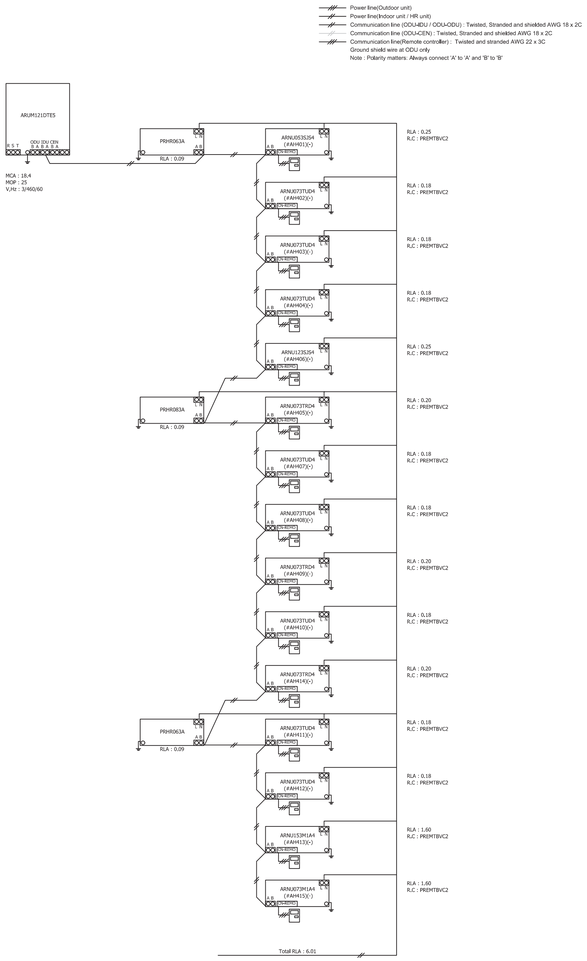
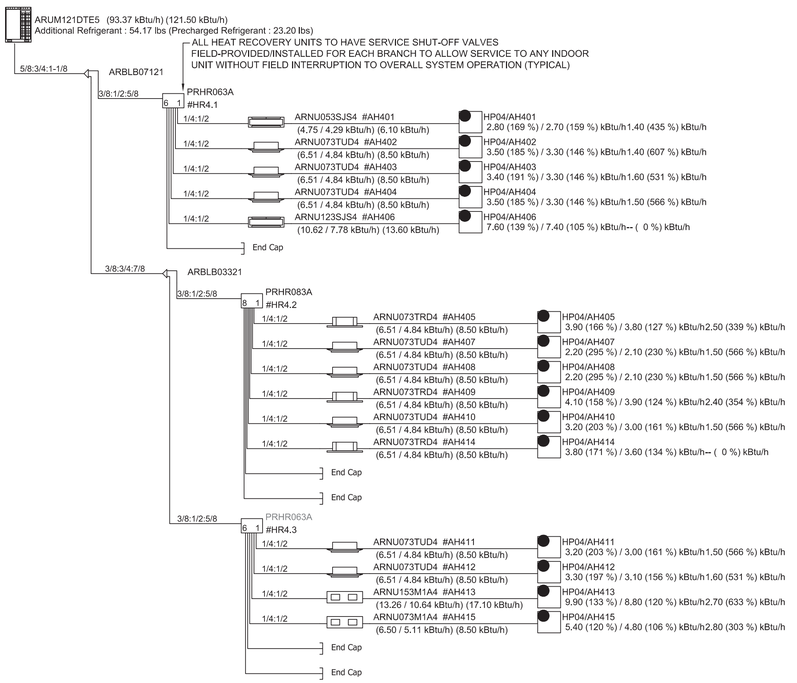


1 VRF SYSTEM SCHEMATIC - HP4
NOT TO SCALE



2 VRF PIPING DIAGRAM - HP4
NOT TO SCALE

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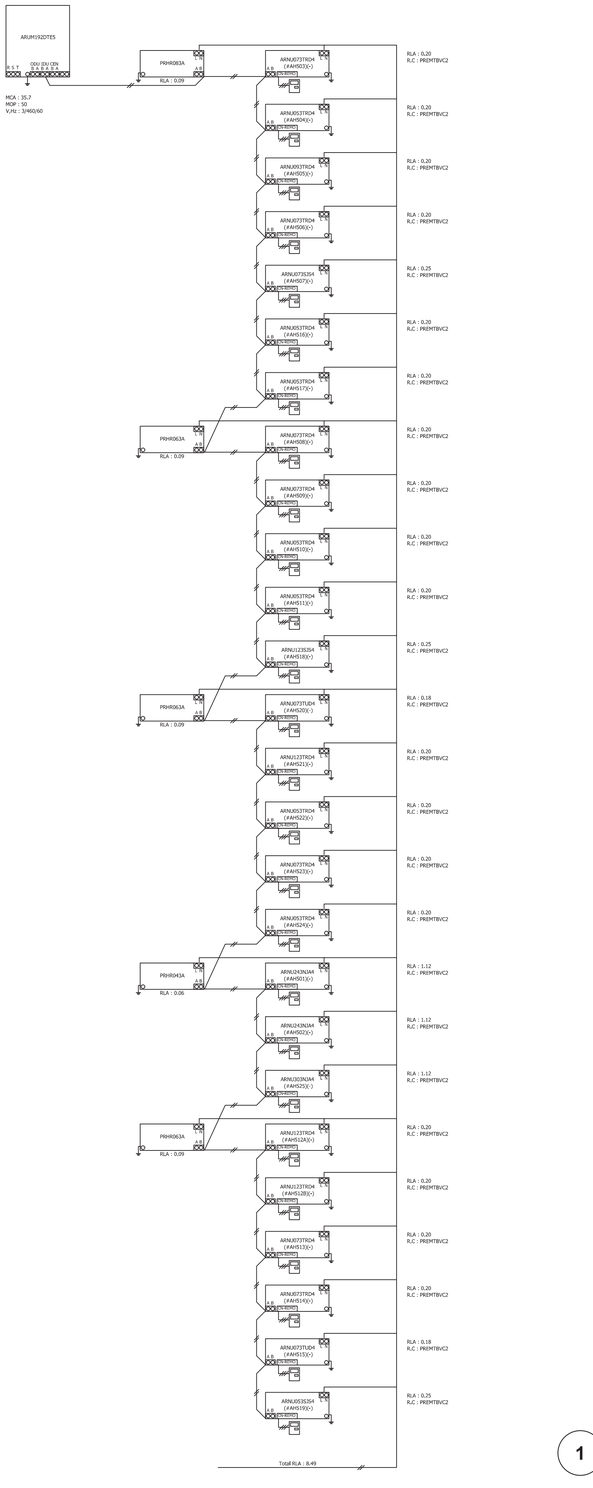
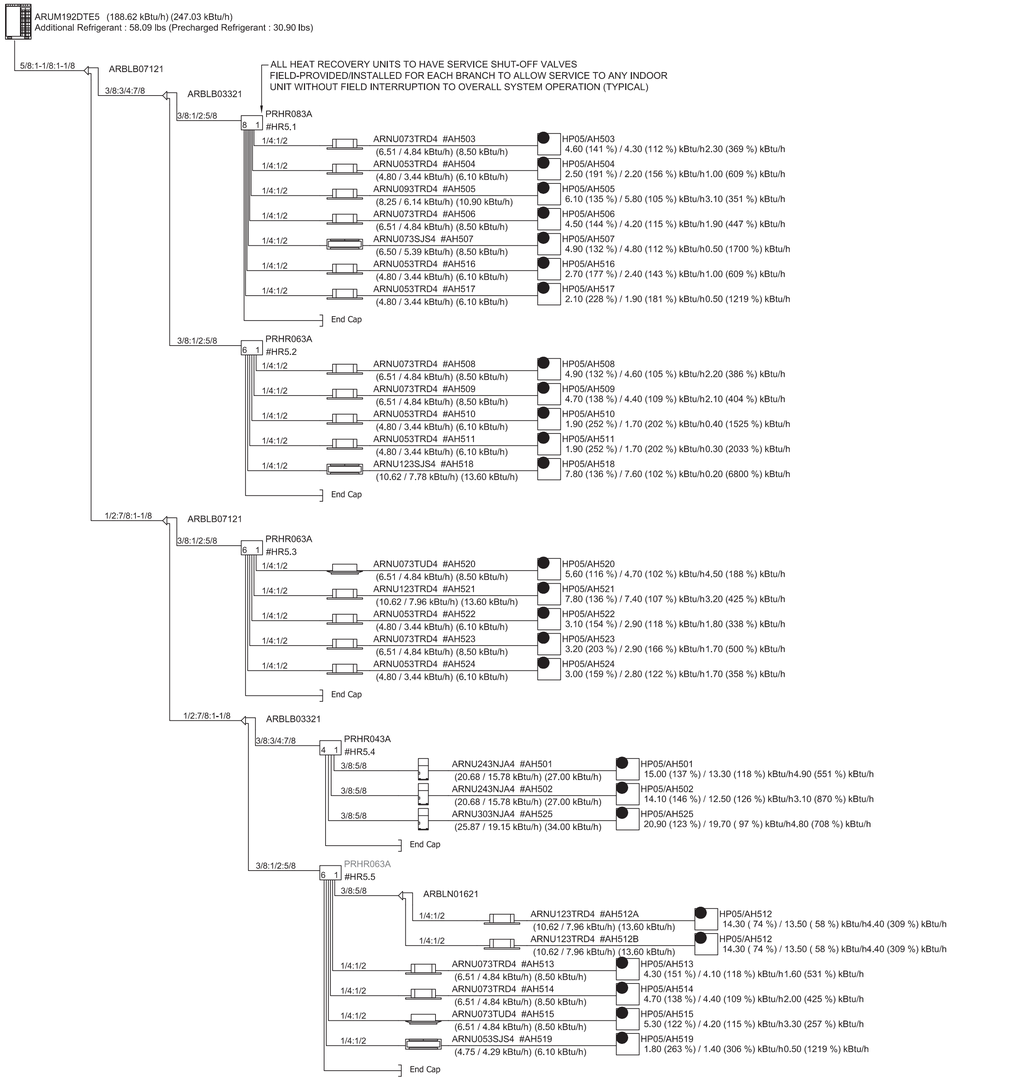


1 VRF SYSTEM SCHEMATIC - HP5
NOT TO SCALE



2 VRF PIPING DIAGRAM - HP5
NOT TO SCALE

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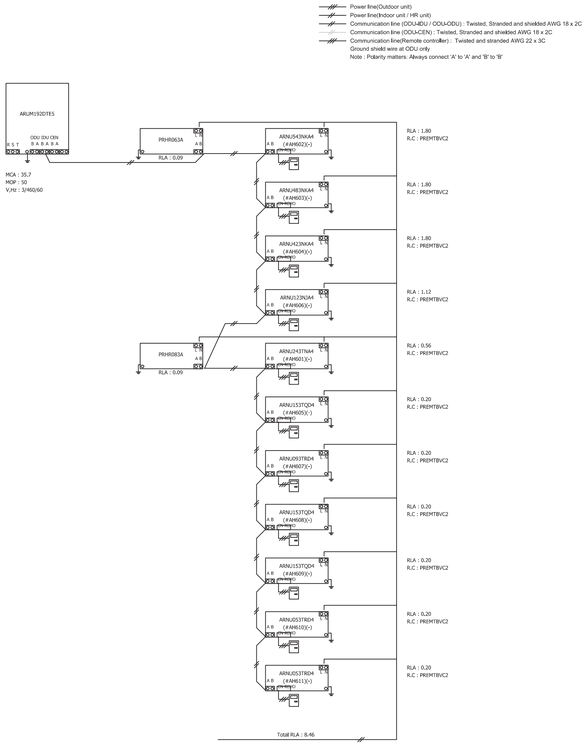
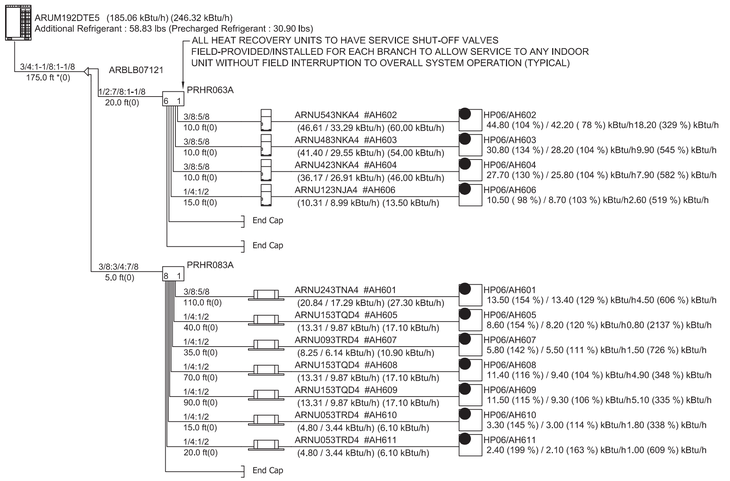


1 VRF SYSTEM SCHEMATIC - HP6
NOT TO SCALE



2 VRF PIPING DIAGRAM - HP6
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043801 TROY O. GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical VRF System Schematic & Piping Diagram

Rev.	Date	Notes

M7.6R

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Note :
Power wiring, breaker size, and disconnects should follow local code and NEC.
Multi-frame outdoor units require a separate power connection for each frame.
Refer to the most up-to-date submittal sheets for applicable electrical data.
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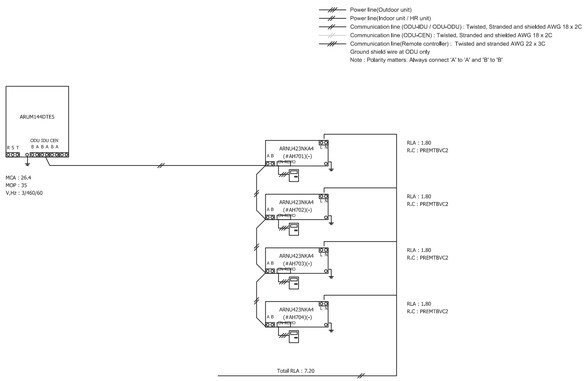
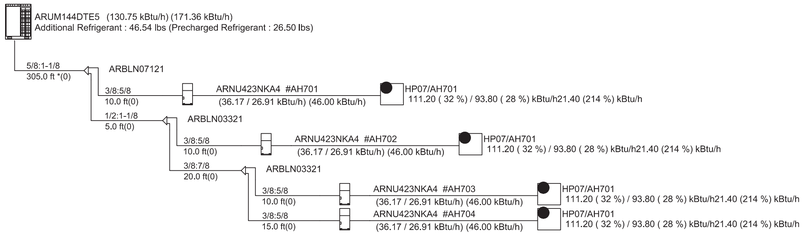


1 VRF SYSTEM SCHEMATIC - HP7
NOT TO SCALE



2 VRF PIPING DIAGRAM - HP7
NOT TO SCALE

NOTE: VRF SYSTEM SCHEMATIC SHOWN IS FOR REFERENCE ONLY AND IS FOR BASIS OF DESIGN MANUFACTURER. IF APPROVED ALTERNATE MANUFACTURER IS USED THE SYSTEM SCHEMATIC AND RECOMMENDED INSTALLATION REQUIREMENTS SHOULD BE FOLLOWED AND APPROVED BY GENERAL CONTRACTOR, ARCHITECT AND ENGINEER. APPROVED ALTERNATE MANUFACTURERS CAN BE FOUND IN EQUIPMENT SCHEDULES.

NOTE: PIPING LENGTHS NOT SHOWN ON THESE DIAGRAMS. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR DETERMINING PIPING LENGTHS USING MOST DIRECT ROUTING WHILE MAINTAINING ACCEPTABLE CONCEALMENT. PIPE ROUTING SHALL BE APPROVED BY GENERAL CONTRACTOR, ARCHITECT AND ENGINEER.

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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02/21/2024

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Mechanical VRF System Schematic & Piping Diagram

Rev.	Date	Notes

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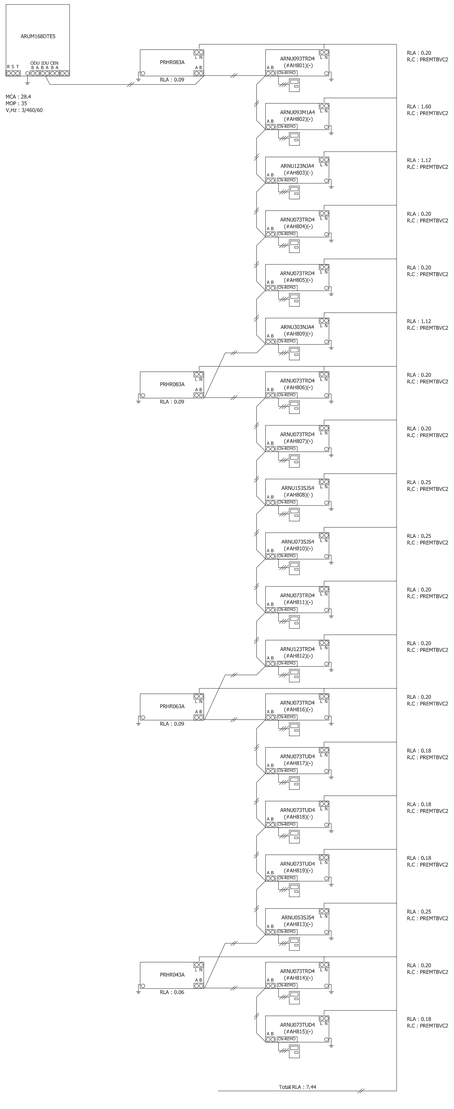
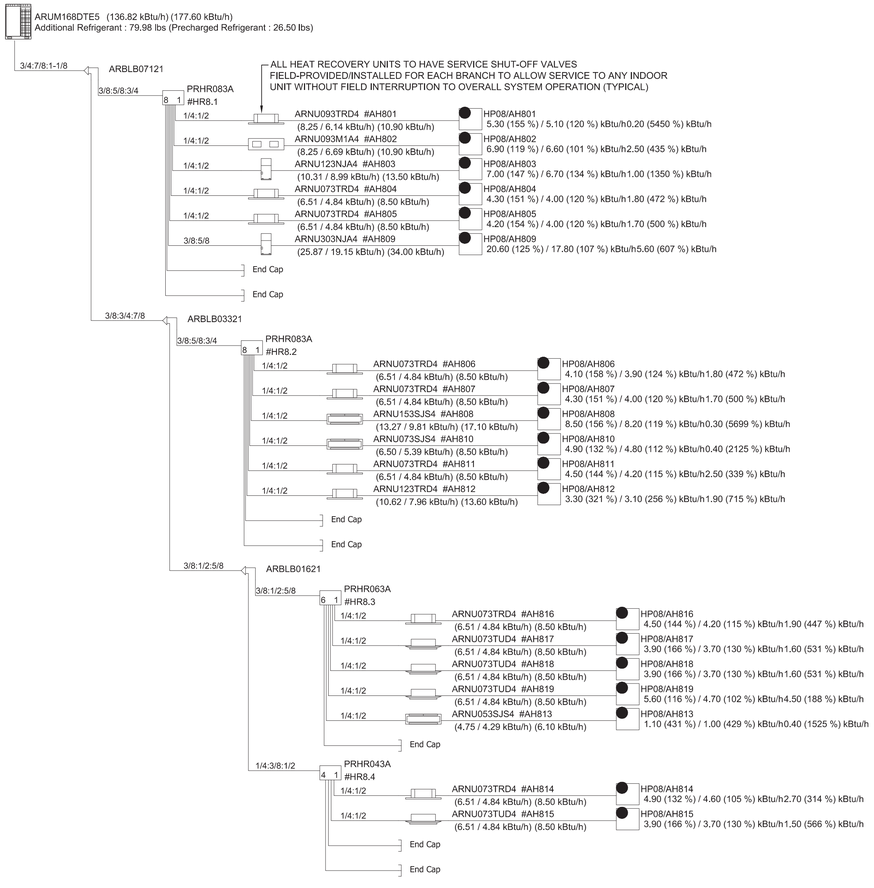
Multi-frame outdoor units require a separate power connection for each frame.
Refer to the most up-to-date submittal sheets for applicable electrical data.
.

Power line(Outdoor unit)
Power line(Indoor unit / HR unit)
Communication line (ODU-IDU / ODU-ODU) : Twisted, Stranded and shielded AWG 18 x 2C
Communication line (ODU-CEN) : Twisted, Stranded and shielded AWG 18 x 2C
Communication line(Remote controller) : Twisted and stranded AWG 22 x 3C
Ground shield wire at ODU only
Note : Polarity matters: Always connect 'A' to 'A' and 'B' to 'B'



1 VRF SYSTEM SCHEMATIC - HP8

NOT TO SCALE



2 VRF PIPING DIAGRAM - HP8

NOT TO SCALE

NOTE: VRF SYSTEM SCHEMATIC SHOWN IS FOR REFERENCE ONLY AND IS FOR BASIS OF DESIGN MANUFACTURER. IF APPROVED ALTERNATE MANUFACTURER IS USED THE SYSTEM SCHEMATIC AND RECOMMENDED INSTALLATION REQUIREMENTS SHOULD BE FOLLOWED AND APPROVED BY GENERAL CONTRACTOR, ARCHITECT AND ENGINEER. APPROVED ALTERNATE MANUFACTURERS CAN BE FOUND IN EQUIPMENT SCHEDULES.

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02/21/2024

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Mechanical VRF System Schematic & Piping Diagram

Rev.	Date	Notes

M7.8R

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HEAT PUMP INDOOR AIR HANDLER WALL AND CEILING CASSETTES

EACH INDOOR UNIT SHALL BE SCHEDULED ON BY THE BMS SYSTEM AT THE OCCUPIED TIMES DEFINED BY THE OWNER.

THE INDOOR UNITS SHALL BE SET TO AUTO MODE DURING OCCUPIED TIMES. DURING UNOCCUPIED TIMES THE INDOOR UNITS SHALL BE SET TO HEAT OR COOL BASED ON OUTSIDE AIR ENTHALPY CONDITIONS.

THE BMS SHALL SET THE OCCUPIED AND UNOCCUPIED TEMPERATURE SET-POINTS BASED ON THE OWNER'S REQUEST. TEMPERATURE SET-POINTS MAY BE CHANGED AT THE RC (REMOTE CONTROLLER) INSTALLED IN THE SPACE.

THE BMS SHALL SEND PROHIBIT COMMANDS FOR PROHIBITING THE MODE BUTTON AT THE LOCAL REMOTE CONTROLLER IN THE SPACE DURING OCCUPIED AND UNOCCUPIED TIMES.

THE BMS SHALL SEND PROHIBIT COMMANDS FOR PROHIBITING THE ON/OFF BUTTON AT THE LOCAL REMOTE CONTROLLER IN THE SPACE DURING OCCUPIED TIMES ONLY. THE BMS SHALL SEND PERMIT COMMANDS FOR PERMITTING THE ON/OFF BUTTON AT THE LOCAL REMOTE CONTROLLER IN THE SPACE DURING UNOCCUPIED TIMES TO ALLOW FOR SETBACK OVERRIDE.

DURING UNOCCUPIED TIMES THE BMS SHALL SEND THE OFF COMMAND TO THE INDOOR UNIT AT THE START OF UNOCCUPIED TIMES AND EVERY TWO HOURS THEREAFTER TO REINFORCE THE SETBACK CONDITIONS. THE BMS SHALL MONITOR THE ROOM TEMPERATURE AT THE REMOTE CONTROLLER IN THE SPACE AND COMMAND THE UNIT ON IF THE OWNER SPECIFIED NIGHT SETBACK LIMITS ARE EXCEED. THE BMS SHALL SEND THE COOL MODE COMMAND WHEN THE TEMPERATURE UPPER LIMIT IS EXCEEDED OR THE HEAT MODE COMMAND WHEN THE TEMPERATURE LOWER LIMIT IS EXCEEDED. THE BMS SHALL SEND THE TEMPERATURE UPPER OR LOWER LIMIT AS THE SPACE TEMPERATURE SET-POINT DURING UNOCCUPIED TIME. THE BMS SHALL MONITOR BUILDING HUMIDITY SEND THE DRY MODE COMMAND WHEN THE HUMIDITY UPPER LIMIT IS EXCEEDED.

ASSOCIATED UNITS SHALL SHUT DOWN UPON CONDENSATE HIGH LIMIT SWITCH ACTIVATION.

CONTRACTOR TO COORDINATE WITH OWNER'S IT CONTRACTOR TO ACCESS EMAIL SERVER TO FACILITATE AUTOMATICALLY GENERATED EMAIL ALARM NOTIFICATIONS.

OCCUPANCY SCHEDULE AND TEMPERATURE SETPOINTS

OCCUPIED TIMES MONDAY THRU FRIDAY 8:00AM THRU 5:00PM (ADJ)

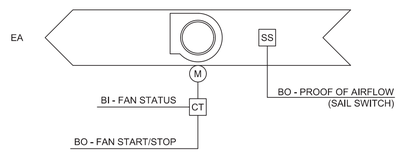
		OCCUPIED	UNOCCUPIED
COOLING SETPOINT	(ADJ)	75°F	85°F
HEATING SETPOINT	(ADJ)	70°F	55°F

HEAT PUMP INDOOR AIR HANDLER CASSETTES POINTS LIST

	SOFTWARE POINTS		FUNCTIONS			ALARMS		
INDOOR UNIT CONTROL POINT DESCRIPTION	NETWORK VARIABLE INPUT	NETWORK VARIABLE OUTPUT	SCHEDULE	TREND	DISPLAY	HIGH LIMIT	LOW LIMIT	ABNORMALITY
ON/OFF	x		x	x				
SET MODE	x		x	x				
SET TEMPERATURE	x		x	x	x			
PROHIBIT ON/OFF AT REMOTE CONTROLLER	x		x	x	x			
PROHIBIT MODE AT REMOTE CONTROLLER	x		x	x	x			
ON/OFF STATUS		x		x	x			
MODE STATE		x		x	x			
ROOM TEMPERATURE		x		x	x	x	x	
ROOM HUMIDITY		x		x	x	x		
FAN SPEED STATE		x			x			
ADDRESS OF UNIT IN ERROR		x		x	x			
ALARM SIGNAL		x		x	x			x
ERROR CODE		x		x	x			x
CONDENSATE HIGH LIMIT		x		x	x	x		

1 AIR HANDLER CASSETTES CONTROL

NOT TO SCALE



POWER VENTILATOR POINTS LIST

	HARDWARE POINTS				SOFTWARE POINTS						
POINT NAME	AI	AO	BI	BO	AV	BV	LOOP	SCHED	TREND	ALARM	SHOW ON GRAPHIC
FAN STATUS			X						X		X
FAN START/STOP				X					X		X
PROOF OF AIRFLOW (SAIL SWITCH)				X						X	X
FAN FAILURE										X	
FAN IN HAND										X	

POWER VENTILATOR SEQUENCE OF OPERATION

POWER VENTILATOR - CONTINUOUS OPERATION

FAN SHALL RUN CONTINUOUSLY.

FAN STATUS:
THE CONTROLLER SHALL MONITOR THE FAN STATUS.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
- PROOF OF AIRFLOW: COMMANDED ON, BUT AIRFLOW NOT DETECTED.

2 POWER VENTILATOR CONTROLS (EF5 AND EF6)

NOT TO SCALE

GENERAL NOTE

CONTROLS CONTRACTOR MUST INTEGRATE NEW HVAC EQUIPMENT INTO EXISTING DDC SYSTEM. PROVIDE ALL DEVICES AS NEEDED TO PROVIDE A FULLY FUNCTIONAL SYSTEM.

DOAS SEQUENCE OF OPERATIONS

DESCRIPTION: DEDICATED OUTSIDE AIR SYSTEM UNIT SUPPLYING 100% OUTDOOR AIR DIRECTLY TO SPACE, WITH DX COOLING, HOT GAS REHEAT, DX HEATING, ENTHALPY WHEEL AND FIXED PLATE ENERGY RECOVERY HEAT EXCHANGER. DOAS OEM CONTROLLER SHALL COMMUNICATE BACNET POINTS TO BAS FOR MONITORING, ADJUSTMENT AND/OR ALARMS.

UNIT START/STOP CONTROL: START/STOP SHALL BE SCHEDULED ON BY THE BAS SYSTEM AT THE OCCUPIED TIMES DEFINED BY THE OWNER. THE SYSTEM IS ON WHEN ALL ENABLE POINTS ARE SET TO THE ON POSITION.

SET POINTS SHALL BE AS FOLLOWS UNLESS MODIFIED BY USER:

SUPPLY AIR TEMPERATURE:	73°F (ADJ)
OUTDOOR AIR DEHUMIDIFICATION DEW POINT TEMPERATURE:	55°F (ADJ)
OUTDOOR AIR REHEAT TEMPERATURE:	68°F (ADJ)

DAMPER OPERATION: DURING SYSTEM STARTUP, THE OPTIONAL OUTDOOR DAMPER CONTROL SHALL ENERGIZE WITH A 120 SECOND (ADJ.) TIME DELAY STANDARD. AS AN OPTION PROOF BY DAMPER END SWITCH SHALL PROVE DAMPER IS OPEN. ONCE THE DAMPER DELAY HAS ELAPSED OR OPTIONAL END SWITCH IS CLOSED, THE SUPPLY FAN IS ENERGIZED TO PROVIDE AIR FLOW.

SUPPLY AND EXHAUST FAN OPERATION, AIRFLOW SET POINT: THE DESIRED CFM AT EACH FAN WHEEL CAN BE ADJUSTED INDIVIDUALLY UNDER THE SET POINTS MENU. THE ECM FANS WILL ADJUST BASED ON FACTORY INSTALLED PRESSURE SENSORS TO MAINTAIN THE AIRFLOW SET POINT.

DEHUMIDIFICATION MODE: DEHUMIDIFICATION IS BASED ON THE ENTERING OUTDOOR AIR DEW POINT AND SUPPLY AIR DEW POINT SET POINT. IF THE OUTDOOR AIR DEW POINT IS GREATER THAN THE SUPPLY AIR DEW POINT SET POINT, DEHUMIDIFICATION MODE IS ACTIVE. DURING DEHUMIDIFICATION MODE, THE VARIABLE SPEED COMPRESSOR WILL RAMP BASED ON TOTAL DEHUMIDIFICATION DEMAND. TOTAL DEHUMIDIFICATION DEMAND IS CALCULATED BASED ON THE DEW POINT AT THE OUTLET OF THE EVAPORATOR COIL AND THE SUPPLY AIR DEW POINT 55°F (ADJ.). DEHUMIDIFICATION TAKES PRIORITY OVER COOLING AND HEATING MODES.

REHEAT MODE: DURING DEHUMIDIFICATION MODE, IF THE SUPPLY AIR TEMPERATURE FALLS BELOW THE REHEAT SET POINT, THE HOT GAS REHEAT VALVE WILL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE BASED ON THE REHEAT SET POINT.

COOLING MODE: COOLING MODE IS ACTIVE WHEN THERE IS NO DEHUMIDIFICATION DEMAND, AND THE SUPPLY AIR TEMPERATURE IS GREATER THAN THE SUPPLY COOLING SET POINT. THE VARIABLE SPEED COMPRESSOR WILL RAMP BASED ON COOLING DEMAND. COOLING DEMAND IS CALCULATED BASED ON THE SUPPLY AIR TEMPERATURE AND THE SUPPLY COOLING SET POINT.

HEAT PUMP MODE: HEAT PUMP MODE IS ACTIVE WHEN THERE IS NO DEHUMIDIFICATION DEMAND, AND THE SUPPLY AIR TEMPERATURE FALLS BELOW THE SUPPLY HEATING SET POINT. DURING HEAT PUMP MODE, THE COMPRESSOR WILL MODULATE TO MAINTAIN THE ADJUSTABLE SUPPLY HEATING SET POINT.

ENERGY RECOVERY WHEEL: THE ENERGY RECOVERY WHEEL WILL BE ENERGIZED ANYTIME THE COMPRESSOR IS ON.

SAFETIES: COMPRESSOR HIGH DISCHARGE PRESSURE, COMPRESSOR LOW SUCTION PRESSURE, CONDENSATE OVERFLOW, DIRTY FILTER DETECTION, LOSS OF AIRFLOW, FIRE/SMOKE DETECTION.

NOTIFICATIONS: CONTRACTOR TO COORDINATE WITH OWNER'S IT CONTRACTOR TO ACCESS EMAIL SERVER TO FACILITATE AUTOMATICALLY GENERATED EMAIL ALARM NOTIFICATIONS.

DEDICATED OUTSIDE AIR SYSTEM POINTS LIST

	SOFTWARE POINTS		FUNCTIONS			ALARMS		
INDOOR UNIT CONTROL POINT DESCRIPTION	NETWORK VARIABLE INPUT	NETWORK VARIABLE OUTPUT	SCHEDULE	TREND	DISPLAY	HIGH LIMIT	LOW LIMIT	ABNORMALITY
ON/OFF	x		x	x	x			
OUTSDIE AIR DAMPER		x		x	x			
OUTSDIE AIR DAMPER STATUS		x		x	x			x
SUPPLY AIR TEMPERATURE	x			x	x	x	x	
SUPPLY AIR DEWPOINT	x			x	x	x		
OUTSIDE AIR TEMPERATURE	x			x	x			
OUTSIDE AIR DEWPOINT	x			x	x			
ON/OFF STATUS		x		x	x			
SUPPLY FAN STATUS		x			x			x
COOLING DEMAND		x		x	x			
HOT GAS REHEAT DEMAND		x		x	x			
HEAT PUMP HEATING DEMAND		x		x	x			

3 DEDICATED OUTDOOR AIR SYSTEM CONTROLS

NOT TO SCALE

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02/21/2024

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102 Town Hall Drive
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Construction Drawings

Issue Date: February 23, 2024

Mechanical Controls

Rev.	Date	Notes

M8.1

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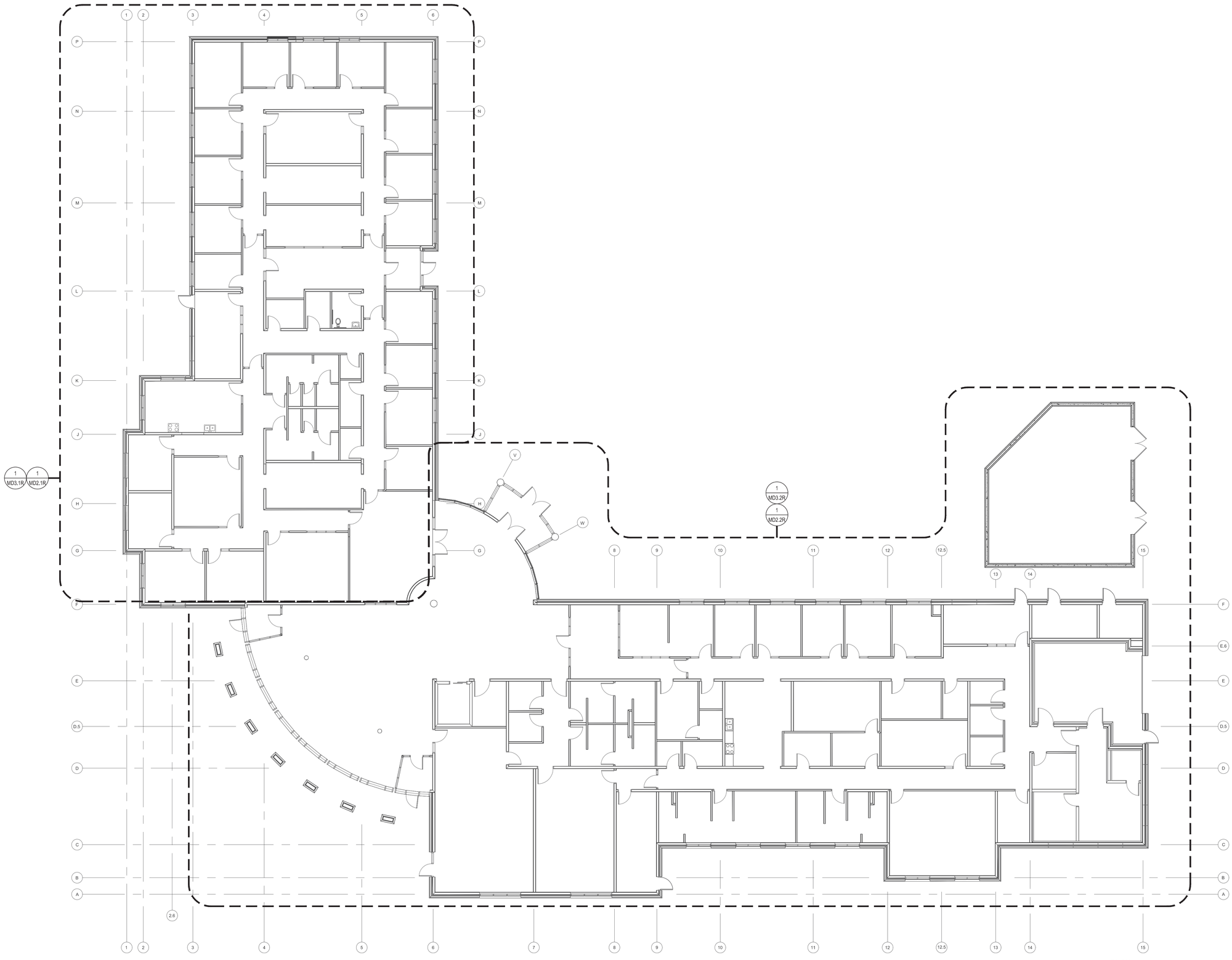

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

1 **FIRST FLOOR PLAN**
3/32" = 1'-0"
0 5' 10' 20'

PLAN NORTH

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02/21/2024

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Demolition First Floor Plan

Rev.	Date	Notes

MD1.1R

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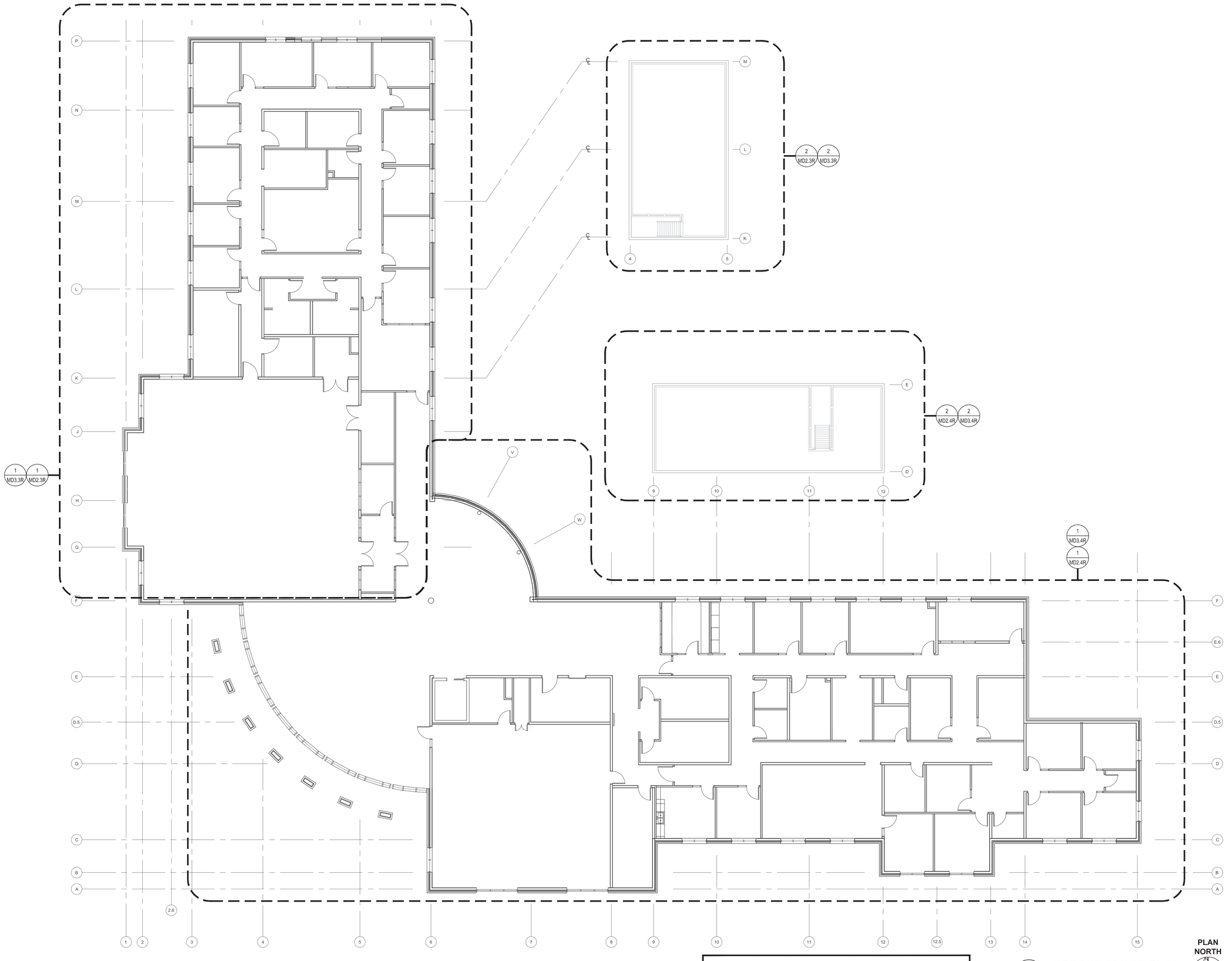

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

1 **SECOND FLOOR PLAN**
3/32" = 1'-0"
0 5' 10' 20'

PLAN NORTH

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02/21/2024

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Mechanical Demolition Second Floor Plan

Rev.	Date	Notes

MD1.2R

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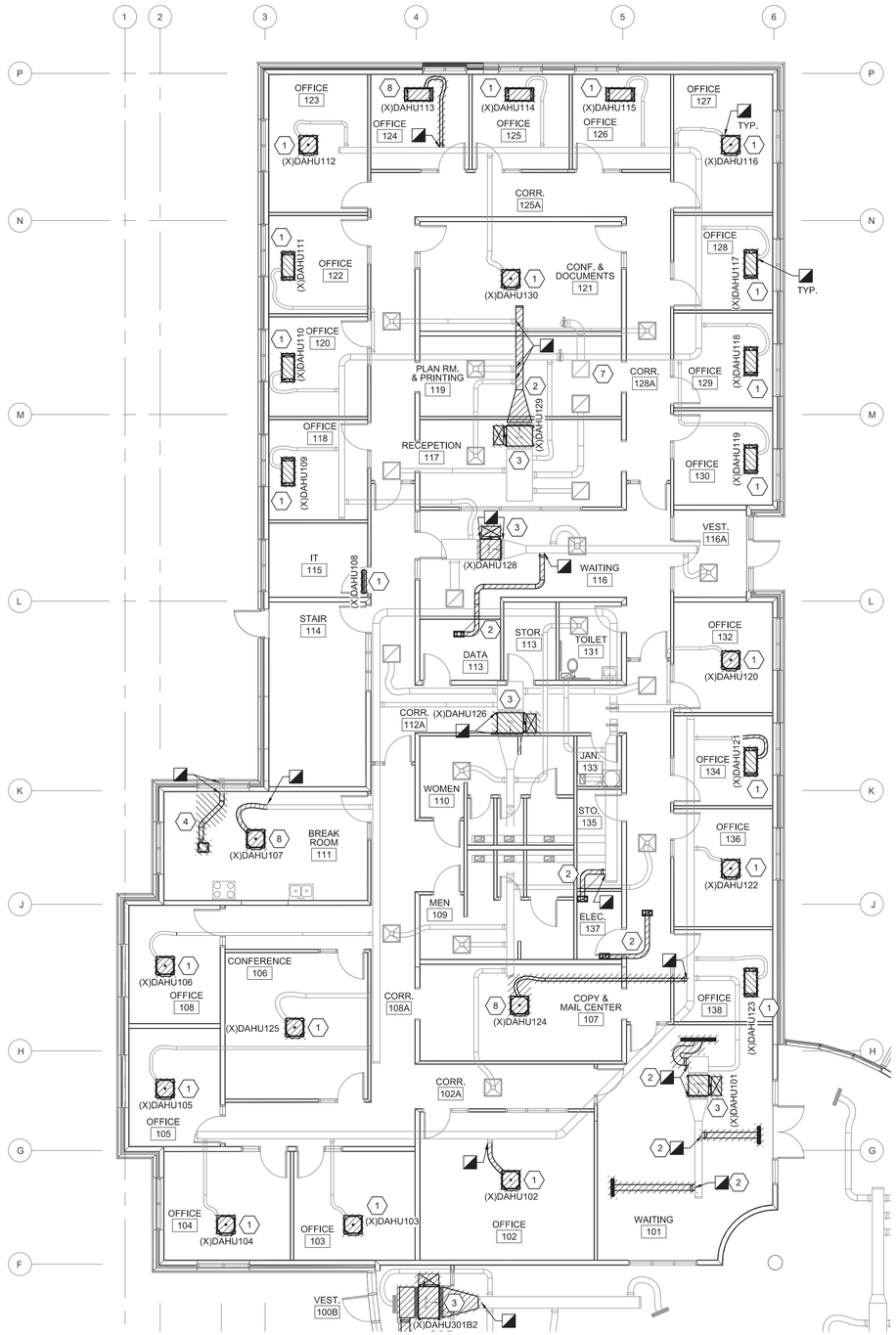

1 **ENLARGED FLOOR PLAN**

1/8" = 1'-0"

KEYED NOTES - DEMOLITION

1. REMOVE AND DISPOSE OF EXISTING DUCTLESS DAHU. PROTECT EXISTING FA DUCTWORK TO THE EXTENT SHOWN ON PLANS. PREPARE FOR CONNECTION TO NEW AHU AS INDICATED ON NEW WORK PLANS.
2. REMOVE AND DISPOSE OF EXISTING DUCTWORK TO EXTENT SHOWN ON PLANS. PATCH DUCT AND INSULATION AS NECESSARY.
3. REMOVE AND DISPOSE OF EXISTING DUCTED AHU. PROTECT EXISTING SA, RA, AND FA DUCTWORK TO THE EXTENT SHOWN ON PLANS. PREPARE FOR CONNECTION TO NEW AHU AS INDICATED ON NEW WORK PLANS.
4. REMOVE AND DISPOSE OF EXISTING EXTERIOR WALL CAP, EXHAUST FAN, DUCTWORK, HANGERS AND SUPPORTS UP TO THE EXTERIOR WALL. CAP REMAINING DUCT ON EITHER SIDE OF EXTERIOR WALL. SEE ARCHITECTURAL WALL OPENING DETAIL FOR MORE INFORMATION.
5. NOT USED.
6. NOT USED.
7. EXISTING TO REMAIN - RA GRILLE FOR EXISTING DEHUMIDIFIER.
8. REMOVE AND DISPOSE OF EXISTING DUCTLESS AHU IN IT'S ENTIRETY, INCLUDING BUT NOT LIMITED TO, HANGERS, SUPPORTS, ETC.
9. REMOVE AND DISPOSE OF EXISTING DUCTED AHU IN IT'S ENTIRETY, INCLUDING BUT NOT LIMITED TO, DUCTWORK, HANGERS, SUPPORTS, ETC.

NOTE: ALL NOTES MAY NOT BE USED ON THIS SHEET.

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Mechanical Demo. HVAC First Floor Enlarged Plans

Rev.	Date	Notes

MD2.1R

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KEYED NOTES - DEMOLITION

1. REMOVE AND DISPOSE OF EXISTING DUCTLESS DAHU. PROTECT EXISTING FA DUCTWORK TO THE EXTENT SHOWN ON PLANS. PREPARE FOR CONNECTION TO NEW AHU AS INDICATED ON NEW WORK PLANS.
2. REMOVE AND DISPOSE OF EXISTING DUCTWORK TO EXTENT SHOWN ON PLANS. PATCH DUCT AND INSULATION AS NECESSARY.
3. REMOVE AND DISPOSE OF EXISTING DUCTED AHU. PROTECT EXISTING SA, RA, AND FA DUCTWORK TO THE EXTENT SHOWN ON PLANS, PREPARE FOR CONNECTION TO NEW AHU AS INDICATED ON NEW WORK PLANS.
4. REMOVE AND DISPOSE OF EXISTING EXTERIOR WALL CAP, EXHAUST FAN, DUCTWORK, HANGERS AND SUPPORTS UP TO THE EXTERIOR WALL. CAP REMAINING DUCT ON EITHER SIDE OF EXTERIOR WALL. SEE ARCHITECTURAL WALL OPENING DETAIL FOR MORE INFORMATION.
5. RELOCATE EXISTING AIR PURIFICATION SYSTEM (APS) IN NEW CEILING GRID.
6. REMOVE AND DISPOSE OF EXISTING EF AND ASSOCIATED DUCTWORK TO THE EXTENT INDICATED ON PLANS.
7. EXISTING TO REMAIN - RA GRILLE FOR EXISTING DEHUMIDIFIER.
8. REMOVE AND DISPOSE OF EXISTING DUCTLESS AHU IN IT'S ENTIRETY, INCLUDING BUT NOT LIMITED TO, HANGERS, SUPPORTS, ETC.
9. REMOVE AND DISPOSE OF EXISTING DUCTED AHU IN IT'S ENTIRETY, INCLUDING BUT NOT LIMITED TO, DUCTWORK, HANGERS, SUPPORTS, ETC.
10. PHASE 1 WORK (HP1C, HP2#1, HP2#2): REMOVE AND DISPOSE OF EXISTING HP'S, INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.
11. PHASE 2 WORK (HP3B#1, HP3B#2, HP3B#3): REMOVE AND DISPOSE OF EXISTING HP'S, INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.
12. PHASE 3 WORK (HP3A#1, HP3A#2): REMOVE AND DISPOSE OF EXISTING HP'S, INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.
13. PHASE 4 WORK (HP1A, HP1B): REMOVE AND DISPOSE OF EXISTING HP'S, INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.

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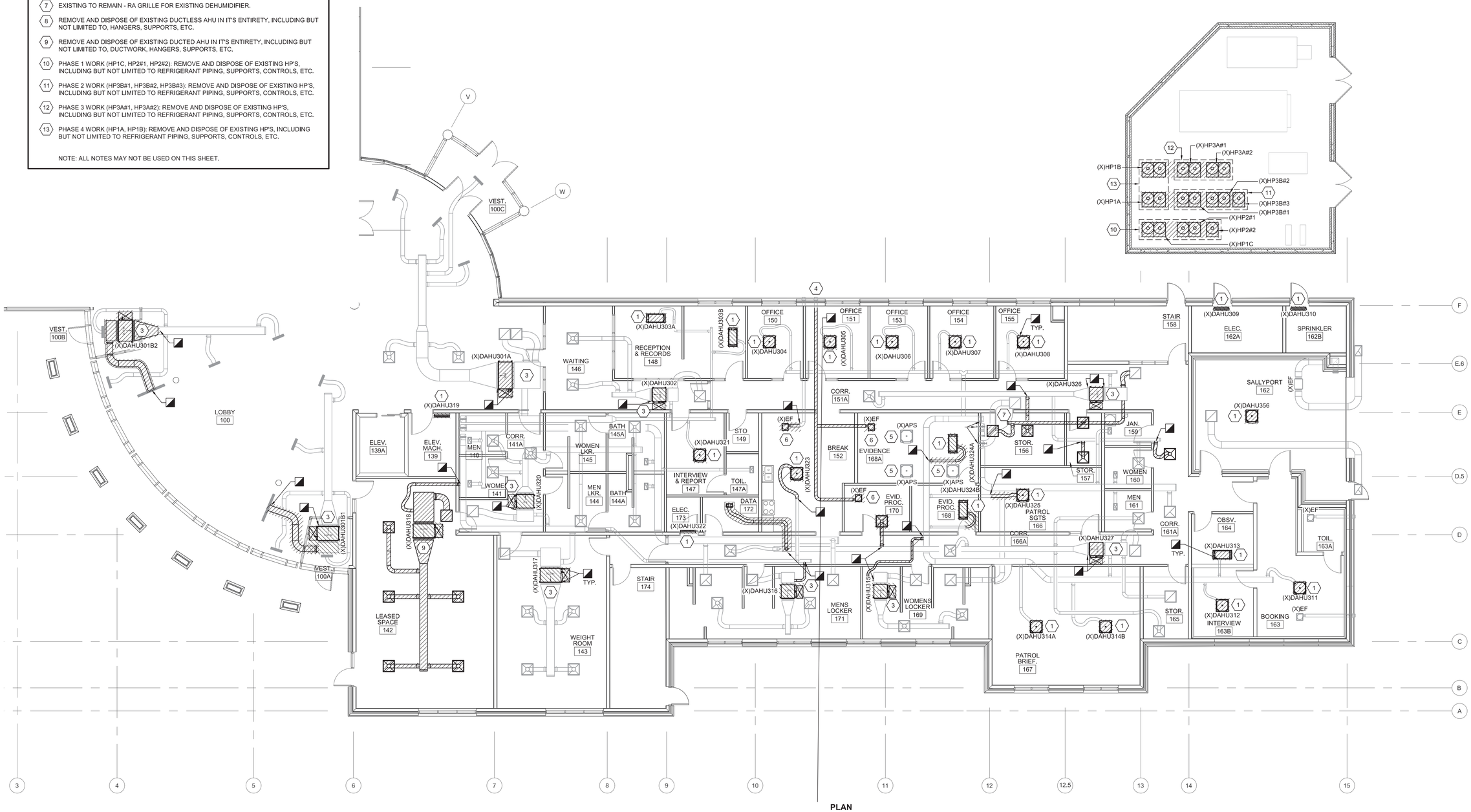

1 ENLARGED FLOOR PLAN
1/8" = 1'-0"
0 4' 8' 16'

PLAN NORTH

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER ROY O GRADY
02/21/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Demo. HVAC First Floor Enlarged Plans

Rev.	Date	Notes

MD2.2R

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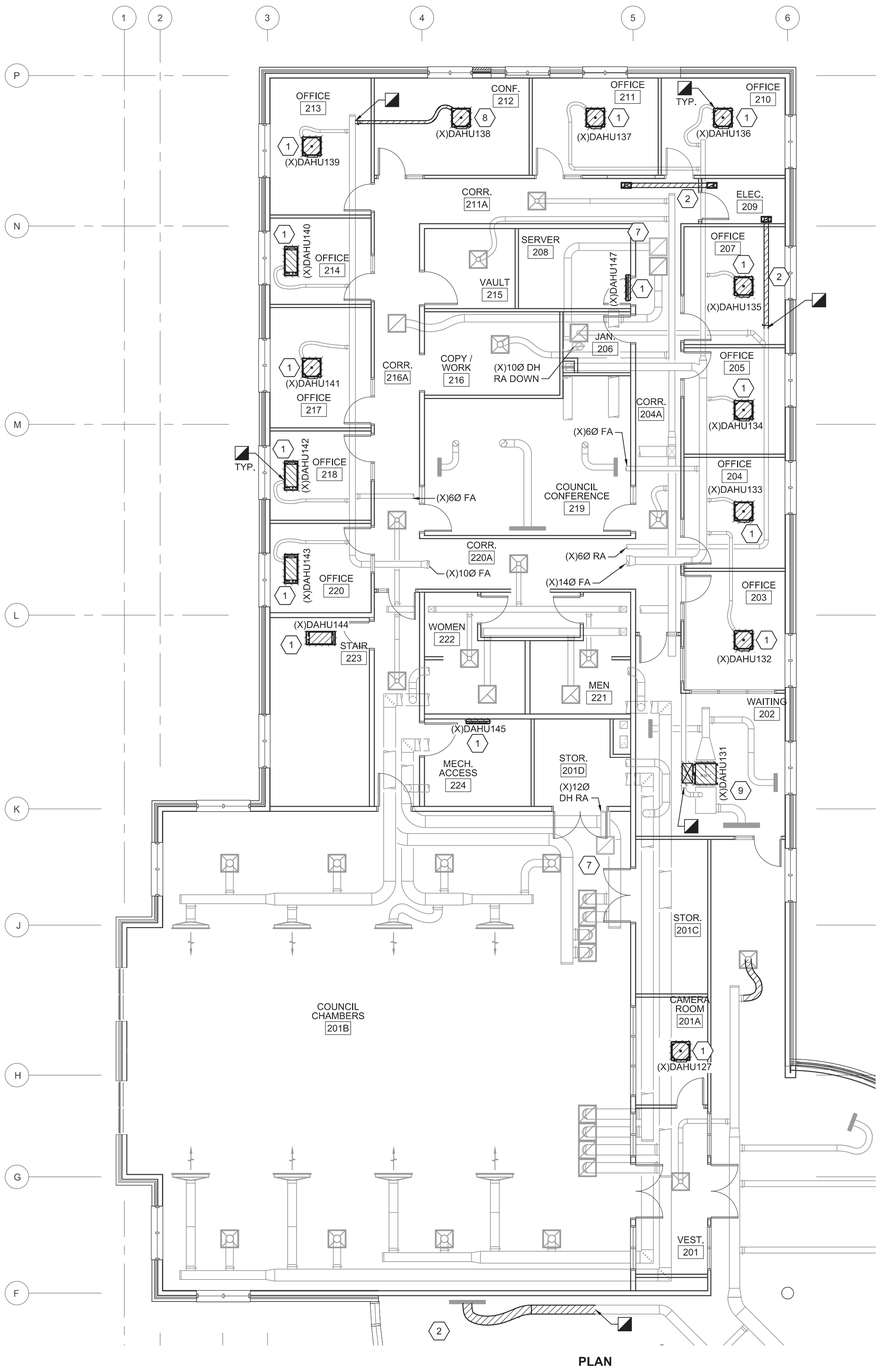
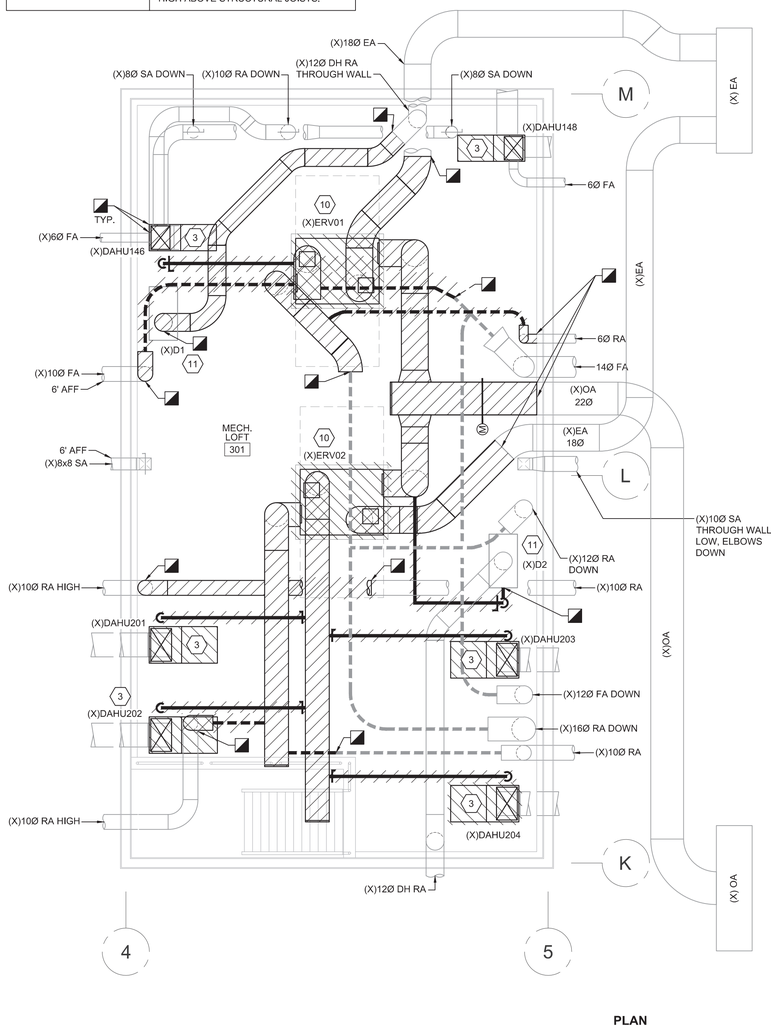


1 **ENLARGED FLOOR PLAN**

1/8" = 1'-0"

PLAN NORTH

DASHED LINE INDICATES DUCT ROUTED HIGH ABOVE STRUCTURAL JOISTS.



2 **ENLARGED FLOOR PLAN - 301 MECH. LOFT**

1/4" = 1'-0"

PLAN NORTH

KEYED NOTES - DEMOLITION

1. REMOVE AND DISPOSE OF EXISTING DUCTLESS DAHU. PROTECT EXISTING FA DUCTWORK TO THE EXTENT SHOWN ON PLANS. PREPARE FOR CONNECTION TO NEW AHU AS INDICATED ON NEW WORK PLANS.
2. REMOVE AND DISPOSE OF EXISTING DUCTWORK TO EXTENT SHOWN ON PLANS. PATCH DUCT AND INSULATION AS NECESSARY.
3. REMOVE AND DISPOSE OF EXISTING DUCTED AHU. PROTECT EXISTING SA, RA, AND FA DUCTWORK TO THE EXTENT SHOWN ON PLANS. PREPARE FOR CONNECTION TO NEW AHU AS INDICATED ON NEW WORK PLANS.
4. NOT USED.
5. NOT USED.
6. NOT USED.
7. EXISTING TO REMAIN - RA GRILLE FOR EXISTING DEHUMIDIFIER.
8. REMOVE AND DISPOSE OF EXISTING DUCTLESS AHU IN IT'S ENTIRETY, INCLUDING BUT NOT LIMITED TO, HANGERS, SUPPORTS, ETC.
9. REMOVE AND DISPOSE OF EXISTING DUCTED AHU IN IT'S ENTIRETY, INCLUDING BUT NOT LIMITED TO, DUCTWORK, HANGERS, SUPPORTS, ETC.
10. DEMOLISH EXISTING ERV AND ALL ASSOCIATED FA, RA, EA AND OA DUCTWORK TO EXTENT SHOWN.
11. THE EXISTING DEHUMIDIFIER'S WILL REMAIN IN PLACE AND OPERATE INDEPENDENTLY TO HELP DEHUMIDIFY THE BUILDING BY PULLING AIR FROM THE BUILDING RUNNING IT THROUGH THE DEHUMIDIFIER AND DUMPING BACK OUT INTO THE BUILDING. DEMOLISH EXISTING DUCTWORK TO THE EXTENT SHOWN ON PLANS.

NOTE: ALL NOTES MAY NOT BE USED ON THIS SHEET.

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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02/21/2024

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3. REMOVE AND DISPOSE OF EXISTING DUCTED AHU. PROTECT EXISTING SA, RA, AND FA DUCTWORK TO THE EXTENT SHOWN ON PLANS. PREPARE FOR CONNECTION TO NEW AHU AS INDICATED ON NEW WORK PLANS.
4. PREPARE EXISTING SA DIFFUSER TO BE RELOCATED IN NEW CEILING GRID.
5. PREPARE EXISTING RA GRILLE TO BE RELOCATED IN NEW CEILING GRID.
6. NOT USED.
7. EXISTING TO REMAIN - RA GRILLE FOR EXISTING DEHUMIDIFIER.
8. REMOVE AND DISPOSE OF EXISTING DUCTLESS AHU IN IT'S ENTIRETY, INCLUDING BUT NOT LIMITED TO, HANGERS, SUPPORTS, ETC.
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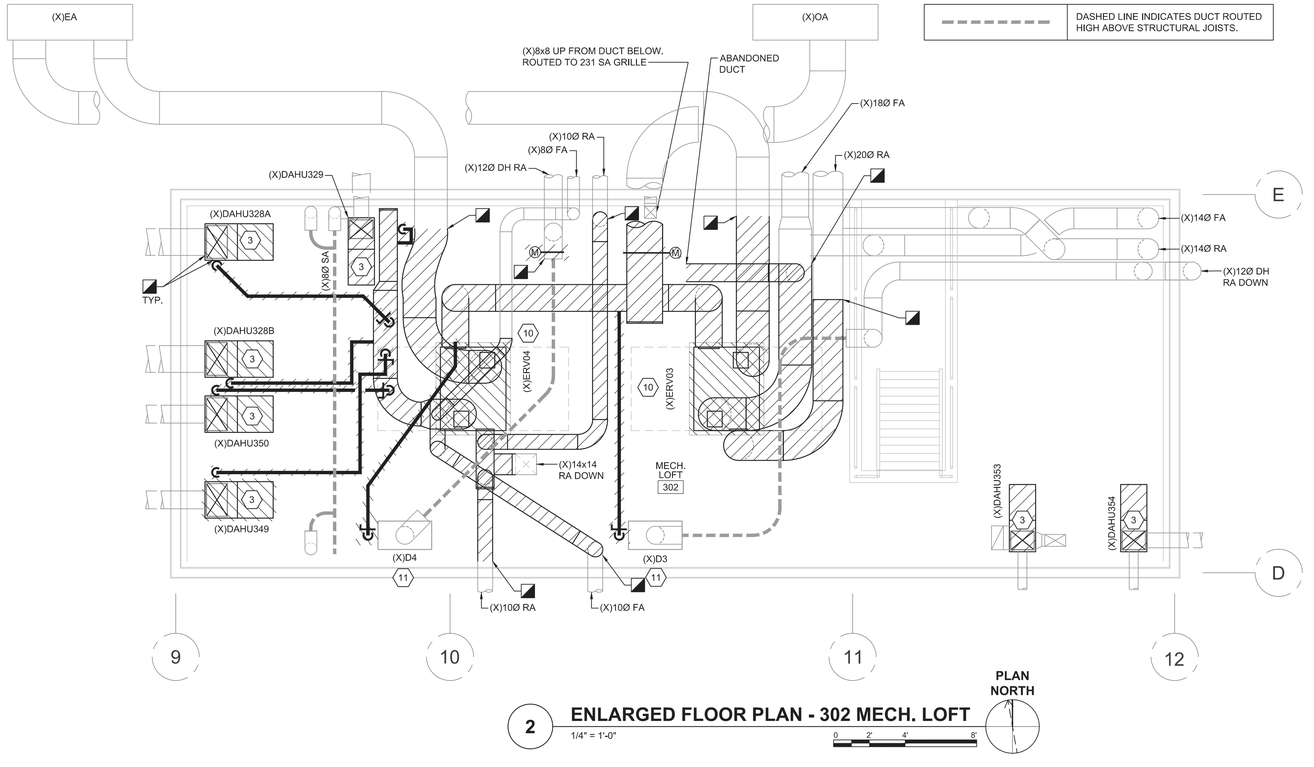
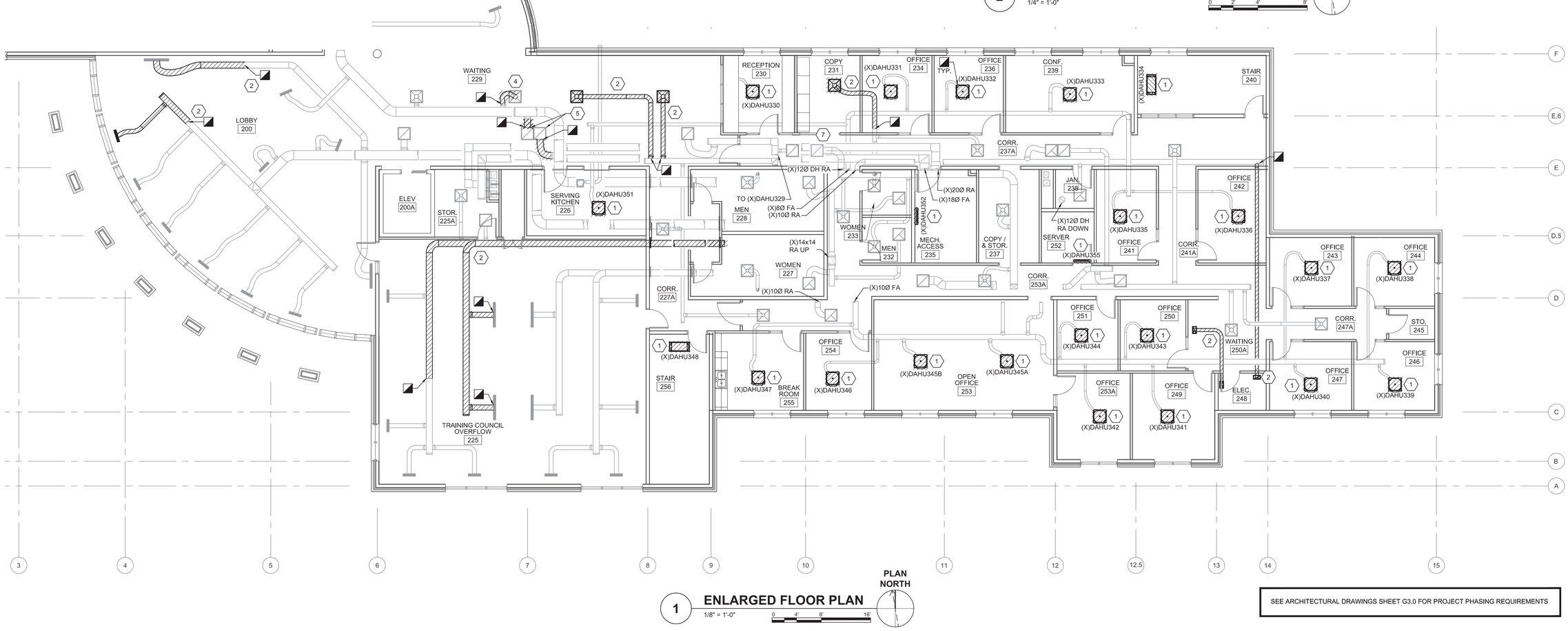


2 ENLARGED FLOOR PLAN - 302 MECH. LOFT

1/4" = 1'-0"

PLAN NORTH



1 ENLARGED FLOOR PLAN

1/8" = 1'-0"

PLAN NORTH

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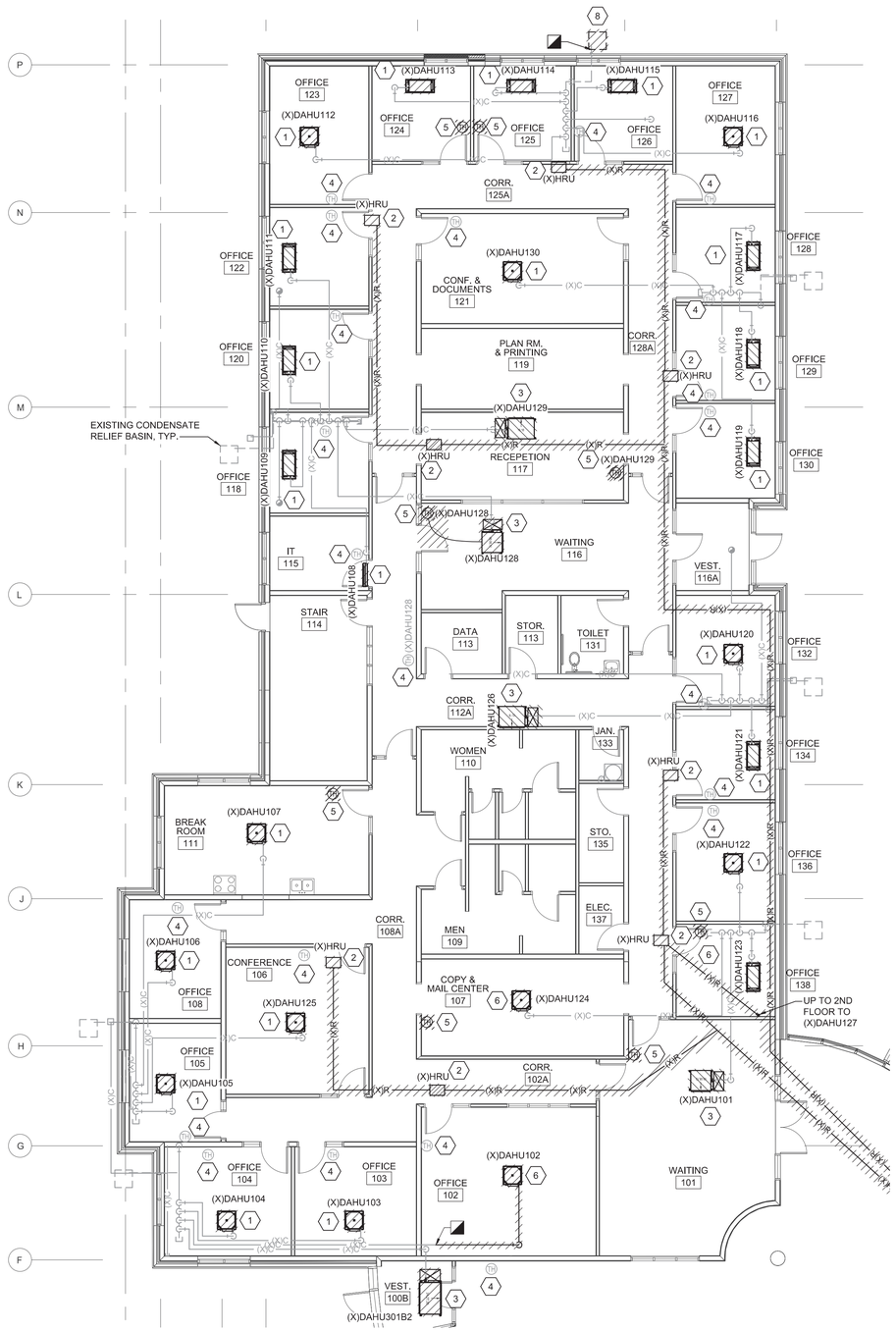

1 **ENLARGED FLOOR PLAN**

1/8" = 1'-0"

0 4' 8' 16'

PLAN NORTH

KEYED NOTES - DEMOLITION

1. REMOVE AND DISPOSE OF EXISTING DUCTLESS AHU INCLUDING REFRIGERANT PIPING (NOT SHOWN) FROM AHU TO HRU. M.C. TO LEAVE REFRIGERANT PIPING HANGERS WHERE APPLICABLE TO RE-USE FOR NEW PIPING. PROTECT EXISTING CONDENSATE PIPING, HANGERS, SUPPORTS AND THERMOSTAT FOR CONNECTION TO NEW AHU.
2. REMOVE AND DISPOSE OF EXISTING HRU, INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, CONTROLS, ETC. M.C. TO LEAVE REFRIGERANT PIPING HANGERS WHERE APPLICABLE TO RE-USE FOR NEW REFRIGERANT PIPING.
3. REMOVE AND DISPOSE OF EXISTING DUCTED AHU INCLUDING REFRIGERANT PIPING (NOT SHOWN) FROM AHU TO HRU, M.C. TO LEAVE REFRIGERANT PIPING HANGERS WHERE APPLICABLE TO RE-USE FOR NEW PIPING.PROTECT EXISTING CONDENSATE PIPING, HANGERS, SUPPORTS AND THERMOSTAT FOR CONNECTION TO NEW AHU.
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6. REMOVE AND DISPOSE OF EXISTING AHU IN IT'S ENTIRETY INCLUDING BUT NOT LIMITED TO, REFRIGERANT PIPING, THERMOSTAT, CONTROLS, HANGERS, SUPPORTS, ETC.
7. REMOVE AND DISPOSE OF EXISTING HRU IN IT'S ENTIRETY INCLUDING BUT NOT LIMITED TO, REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.
8. RELOCATE EXISTING CONDENSATE BASIN TO LOCATION INDICATED ON NEW WORK PLANS. EXTEND EXISTING CONDENSATE PIPING TO NEW LOCATION. REPLACE BASIN IF CONDITION IS UNSATISFACTORY.

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL SEAL 043801 ENGINEER TROY O. GRADY
02/21/2024

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Issue Date: February 23, 2024

Mechanical Demo. Piping First Floor Enlarged Plans

Rev.	Date	Notes

MD3.1R

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KEYED NOTES - DEMOLITION

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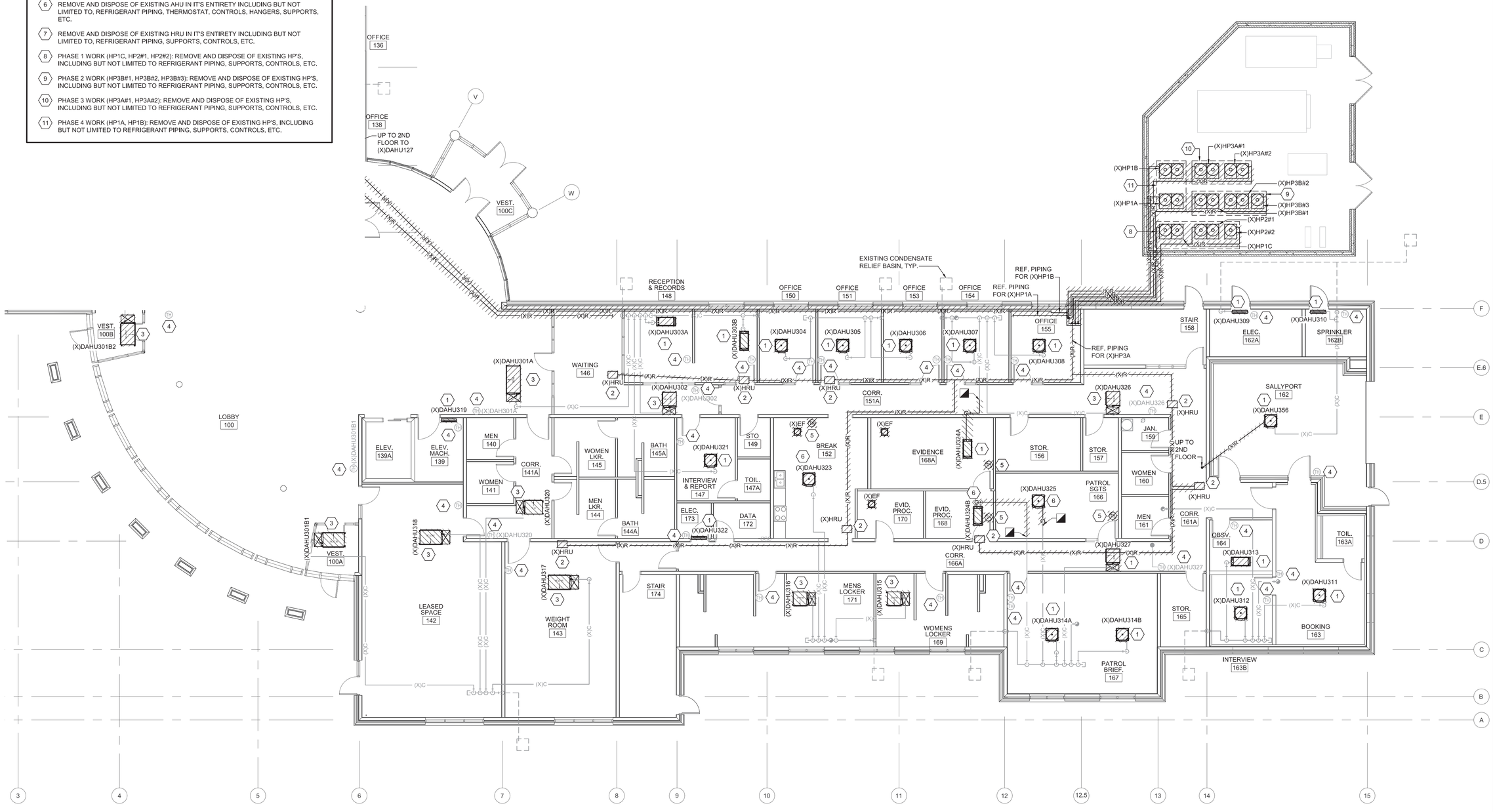
7. REMOVE AND DISPOSE OF EXISTING HRU IN IT'S ENTIRETY INCLUDING BUT NOT LIMITED TO, REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.
8. PHASE 1 WORK (HP1C, HP2#1, HP2#2): REMOVE AND DISPOSE OF EXISTING HP'S, INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.
9. PHASE 2 WORK (HP3B#1, HP3B#2, HP3B#3): REMOVE AND DISPOSE OF EXISTING HP'S, INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.
10. PHASE 3 WORK (HP3A#1, HP3A#2): REMOVE AND DISPOSE OF EXISTING HP'S, INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.
11. PHASE 4 WORK (HP1A, HP1B): REMOVE AND DISPOSE OF EXISTING HP'S, INCLUDING BUT NOT LIMITED TO REFRIGERANT PIPING, SUPPORTS, CONTROLS, ETC.



1 ENLARGED FLOOR PLAN

1/8" = 1'-0"

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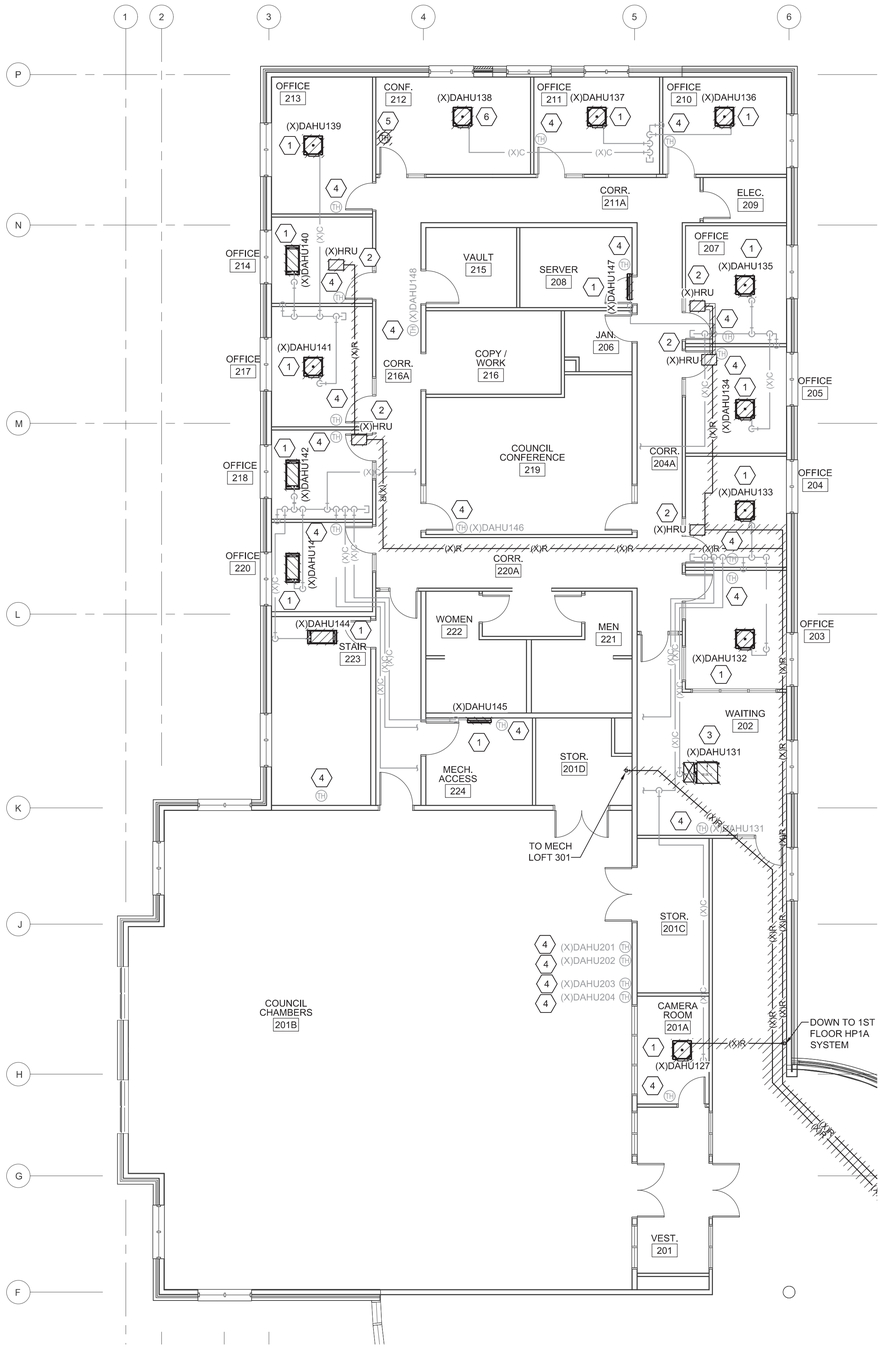
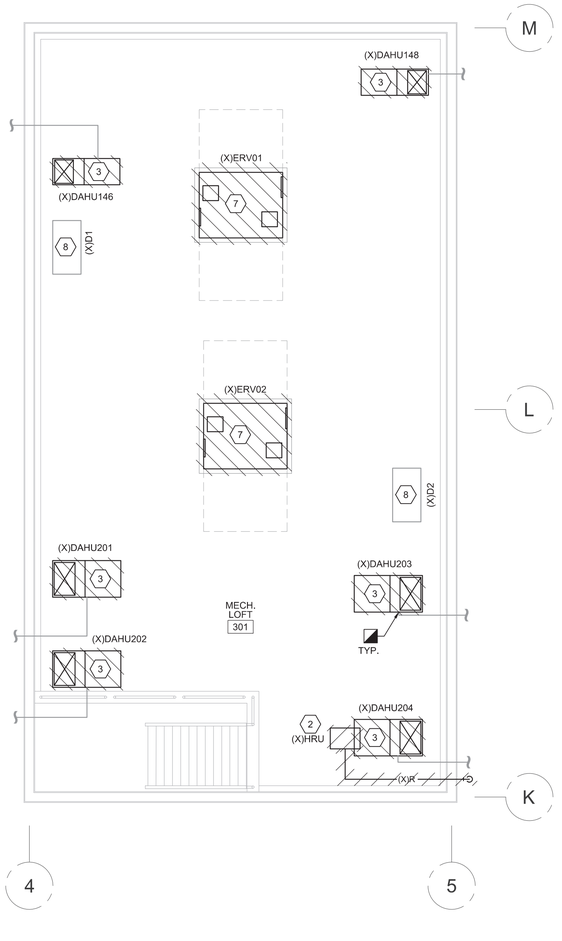


1 **ENLARGED FLOOR PLAN**

1/8" = 1'-0"

PLAN NORTH



2 **ENLARGED FLOOR PLAN - 301 MECH. LOFT**

1/4" = 1'-0"

PLAN NORTH

KEYED NOTES - DEMOLITION

1. REMOVE AND DISPOSE OF EXISTING DUCTLESS AHU INCLUDING REFRIGERANT PIPING (NOT SHOWN) FROM AHU TO HRU. M.C. TO LEAVE REFRIGERANT PIPING HANGERS WHERE APPLICABLE TO RE-USE FOR NEW PIPING. PROTECT EXISTING CONDENSATE PIPING, HANGERS, SUPPORTS AND THERMOSTAT FOR CONNECTION TO NEW AHU.
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7. REMOVE AND DISPOSE OF EXISTING ERV INCLUDING BUT NOT LIMITED TO, THERMOSTAT, CONTROLS, SUPPORTS, ETC. PREPARE AREA FOR INSTALLATION OF NEW DOAS.
8. EXISTING DEHUMIDIFIER TO REMAIN. DEMOLISH DUCTWORK TO EXTENT INDICATED ON PLANS.

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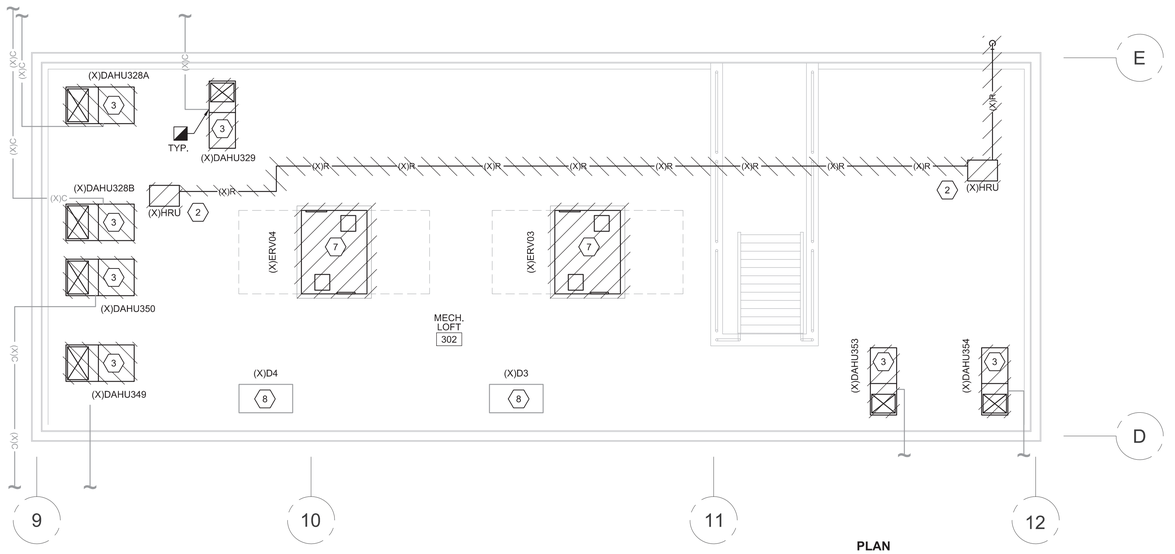
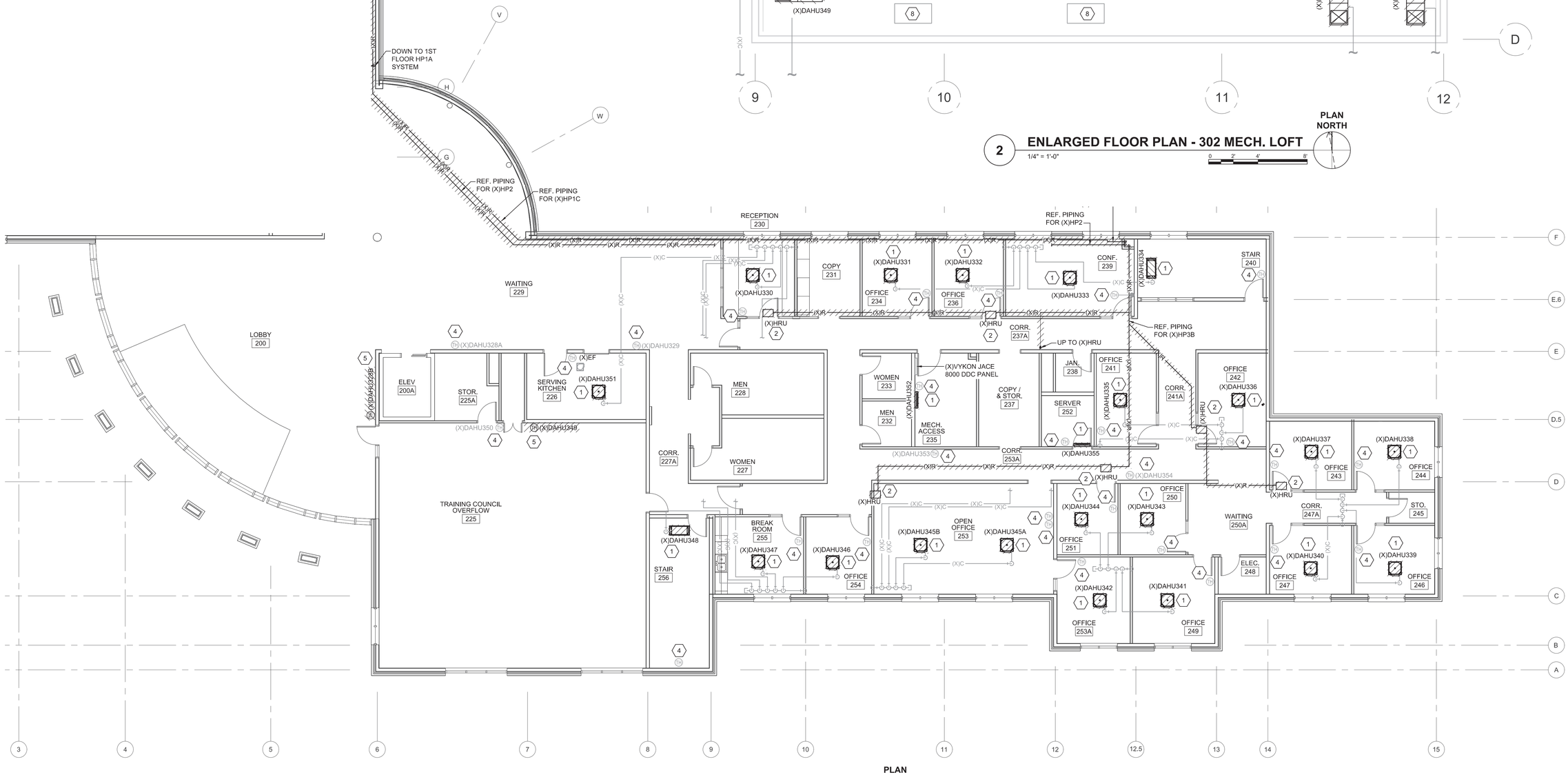


2 ENLARGED FLOOR PLAN - 302 MECH. LOFT

1/4" = 1'-0"

PLAN NORTH



1 ENLARGED FLOOR PLAN

1/8" = 1'-0"

PLAN NORTH

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ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	CEILING FAN, SEE LIGHTING FIXTURE SCHEDULE FOR TYPE
	2x4 LIGHT FIXTURE, RECESSED OR SURFACE MOUNTED
	2x2 LIGHT FIXTURE, RECESSED OR SURFACE MOUNTED
	4FT OR 8FT LIGHT FIXTURE, RECESSED OR SURFACE MOUNTED
	4FT OR 8FT CHANNEL LIGHT FIXTURE, SUSPENDED OR SURFACE MOUNTED
	UNDER COUNTER LIGHT FIXTURE
	DIRECT/INDIRECT FIXTURE, SUSPENDED
	TRACK WITH LIGHT KIT
	RECESSED LIGHT FIXTURE
	SURFACE LIGHT FIXTURE
	RECESSED WALL WASH LIGHT FIXTURE
	WALL MOUNTED LIGHT FIXTURE
	EXIT SIGN, SINGLE FACE, CEILING, CHEVRON INDICATES DIRECTION.
	EXIT SIGN, DOUBLE FACE, CEILING MOUNTED, CHEVRON INDICATES DIRECTION.
	EXIT SIGN W/EMERGENCY LIGHTING UNIT, CEILING MOUNTED, CHEVRON INDICATES DIRECTION.
	EXIT SIGN, SINGLE FACE, WALL/END MOUNTED, CHEVRON INDICATES DIRECTION.
	EXIT SIGN, DOUBLE FACE, WALL/END MOUNTED, CHEVRON INDICATES DIRECTION.
	EXIT SIGN W/EMERGENCY LIGHTING UNIT, WALL/END MOUNTED, CHEVRON INDICATES DIRECTION.
	EMERGENCY LIGHTING UNIT, 2-HEAD WITH BATTERY BACK-UP, WALL MOUNTED, "NOT SWITCHED"
	EMERGENCY LIGHTING UNIT, 2-HEAD WITH BATTERY BACK-UP, CEILING MOUNTED, "NOT SWITCHED"
	**FOR ALL LIGHTING FIXTURE TYPES ABOVE: LETTER ADJACENT TO FIXTURE INDICATES FIXTURE TYPE, SEE LIGHTING FIXTURE SCHEDULE
	POWER & SWITCH LEG
	UNSWITCHED LEG
	CONDUIT, HOME RUN TO PANEL BOARD
PB	PHOTOCELL, REMOTE MOUNTED, 120V, 10 SECOND TIME DELAY, UL WET LOCATION, RATED FOR 1500 W @ 120 VAC AND 4000 W @ 277 VAC (FOR USE WITH LAMP SOURCE(S) SHOWN.
$	SWITCH, SINGLE POLE, 120/277VAC, 20A, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED, SEE ELECTRICAL DEVICES MOUNTING HEIGHT DETAIL. LOWER CASE LETTER INDICATES FIXTURE SWITCHING, WHEN INDICATED.
$3	3-WAY SWITCH, 120/277 VAC, 20A, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED SEE ELECTRICAL DEVICES MOUNTING HEIGHT DETAIL. LOWER CASE LETTER INDICATES FIXTURE SWITCHING, WHEN INDICATED.
$4	4-WAY SWITCH 120/277 VAC, 20A, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED SEE ELECTRICAL DEVICES MOUNTING HEIGHT DETAIL. LOWER CASE LETTER INDICATES FIXTURE SWITCHING, WHEN INDICATED.
$$	INDICATES BI-LEVEL SWITCHING, 1 SWITCH SWITCHES OUTSIDE LAMPS, 1 SWITCH SWITCHES INSIDE LAMPS. SEE ELECTRICAL DEVICES MOUNTING HEIGHT DETAIL. LOWER CASE LETTER INDICATES FIXTURE SWITCHING, WHEN INDICATED.
$WP	WEATHERPROOF SWITCH, SINGLE POLE 120/277 VAC, 20A, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED.
D$	DIMMER SWITCH, 0-10V OR LINE VOLTAGE RATING AS REQUIRED BY LIGHTING FIXTURE(S). LINE VOLTAGE RATED DIMMERS MUST BE 1500W FOR 120 VAC AND 4000W 277VAC MINIMUM.
AFC$	ADJUSTABLE FAN CONTROL, 120/277VAC, SINGLE POLE, 20A, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED, SEE ELECTRICAL DEVICES MOUNTING HEIGHT DETAIL. LOWER CASE LETTER INDICATES FIXTURE SWITCHING, WHEN INDICATED

SYMBOL	DESCRIPTION
OS	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, 360° COVERAGE 2 = SECOND CONTACT TO BE PROVIDED FOR CONNECTION TO BUILDING MANAGEMENT
OS	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, LONG RANGE COVERAGE 2 = SECOND CONTACT TO BE PROVIDED FOR CONNECTION TO BUILDING MANAGEMENT
OS	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, 180° COVERAGE 2 = SECOND CONTACT TO BE PROVIDED FOR CONNECTION TO BUILDING MANAGEMENT
OS	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, PIR TECHNOLOGY OCCUPANCY SENSOR, LOW VOLTAGE (24VDC) 19mA DRAW, WATTSTOPPER CX100-1, LONG RANGE SENSOR. INSTALL WHERE FREE OF OBSTRUCTIONS.
OS	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, PIR TECHNOLOGY OCCUPANCY SENSOR, LOW VOLTAGE (24VDC) 19mA DRAW, WATTSTOPPER CX100-3, TWO SIDED AISLEWAY. INSTALL WHERE FREE OF OBSTRUCTIONS.
O$	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, SINGLE BUTTON ON/OFF CONTROL, 180° COVERAGE, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED.
O$2	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, DUAL BUTTON ON/OFF CONTROL, 180° COVERAGE, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED.
O$D	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, DUAL BUTTON ON/OFF CONTROL WITH 0-10V DIMMING, 180° COVERAGE, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED. WATTSTOPPER DW-311 OR EQUAL.
O$F	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, DUAL BUTTON ON/OFF CONTROL, 180° COVERAGE, ADDITIONAL POWER SUPPLY FOR FAN OPERATION, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED.
$T	WALL MOUNTED DIGITAL TIMED SWITCH (5 MIN'S TO 12 HR'S), SINGLE BUTTON ON/OFF CONTROL, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED.
	RECESSED SINGLE/DOUBLE GANG BOX WITH BLANK COVER PLATE, MOUNTED 16" AFF, UNLESS OTHERWISE NOTED
	RECESSED DEDICATED/PICTURE/CLOCK SINGLE OUTLET, 120VAC, 20A, MOUNTED AS INDICATED ON DRAWING.
	RECEPTACLE, DUPLEX, 120VAC, 20A, MOUNTED 16" AFF, UNLESS OTHERWISE NOTED. (SEE ELECTRICAL MOUNTING HEIGHT DETAIL)
	RECEPTACLE, DUPLEX, 120VAC, 20A, MOUNTED 6" ABOVE COUNTER TOP OR BACK SPLASH.
	RECEPTACLE, QUADPLEX, 120VAC, 20A MOUNTED 16"AFF UNLESS OTHERWISE NOTED (SEE ELECTRICAL MOUNTING HEIGHT DETAIL)
	RECEPTACLE, QUADPLEX, 120VAC, 20A, MOUNTED 6" ABOVE COUNTER TOP OR BACK SPLASH.
	RECEPTACLE, DUPLEX, GROUND FAULT CIRCUIT INTERRUPTER TYPE, 120VAC, 20A. MOUNTED 16" AFF, UNLESS OTHERWISE NOTED. (SEE ELECTRICAL MOUNTING HEIGHT DETAIL)
	RECEPTACLE, DUPLEX, GROUND FAULT CIRCUIT INTERRUPTER TYPE, 120VAC, 20A, MOUNTED 6" ABOVE COUNTER TOP OR BACK SPLASH.
	RECEPTACLE, QUADPLEX, GROUND FAULT CIRCUIT INTERRUPTER TYPE, 120VAC, 20A MOUNTED 16"AFF UNLESS OTHERWISE NOTED (SEE ELECTRICAL MOUNTING HEIGHT DETAIL)
	RECEPTACLE, QUADPLEX, GROUND FAULT CIRCUIT INTERRUPTER TYPE, 120VAC, 20A, MOUNTED 6" ABOVE COUNTER TOP OR BACK SPLASH.
	RECEPTACLE, 250VAC, 2 POLE, 3 WIRE, WALL MOUNTED, SIZE AS INDICATED ON DRAWING
	RECEPTACLE, 480VAC, 2 POLE, 3 WIRE, WALL MOUNTED, SIZE AS INDICATED ON DRAWING
	RECEPTACLE, DUPLEX, 120VAC, 20A CEILING MOUNTED (LAY-IN / GYPBOARD / SUSPENDED)
	RECEPTACLE, DUPLEX, 120VAC, 20A RECESSED FLOOR MOUNTED.
	UPS FED RECEPTACLE, DUPLEX, 120VAC, 20A, MOUNTED 16" AFF, UNLESS OTHERWISE NOTED. (SEE ELECTRICAL MOUNTING HEIGHT DETAIL)
	UPS FED RECEPTACLE, QUADPLEX, 120VAC, 20A, MOUNTED 16" AFF, UNLESS OTHERWISE NOTED. (SEE ELECTRICAL MOUNTING HEIGHT DETAIL)
	**FOR ALL RECEPTACLE TYPES ABOVE: +XX"- INDICATES MOUNTING HEIGHT OF DEVICE IN INCHES AFF (IF GIVEN) (SEE ELECTRICAL MOUNTING HEIGHT DETAIL) WP - LISTED WEATHER-RESISTANT TYPE DEVICE WITH WEATHERPROOF IN USE COVER TR - TAMPER RESISTANT S - INDICATES THE TOP RECEPTACLE OF THE DEVICE IS CONTROLLED VIA WALL SWITCH H - DEVICE MOUNTED HORIZONTALLY U - USB IN-WALL CHARGER
30A/3/3R W/ 30AF	SAFETY SWITCH, FUSED, HEAVY DUTY, SIZE AS INDICATED ON DRAWINGS ##A = DISCONNECT SIZE / # = NUMBER OF POLES / # = NEMA RATING, / ##AF = FUSE SIZE
CB	ENCLOSED BREAKER, SIZE AS INDICATED ON DRAWINGS ##A = BREAKER SIZE / # = NUMBER OF POLES / # = NEMA RATING
"Equip" #AMP HMCP (#HP) NEMA #	VARIABLE FREQUENCY DRIVE (VFD)
	STARTER, FULL VOLTAGE, SIZE AS INDICATED ON DRAWINGS
"Equip" #AMP HMCP (#HP) NEMA #	COMBINATION STARTER WITH CIRCUIT BREAKER DISCONNECT, FULL VOLTAGE, SIZE AS INDICATED ON DRAWINGS
M$##	MANUAL MOTOR STARTER, ELECTRICAL CONTRACTOR SHALL COORDINATE POLES AND SIZE WITH EQUIPMENT ## = AMPERAGE RATING WHEN INDICATED ON DRAWING
	1 BUTTON CONTROLLER

SYMBOL	DESCRIPTION
	2 START/STOP PUSHBUTTON CONTROLLER
	3 UP/STOP/DN PUSHBUTTON CONTROLLER
EPO	WALL MOUNTED 120V EMERGENCY OFF PUSH BUTTON WITH RED MUSHROOM STYLE HEAD WITH MANUAL PULL REST, NORMALLY OPEN, WITH CLEAR PROTECTIVE COVER. MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED.
	WALL MOUNTED PUSH PLATE MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED.
208/120V / 480/277V	PANELBOARD, SURFACE OR RECESSED MOUNTED AS SHOWN. SIZE, RATINGS, AND MOUNTING AS INDICATED ON PANEL SCHEDULE. CONTRACTOR IS RESPONSIBLE FOR REQUIRED CLEARANCE IN FRONT OF ELECTRICAL PANEL. SEE NEC TABLE 110.26 WORKING SPACES FOR ADDITIONAL CLEARANCE CONDITIONS.
	TRANSFORMER, SIZE AS INDICATED ON DRAWING
	METER
PP	SERVICE POLE, HUBBEL, LEGRAND, OR EQUAL, EXTRUDED ALUMINUM SERVICE POLE, 2-CHANNELS WITH CEILING TRIM, ANODIZED ALUMINUM, MULTI-SERVICE, TWO-CHANNEL POLE WITH (2) KNOCKOUTS, (2) 20AMP RECEPTACLES. ADJUSTABLE T-BAR ASSEMBLY FOR MOUNTING POLES IN MIDDLE OF CEILING. UL LISTED. EACH POWER POLE SHOWN ON PLAN SHALL HAVE PROVISIONS FOR (2) DATA DROPS AND (1) VOICE DROP.
M	ELECTRICAL MOTOR
	GROUND BUS, "E" INDICATES ELECTRICAL GROUND BAR, "TG" INDICATES TELECOMMUNICATIONS GROUND BAR
	CABLE TRAY, LADDER TYPE
	CABLE TRAY, CENTER HUNG TYPE
	CABLE TRAY, BASKET TYPE
	HAND HOLE, IN GRADE, TIER RATING AS INDICATED ON DRAWING
	HATCHING INDICATES ITEMS TO BE DEMOLISHED. REMOVE DEVICE, EQUIPMENT, FIXTURE INDICATED, CIRCUIT, AND CONDUIT BACK TO SOURCE UNLESS OTHERWISE NOTED.
1	DEMOLITION KEY NOTE SYMBOL
1	KEY NOTE SYMBOL
1	REVISION DELTA
WP WALL CLNG WAP	WIRELESS ACCESS POINT, 1 DATA IN A DUAL GANG BOX WITH A SINGLE GANG PLASTER RING, OWNER SHALL PROVIDE SURGE PROTECTOR AND WAP DEVICE, THE ELECTRICAL CONTRACTOR SHALL INSTALL. WP - LISTED WEATHER-RESISTANT TYPE DEVICE
1V/1D	COMBINATION DATA/TELEPHONE OUTLET, MOUNTED 18" AFF UNLESS OTHERWISE NOTED. PROVIDE 11/4" CONDUIT TO ABOVE ACCESSIBLE GRID CEILING W/PULL STRING FOR OUTLETS LOCATED BELOW HARD (GYPBOARD) CEILINGS, ROUTE 11/4" CONDUIT TO TELEPHONE/DATA ROOM. #V = NUMBER OF VOICE CONNECTIONS / #D = NUMBER OF DATA CONNECTIONS, IF INDICATED
	WALL TELEPHONE OUTLET, MOUNTED 60" AFF UNLESS OTHERWISE NOTED. PROVIDE 11/4" CONDUIT TO ABOVE ACCESSIBLE GRID CEILING W/PULL STRING FOR OUTLETS LOCATED BELOW HARD (GYPBOARD) CEILINGS, ROUTE 11/4" CONDUIT TO TELEPHONE/DATA ROOM.
1V/1D	COMBINATION DATA/TELEPHONE OUTLET, RECESSED CEILING MOUNTED (LAY-IN / GYPBOARD) PROVIDE 11/4" CONDUIT TO ABOVE ACCESSIBLE GRID CEILING W/PULL STRING FOR OUTLETS LOCATED BELOW HARD (GYPBOARD) CEILINGS, ROUTE 11/4" CONDUIT TO TELEPHONE/DATA ROOM. #V = NUMBER OF VOICE CONNECTIONS / #D = NUMBER OF DATA CONNECTIONS, IF INDICATED
2D PT	6" FIRE RATED POKE THRU FLOORBOX WITH TWO DUPLEX RECEPTACLES AND GANG FOR DATA CABLES. HUBBEL SYSTEM ONE WITH 50/50 SPLIT SUB-PLATES OR APPROVED EQUAL. MATCH EXISTING FLOOR BOX FINISH. PROVIDE 1 /14" CONDUIT WITH DATA CABLES INSTALLED BY CONTRACTOR.
2G MD	NON-METALLIC 2 GANG FLOOR BOX WITH ONE DUPLEX RECEPTACLE AND ONE GANG FOR TELECOMMUNICATIONS DEVICES. PROVIDE AND INSTALL 1-1" CONDUIT FOR POWER AND 1-1/14" CONDUIT WITH PULL STRING TO ACCESSIBLE CEILING CAVITY FOR DATA CABLES. CABLES PROVIDED AND INSTALLED BY CONTRACTOR. MATCH EXISTING FLOOR BOXES INSTALLED IN BUILDING.
PT MD RL	FIRE RATED POKE THRU FLOOR BOX WITH ONE DUPLEX RECEPTACLE AND ONE GANG FOR TELECOMMUNICATIONS DEVICES. PROVIDE AND INSTALL 1-1" CONDUIT FOR POWER AND 1-1/14" CONDUIT WITH PULL STRING TO ACCESSIBLE CEILING CAVITY FOR TELECOMMUNICATIONS CABLES. CABLES PROVIDED AND INSTALLED BY OWNER. RL - RELOCATED EXISTING WHEN INDICATED
J	JUNCTION BOX - WALL MOUNTED +##" - INDICATES MOUNTING HEIGHT OF DEVICE IN INCHES AFF (if given)
J	JUNCTION BOX - CEILING/ABOVE CEILING MOUNTED
J	JUNCTION BOX - FLOOR MOUNTED

SYMBOL	DESCRIPTION
	WALL MOUNTED TWO GANG BOX FOR TELEVISION MOUNTED AT 72" AFF UNLESS NOTED OTHERWISE. BOX SHALL HAVE ONE DUPLEX RECEPTACLE. PROVIDE 1 1/4" CONDUIT WITH PULL STRING TO ABOVE ACCESSIBLE CEILING GRID. FOR BOXES LOCATED BELOW HARD (GYPBOARD) CEILINGS, ROUTE 1 1/4" CONDUIT WITH PULL STRING TO ABOVE ADJACENT ACCESSIBLE LAY-IN CEILING SPACE. BOX SHALL BE PASS & SEYMOUR TV2MW OR APPROVED EQUAL. CABLE PROVIDED AND INSTALLED BY OWNER.
	CEILING MOUNTED DOUBLE GANG BOX FOR TELEVISION RECESSED IN CEILING. BOX SHALL HAVE DUPLEX RECEPTACLE AND DATA CONNECTIONS FOR TELEVISION AS DIRECTED BY OWNER/CLIENT/TENANT. BOX SHALL BE PASS & SEYMOUR TV2MW OR APPROVED EQUIVALENT.
	ELECTRIC STRIKE
	MAGNETIC LOCK
	DOOR CONTACTS
	CARD READER
	KEYPAD
	MOTION DETECTOR (TYPE DENOTED)
WP	WALL MOUNTED CAMERA, WP INDICATES WEATHERPROOF (PROVIDED BY GENERAL CONTRACTOR INSTALLED BY DATA CONTRACTOR)
	CEILING MOUNTED CAMERA (PROVIDED BY GENERAL CONTRACTOR INSTALLED BY DATA CONTRACTOR)
S	CEILING MOUNTED SPEAKER
S	WALL MOUNTED SPEAKER
	FLOOR MOUNTED DATA RACK
	WALL MOUNTED DATA RACK
	PROJECTOR PAN, CEILING MOUNTED
	1 HOUR RATED FIRE WALL
	1 HOUR RATED FIRE WALL - EXISTING
	2 HOUR RATED FIRE WALL
	2 HOUR RATED FIRE WALL - EXISTING
	3 HOUR RATED FIRE WALL
	3 HOUR RATED FIRE WALL - EXISTING
OHP	OVERHEAD PRIMARY CONDUCTORS
(X)OHP	OVERHEAD PRIMARY CONDUCTORS - EXISTING
UGP	UNDERGROUND PRIMARY CONDUCTORS
(X)UGP	UNDERGROUND PRIMARY CONDUCTORS - EXISTING
OHS	OVERHEAD SECONDARY CONDUCTORS
(X)OHS	OVERHEAD SECONDARY CONDUCTORS - EXISTING
UGS	UNDERGROUND SECONDARY CONDUCTORS
(X)UGS	UNDERGROUND SECONDARY CONDUCTORS - EXISTING
G	COPPER CLASS 1 CONDUCTOR ON ROOF
GA	ALUMINUM CLASS 1 CONDUCTOR ON ROOF
	COPPER CLASS 1 CONDUCTOR BELOW GRADE
C	CONTROL CABLE CONDUIT
	GROUND ROD, COPPER, 3/4"DIA x 10'-0" LONG
	COPPER AIR TERMINAL IN BRONZE BASE
"A"	ALUMINUM AIR TERMINAL IN ALUMINUM BASE
"B"	
T	226V - STYLE THRU-ROOF CONNECTOR (TYPE T)
T1	230V - STYLE THRU-ROOF CONNECTOR (TYPE T1)
"BM"	LIGHTNING CONDUCTOR CABLE CONNECTOR
	GROUNDING ELECTRODE CONDUCTOR, 10' COILED ABOVE GRADE

TYPICAL ABBREVIATIONS:

A, AMP	AMPERE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BOF	BOTTOM OF FIXTURE
BRKR	BREAKER
C, CND	CONDUIT
CAB	CABINET
CAT	CATALOG
CL	CHLORINE
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
CP	CONTROL PANEL
CR	CONTROL RELAY, CORROSION RESISTANT
CS	CONTROL SWITCH
CV	CONTROL VALVE
CT	CURRENT TRANSFORMER
CU	COPPER
DC	DIRECT CURRENT
DI	DOOR INTERLOCK
DISC SW	DISCONNECT SWITCH
DN	DOWN
EF	EXHAUST FAN
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EPO	EMERGENCY POWER OFF
EQ, EQIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EPRF	EXPLOSION PROOF
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FLA	FULL LOAD AMPS
FLUOR	FLUORESCENT
FLR	FLOOR
FWE	FURNISHED WITH EQUIPMENT
GEN	GENERATOR
G, GND	GROUND
GFI, GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO
HP	HORSE POWER
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HTR	HEATER
HV	HIGH VOLTAGE
Hz	HERTZ
IMC	INTERMEDIATE METALLIC CONDUIT
INCAND	INCANDESCENT
JB	JUNCTION BOX
K	THOUSAND
Kcmil	THOUSAND CIRCULAR MILLS
KVA	KILOVOLT AMPERE
KW	KILOWATTS
KWH	KILOWATT-HOURS
LP	LIGHTING PANEL, LIGHT POLE
LTG	LIGHTING
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	MANHOLE
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
N, NEUT	NEUTRAL
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
P	POLE
PA	PUBLIC ADDRESS
PB	PULL BOX, PUSH-BUTTON
PF	POWER FACTOR
PH,φ	PHASE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
PP	POWER PANEL, POWER POLE
PT	POTENTIAL TRANSFORMER
PWR	POWER
RECPT,RCP	RECEPTACLE
REQ'D	REQUIRED
RGS	RIGID GALVANIZED STEEL CONDUIT
RM	ROOM
RTU	REMOTE TELEMETRY UNIT
SCR	DC MOTOR DRIVE
SH	SHEET
SM	SURFACE MOUNTED
SPEC	SPECIFICATION
SS	SELECTOR SWITCH
SST	STAINLESS STEEL
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCH GEAR
TEL	TELEPHONE
TPS	TWISTED PAIR SHIELDED
TVSS, SPD	TRANSIENT VOLTAGE SURGE SUPPRESSER
TYP	TYPICAL
UG, UGND	UNDERGROUND
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UTIL	UTILITY
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE, WATT
WH	WATT-HOUR
WP	WEATHERPROOF
XFMR	TRANSFORMER
(X)	EXISTING

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023311 WILLIAM ALLEN CRIBB
02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Abbreviations and Legend

Rev.	Date	Notes

E0.1

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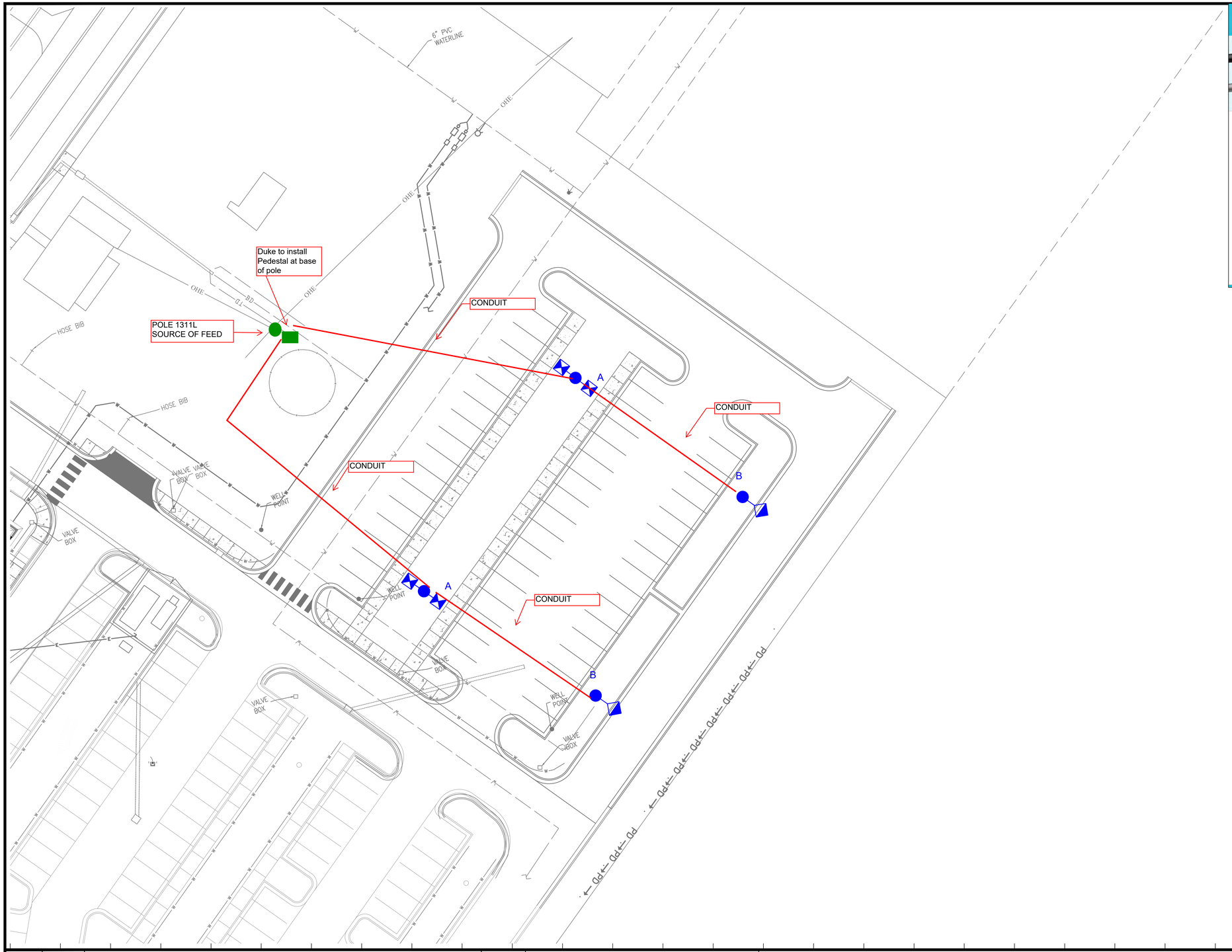
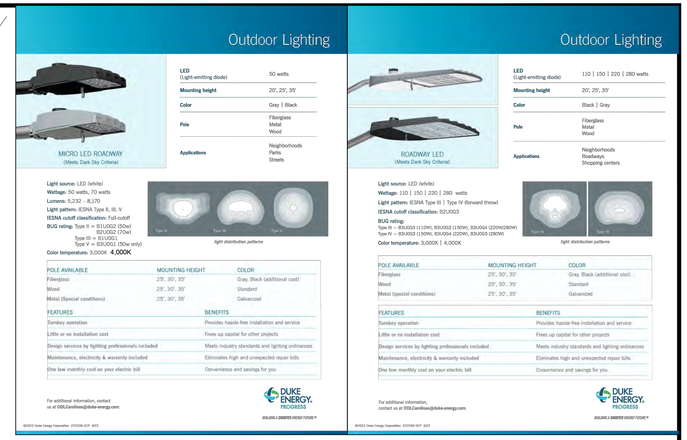
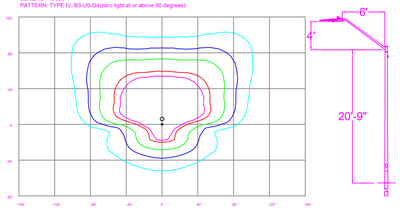




ISOFOOTCANDLE CURVES

FIXTURE: LED 150W ROADWAY
MOUNTING HEIGHT: 25 FT
LIGHT SOURCE: LED, 4000K, 70 CRI
LUMENS - 19806
PATTERN: TYPE IV, B3-U0-G4(zero light at or above 90 degrees)

ASSY# LFIX-RW-LED-150-GRAY-IV-MULTIV-___-P
POLE ASSY# LPOLE-DB-FG-25FT-GRAY-___-P (GRAY)

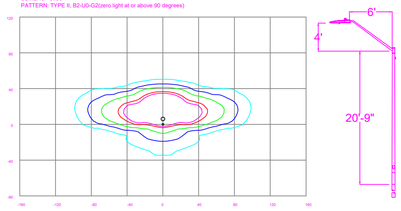


LEGEND (OUTER to INNER): 0.10 , 0.25 , 0.50 , 1.00 , 1.25

ISOFOOTCANDLE CURVES

FIXTURE: LED 70W ROADWAY
MOUNTING HEIGHT: 25 FT
LIGHT SOURCE: LED, 4000K, 70 CRI
LUMENS - 8709
PATTERN: TYPE II, B2-U0-G2(zero light at or above 90 degrees)

ASSY# LFIX-RW-LED-75-GRAY-II-MULTIV-___-P
POLE ASSY# LPOLE-DB-FG-25FT-GRAY-___-P (GRAY)



LEGEND (OUTER to INNER): 0.10 , 0.25 , 0.50 , 1.00 , 1.25

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Parking	+	1.6 fc	3.8 fc	0.4 fc	9.5:1	4.0:1

Schedule

Symbol	Label	Quantity	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor
	A	2	LED 150w Roadway - Type IV - 4000K	1	19809	0.85
	B	2	LED 70w Roadway - Type II - 4000K	1	8661	0.85

NO.	DATE	REVISION	BY
Rev B	01/30/24	CUSTOMER REQUEST.	NJ

DISTANCE CALIBRATION (INCHES)
0 0.5 1.0 2.0 3.0 4.0

LIGHTING DESIGN TOLERANCE

The calculated footcandle light levels in this lighting design are predicted values and are based on specific information that has been supplied to Duke Energy. Any inaccuracies in the supplied information, differences in luminaire installation, lighted area geometry including elevation differences, reflective properties of surrounding surfaces, obstructions (foliage or otherwise) in the lighted area, or lighting from sources other than listed in this design may produce different results from the predicted values. Normal tolerances of voltage, lamp output, and ballast and luminaire manufacture will also affect results.

DUKE ENERGY® PROGRESS

PROPRIETARY & CONFIDENTIAL

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LELAND TOWNHALL ADDITIONAL PARKING
Leland, NC
SITE LIGHTING ARRANGEMENT

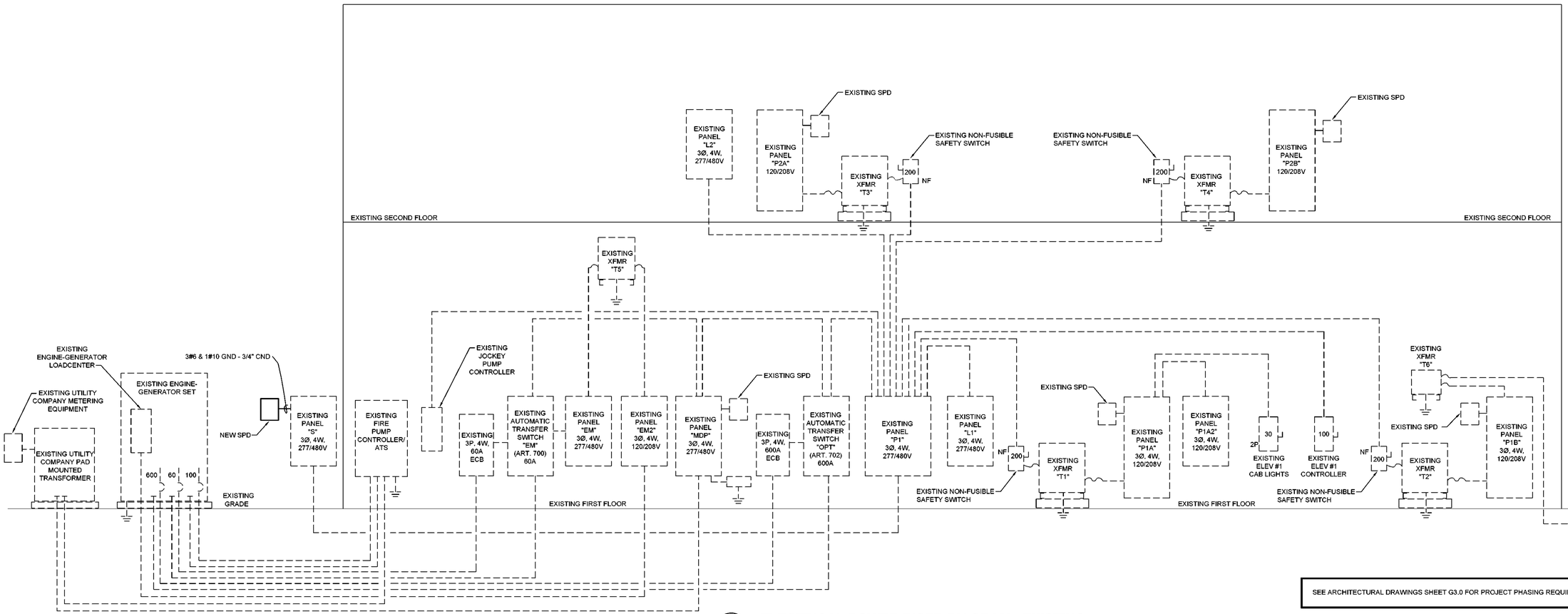
Designed by DUKE ENERGY PROGRESS LIGHTING SOLUTIONS
Reviewed by N. Johnson Scale 1" = 20'
Date 01/30/2024 Size Drawing size "D"
Description LED Roadway
Drawing No. 24-0033B Sht. 1 OF 1

ELECTRICAL GENERAL NOTES

1. ALL ELECTRICAL WORK SHALL BE IN FULL COMPLIANCE WITH NFPA 70, THE NORTH CAROLINA STATE BUILDING CODE, ALL LOCAL CODES AND ORDINANCES AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.
2. ALL EQUIPMENT PROVIDED BY THE CONTRACTOR SHALL BE LISTED AND LABELED BY A NATIONALLY-RECOGNIZED TESTING AGENCY, ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION, FOR THE CONDITIONS OF INSTALLATION. ALL MATERIAL, EQUIPMENT AND DEVICES SHALL BE NEW CURRENT PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN THE PRODUCTION OF SUCH PRODUCTS. EQUIPMENT SHALL BE SUITABLE FOR ITS APPLICATION (E.G. WHEN INSTALLED OUTDOORS, IT SHALL BE WEATHERPROOF, ETC.)
3. THE CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR WORK REQUIREMENTS, THE AMOUNT OF SPACE AVAILABLE FOR ELECTRICAL EQUIPMENT, AND LAYOUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER.
4. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THOROUGHLY FAMILIARIZING HIMSELF WITH ANY CONTRACTUAL REQUIREMENTS AS MAY BE SET FORTH IN THE OTHER DIVISIONS OF THE PROJECT SPECIFICATIONS.
5. UNLESS SPECIFICALLY NOTED OTHERWISE, SYSTEMS PROVIDED OR INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE COMPLETE AND FULLY-FUNCTIONING AFTER INSTALLATION. INCIDENTAL COMPONENTS MAY NOT BE SHOWN, AND ALL WORK WHICH MAY BE REASONABLY IMPLIED AS BEING INCIDENTAL TO THIS WORK, BUT REQUIRED FOR THE PROPER OPERATION OF THE EQUIPMENT OR SYSTEM, SHALL BE PROVIDED BY THE CONTRACTOR AND INCLUDED IN THE BID. ADDITIONAL CIRCUITS SHALL BE INSTALLED WHEREVER NEEDED TO CONFORM TO THE SPECIFIC REQUIREMENTS OF EQUIPMENT.
6. TEMPORARY POWER CONNECTIONS AS REQUIRED SHALL BE PROVIDED BY THE CONTRACTOR AND INCLUDED IN THE BID. ALL TEMPORARY EQUIPMENT WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. THE CONTRACTOR SHALL PROVIDE DETAILS, METHODS, MATERIALS, ETC. FOR REVIEW PRIOR TO MAKING TEMPORARY CONNECTIONS. FURNISH AND INSTALL ALL EQUIPMENT AND MATERIALS INCLUDING CONTROL EQUIPMENT, MOTOR STARTERS, BRANCH AND FEEDER CIRCUIT BREAKERS, PANELBOARDS, TRANSFORMERS, ETC. FOR TEMPORARY POWER. COORDINATE WITH THE ELECTRICAL UTILITY COMPANY AS REQUIRED.
7. THE WORK SHALL INCLUDE COMPLETE TESTING OF ALL EQUIPMENT AND WIRING AT THE COMPLETION OF WORK AND ANY MINOR CORRECTIONS, CHANGES OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND EQUIPMENT.
8. ALL EQUIPMENT SHOWN DOTTED OR DASHED IS BY OTHERS OR IS EXISTING, AS NOTED.
9. ALL ELECTRICAL EQUIPMENT SHALL, AT ALL TIMES DURING CONSTRUCTION, BE ADEQUATELY PROTECTED AGAINST MECHANICAL INJURY, OR DAMAGE BY WATER AND/OR THE ELEMENTS. ELECTRICAL EQUIPMENT SHALL NOT BE STORED OUT OF DOORS, BUT SHALL BE STORED IN DRY PERMANENT SHELTERS. IF AN APPARATUS HAS BEEN DAMAGED, OR HAS BEEN SUBJECT TO POSSIBLE INJURY BY WATER OR THE ELEMENTS, SUCH DAMAGE SHALL BE REPLACED AT NO ADDITIONAL COST.
10. DO NOT SCALE ELECTRICAL DRAWINGS. REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
11. CIRCUIT LAYOUTS ARE NOT INTENDED TO SHOW THE NUMBER OF FITTINGS, OR OTHER INSTALLATION DETAILS. UNLESS NOTED OTHERWISE, THE EXACT ROUTING OF FEEDER AND BRANCH CIRCUIT RACEWAYS AND CABLES IS THE RESPONSIBILITY OF THE CONTRACTOR. RISER AND GENERAL CIRCUIT ARRANGEMENTS ARE SHOWN SCHEMATICALLY/DIAGRAMMATICALLY ONLY. THE CONTRACTOR SHALL ROUTE CONDUITS AS REQUIRED BY THE CONDITIONS OF THE INSTALLATION.
12. UNLESS DIMENSIONED, DEVICE LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. ADJUST EXACT LOCATIONS AS REQUIRED TO SERVE THE INTENDED PURPOSE AND TO AVOID CONFLICTS AND INTERFERENCES WITH OTHER TRADES. EXACT DEVICE LOCATIONS SHALL BE AS INDICATED ON THE ARCHITECTURAL DRAWINGS OR AS DIMENSIONED. IF NOT SHOWN ON THE ARCHITECTURAL DRAWINGS OR DIMENSIONED ON THE ELECTRICAL DRAWINGS, VERIFY EXACT LOCATION WITH THE ARCHITECT/ENGINEER PRIOR TO ROUGH-IN.
13. CONDUIT TERMINATING IN PRESSED STEEL BOXES SHALL HAVE DOUBLE LOCKNUTS AND INSULATED BUSHINGS. CONDUITS TERMINATING IN GASKETED ENCLOSURES SHALL BE TERMINATED WITH GROUNDING TYPE CONDUIT HUBS.
14. DEVICE BOXES SHOWN BACK-TO-BACK SHALL BE OFFSET A MINIMUM OF TWELVE (12) INCHES TO REDUCE SOUND TRANSMISSION BETWEEN ROOMS.
15. BRANCH CIRCUIT HOMERUNS SHOWN ON DRAWINGS INDICATE PHASE CONDUCTORS, NEUTRAL, EQUIPMENT GROUND [ISOLATED GROUND] CONDUCTORS AS REQUIRED. ADDITIONAL CONDUCTORS REQUIRED FOR CONTROL SHALL BE INCLUDED EVEN IF NOT EXPLICITLY SHOWN.
16. SEAL ALL CONDUIT OPENINGS THROUGH EXTERIOR BUILDING WALLS WATERTIGHT.
17. IN WET LOCATIONS AND EXTERIOR, ALL WIRING DEVICES SHALL BE WEATHER-RESISTANT LISTED WITH WEATHERPROOF WHILE IN USE COVER. LIGHTING FIXTURES SHALL BE APPROPRIATELY RATED AND LISTED FOR THE ENVIRONMENT INCLUDING 0 DEGREE BALLASTS FOR FLUORESCENT.
18. RACEWAYS PENETRATING FLOORS, CEILINGS OR WALLS SHALL BE PROPERLY SEALED SMOKETIGHT.
19. RACEWAYS PENETRATING RATED FLOOR, CEILING OR WALL ASSEMBLIES SHALL BE PROPERLY SEALED IN ACCORDANCE WITH THE CORRESPONDING UNDERWRITERS LABORATORIES (OR OTHER APPROVED THIRD PARTY TESTING AGENCY) APPROVED AND LISTED FIRESTOPPING MATERIALS AND MANUFACTURER APPROVED INSTALLATION TECHNIQUES COMPLYING WITH ALL APPLICABLE CODES. SEE ARCHITECTURAL DRAWINGS FOR IDENTIFICATION OF RATED WALLS AND CEILINGS.
20. ALL RACEWAYS SHALL BE CONCEALED WHERE POSSIBLE, EXCEPT THOSE SHOWN TO BE EXPOSED ON DRAWINGS. IF APPLICABLE, MATCH EXISTING RACEWAY INSTALLATION METHODS AND ROUTINGS AT OR NEAR EXISTING FACILITIES.
21. INSTALL EXPOSED RACEWAYS PARALLEL TO OR AT RIGHT ANGLES TO NEARBY SURFACES OR STRUCTURAL MEMBERS, AND FOLLOW THE SURFACE CONTOURS AS MUCH AS POSSIBLE. NO DIAGONAL RUNS WILL BE ALLOWED. ALL CONDUITS SHALL BE RUN STRAIGHT AND TRUE. RUN PARALLEL OR BANKED RACEWAYS TOGETHER ON COMMON SUPPORTS WHERE PRACTICAL. MAKE BENDS IN PARALLEL OR BANKED RUNS FROM SAME CENTERLINE TO MAKE BENDS PARALLEL.
22. PROVIDE AND PLACE ALL SLEEVES FOR CONDUITS PENETRATING WALLS, FLOORS, PARTITIONS, ETC. LOCATE ALL NECESSARY SLOTS FOR ELECTRICAL WORK AND FORM BEFORE CONCRETE IS POURED.
23. PATCHING OF WATERPROOFED SURFACES SHALL RENDER THE AREA OF THE PATCHING COMPLETELY WATERPROOF.
24. ALL MOTORS AND OTHER VIBRATING EQUIPMENT SHALL BE CONNECTED TO THE CONDUIT SYSTEM BY MEANS OF A SHORT SECTION (18 INCH MINIMUM) OF FLEXIBLE CONDUIT UNLESS OTHERWISE INDICATED. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED INSIDE THE FLEXIBLE CONDUIT AND TERMINATE AT THE LOAD END WITH AN APPROVED GROUNDING CLAMP OR LUG.
25. SURFACE MOUNTED JUNCTION, OUTLET AND PULL BOXES, RACEWAYS, ETC., INSTALLED ON EXTERIOR SURFACES OR INSIDE ON EXTERIOR WALLS SHALL BE SUPPORTED BY SPACERS TO PROVIDE A 1/4" MINIMUM CLEARANCE BETWEEN THE WALL AND EQUIPMENT.
26. CEILING MOUNTED DEVICES INSTALLED IN ACOUSTICAL TILE CEILING AREAS SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE WITH RODS OF SUFFICIENT SIZE TO PREVENT VERTICAL MOVEMENT OF THE OUTLET BOX. BRIDGES ALONE ARE NOT ADEQUATE UNLESS SPECIFICALLY APPROVED. CEILING MOUNTED EXIT LIGHT FIXTURES SHALL BE INSTALLED LEVEL. DO NOT SUPPORT DEVICES FROM ACOUSTICAL CEILING TILE.
27. PROVIDE ADHESIVE BACKED RECEPTACLE DEVICE PLATE LABELS IDENTIFYING THE CIRCUIT FEEDING THE DEVICE. LABELS SHALL INDICATE PANEL AND CIRCUIT NUMBER. ALSO PROVIDE IDENTIFICATION FOR MULTIWIRE BRANCH CIRCUIT PHASE CONDUCTORS IN PANELBOARD. SEE SPECIFICATIONS SECTION 260553 FOR REQUIREMENTS.
28. FINAL TYPED PANELBOARD DIRECTORIES INSTALLED IN THE PANELBOARD DOOR POCKET SHALL INCLUDE FINAL ACTUAL ROOM NAMES AND NUMBERS IN ADDITION TO THE GENERAL DESCRIPTION SHOWN ON THE PANEL SCHEDULES ON THE DRAWINGS.
29. CONDUCTOR SIZING IS BASED ON 75 DEGREE C. COPPER NEC RATINGS, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL VERIFY, PRIOR TO INSTALLATION OF CONDUCTORS OR CONDUIT FEEDING ANY EQUIPMENT, THE ELECTRICAL EQUIPMENT IS RATED FOR USE WITH 75 DEGREE C. WIRING. IF ANY EQUIPMENT IS RATED FOR USE WITH LESS THAN 75 DEGREE C. CONDUCTORS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY FOR EVALUATION/CORRECTION.
30. DO NOT PULL CONDUCTORS UNTIL THE CONDUIT SYSTEM IS COMPLETE IN EVERY DETAIL. IN THE CASE OF CONCEALED WORK, "COMPLETE" MEANS UNTIL ALL ROUGH PLASTERING OR MASONRY HAS BEEN COMPLETED.
31. WHERE SIZE IS NOT SHOWN ON THE DRAWINGS, BRANCH CIRCUITS SHALL CONSIST OF #12 OR #10 AWG MINIMUM PHASE, NEUTRAL AND EQUIPMENT GROUND CONDUCTORS IN 1/2" [3/4"] MINIMUM RACEWAY.
32. USE #10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS WITH A TOTAL INSTALLED LENGTH GREATER THAN 75 FEET AND/OR BRANCH CIRCUIT HOMERUNS LONGER THAN 50 FEET, I.E.; #12 AWG INCREASED TO #10 AWG FOR RECEPTACLE BRANCH CIRCUITS OVER 75 FEET TOTAL LENGTH (INCLUDING THE HOMERUN SEGMENT) AND HOMERUNS OVER 50 FEET. IF 277 VOLT CIRCUITS ARE SHOWN, USE #10 AWG CONDUCTORS FOR 20 AMPERE, 277 VOLT BRANCH CIRCUITS WITH TOTAL INSTALLED LENGTH GREATER THAN 200 FEET AND/OR BRANCH CIRCUIT HOMERUNS LONGER THAN 125 FEET, I.E.; #12 AWG INCREASED TO #10 AWG FOR RECEPTACLE BRANCH CIRCUITS OVER 75 FEET TOTAL LENGTH (INCLUDING THE HOMERUN SEGMENT) AND HOMERUNS OVER 50 FEET.
33. KEEP CONDUCTOR SPLICES TO A MINIMUM. INSTALL SPLICES AND TAPES THAT POSSESS EQUIVALENT OR BETTER MECHANICAL STRENGTH AND INSULATION RATINGS THAN CONDUCTORS BEING SPLICED. USE SPLICE AND TAP CONNECTORS COMPATIBLE WITH CONDUCTOR MATERIAL. INSTALL CONDUCTORS AT EACH OUTLET WITH AT LEAST 6 [12] INCHES OF SLACK. CONNECT OUTLETS AND COMPONENTS TO WIRING AND TO GROUND AS INDICATED AND INSTRUCTED BY THE MANUFACTURER.
34. ALTERNATE MULTIWIRE (COMMON NEUTRAL) RECEPTACLE CIRCUITS SUCH THAT ADJACENT RECEPTACLES ARE ON DIFFERENT CIRCUITS.
35. COMMON NEUTRAL CONDUCTORS OF MULTIWIRE RECEPTACLE BRANCH CIRCUITS HOMERUNS SHALL BE #10 AWG MINIMUM.
36. DO NOT SPLICE BRANCH CIRCUIT HOMERUNS WITHOUT THE PERMISSION OF THE ARCHITECT/ENGINEER. HOMERUNS SHALL BE CONTINUOUS FROM THE LAST OUTLET BOX TO THE SERVING PANELBOARD.
37. DO NOT COMBINE BRANCH CIRCUIT HOMERUNS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS.
38. DO NOT CHANGE CIRCUITING SHOWN WITHOUT PERMISSION OF THE ARCHITECT/ENGINEER.
39. TROUGH TAPS SHALL BE AT SWITCH AMPACITY, UNLESS NOTED OTHERWISE.
40. INSTALL WIRING DEVICES AT HEIGHTS AS SHOWN ON THE DRAWINGS. ALSO COORDINATE MOUNTING HEIGHTS WITH THE ARCHITECTURAL DRAWINGS AND CASEWORK DETAILS. IF CONFLICTING, ARCHITECTURAL DRAWINGS AND DETAILS SHALL GOVERN.
41. PROVIDE GROUND FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL IN ACCORDANCE WITH THE NEC INCLUDING ALL ELECTRIC WATER COOLERS, EXTERIOR RECEPTACLES AND RECEPTACLES IN AREAS SUBJECT TO POSSIBLE WET CONDITIONS. ALL RECEPTACLES INSTALLED WITHIN 6 FEET OF A SINK SHALL BE GFI PROTECTED. ALL RECEPTACLES IN NON-RESIDENTIAL KITCHENS SHALL BE GFI PROTECTED.
42. IN AREAS IN WHICH DUAL LEVEL SWITCHING IS INDICATED (TYPICALLY BY 2 OR MORE ADJACENT, GANGED SWITCHES), PROVIDE THE APPROPRIATE NUMBER OF CONDUCTORS TO FACILITATE THIS FUNCTION (AS TYPICALLY SHOWN).
43. CONNECT BATTERY PACK TYPE EMERGENCY AND EXIT LIGHTING TO THE UNSWITCHED LIGHTING CIRCUIT SERVING THE SPACE LIGHTED BY THE EMERGENCY AND EXIT FIXTURES. THESE CONNECTIONS ARE INTENTIONALLY NOT SHOWN TO MAINTAIN DRAWING FOR CLARITY.
44. COORDINATE LIGHTING FIXTURE LOCATIONS WITH THE ARCHITECTURAL REFLECTED CEILING PLAN. IF CONFLICTS ARE NOTED, REQUEST CLARIFICATION FROM THE ARCHITECT/ENGINEER BEFORE PROCEEDING.
45. ADJACENT SWITCHES SHALL BE GANGED. INSTALL BARRIERS BETWEEN UNLIKE VOLTAGE SECTIONS.
46. SEPARATE NEUTRALS ARE REQUIRED FOR ALL DIMMED LIGHTING CIRCUITS.
47. WHERE THE DRAWINGS INDICATE A LIGHTING FIXTURE IS TO BE PROVIDED WITH SPECIAL FEATURES/SWITCHING (DIMMING, EMERGENCY BATTERY BALLAST, MULTI-LEVEL, ETC), THE CONTRACTOR SHALL PROVIDE THESE FIXTURES WITH THE APPROPRIATE BALLASTING TO ACCOMMODATE THE SPECIAL FEATURE. THE CONTRACTOR SHALL PROVIDE THE FIXTURES AS INDICATED IN THE LIGHTING FIXTURE SCHEDULE WITH MODIFICATIONS AS REQUIRED BY DRAWING NOTES.
48. COORDINATE LOCATIONS OF PLUMBING, MECHANICAL, DATA AND TELEPHONE AND AUDIO/VISUAL EQUIPMENT AND OF OWNER-PROVIDED EQUIPMENT WITH THE RESPECTIVE CONTRACTORS AND VENDORS AND THE OWNER BEFORE ROUGH-IN. ADJUST LIGHTING FIXTURES, RECEPTACLES AND ELECTRICAL EQUIPMENT TO ACCOMMODATE THIS EQUIPMENT. ADVISE THE ARCHITECT/ENGINEER OF CONFLICTS BEFORE ROUGH-IN.
49. BEFORE COMMENCING WORK OR ORDERING MATERIALS, THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND VERIFY THE NAMEPLATE RATINGS OF ALL EQUIPMENT (MOTORS, HEATERS, COMPRESSORS, ETC.) AND ADJUST THE RATINGS OF THE ELECTRICAL EQUIPMENT (SWITCHES, FUSES, CIRCUIT BREAKERS, FEEDERS, ETC.) AS APPROPRIATE TO SERVE THIS EQUIPMENT.
50. ENERGIZE EQUIPMENT ONLY AFTER OBTAINING PERMISSION FROM THE CONTRACTOR PROVIDING THE EQUIPMENT.
51. UNLESS SPECIFICALLY NOTED OTHERWISE, THE ELECTRICAL CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO ALL UTILIZATION EQUIPMENT SHOWN ON THE DRAWINGS. VERIFY THE TYPE OF FINAL CONNECTION AND PROVIDE APPROPRIATE WIRING METHOD. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL, PLUMBING AND GENERAL CONTRACTORS, PRIOR TO ORDERING OR INSTALLATION OF ANY EQUIPMENT, TO VERIFY MECHANICAL AND PLUMBING EQUIPMENT REQUIREMENTS ARE PROVIDED IN THE ELECTRICAL DESIGN. THE CONTRACTOR WILL NOT BE COMPENSATED FOR COSTS ASSOCIATED WITH CHANGING THE ELECTRICAL SYSTEMS TO MATCH UTILIZATION EQUIPMENT, EVEN IF THE ELECTRICAL WORK IS INSTALLED PER THE ELECTRICAL DRAWINGS.
52. THE MECHANICAL AND PLUMBING CONTRACTORS SHALL FURNISH ALL STARTERS AND CONTROLS FOR THEIR EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL MOUNT STARTERS FURNISHED BY THE MECHANICAL AND PLUMBING CONTRACTORS, THE ELECTRICAL CONTRACTOR PROVIDE ALL SAFETY SWITCHES, WIRING AND CONNECTIONS TO LINE SIDE AND LOAD SIDE OF STARTERS AND SAFETY SWITCHES COMPLETE TO MECHANICAL EQUIPMENT. FOR RESISTANCE TYPE LOADS WHERE STARTERS OR CONTACTORS ARE NOT REQUIRED, THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL POWER WIRING AND CONNECTIONS COMPLETE TO EQUIPMENT. THE MECHANICAL AND PLUMBING CONTRACTORS SHALL PROVIDE ALL CONTROL WIRING AND CONNECTIONS AND DEVICES FOR THEIR EQUIPMENT.
53. TELECOMMUNICATIONS AND DATA CABLES WILL BE PROVIDED AND INSTALLED BY THE OWNER. LEAVE PULL WIRES OR ROPES OF ADEQUATE TENSILE STRENGTH IN ALL EMPTY CONDUITS.
54. EXACT SPACING OF SMOKE AND HEAT DETECTORS AND A/V DEVICES SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE WITH POSITIONS SHOWN ON THE DRAWINGS. DETECTOR SPACING IS BASED UPON NFPA 72 INCLUDING APPENDIX A. SLIGHT ADJUSTMENTS MAY BE MADE IN SPACING IF REQUIRED BY FIELD CONDITIONS, BUT SPACING SHALL NOT EXCEED ADA, NFPA AND EQUIPMENT MANUFACTURERS SPACING CRITERIA. DO NOT INSTALL SMOKE DETECTORS WITHIN 3 FEET OF SUPPLY AIR DIFFUSERS OR RETURN GRILLES. PROVIDE FLEX CONDUIT CONNECTION TO SMOKE AND HEAT DETECTORS OF ADEQUATE LENGTH TO ALLOW HORIZONTAL ADJUSTMENT OF FOUR FEET FROM POSITION INDICATED ON DRAWINGS.
55. COORDINATE FIRE ALARM SYSTEM MODIFICATIONS WITH THE OWNER AND THE OWNER'S FIRE ALARM SYSTEM VENDOR. THE EXISTING SYSTEM SHALL REMAIN OPERATIONAL AT ALL TIMES UNLESS PRIOR ARRANGEMENTS HAVE BEEN MADE WITH THE OWNER.
56. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FIRE ALARM WORK ON THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO DE-PROGRAMMING REMOVED DEVICES, PUTTING SYSTEM ON TEST, PROTECTING EXISTING DEVICES DURING CONSTRUCTION, ETC. EC SHALL INCLUDE IN BID THE COST FOR VENDOR TO PERFORM THIS WORK. THE EC SHALL BE RESPONSIBLE FOR PAYING FOR ANY FALSE ALARMS CAUSED BY THE CONSTRUCTION FOR THIS PROJECT.
57. INSTALLATION INFORMATION PACKED WITH LIGHTING FIXTURES, DEVICES AND EQUIPMENT SHALL BE RETAINED FOR INCLUSION IN THE OPERATIONS AND MAINTENANCE MANUALS.
58. PROTECT ALL EXISTING POWER, COMMUNICATIONS, DATA, LIFE SAFETY SYSTEMS, FIRE ALARM AND PUBLIC ADDRESS SYSTEMS AND MAINTAIN THEM IN OPERATION THROUGHOUT THE PROGRESS OF THE WORK. NOTIFY THE OWNER AND ARCHITECT/ENGINEER IF SHUTDOWNS ARE REQUIRED PRIOR TO ANY OUTAGE OF SERVICE. WHERE THE DURATION OF A PROPOSED OUTAGE CANNOT BE TOLERATED BY THE OWNER [TENANT], PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO MAINTAIN SERVICE.
59. THE CONTRACT REQUIRES SEVERAL NEW CIRCUITS BE ADDED TO EXISTING PANELBOARDS AND NUMEROUS EXISTING CIRCUITS' LOADING WILL CHANGE AS A RESULT OF THIS WORK. THE CONTRACTOR SHALL ENDEAVOR TO MAINTAIN PHASE BALANCE IN ALL PANELBOARDS AFFECTED BY THIS WORK. RECONNECT/MODIFY/EXTEND EXISTING CIRCUITING AS REQUIRED TO MAINTAIN SAFE CIRCUIT LOADING AND PHASE BALANCE. COORDINATE CONNECTIONS TO THE EXISTING ELECTRICAL DISTRIBUTION SYSTEM WITH THE OWNER AND ARCHITECT/ENGINEER. PROVIDE ACCURATE, UPDATED, TYPED PANEL SCHEDULES FOR ALL AFFECTED PANELS. NOTE ALL FINAL CIRCUIT CONFIGURATIONS ON AS-BUILT DRAWINGS.
60. THE CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING NECESSARY TO INSTALL ALL EQUIPMENT AS REQUIRED AND SHALL REESTABLISH ALL FINISHES TO THEIR ORIGINAL CONDITION WHERE CUTTING AND PATCHING OCCUR. ALL CUTTING AND PATCHING SHALL BE DONE IN A THOROUGHLY WORKMANSHIP MANNER. SAW CUT CONCRETE AND MASONRY PRIOR TO BREAKING OUT SECTIONS. ALL PATCHING MATERIALS AND WORKMANSHIP SHALL BE [IN ACCORDANCE WITH DIVISION 9 OF THESE SPECIFICATIONS AND] PERFORMED BY TRADESMEN EXPERIENCED IN THAT WORK. ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT/ENGINEER.
61. CORE DRILL HOLES IN EXISTING CONCRETE WALLS AS REQUIRED.
62. INSTALL WORK AT SUCH TIME AS TO REQUIRE THE MINIMUM AMOUNT TO CUTTING AND PATCHING.
63. CUT OPENINGS ONLY LARGE ENOUGH TO ALLOW EASY INSTALLATION OF THE CONDUIT.
64. WHEN INDICATED, CONNECT NEW LOADS TO EXISTING ABANDONED CIRCUITS SERVING THE SAME AREA AND NOTE CIRCUITS ON AS-BUILT DRAWINGS.
65. EXISTING CIRCUITING WHERE SHOWN IS FOR CONVENIENCE PURPOSES ONLY. VERIFICATION OF EXISTING WIRING DESTINATION, TERMINATION AND ADDITIONS OF NEW LOADS IS THE RESPONSIBILITY OF THE CONTRACTOR.
66. MAINTAIN CONTINUITY OF ALL EXISTING CIRCUITS TO REMAIN OR PORTIONS THEREOF AFFECTED BY THIS WORK.
67. DESIGN AND ADDITION OF NEW CIRCUITING IS BASED ON THE ENGINEER'S BEST INFORMATION REGARDING EXISTING CONDITIONS AND RECORD DRAWINGS. AVAILABILITY OF ADEQUATE CIRCUIT BREAKER SPACE FOR NEW WORK IN EXISTING PANELBOARDS SHALL BE VERIFIED BY THE CONTRACTOR AFTER DEMOLITION OF THE EXISTING SPACE. IF ADEQUATE SPACE IS NOT AVAILABLE FOR NEW CIRCUIT BREAKERS THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR RESOLUTION.
68. ABANDONED POWER WIRING, RACEWAYS AND CONDUCTORS, SHALL BE REMOVED BACK TO THEIR SOURCE. THE ACCESSIBLE PORTIONS OF ABANDONED CABLES (VOICE, DATA, VIDEO, ALARM, ETC.) SHALL BE REMOVED.
69. TRACE OUT EXISTING WIRING THAT IS TO BE RELOCATED, OR REMOVED AND PERFORM THE RELOCATION OR REMOVAL WORK AS REQUIRED FOR A COMPLETE OPERATING AND SAFE SYSTEM.
70. INSOFAR AS POSSIBLE, MATCH EXISTING EXPOSED DEVICES IN FINISHED AREAS IN TYPE, COLOR AND FINISH.
71. THE EXISTING ELECTRICAL SYSTEMS DEPICTED ON THESE DRAWINGS HAVE BEEN COMPILED BY THE ENGINEER FROM THE OWNER'S RECORD DRAWINGS AND LIMITED FIELD VERIFICATION OF THE EXISTING CONDITIONS FOR THE PURPOSE OF INDICATING THE WORK REQUIRED AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, POINTS OF ACCESS AND FIELD CONDITIONS AFFECTING HIS WORK.
72. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING ELECTRICAL SYSTEMS AND THE EXISTING BUILDING. THE SUBMISSION OF THE PROPOSAL BY THE CONTRACTOR SHALL BE CONSIDERED EVIDENCE THAT HE OR HIS REPRESENTATIVE HAS VISITED THE SITE AND BUILDINGS AND NOTED THE LOCATION AND CONDITIONS UNDER WHICH THE WORK WILL BE PERFORMED AND THAT HE TAKES FULL RESPONSIBILITY OF ALL FACTORS GOVERNING HIS WORK. NO EXTRAS WILL BE CONSIDERED BECAUSE OF ADDITIONAL WORK NECESSITATED BY EXISTING JOB CONDITIONS THAT ARE NOT INDICATED ON THE DRAWINGS.
73. SOME EXISTING RECEPTACLE, LIGHTING OR OTHER LOADS MAY BE SERVED BY CIRCUITS INDICATED TO BE REMOVED. IF SUCH CONDITIONS ARE DISCOVERED, REQUEST THE ARCHITECT/ENGINEER PROVIDE NEW CIRCUIT NUMBER FOR THE LOAD. DO NOT INDISCRIMINATELY CONNECT TO THE NEAREST CIRCUIT.
74. ALL UNUSED OUTLET BOXES SHALL BE REMOVED OR, WITH SPECIFIC APPROVAL OF THE ARCHITECT/ENGINEER, SHALL BE BLANKED WITH STAINLESS STEEL PLATES. ALL OPENINGS IN EXISTING WALLS AND CEILINGS MADE BY THIS CONTRACTOR SHALL BE REPAIRED TO AN EQUAL [ROUGH] FINISH AS ADJACENT SURFACES.
75. PROVIDE ALL ELECTRICAL RELOCATION WORK ASSOCIATED WITH THE RELOCATING OF EQUIPMENT FOR THE EXISTING FACILITIES, INCLUDING DISCONNECTING ALL EXISTING WIRING AND CONDUITS AND PROVIDING NEW WIRING AND CONDUITS TO THE RELOCATED EQUIPMENT.
76. THE EXISTING FACILITIES WILL REMAIN OCCUPIED BY THE STAFF THROUGHOUT THE PROJECT. AS SUCH, WORK WILL REQUIRE SPECIAL EFFORT BY THIS CONTRACTOR TO ALLOW THE WORK TO PROCEED IN A TIMELY MANNER. ALL ELECTRICAL WORK SHALL BE COORDINATED WITH THE OWNER AND GENERAL CONTRACTOR SO AS TO MINIMIZE DISRUPTION OF THE OWNER'S USE OF THE FACILITIES AND MAINTAIN THE CONSTRUCTION SEQUENCE OF THE GENERAL CONTRACTOR. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INSTRUCTIONS CONCERNING PHASING AND SEQUENCE OF WORK. ALSO SEE SPECIFICATIONS SECTION TITLED "EXISTING BUILDINGS AND CONSTRUCTION" FOR ADDITIONAL REQUIREMENTS.
77. SEE "SELECTIVE DEMOLITION NOTES" FOR ADDITIONAL REQUIREMENTS.
78. SAFETY: COMPLY WITH OSHA AND NEC ARC FLASH PROTECTION REQUIREMENTS.
79. SAFETY
    A. COMPLY WITH OSHA AND NEC ARC FLASH PROTECTION REQUIREMENTS.
    B. FOR EQUIPMENT BEING REMOVED AND REPLACED, THE CONTRACTOR SHALL DE-ENERGIZE THE EQUIPMENT AND MAKE IT SAFE PRIOR TO REMOVAL AND COMPLY WITH OSHA REQUIREMENTS FOR LOCKING-OUT AND TAGGING EQUIPMENT TO PREVENT INADVERTENT RE-ENERGIZING.
    C. WHERE EQUIPMENT IS BEING REMOVED, BUT NOT REPLACED, REMOVE THE CONDUCTORS FEEDING THE EQUIPMENT BACK TO THE POINT WHERE THEY RECEIVE POWER. REMOVE ACCESSIBLE CONDUITS. ABANDON IN PLACE INACCESSIBLE CONDUITS. AFTER REMOVAL OF EQUIPMENT, REPAIR ANY OPENING LEFT TO MATCH SURROUNDING WALLS, CEILINGS, OR FLOORS TO THE ARCHITECT/ENGINEER'S SATISFACTION.
    D. COORDINATE WITH THE OTHER TRADES, PRIOR TO BID, AND INCLUDE IN THE BASE BID THE ELECTRICAL DISCONNECTION OF ANY EQUIPMENT BEING DEMOLISHED, EVEN IF NOT EXPLICITLY SHOWN. UNLESS NOTED OTHERWISE, REMOVE ALL DEMOLISHED EQUIPMENT FROM THE PROPERTY.

ELECTRICAL SELECTIVE DEMOLITION NOTES

1. SELECTIVE ELECTRICAL DEMOLITION SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR AS DESCRIBED HEREIN AND AS SHOWN ON THE CONTRACT DRAWINGS. GROSS DEMOLITION WILL BE PROVIDED BY THE GENERAL CONTRACTOR. IDENTIFY ACTIVE UTILITIES, AND AT THE APPROPRIATE TIME, DISCONNECT AND CAP OFF SUCH UTILITIES AND PROVIDE EXPERIENCED PERSONNEL ON SITE DURING GENERAL CONTRACTOR DEMOLITION OPERATIONS TO PERFORM SUCH OPERATIONS AND RESOLVE ISSUES. REMOVE MATERIALS NOTED FOR SALVAGE AND REUSE. IDENTIFY AND MARK WIRING AND DEVICES TO REMAIN FOR THE GENERAL CONTRACTOR.
2. THE ELECTRICAL CONTRACTOR SHALL REVIEW THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR DEMOLITION REQUIREMENTS AND CARRY OUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER. REMOVE ALL WIRING DEVICES, BOXES, FIXTURES, EXPOSED ABANDONED RACEWAYS, HANGARS, ETC., [AND THOSE] MADE OBSOLETE BY THESE ALTERATIONS AND AS SHOWN ON THE ELECTRICAL DRAWINGS. ALL ITEMS TO BE REMOVED OR MODIFIED MAY NOT BE SHOWN; HOWEVER, THIS CONTRACTOR SHALL REMOVE ANY ELECTRICAL WORK AS REQUIRED BY THE CONSTRUCTION OR AS DIRECTED BY THE OWNER OR ARCHITECT/ENGINEER. SURVEY THE AFFECTED AREAS BEFORE SUBMITTING A BID AS ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DEPICTED ON THE DRAWINGS AND SOME UNUSUAL CONDITIONS MAY EXIST.
3. REMOVE, RELOCATE, AND EXTEND EXISTING INSTALLATIONS TO ACCOMMODATE NEW CONSTRUCTION.
4. ALL EXISTING ELECTRICAL EQUIPMENT AND DEVICES SHALL REMAIN UNLESS SPECIFICALLY NOTED TO BE REMOVED.
5. VERIFY FIELD MEASUREMENTS AND CIRCUITING ARRANGEMENTS AS SHOWN ON DRAWINGS.
6. VERIFY THAT ABANDONED WIRING AND EQUIPMENT SERVE ONLY ABANDONED FACILITIES.
7. DISCONNECT



SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

1 **ELECTRICAL POWER RISER DIAGRAM - EXISTING**
NOT TO SCALE

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NORTH CAROLINA PROFESSIONAL SEAL 023311 ENGINEER WILLIAM ALLEN CRIBB
02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Electrical Power Riser Diagram - Existing

Rev.	Date	Notes

E0.3

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EXISTING PANEL "S"

	480	277	VOLTS:	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
	MOUNT:	SURFACE								XX	100 % NEUTRAL BUS
	FEED:										ULSE LABEL
	NEMA -	4	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
	4,678			7,976					3,298	
HP2 MODULE 1	4,678	3/30	1		7,976		2	3/25	3,298	HP2 MODULE 2
	4,678					7,976			3,298	
	5,587			11,706					6,119	
HP1A	5,587	3/35	3		11,706		4	3/40	6,119	HP1C
	5,587					11,706			6,119	
	5,587			8,890					3,303	
HP1B	5,587	3/35	5		8,890		6	3/25	3,303	HP3B MODULE 3
	5,873					9,176			3,303	
	5,986			12,105					6,119	
HP3A MODULE 1	5,986	3/40	7		12,105		8	3/40	6,119	HP3B MODULE 1
	5,986					12,105			6,119	
	5,986			11,573					5,587	
HP3A MODULE 2	5,986	3/40	9		11,573		10	3/35	5,587	HP3B MODULE 2
	5,986					11,573			5,587	
SPACE		3/						3/		SPACE
SPACE		3/						3/		SPACE

NOTES:				TOTAL VA	400 A. BUS (COPPER)
				TOTAL AMPERES	300 A. MAIN LUGS

18 KAIC MINIMUM RATING

REVISED EXISTING PANEL "S"

	480	277	VOLTS:	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
	MOUNT:	SURFACE								XX	100 % NEUTRAL BUS
	FEED:										ULSE LABEL
	NEMA -	4	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
	5,853			9,933					4,079	
HP1 (NOTE 2)	5,853	**3/35**	1		9,933		2	3/20	4,079	**HP4 (NOTE 1)**
	5,853					9,933			4,079	
	6,297			6,297						
HP2 (NOTE 1)	6,297	2/35	3		6,297		4	3/40		**SPARE**
	6,297					6,297				
	5,853			5,853						
HP3 (NOTE 1)	5,853	2/35	5		5,853		6	3/20		**SPARE**
	5,853					5,853				
	5,853			5,853						
HP7 (NOTE 2)	5,853	**3/35**	7		5,853		8	3/40		**SPARE**
	5,853					5,853				
	6,297			6,297						
HP8 (NOTE 2)	6,297	**3/35**	9		6,297		10	3/20		**SPARE**
	6,297					6,297				
SPARE		3/	11				12	**3/60**		**SPD (NOTE 2)**
	7,915			15,830					7,915	
HP6 (NOTE 2)	7,915	**3/50**	13		15,830		14	**3/50**	7,915	**HP5 (NOTE 2)**
	7,915					15,830			7,915	

NOTES:				TOTAL VA	400 A. BUS (COPPER)
1. NEW LOAD CONNECTED TO EXISTING CIRCUIT BREAKER				TOTAL AMPERES	300 A. MAIN LUGS
2. NEW LOAD CONNECT TO NEW CIRCUIT BREAKER. PROVIDE CIRCUIT BREAKER INDICATED. BREAKER AIC RATING MUST MATCH PANEL AIC RATING.					

18 KAIC MINIMUM RATING

EXISTING PANEL "P1"

	480	277	VOLTS:	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
	MOUNT:	SURFACE								XX	100 % NEUTRAL BUS
	FEED:										ULSE LABEL
	NEMA -	4	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
	8,854			17,419					8,565	
PANEL "L1"	3,744	3/60	1		6,362		2	3/65	2,618	PANEL "L2"
	8,016					8,138			122	
	4,000			4,582					582	
ELECTRIC WATER HEATER EWH1	4,000	3/20	3		4,582		4	3/20	582	JOCKEY PUMP CONTROLLER
	4,000					4,582			582	
	20,861			42,482					21,621	
TRANSFORMER T-1(PANEL P1A")	22,632	3/125	5		38,738		6	3/125	16,106	TRANSFORMER T-3 (PANEL P1B)
	25,113					47,566			22,453	
	21,347			34,549					13,202	
TRANSFORMER T-3 (PANEL P2A)	33,666	3/125	7		50,246		8	3/125	16,580	TRANSFORMER T-4 (PANEL P2B)
	21,051					32,729			11,678	
	14,410			66,660					52,250	
ELEVATOR (40 HP)	14,410	3/100	9		66,660		10	3/400	52,250	PANEL "S"
	14,410					66,660			52,250	
	1,508			3,642					2,134	
ERV01	1,508	3/15	11		3,642		12	3/15	2,134	ERV03
	1,508					3,642			2,134	
	1,508			3,642					2,134	
ERV02	1,508	3/15	13		3,642		14	3/15	2,134	ERV04
	1,508					3,642			2,134	
SPACE		3/20	15				16	3/20		SPACE

NOTES:				TOTAL VA	600 A. BUS (COPPER)
				TOTAL AMPERES	600 A. MAIN CIRCUIT BREAKER

25 KAIC MINIMUM RATING

EXISTING PANEL "P1A"

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE								XX	200 % NEUTRAL BUS
DOOR-IN-DOOR HINGED TRIM	FEED:	BOTTOM									ULSE LABEL
	NEMA -	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
RECEPTACLES	360	1/20	1	1,080			2	1/20	720	RECEPTACLES
RECEPTACLES	360	1/20	3		1,080		4	1/20	720	RECEPTACLES
RECEPTACLES	1,080	1/20	5			1,620	6	1/20	540	RECEPTACLES
RECEPTACLE	1,000	1/20	7	1,540			8	1/20	540	FLOORBOXES
RECEPTACLE	1,000	1/20	9		1,180		10	1/20	180	RECEPTACLES
COPIER	1,800	1/20	11			1,980	12	1/20	180	RECEPTACLES
COPIER	1,800	1/20	13	1,980			14	1/20	180	RECEPTACLES
PROJECTOR	1,000	1/20	15		1,180		16	1/20	180	RECEPTACLES
RECEPTACLES	900	1/20	17			1,080	18	1/20	180	RECEPTACLES
RECEPTACLES/PROJECTION SCREEN	900	1/20	19	1,080			20	1/20	180	RECEPTACLES
RECEPTACLES	900	1/20	21		1,080		22	1/20	180	RECEPTACLES
RECEPTACLES	720	1/20	23			900	24	1/20	180	RECEPTACLES
EWC	1,000	1/20	25	1,180			26	1/20	180	RECEPTACLES
RECEPTACLES	900	1/20	27		1,080		28	1/20	180	RECEPTACLES
EXTERIOR RECEPTACLES	900	1/20	29			1,080	30	1/20	180	RECEPTACLES
RECEPTACLES	900	1/20	31	1,080			32	1/20	180	RECEPTACLES
RECEPTACLES	900	1/20	33		1,900		34	1/20	1,000	EWC
CIRC. PUMP CP-1	200	1/20	35			1,200	36	1/20	1,000	VENDING MACHINNE
FLOOR BOXES	900	1/20	37	1,900			38	1/20	1,000	VENDING MACHINNE
SUMP ALARM PANEL	200	1/20	39		2,000		40	1/20	1,800	RECEPTACLE
RECEPTACLES	1,440	1/20	41			3,240	42	1/20	1,800	RECEPTACLE
RECEPTACLE	1,000	1/20	43	2,440			44	1/20	1,440	RECEPTACLES
RECEPTACLE	1,000	1/20	45		2,800		46	1/20	1,800	RECEPTACLE
RECEPTACLE	1,000	1/20	47			2,800	48	1/20	1,800	RECEPTACLE
RECEPTACLE	1,000	1/20	49	5,176			50		4,176	
OVERHEAD MOTORIZED DOOR	1,500	1/20	51		5,300		52	3/60	3,800	PANEL "P1A2"
FIRE ALARM CONTROL UNIT (FACU), SEE NOTE 2	200	1/20	53			3,980	54		3,780	
NAC POWER SUPPLY, SEE NOTE 2	200	1/20	55	1,200			56	1/20	1,000	RECEPTACLE
IRRIGATION CONTROLLER	200	1/20	57		1,200		58	1/20	1,000	RERIGERATOR
REFRIGERATOR	1,200	1/20	59			2,200	60	1/20	1,000	DISHWASHER
REFRIGERATOR	1,200	1/20	61	2,100			62	1/20	900	RECEPTACLES
SURVEILANCE MONITOR	200	1/20	63		920		64	1/20	720	RECEPTACLES
COPIER	1,800	1/20	65			3,060	66	1/20	1,260	RECEPTACLES
DAHUS & HEAT RECOVERY BOXES	580	2/15	67	1,840			68	1/20	1,260	RECEPTACLES
	580		69		2,020		70	1/20	1,440	RECEPTACLES
SPARE		1/20	71			200	72	1/20	200	CIRC. PUMP CP1
SPARE		2/20	73	180			74	1/20	180	RECEPTACLE ELEV. MACH. ROOM
			75				76			
DAHUS & HEAT RECOVERY BOXES	1,061	2/15	77			1,061	78	3/60		SPD DEVICE
	1,061		79	1,061			80			
DAHUS & HEAT RECOVERY BOXES	742	2/15	81		3,492		82	2/50	2,750	RANGE
	742		83			3,492	84		2,750	

NOTES:				23,837	25,232	27,593	TOTAL VA	225 A. BUS (COPPER)
				199	210	232	TOTAL AMPERES	225 A. MAIN CIRCUIT BREAKER

10 KAIC MINIMUM RATING

REVISED EXISTING PANEL "P1"

TYPE:	480	277	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
	MOUNT:	SURFACE								XX	100 % NEUTRAL BUS
	FEED:	BOTTOM									ULSE LABEL
	NEMA -	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
	8,854			17,419					8,565	
SPARE "L1"	3,744	3/60	1		6,362		2	3/65	2,618	SPARE "L2"
	8,016					8,138			122	
	4,000			4,582					582	
ELECTRIC WATER HEATER EWH1	4,000	3/20	3		4,582		4	3/20	582	JOCKEY PUMP CONTROLLER
	4,000					4,582			582	
	22,045			46,785					23,749	
EXTRANSFORMER T-1 (PANEL P1A)	28,208	2/125	5		42,719		6	3/125	14,511	EXTRANSFORMER T-2 (PANEL P1B)
	28,189					51,438			23,249	
	54,525			40,798					18,289	
EXTRANSFORMER T5 (PANEL P2A)	25,517	2/125	7		43,015		8	3/125	17,498	EXTRANSFORMER T4 (PANEL P2B)
	25,586					37,213			11,627	
	14,410			84,472					50,062	
EXELEVATOR (40 HP)	14,410	2/100	9		84,472		10	3/350	50,062	EXPANEL "S"
	14,410					84,472			50,062	
DOAS1 (NOTE 2)	**5,432**	**3/30**	11	11,728			12	**3/40**	**6,296**	**DOAS3 (NOTE 2)**
	5,432				11,728				**6,296**	
	5,432					11,728			**6,296**	
DOAS2 (NOTE 2)	**5,432**	**3/30**	13	10,864			14	**3/30**	**5,432**	**DOAS4 (NOTE 2)**
	5,432				10,864				**5,432**	
						10,864				
EXSPACE		3/20	15				16	3/20		EXSPARE

NOTES:				196,648	183,742	188,435	TOTAL VA	600 A. BUS (COPPER)
1. (X) INDICATES EXISTING LOADS AND/OR CIRCUIT BREAKER				710	663	680	TOTAL AMPERES	600 A. MAIN CIRCUIT BREAKER
2. NEW LOAD CONNECTED TO NEW CIRCUIT BREAKER. PROVIDE CIRCUIT BREAKER INDICATED. NEW BREAKER AIC RATING MUST MATCH PANEL AIC RATING								

25 KAIC MINIMUM RATING

EXISTING PANEL "P1A2"

	208	120	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
	MOUNT:	SURFACE								XX	200 % NEUTRAL BUS
	FEED:										ULSE LABEL
	NEMA -	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
SPARE		1/20	1	200			2	1/20	200	DOOR CONTROL POWER
SPARE		1/20	3		200		4	1/20	200	DOOR CONTROL POWER
SPARE		1/20	5			1,000	6	1/20	1,000	RECEPTACLE 152
SPARE		1/20	7	1,000			8	1/20	1,000	RECEPTACLE 152
SPARE		1/20	9		1,000		10	1/20	1,000	RECEPTACLE 152
SPARE		1/20	11			180	12	1/20	180	RECEPT 172
SPARE		1/20	13				14	1/20		SPARE
SPARE		1/20	15				16	1/20		SPARE
SPARE		1/20	17				18	1/20		SPARE
SPARE		1/20	19				20	1/20		SPARE
SPARE		1/20	21				22	1/20		SPARE
SPARE		1/20	23				24	1/20		SPARE
SPARE		1/20	25				26	1/20		SPARE
SPARE		**1/20**	27				28	1/20		SPARE
SPARE		1/20	29				30	1/20		SPARE

NOTES:				1,200	1,200	1,180	TOTAL VA	100 A. BUS (COPPER)
				10	10	10	TOTAL AMPERES	100 A. MAIN LUGS

10 KAIC MINIMUM RATING

REVISED EXISTING PANEL "P1A2"

	208	120	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
	MOUNT:	SURFACE								XX	200 % NEUTRAL BUS
	FEED:										ULSE LABEL
	NEMA -	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
UC DISHWASHER 142 (NOTE 2)	**1,200**	1/20	1	1,200			2	1/20	200	EXDOOR CONTROL POWER
ICE MAKER 142 (NOTE 2)	**1,500**	1/20	3		2,000		4	1/20	200	DOOR CONTROL POWER
ICE MAKER 142 (NOTE 2)	**1,500**	1/20	5			3,600	6	**1/20**	1,800	**MICROWAVE 142 (NOTE 2)**
RECEPTACLE 168B	**200**	1/20	7	2,000			8	1/20	1,800	**MICROWAVE 142 (NOTE 2)**
RECEPTACLE 168B	**200**	1/20	9		2,000		10	1/20	1,800	**MICROWAVE AHD RANGE HOOD 142 (NOTE 2)**
EXSPARE		1/20	11			180	12	1/20	180	EXRECEPT 172
EXSPARE		1/20	13				14	1/20		EXSPARE
EXSPARE		1/20	15				16	1/20		EXSPARE
EXSPARE		1/20	17				18	1/20		EXSPARE
EXSPARE		1/20	19				20	1/20		EXSPARE
EXSPARE		1/20	21				22	1/20		EXSPARE
EXSPARE		1/20	23				24	1/20		EXSPARE
EXSPARE		1/20	25				26	1/20		EXSPARE
EXSPARE		1/20	27				28	1/20		EXSPARE
EXSPARE		1/20	29				30	1/20		EXSPARE

NOTES:				3,200	4,000	3,780	TOTAL VA	100 A. BUS (COPPER)
1. (X) INDICATES EXISTING LOADS AND/OR CIRCUIT BREAKERS				27	33	32	TOTAL AMPERES	100 A. MAIN LUGS
2. NEW LOAD CONNECTED TO EXISTING CIRCUIT BREAKER								
3. NEW LOAD CONNECT TO NEW CIRCUIT BREAKER. PROVIDE CIRCUIT BREAKER INDICATED. BREAKER AIC RATING MUST MATCH PANEL AIC RATING.								

10 KAIC MINIMUM RATING

REVISED EXISTING PANEL "P1A"

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE		PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE								XX	200 % NEUTRAL BUS
DOOR-IN-DOOR HINGED TRIM	FEED:	BOTTOM									ULSE LABEL
	NEMA -	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
EXRECEPTACLES	900	1/20	1	1,080			2	1/20	720	EXRECEPTACLES
EXRECEPTACLES	360	1/20	3		1,080		4	1/20	720	EXRECEPTACLES
EXRECEPTACLES	1,620	1/20	5			1,620	6	1/20	540	EXRECEPTACLES
EXRECEPTACLE	1,000	1/20	7	1,540			8	1/20	540	EXFLOORBOXES
EXRECEPTACLE	1,000	1/20	9		1,180		10	1/20	180	EXRECEPTACLES
EXCOPIER	1,800	1/20	11			1,980	12	1/20	180	EXRECEPTACLES
EXCOPIER	1,800	1/20	13	1,980			14	1/20	180	EXRECEPTACLES
EXPROJECTOR	1,000	1/20	15		1,180		16	1/20	180	EXRECEPTACLES
EXRECEPTACLES	900	1/20	17			1,080	18	1/20	180	EXRECEPTACLES
EXRECEPTACLES/PROJECTION SCREEN	900	1/20	19	1,080			20	1/20	180	EXRECEPTACLES
EXRECEPTACLES	900	1/20	21		1,080		22	1/20	180	EXRECEPTACLES
EXRECEPTACLES	720	1/20	23			900	24	1/20	180	EXRECEPTACLES
EXEWC	1,000	1/20	25	1,180			26	1/20	180	EXRECEPTACLES
EXRECEPTACLES	900	1/20	27		1,080		28	1/20	180	EXRECEPTACLES
EXEXTERIOR RECEPTACLES	900	1/20	29			1,080	30	1/20	180	EXRECEPTACLES
EXRECEPTACLES	900	1/20	31	1,080			32	1/20	180	EXRECEPTACLES
EXRECEPTACLES	900	1/20	33		1,900		34	1/20	1,000	EXEWC
EXCIRC. PUMP CP-1	200	1/20	35			1,200	36	1/20	1,000	EXVENDING MACHINNE
EXFLOOR BOXES	900	1/20	37	1,900			38	1/20	1,000	EXVENDING MACHINNE
EXSUMP ALARM PANEL	200	1/20	39		2,000		40	1/20	1,800	EXRECEPTACLE
EXRECEPTACLES	1,440	1/20	41			3,240	42	1/20	1,800	EXRECEPTACLE
EXRECEPTACLE	1,000	1/20	43	2,440			44	1/20	1,440	EXRECEPTACLES
EXRECEPTACLE	1,000	1/20	45		2,800		46	1/20	1,800	EXRECEPTACLE
EXRECEPTACLE	1,000	1/20	47			2,800	48	1/20	1,800	EXRECEPTACLE
EXRECEPTACLE	1,000	1/20	49	4,200			50		3,200	
EXOVERHEAD MOTORIZED DOOR	1,500	1/20	51		5,500		52	3/60	4,000	EXPANEL "P1A2"
EXFIRE ALARM CONTROL UNIT (FACU), SEE NOTE 2	200	1/20	53			3,980	54		3,780	
EXNAC POWER SUPPLY, SEE NOTE 2	200	1/20	55	1,200			56	1/20	**1,000**	**REFRIGERATOR 142 (NOTE 2)**
EXIRRIGATION CONTROLLER	200	1/20	57		1,200		58	1/20	**1,000**	**RERIGERATOR 142 (NOTE 2)**
EXREFRIGERATOR	1,200	1/20	59			2,200	60	1/20	**1,000**	**DISHWASHER 142 (NOTE 2)**
EVIDENCE DRYING CABINET 170 (NOTE 2)	**1,200**	**1/20**	61	2,100			62	1/20	900	EXRECEPTACLES
EXSURVEILANCE MONITOR	200	1/20	63		920		64	1/20	720	EXRECEPTACLES
EXCOPIER	1,800	1/20	65			3,060	66	1/20	1,260	EXRECEPTACLES
AH2 & HR2 SERIES UNITS (NOTE 3)	**1,163**	**2/20**	67	2,423			68	1/20	1,260	EXRECEPTACLES
	1,163		69		2,603		70	1/20	1,440	EXRECEPTACLES
NEW APS1 (NOTE 2)	**600**	1/20	71			800	72	1/20	200	EXCIRC. PUMP CP1
EXSPARE		2/20	73	180			74	1/20	180	EXRECEPTACLE ELEV. MACH. ROOM
			75				76			
AH1 & HR1 SERIES UNITS (NOTE 2)	**662**	2/15	77			662	78	3/60		EXSPD DEVICE
	662		79	662			80			
AH1 & HR1 SERIES UNITS (NOTE 2)	**757**	2/15	81		3,507		82	2/50	**2,750**	**RANGE 142 (NOTE 2)**
	757		83			3,507	84		**2,750**	

NOTES:				23,045	26,030	28,109	TOTAL VA	225 A. BUS (COPPER)
1. (X) INDICATES EXISTING LOADS AND/OR CIRCUIT BREAKERS				192	217	234	TOTAL AMPERES	225 A. MAIN CIRCUIT BREAKER
2. NEW LOAD CONNECTED TO EXISTING CIRCUIT BREAKER								
3. NEW LOAD CONNECT TO NEW CIRCUIT BREAKER. PROVIDE CIRCUIT BREAKER INDICATED. BREAKER AIC RATING MUST MATCH PANEL AIC RATING.								

10 KAIC MINIMUM RATING

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023311 WILLEN CRIBB
02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Electrical Panel Schedules

Rev.	Date	Notes

E0.4

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EXISTING PANEL "P1B"

	208	120	VOLTS,	3	PHASE,	4	WIRE		PROVIDE	XX	EQUIPMENT GROUND BUS
	MOUNT:	SURFACE							IF	XX	200 % NEUTRAL BUS
	FEED:								CHECKED		ULSE LABEL
	NEMA -	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD	CKT	CKT		LOAD VA			CKT	CKT	LOAD	
LOAD SERVED	VA	BKR	#	A	B	C	#	BKR	VA	LOAD SERVED
RECEPTACLES	1,260	1/20	1	2,700			2	1/20	1,440	RECEPTACLES
RECEPTACLES	1,080	1/20	3		2,520		4	1/20	1,440	RECEPTACLES
RECEPTACLES	1,080	1/20	5			2,520	6	1/20	1,440	RECEPTACLES
RECEPTACLES	1,440	1/20	7	2,160			8	1/20	720	RECEPTACLES
RECEPTACLES	1,440	1/20	9		3,240		10	1/20	1,800	COPIER
RECEPTACLES	1,440	1/20	11			3,240	12	1/20	1,800	COPIER
RECEPTACLES	1,620	1/20	13	1,980			14	1/20	360	RECEPTACLES
RECEPTACLES	1,080	1/20	15		1,440		16	1/20	360	RECEPTACLES
RECEPTACLES	1,080	1/20	17			2,520	18	1/20	1,440	RECEPTACLES
RECEPTACLES	1,260	1/20	19	2,700			20	1/20	1,440	RECEPTACLES
EXTERIOR RECEPTACLES	360	1/20	21		1,620		22	1/20	1,260	RECEPTACLE
EXTERIOR RECEPTACLES	900	1/20	23			2,520	24	1/20	1,620	RECEPTACLES
TELECOMMUNICATIONS BACKBOARD	360	1/20	25	1,360			26	1/20	1,000	RECEPTACLES
TELECOMMUNICATIONS BACKBOARD	360	1/20	27		1,360		28	1/20	1,000	RECEPTACLES
TELECOMMUNICATIONS BACKBOARD	360	1/20	29			1,360	30	1/20	1,000	REFRIGERATOR
TELECOMMUNICATIONS BACKBOARD	360	1/20	31	1,360			32	1/20	1,000	DISHWASHER
DOOR CONTROL SYSTEM	200	1/20	33		1,200		34	1/20	1,000	RECEPTACLE
RECEPTACLE	180	1/20	35			1,180	36	1/20	1,000	RECEPTACLE
HAND DRYER	1,000	1/20	37	2,000			38	1/20	1,000	RECEPTACLE
RECEPTACLE	180	1/20	39		380		40	1/20	200	CIRC PUMP CP1
HAND DRYER	1,000	1/20	41			2,000	42	1/20	1,000	EWC
RECEPTACLES	540	1/20	43	1,040			44	1/20	500	SURVEILANCE MONINTOR
DOOR CONTROL POWER	200	1/20	45		400		46	1/20	200	NETWORK VIDEO RECORDER
DOOR CONTROL POWER SUPPLY	200	1/20	47			400	48	1/20	200	NETWORK VIDEO RECORDER
DOOR CONTROL POWER SUPPLY	200	1/20	49	2,000			50	1/20	1,800	COPIER
IRRIGATION PUMP THRU XFMR T-6	902	2/30	51		2,702		52	1/20	1,800	SCANNER
	902		53			2,702	54	1/20	1,800	PLOTTER
SPARE		1/20	55				56	1/20		SPARE
SPARE		1/20	57				58	1/20		SPARE
SPARE		1/20	59				60	1/20		SPARE
SPARE		1/20	61				62	1/20		SPARE
SPARE		1/20	63				64	1/20		SPARE
SPARE		1/20	65			60	66	1/20	60	LIGHT ELEV PIT
		1/20	67	1,176			68	1/20	1,176	SUMP PUMP SP1
SPARE		2/15	69		180		70	1/20	180	RECEPTACLE ELEV PIT
			71				72			
DAHU'S & HEAT RECOVERY BOXES	234	2/15	73	234			74	3/60		SPD DEVICE
	234		75		234		76			
DAHU'S & HEAT RECOVERY BOXES	661	2/15	77			2,911	78	2/30	2,250	ELECTRIC WATER HEATER EWH2
	661		79	2,911			80		2,250	
DAHU'S & HEAT RECOVERY BOXES	596	2/15	81		830		82	2/50	234	RANGE
	596		83			830	84		234	
NOTES:				21,621	16,106	22,243	TOTAL VA		225	A. BUS (COPPER)
				180	134	185	TOTAL AMPERES		225	A. MAIN CIRCUIT BREAKER

10 KAIC MINIMUM RATING

EXISTING PANEL "P2A"

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE		PROVIDE	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE							IF	XX	200 % NEUTRAL BUS
DOOR-IN-DOOR HINGED TRIM	FEED:	BOTTOM							CHECKED		ULSE LABEL
	NEMA -	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD	CKT	CKT		LOAD VA			CKT	CKT	LOAD	
LOAD SERVED	VA	BKR	#	A	B	C	#	BKR	VA	LOAD SERVED
RECEPTACLES	1,260	1/20	1	2,700			2	1/20	1,440	RECEPTACLES
RECEPTACLES	1,260	1/20	3		2,700		4	1/20	1,440	RECEPTACLES
RECEPTACLES	1,260	1/20	5			2,700	6	1/20	1,440	RECEPTACLES
COPIER	800	1/20	7	2,420			8	1/20	1,620	RECEPTACLES
COPIER	800	1/20	9		2,060		10	1/20	1,260	RECEPTACLES
RECEPTACLES	540	1/20	11			1,800	12	1/20	1,260	RECEPTACLES
RECEPTACLES	720	1/20	13	1,980			14	1/20	1,260	RECEPTACLES
EWC	600	1/20	15		1,400		16	1/20	800	COPIER
EWC	600	1/20	17			1,400	18	1/20	800	COPIER
RECEPTACLES	360	1/20	19	1,160			20	1/20	800	COPIER
RECEPTACLES	360	1/20	21		1,800		22	1/20	1,440	MODULAR FURNITURE
MOTORIZED PARTITION	800	1/20	23			2,240	24	1/20	1,440	MODULAR FURNITURE
RECEPTACLE	1,000	1/20	25	2,000			26	1/20	1,000	DISHWASHER
RECEPTACLE	1,000	1/20	27		2,000		28	1/20	1,000	REFRIGERATOR
RECEPTACLE	1,000	1/20	29			2,000	30	1/20	1,000	RECEPTACLE
RECEPTACLE	1,000	1/20	31	2,000			32	1/20	1,000	RECEPTACLE
DISHWASHER	1,000	1/20	33		1,540		34	1/20	540	RECEPTACLES
RECEPTACLE	1,000	1/20	35			1,720	36	1/20	720	RECEPTACLES/PROJECTOR SCREEH
REFRIGERATOR	1,000	1/20	37	2,000			38	1/20	1,000	PROJECTOR
ICE MAKER	1,000	1/20	39		2,000		40	1/20	1,000	PROJECTOR
FLOORBOXES	360	1/20	41			1,360	42	1/20	1,000	PROJECTOR
FLOORBOXES	540	1/20	43	1,080			44	1/20	540	FLOORBOXES
TELECOMMUNICATIONS BACKBOARD	360	1/20	45		900		46	1/20	540	FLOORBOXES
TELECOMMUNICATIONS BACKBOARD	360	1/20	47			900	48	1/20	540	RECEPTACLES
TELECOMMUNICATIONS BACKBOARD	360	1/20	49	1,080			50	1/20	720	RECEPTACLES/PROJECTOR SCREEH
TELECOMMUNICATIONS BACKBOARD	360	1/20	51		860		52	1/20	500	MOTORIZED SHADES
DOOR CONTROL POWER	200	1/20	53			1,100	54	1/20	900	RECEPTACLES
DOOR CONTROL POWER SUPPLY	200	1/20	55	740			56	1/20	540	RECEPTACLES
HVAC SMART CONTROLLER	180	1/20	57		1,180		58	1/20	1,000	FOOD CART
SPARE		1/20	59			1,000	60	1/20	1,000	FOOD CART
SPARE		1/20	61	1,000			62	1/20	1,000	FOOD CART
SPARE		1/20	63		1,500		64	1/20	1,500	PROJECTOR
SPARE		2/15	65			1,000	66	1/20	1,000	HAND DRYER
SPARE		1/20	67	1,000			68	1/20	1,000	HAND DRYER
SPARE		2/15	69				70	1/20		SPARE
			71				72	1/20		SPARE
DAHU'S & HEAT RECOVRY BOXES	1,641	2/20	73	1,641			74	1/20		SPARE
	1,641		75		1,641		76			
DAHU'S & HEAT RECOVRY BOXES	546	2/15	77			546	78	3/60		SPD DEVICE
	546		79	546			80			
DAHU'S & HEAT RECOVERY BOXES	535	2/15	81		3,285		82	2/50	2,750	RANGE
	535		83			3,285	84		2,750	
NOTES:				21,347	22,866	21,051	TOTAL VA		225	A. BUS (COPPER)
				178	191	175	TOTAL AMPERES		225	A. MAIN CIRCUIT BREAKER

10 KAIC MINIMUM RATING

EXISTING PANEL "P2B"

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE		PROVIDE	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE							IF	XX	200 % NEUTRAL BUS
DOOR-IN-DOOR HINGED TRIM	FEED:	BOTTOM							CHECKED		ULSE LABEL
	NEMA -	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD	CKT	CKT		LOAD VA			CKT	CKT	LOAD	
LOAD SERVED	VA	BKR	#	A	B	C	#	BKR	VA	LOAD SERVED
RECEPTACLE	1,440	1/20	1	1,980			2	1/20	540	FLOORBOXES
RECEPTACLE	1,440	1/20	3		2,940		4	1/20	1,500	PROJECTOR
RECEPTACLE	1,440	1/20	5			2,520	6	1/20	1,080	RECEPTACLES
RECEPTACLE	1,440	1/20	7	2,700			8	1/20	1,260	RECEPTACLES
RECEPTACLE	1,620	1/20	9		2,620		10	1/20	1,000	MOTORIZED SHADES
RECEPTACLE	1,620	1/20	11			2,620	12	1/20	1,000	PROJECTION SCREEN
TELECOMMUNICATIONS BACKBOARD	360	1/20	13	720			14	1/20	360	FLOORBOXES
TELECOMMUNICATIONS BACKBOARD	360	1/20	15		720		16	1/20	360	FLOORBOXES
TELECOMMUNICATIONS BACKBOARD	360	1/20	17			900	18	1/20	540	RECEPTACLES
TELECOMMUNICATIONS BACKBOARD	360	1/20	19	1,080			20	1/20	720	RECEPTACLES
RECEPTACLE	180	1/20	21		1,620		22	1/20	1,440	RECEPTACLE
RECEPTACLE	180	1/20	23			1,080	24	1/20	900	RECEPTACLE
HAND DRYER	1,000	1/20	25	1,360			26	1/20	360	RECEPTACLE
HAND DRYER	1,000	1/20	27		1,360		28	1/20	360	RECEPTACLE
DOOR CONTROL POWER	200	1/20	29			1,200	30	1/20	1,000	EWC
NAC REMOTE POWER SUPPLY. SEE NOTE 2	200	1/20	31	1,700			32	1/20	1,500	PROJECTOR
DOOR CONTROL POWER SUPPLY	200	1/20	33		1,200		34	1/20	1,000	UC REFRIG.
AV SYSTEM	360	1/20	35			540	36	1/20	180	RECEPTACLE
AV SYSTEM	360	1/20	37	2,160			38	1/20	1,800	COPIER
HVAC SMART CONTROLLER	180	1/20	39		1,980		40	1/20	1,800	COPIER
SPARE		1/20	41			360	42	1/20	360	RECEPTACLES
SPARE		1/20	43	180			44	1/20	180	RECEPTACLE
SPARE		1/20	45		1,620		46	1/20	1,620	RECEPTACLES
SPARE		1/20	47			1,080	48	1/20	1,080	RECEPTACLES
SPARE		1/20	49	540			50	1/20	540	FLOOR BOXES
SPARE		1/20	51		540		52	1/20	540	FLOOR BOXES
SPARE		1/20	53				54	1/20		SPARE
SPARE		1/20	55				56	1/20		SPARE
SPARE		1/20	57				58	1/20		SPARE
HVAC SMART CONTROLLER	180	1/20	59			180	60	1/20		SPARE
SPARE		1/20	61				62	1/20		SPARE
SPARE		1/20	63				64	1/20		SPARE
SPARE		1/20	65				66	1/20		SPARE
SPARE		1/20	67				68	1/20		SPARE
SPARE		2/15	69				70	1/20		SPARE
			71				72	1/20		SPARE
DAHU'S & HEAT RECOVERY BOXES	782	2/15	73	782			74	1/20		SPARE
	782		75		782		76	1/20		SPARE
SPARE		2/15	77				78	1/20		SPARE
			79				80			
DAHU'S & HEAT RECOVERY BOXES	1,198	2/15	81		1,198		82	3/60		SPD DEVICE
	1,198		83			1,198	84			
NOTES:				13,202	16,580	11,678	TOTAL VA		225	A. BUS (COPPER)
				110	138	97	TOTAL AMPERES		225	A. MAIN CIRCUIT BREAKER

10 KAIC MINIMUM RATING

REVISED EXISTING PANEL "P1B"

	208	120	VOLTS,	3	PHASE,	4	WIRE		PROVIDE	XX	EQUIPMENT GROUND BUS
	MOUNT:	SURFACE							IF	XX	200 % NEUTRAL BUS
	FEED:								CHECKED		ULSE LABEL
	NEMA -	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD	CKT	CKT		LOAD VA			CKT	CKT	LOAD	
LOAD SERVED	VA	BKR	#	A	B	C	#	BKR	VA	LOAD SERVED
(X)RECEPTACLES	1,260	1/20	1	2,700			2	1/20	1,440	(X)RECEPTACLES
(X)RECEPTACLES	1,080	1/20	3		2,520		4	1/20	1,440	(X)RECEPTACLES
(X)RECEPTACLES	1,080	1/20	5			2,520	6	1/20	1,440	(X)RECEPTACLES
(X)RECEPTACLES	1,440	1/20	7	2,160			8	1/20	720	(X)RECEPTACLES
(X)RECEPTACLES	1,440	1/20	9		3,240		10	1/20	1,800	(X)COPIER
(X)RECEPTACLES	1,440	1/20	11			3,240	12	1/20	1,800	(X)COPIER
(X)RECEPTACLES	1,620	1/20	13	1,980			14	1/20	360	(X)RECEPTACLES
(X)RECEPTACLES	1,080	1/20	15		1,440		16	1/20	360	(X)RECEPTACLES
(X)RECEPTACLES	1,080	1/20	17			2,520	18	1/20	1,440	(X)RECEPTACLES
(X)RECEPTACLES	1,260	1/20	19	2,700			20	1/20	1,440	(X)RECEPTACLES
(X)EXTERIOR RECEPTACLES	360	1/20	21		1,620		22	1/20	1,260	(X)RECEPTACLE
(X)EXTERIOR RECEPTACLES	900	1/20	23			2,520	24	1/20	1,620	(X)RECEPTACLES
(X)TELECOMMUNICATIONS BACKBOARD	360	1/20	25	1,360			26	1/20	1,000	(X)RECEPTACLES
(X)TELECOMMUNICATIONS BACKBOARD	360	1/20	27		1,360		28	1/20	1,000	(X)RECEPTACLES
(X)TELECOMMUNICATIONS BACKBOARD	360	1/20	29			1,360	30	1/20	1,000	(X)REFRIGERATOR
(X)TELECOMMUNICATIONS BACKBOARD	360	1/20	31	1,360			32	1/20	1,000	(X)DISHWASHER
(X)DOOR CONTROL SYSTEM	200	1/20	33		1,200		34	1/20	1,000	(X)RECEPTACLE
(X)RECEPTACLE	180	1/20	35			1,180	36	1/20	1,000	(X)RECEPTACLES
(X)HAND DRYER	1,000	1/20	37	2,000			38	1/20	1,000	(X)RECEPTACLE
(X)RECEPTACLE	180	1/20	39		380		40	1/20	200	(X)CIRC PUMP CP1
(X)HAND DRYER	1,000	1/20	41			2,000	42	1/20	1,000	(X)EWC
(X)RECEPTACLES	540	1/20	43	1,040			44	1/20	500	(X)SURVEILANCE MONINTOR
(X)DOOR CONTROL POWER	200	1/20	45		400		46	1/20	200	(X)NETWORK VIDEO RECORDER
(X)DOOR CONTROL POWER SUPPLY	200	1/20	47			400	48	1/20	200	(X)NETWORK VIDEO RECORDER
(X)DOOR CONTROL POWER SUPPLY	200	1/20	49	2,000			50	1/20	1,800	(X)COPIER
(X)IRRIGATION PUMP THRU XFMR T-6	902	2/30	51		2,702		52	1/20	1,800	(X)PLOTTER
	902		53			2,702	54	1/20	1,800	(X)PLOTTER
(X)SPARE		1/20	55	1,800			56	1/20	**1,800**	**COPIER 108 (NOTE 2)**
(X)SPARE		1/20	57		1,080		58	1/20	**1,080**	**RECEPTACLES 108 (NOTE 2)**
SPARE		1/20	59			1,080	60	1/20	**1,080**	**RECEPTACLES/FLOOR BOX 108 (NOTE 2)**
SPARE		1/20	61				62	1/20		SPARE
SPARE		1/20	63				64	1/20		SPARE
SPARE		1/20	65			60	66	1/20	60	(X)LIGHT ELEV PIT
		1/20	67	1,176			68	1/20	1,176	(X)SUMP PUMP SP1
SPARE		2/15	69		180		70	1/20	180	(X)RECEPTACLE ELEV PIT
			71				72			
AH3 AND HR4 SERIES UNITS (NOTE 2)	**142**	2/15	73	142			74	3/60		(X)SPD DEVICE
	142		75		142		76			
AH3 AND HR3 SERIES UNITS (NOTE 2)	**1,072**	2/15	77			3,322	78	2/50	2,250	(X)ELECTRIC WATER HEATER EWH2
	1,072		79	3,322			80		2,250	
AH4 AND HR4 SERIES UNITS (NOTE 2)	**425**	2/15	81		425		82	2/50		**SPARE**
	425		83			425	84			
NOTES:				23,740	16,849	23,329	TOTAL VA		225	A. BUS (COPPER)
1. (X) INDICATES EXISTING LOADS AND/OR CIRCUIT BREAKERS				198	139	194	TOTAL AMPERES		225	A. MAIN CIRCUIT BREAKER
2. NEW LOAD CONNECTED TO EXISTING CIRCUIT BREAKER										
3. NEW LOAD CONNECT TO NEW CIRCUIT BREAKER. PROVIDE CIRCUIT BREAKER INDICATED. BREAKER AIC RATING MUST MATCH PANEL AIC RATING.										

10 KAIC MINIMUM RATING

REVISED EXSTING PANEL "P2A"

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE		PROVIDE	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE							IF	XX	200 % NEUTRAL BUS
DOOR-IN-DOOR HINGED TRIM	FEED:	BOTTOM							CHECKED		ULSE LABEL
	NEMA -	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD	CKT	CKT		LOAD VA			CKT	CKT	LOAD	
LOAD SERVED	VA	BKR	#	A	B	C	#	BKR	VA	LOAD SERVED
(X)RECEPTACLES	1,260	1/20	1	2,700			2	1/20	1,440	(X)RECEPTACLES
RECEPTACLES 239A (NOTE 2)	**720**	**1/20**	3		2,160		4	1/20	1,440	(X)RECEPTACLES
(X)RECEPTACLES	1,260	1/20	5			2,700	6	1/20	1,440	(X)RECEPTACLES
RECEPTACLES 239,231 (NOTE 2)	**1,080**	**1/20**	7	2,700			8	1/20	1,620	(X)RECEPTACLES
RECEPTACLES 239 (NOTE 2)	**540**	**1/20**	9		1,800		10	1/20	1,260	(X)RECEPTACLES
RECEPTACLES 200A (NOTE 2)	**900**	**1/20**	11			2,160	12	1/20	1,260	(X)RECEPTACLES
RECEPTACLES 230A (NOTE 2)	**540**	**1/20**	13	1,800			14	1/20	1,260	(X)RECEPTACLES
(X)EWC	600	1/20	15		1,400		16	1/20	800	(X)COPIER
(X)EWC	600	1/20	17			1,400	18	1/20	800	(X)COPIER
(X)RECEPTACLES	540	1/20	19	1,160			20	1/20	800	(X)COPIER
(X)RECEPTACLES	360	1/20	21		1,800		22	1/20	1,440	(X)MODULAR FURNITURE
(X)MOTORIZED PARTITION	800	1/20	23			2,240	24	1/20	1,440	(X)MODULAR FURNITURE
(X)RECEPTACLE	1,000	1/20	25	1,720			26	1/20	**720**	**RECEPTACLES 255 (NOTE 2)**
(X)RECEPTACLE	1,000	1/20	27		2,000		28	1/20	1,000	(X)REFRIGERATOR
(X)RECEPTACLE	1,000	1/20	29			2,000	30	1/20	1,000	(X)RECEPTACLE
(X)RECEPTACLE	1,000	1/20	31	2,000			32	1/20	1,000	(X)RECEPTACLE
(X)DISHWASHER	1,000	1/20	33		1,540		34	1/20	540	(X)RECEPTACLES
(X)RECEPTACLE	1,000	1/20	35			1,720	36	1/20	720	(X)RECEPTACLES/PROJECTOR SCREEH
(X)REFRIGERATOR	1,000	1/20	37	2,000			38	1/20	1,000	(X)PROJECTOR
(X)ICE MAKER	1,000	1/20	39		2,000		40	1/20	1,000	(X)PROJECTOR
(X)FLOORBOXES	360	1/20	41			1,360	42	1/20	1,000	(X)PROJECTOR
(X)FLOORBOXES	540	1/20	43	1,080			44	1/20	540	(X)FLOORBOXES
(X)TELECOMMUNICATIONS BACKBOARD	360	1/20	45		900		46	1/20	540	(X)FLOORBOXES
(X)TELECOMMUNICATIONS BACKBOARD	360	1/20	47			900	48	1/20	540	(X)RECEPTACLES
(X)TELECOMMUNICATIONS BACKBOARD	360	1/20	49	1,080			50	1/20	720	(X)RECEPTACLES/PROJECTOR SCREEH
(X)TELECOMMUNICATIONS BACKBOARD	360	1/20	51		860		52	1/20	500	(X)MOTORIZED SHADES
(X)DOOR CONTROL POWER	200	1/20	53			1,100	54	1/20	900	(X)RECEPTACLES
(X)DOOR CONTROL POWER SUPPLY	540	1/20	55	740			56	1/20	540	(X)RECEPTACLES
(X)HVAC SMART CONTROLLER	180	1/20	57		1,180		58	1/20	1,000	(X)FOOD CART
(X)RECEPTACLE		1/20	59			1,000	60	1/20	1,000	(X)FOOD CART
RECEPTACLE 252 (NOTE 3)	**2,880**	**1/30**	61	3,880			62	1/20	1,000	(X)FOOD CART
RECEPTACLE 252 (NOTE 3)	**2,880**	**1/30**	63		4,380		64	1/20	1,500	(X)PROJECTOR
(X)SPARE		2/15	65			1,000	66	1/20	1,000	(X)HAND DRYER
			67	1,000			68	1/20	1,000	(X)HAND DRYER
DHA3, DHA4 TROUGH (NOTE 3)	**1,231**	**2/30**	69		1,231		70	1/20		(X)SPARE
	1,231		71			1,231	72	1/20		(X)SPARE
(X)DAHU'S & HEAT RECOVERY BOXES	1,641	2/20	73	1,641			74	1/20		(X)SPARE
	1,641		75		1,641		76			
AH5 & HR5 SERIES UNITS (NOTE 2)	**1,028**	2/15	77			1,028	78	2/60		(X)SPD DEVICE
	1,028		79	1,028			80			
AH5 & HR5 SERIES UNITS (NOTE 2)	**1,206**	2/15	81		3,956		82	2/60	2,760	(X)RANGE
	1,206		83			3,956	84		2,760	
NOTES:				24,529	26,848	23,795	TOTAL VA		225	A. BUS (COPPER)
1. (X) INDICATES EXISTING LOADS AND/OR CIRCUIT BREAKERS				204	224	198	TOTAL AMPERES		225	A. MAIN CIRCUIT BREAKER
2. NEW LOAD CONNECTED TO EXISTING CIRCUIT BREAKER										
3. NEW LOAD CONNECT TO NEW CIRCUIT BREAKER. PROVIDE CIRCUIT BREAKER INDICATED. BREAKER AIC RATING MUST MATCH PANEL AIC RATING.										

10 KAIC MINIMUM RATING

REVISED EXISTING PANEL "P2B"

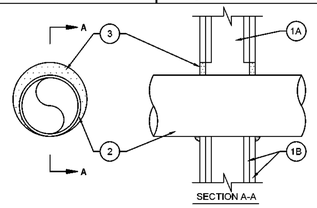
TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE		PROVIDE	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE							IF	XX	200 % NEUTRAL BUS
DOOR-IN-DOOR HINGED TRIM	FEED:	BOTTOM							CHECKED		ULSE LABEL
	NEMA -	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD	CKT	CKT		LOAD VA			CKT	CKT	LOAD	
LOAD SERVED	VA	BKR	#	A	B	C	#	BKR	VA	LOAD SERVED
(X)RECEPTACLE	1,440	1/20	1	1,980			2	1/20	540	(X)FLOORBOXES
(X)RECEPTACLE	1,440	1/20	3		2,940		4	1/20	1,500	(X)PROJECTOR
(X)RECEPTACLE	1,440	1/20	5			2,520	6	1/20	1,080	(X)RECEPTACLES
(X)RECEPTACLE	1,440	1/20	7	2,700			8	1/20	1,260	(X)RECEPTACLES
(X)RECEPTACLE	1,620	1/20	9		2,620		10	1/20	1,000	(X)MOTORIZED SHADES
(X)RECEPTACLE	1,620	1/20	11			2,620	12	1/20	1,000	(X)PROJECTION SCREEN
(X)TELECOMMUNICATIONS BACKBOARD	360	1/20	13	720			14	1/20	360	(X)FLOORBOXES
(X)TELECOMMUNICATIONS BACKBOARD	360	1/20	15		720		16	1/20	360	(X)FLOORBOXES
(X)TELECOMMUNICATIONS BACKBOARD	360	1/20	17			900	18	1/20	540	(X)RECEPTACLES
(X)TELECOMMUNICATIONS BACKBOARD	360	1/20	19	1,080

System No. W-L-1054

January 21, 2020

ANSI / UL1479 (ASTM E814)	CAN / ULC S115
F Ratings - 1 and 2 Hr (See Items 1 & 3)	F Ratings - 1 and 2 Hr (See Items 1 & 3)
T Ratings - 0 Hr	FT Ratings - 0 Hr
L Ratings at Ambient - Less Than 1 CFM / sq ft	FH Ratings - 1and 2 HR (See Items 1 and 3)
L Ratings at 400 F - Less Than 1 CFM / sq ft	FTH Ratings - 0 Hr
	FTH Ratings - 0 Hr L Rating at Ambient - Less Than 1 CFM / sq ft
	L Ratings at 400 F - Less Than 1 CFM / sq ft



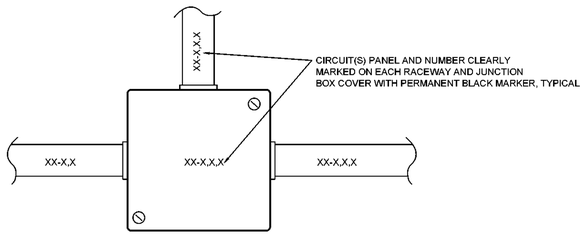
SECTION A-A

1. WALL ASSEMBLY — THE 1 OR 2 HR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS — WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. (51 BY 102 MM) LUMBER SPACED 16 IN. (406 MM) OC. STEEL STUDS TO BE MIN 2-1/2 IN. (64 MM) WIDE AND SPACED MAX 24 IN. (610 MM) OC. FOR M RATING, STEEL STUDS TO BE MIN 3-5/8 IN. (92 MM) WIDE. WHEN STEEL STUDS ARE USED AND THE DIAM OF OPENING EXCEEDS THE WIDTH OF STUD CAVITY, THE OPENING SHALL BE FRAMED ON ALL SIDES USING LENGTHS OF STEEL STUD INSTALLED BETWEEN THE VERTICAL STUDS AND SCREW-ATTACHED TO THE STEEL STUDS AT EACH END. THE FRAMED OPENING IN THE WALL SHALL BE 4 TO 6 IN. (102 TO 152 MM) WIDER AND 4 TO 6 IN. (102 TO 152 MM) HIGHER THAN THE DIAM OF THE PENETRATING ITEM SUCH THAT, WHEN THE PENETRATING ITEM IS INSTALLED IN THE OPENING, A 2 TO 3 IN. (51 TO 76 MM) CLEARANCE IS PRESENT BETWEEN THE PENETRATING ITEM AND THE FRAMING ON ALL FOUR SIDES.
   B. GYPSUM BOARD* — 5/8 IN. (16 MM) THICK, 4 FT (122 CM) WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 32-1/4 IN. (819 MM) FOR STEEL STUD WALLS. MAX DIAM OF OPENING IS 14-1/2 IN. (368 MM) FOR WOOD STUD WALLS. THE F AND FH RATINGS OF THE FIRESTOP SYSTEM ARE EQUAL TO THE FIRE RATING OF THE WALL ASSEMBLY. THE M RATING IS APPLICABLE ONLY TO 1 HR RATED WALLS.
2. THROUGH-PENETRANTS — ONE METALLIC PIPE, CONDUIT OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE SHALL BE MIN 0 IN. TO MAX 2-1/4 IN. (57 MM). PIPE MAY BE INSTALLED WITH CONTINUOUS POINT CONTACT. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
   A. STEEL PIPE — NOM 30 IN. (762 MM) DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
   B. IRON PIPE — NOM 30 IN. (762 MM) DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   C. CONDUIT — NOM 4 IN. (102 MM) DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR 6 IN. (152 MM) . DIAM STEEL CONDUIT.
   D. COPPER TUBING — NOM 6 IN. (152 MM) DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.
   E. COPPER PIPE — NOM 6 IN. (152 MM) DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
3. FILL, VOID OR CAVITY MATERIAL* — SEALANT — MIN 5/8 IN. (16 MM) THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. AT THE POINT OR CONTINUOUS CONTACT LOCATIONS BETWEEN PIPE AND WALL, A MIN 1/2 IN. (13 MM) DIAM BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE PIPE WALL INTERFACE ON BOTH SURFACES OF WALL.

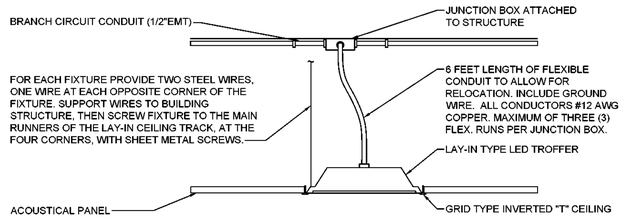
Movement Direction	Penetrant Item	Nominal Penetrant Diameter	Annular Space	Movement	Sealant Depth	F-Rating	L Rating with Movement
Y	2A, 2C*	2 in.	Max 2-1/4 in.	5%	5/8 in.	1 hr	N/A
Z	2A, 2C*	2 in.	2-1/4 in.	0.25 in.	5/8 in.	1 hr	N/A

* INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION

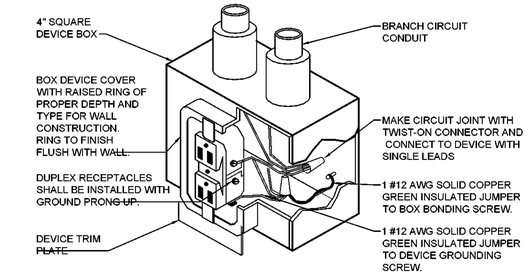
5 1 AND 2 HOUR FIREWALL PENETRATION DETAIL
NOT TO SCALE



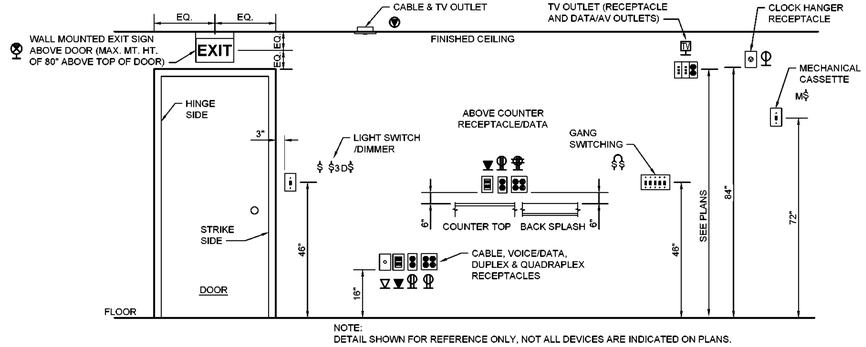
2 CIRCUIT IDENTIFICATION DETAIL
NOT TO SCALE



4 LIGHTING FIXTURE SUSPENSION DETAIL
NOT TO SCALE



3 RECEPTACLE GROUNDING DETAIL
NOT TO SCALE



NOTE:
DETAIL SHOWN FOR REFERENCE ONLY, NOT ALL DEVICES ARE INDICATED ON PLANS.

1 ELECTRICAL DEVICES - MOUNTING HEIGHT DETAIL
NOT TO SCALE

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL SEAL 023311 ENGINEER WILLEN OR 188

02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Electrical Details

Rev.	Date	Notes

E0.6

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2018 APPENDIX B BUILDING CODE SUMMARY
ELECTRICAL SUMMARY
ELECTRICAL SYSTEMS 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 FIXTURE SCHEDULE
NUMBER OF LAMPS IN FIXTURE: SEE FIXTURE SCHEDULE
BALLAST TYPE USED IN THE FIXTURE: SEE FIXTURE SCHEDULE
NUMBER OF BALLASTS IN FIXTURE: SEE FIXTURE SCHEDULE
TOTAL WATTAGE PER FIXTURE: SEE FIXTURE SCHEDULE

TOTAL INTERIOR WATTAGE: (WHOLE BUILDING OR SPACE BY SPACE)

ALLOWED =	18,732	WATTS
ADDITIONAL 10% =	16,859	WATTS
SPECIFIED =	12,012	WATTS

EXTERIOR ALLOWANCE:
(TRADEABLE SURFACES)

ALLOWED =	N/A	WATTS
SPECIFIED =	N/A	WATTS

(NON-TRADEABLE SURFACES:)

ALLOWED =	N/A	WATTS
SPECIFIED =	N/A	WATTS

ADDITIONAL PRESCRIPTIVE COMPLIANCE

- ☐ C406.2 MORE EFFICIENT HVAC EQUIPMENT PERFORMANCE
- ☑ C406.3 REDUCED LIGHTING POWER DENSITY
- ☐ C406.4 ENHANCED DIGITAL LIGHTING CONTROLS
- ☐ C406.5 ON-SITE RENEWABLE ENERGY
- ☐ C406.6 DEDICATED OUTSIDE AIR SYSTEM
- ☐ C406.7 REDUCED ENERGY USE IN SERVICE WATER HEATING

1 **BUILDING CODE SUMMARY - ADDITION**
NOT TO SCALE

LIGHTING FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER/SERIES	NOM. SIZE	SOURCE / TEMP(oK) / DELIVERED LUMENS	VOLTS	WATTS	LENS	COLOR/ MATERIAL	MOUNTING HEIGHT	DRIVER/ DIMMING	REMARKS
A	LAY-IN VOLUMETRIC FIXTURE	LITHONIA: STAK 2X4 5000LM 80CRI 40K COL MVOLT	2'x4'x4"	LEDs / 4000K / 5430 LUMENS	MVOLT	42	CURVED OPAL	WHITE	RECESSED	LED DRIVER 0-10V DIMMING	1
B	LAY-IN VOLUMETRIC FIXTURE	LITHONIA: STAK 2X4 6000LM 80CRI 40K COL MVOLT	2'x4'x4"	LEDs / 4000K / 5430 LUMENS	MVOLT	50	CURVED OPAL	WHITE	RECESSED	LED DRIVER 0-10V DIMMING	
C	4" DIA DOWN LIGHT	LITHONIA: 4IN LDN 4000K 1000LM CLEAR SEMI SPECULAR REFL CRI 80	4"DIA	LEDs / 4000K / 1000 LUMENS	MVOLT	11	SEMI-SPEC		RECESSED	LED DRIVER 0-10V DIMMING	1
D	LED STAIR LIGHT	PRUDENTIAL LTG: FLAIR-PRO-LED4-HO-4-SAL-TMW-UNV-SUR-DM01	4'	LEDs / 4000K / 4000 LUMENS	MVOLT	35	SATIN ACRYLIC	TEXTURED WHITE	WALL MOUNTED 14'-0" AFF	LED DRIVER	8, 9
E	2-HEAD EMERGENCY LIGHT	LITHONIA: ELM2L	12"W 6"H 6"D	LED	MVOLT	10		WHITE	WALL MOUNTED 7'-6" AFF		8
F	EXTERIOR AREA LIGHT	VERSALED LIGHTING: WP28-C-1L-QT-40K-50W	18"W 19"H 7"D	LEDs / 4000K / 6400 LUMENS	MVOLT	50		DARK BRONZE	WALL MOUNTED B.O.F. 11'- 0" AFF		3, 6
G	4' LED UTILITY LIGHT	LITHONIA: CSS	4'	LEDs / 4000K / 4298 LUMENS	MVOLT	34	ACRYLIC	WHITE	SURFACE / SUSPENDED	LED DRIVER	
H	4" DIA DOWN LIGHT	LITHONIA: 4IN LDN 4000K 1000LM CLEAR SEMI SPECULAR REFL CRI 80	4"DIA	LEDs / 4000K / 1000 LUMENS	MVOLT	11	SEMI-SPEC		RECESSED	LED DRIVER	2, 8
J	2' LED UTILITY LIGHT	LITHONIA: CSS	2'	LEDs / 4000K / 2300 LUMENS	MVOLT	16	ACRYLIC	WHITE	SURFACE / SUSPENDED	LED DRIVER	
K	EXTERIOR AREA LIGHT	LITHONIA: TWX2 LED P1	13.0" W 9.0" H 4.5" D	LEDs / 4000K / 3200 LUMENS	MVOLT	32	BOROSIL GLASS	DDBXD DARK BRONZE	WALL MOUNTED		3
X1	EXIT SIGN, SINGLE FACE, THERMO PLASTIC HOUSING 6" RED LETTERS	LITHONIA LQM SERIES		LED	MVOLT	4		WHITE	CEILING		8
X2	EXIT SIGN, DOUBLE FACE, THERMO PLASTIC HOUSING 6" RED LETTERS	LITHONIA LQM SERIES		LED	MVOLT	4		WHITE	CEILING		8

REMARKS:
1.0-10V DIM TO 1%
2. DAMP LOCATION
3. WET LOCATION
4. WIREGUARD
5. LED REQUIRED SURGE PROTECTION
6. VERIFY FINAL MOUNTING HEIGHT WITH EXISTING EXTERIOR FIXTURES
7. FINAL COLOR SELECTION BY ARCHITECT
8. 90 MIN BATTERY BACKUP
9. 50% DIMMING AFTER 30 MIN'S NO OCCUPANCY

GENERAL NOTES
A. THE CONTRACTOR SHALL VERIFY THE LEAD TIME OF ALL PRODUCTS SPECIFIED IN THIS SCHEDULE AT THE TIME OF PACKAGE QUOTE.
B. DURING THE BID PROCESS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DELIVERY/SCHEDULING ISSUES.
C. NO SUBSTITUTIONS WILL BE ALLOWED DUE TO THE LACK OF COORDINATION OF DELIVERY DATES AND CONSTRUCTION SCHEDULE AFTER BID.
D. ALL EXPEDITED EXPENSES SHALL BE THE RESPONSIBILITY OF THE CONTRACTORS.
E. FIXTURES TO BE INSTALLED IN CEILINGS, INDICATE ON THE ARCHITECTURAL PLANS AS HAVING INSULATION IN CONTACT WITH THE CEILING SURFACE, SHALL BE IC RATED BY MANUFACTURER.
F. LIGHTING FIXTURES SHALL MEET THE AESTHETICS, DESCRIPTION AND SPECIFICATIONS, SUBSTITUTIONS SHALL INCLUDE PT. BY PT. CALCULATIONS.
G. LIGHTING FIXTURES, AS SPECIFIED, HAVE BEEN SO SELECTED TO ACHIEVE REQUIRED/DESIRED FOOTCANDLE LEVELS IN THEIR RESPECTIVE AREA. HENCE SPECIFIC FIXTURE CHARACTERISTICS WHICH MAY CREATE PARTICULAR ILLUMINATION RESULTS ARE ESSENTIAL. ANY DEVIATIONS FROM SPECIFIED FIXTURES SHALL DEEM THE SUBMITTING AGENT AND CONTRACTORS RESPONSIBLE IN PROVIDINGSUCH DEVIATION FOR THE ARCHITECT/ENGINEER AND OWNER TO MAKE AN INFORMED DECISION.
H. SUBSTITUTIONS APPROVED BY THE ENGINEER PREVIOUS TO BID ARE ACCEPTABLE AS LONG AS THEY ARE EQUAL TO THE FIXTURE SPECIFIED, UNLESS OTHERWISE NOTED. THIS INCLUDES LENS, COLORS, REFLECTORS, PHOTOMETRICS, HOUSING MATERIAL, FINISHES, ETC. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER WITH CUT SHEETS FOR APPROVAL. LISTED SEPARATELY SO THE ARCHITECT, ENGINEER AND OWNER CAN MAKE AN INFORMED DECISION. SUBSTITUTE FIXTURES SHALL BE PRICED WITH THE SPECIFIED FIXTURE AND ALL 4' LED LAMPS SHALL BE 3500 K, OTHER LAMPS SHALL BE AS SCHEDULED.
J. ANY FIXTURE WITH THE TEXT "NL" ADJACENT TO IT SHALL INDICATE THAT THAT FIXTURE IS A NIGHT LIGHT (24HR LIGHT). THE FIXTURE SHALL BE CONNECTED TO THE UNSWITCHED HOT LEG OF THE INDICATED CIRCUIT.
K. ACRYLIC PRISMATIC LENSES SHALL BE 0.156" NOMINAL MINIMUM THICKNESS.
L. ALL EXIT AND EMERGENCY FIXTURES SHALL COMPLY WITH NCSBC STANDARDS AND HAVE AUTOMATIC TESTING DEVICES.
M. LED EMERGENCY BATTERY SHALL PROVIDE 1400 MINIMUM LUMENS OUTPUT FROM 1 LAMP FOR 90 MINUTES MINIMUM.
N. LED MODULES SHALL BE REPLACEABLE.
O. PROVIDE MANUFACTURER INSTALLED NEC 2017 ARTICLE 410.130 (G) COMPLIANT DISCONNECTING MEANS FOR ALL APPLICABLE FIXTURES.
P. SEE SPECIFICATIONS SECTIONS 265100 AND 265200 FOR ADDITIONAL REQUIREMENTS.
Q. ELECTRICAL CONTRACTOR SHALL RECEIVE APPROVAL FOR ALL LIGHTING FIXTURES FROM ARCHITECT/OWNER PRIOR TO PURCHASE AND ROUGH-IN.

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL SEAL 023311 ENGINEER WILLIAM ALLEN CRIBB
02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Electrical Lighting Fixture Schedule and Energy Summary

Rev.	Date	Notes

E0.7

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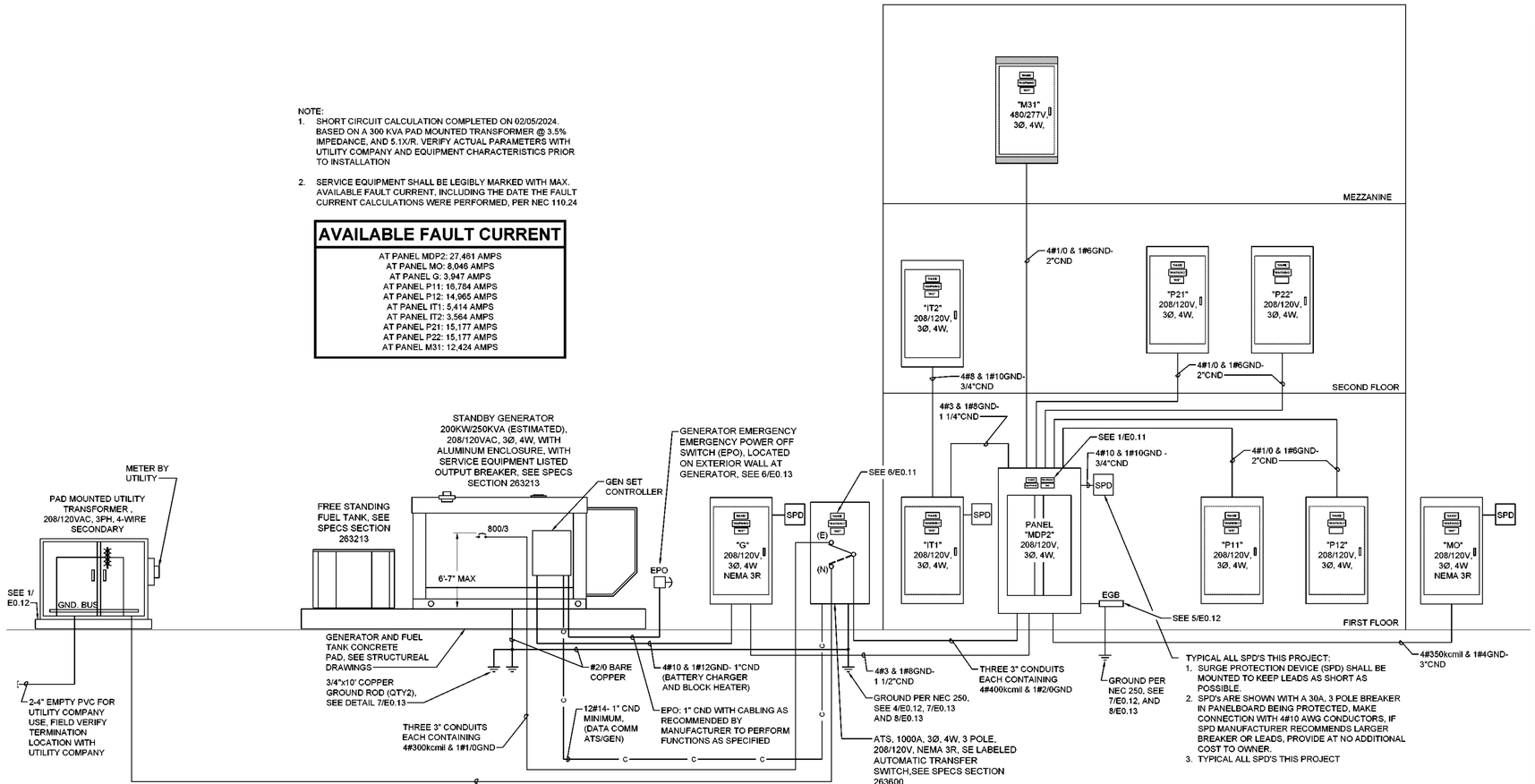
LOAD SUMMARY

VOLTAGE	PHASE	
208	3	
LARGEST MOTOR APPROX. AMPS	33	AMPS
LARGEST MOTOR APPROX. AMPS x .25	8	AMPS
HVAC		
AH's	9,155	VA
DOAS5	18,071	VA
HR's	3,471	VA
HP's	56,463	VA
EF7	55	VA
SUB-TOTAL HVAC DEMAND	87,215	VA
SUB-TOTAL HVAC DEMAND	242	AMPS
EQUIPMENT		
REFRIG	1,200	VA
COFFEE	1,500	VA
RPZ's	9,984	VA
GEN CHARGER	800	VA
GEN CTRLS	500	VA
GEN BLOCK HEATER	5,600	VA
LEAK DETECTION	400	VA
FA POWER SUPPLY	800	VA
SECURITY POWER SUPPLY	400	VA
BDA	400	VA
EWH	4,500	VA
SUB-TOTAL EQUIPMENT DEMAND	26,084	VA
SUB-TOTAL EQUIPMENT DEMAND	72	AMPS
ADD FOR LARGEST MOTOR	8	AMPS
TOTAL EQUIPMENT DEMAND	81	AMPS
LIGHTING		
LIGHTS (INTERIOR, BASED ON NEC 220.12)	29,697	VA
LIGHTS (EXTERIOR)	150	VA
SIGN	1,200	VA
TOTAL LIGHTING LOAD	31,047	VA
LIGHTING LOAD x 1.25	38,809	VA
TOTAL DEMAND FOR LIGHTING	108	AMPS
RECEPTACLES		
RECEPTACLES	80,600	VA
FIRST 10000VA	10,000	VA
REMAINDER @ 50%	35,300	VA
TOTAL DEMAND FOR RECEPTACLE/POWER PANELS	45,300	VA
TOTAL DEMAND FOR RECEPTACLE/POWER PANELS	126	AMPS
TOTAL DEMAND BUILDING AMPS	556	AMPS
TOTAL DEMAND BUILDING VA	200,380	VA
TOTAL BUILDING CONNECTED LOAD	224,946	VA

NOTE:
1. SHORT CIRCUIT CALCULATION COMPLETED ON 02/05/2024. BASED ON A 300 KVA PAD MOUNTED TRANSFORMER @ 3.5% IMPEDANCE, AND 5.1X/R. VERIFY ACTUAL PARAMETERS WITH UTILITY COMPANY AND EQUIPMENT CHARACTERISTICS PRIOR TO INSTALLATION
2. SERVICE EQUIPMENT SHALL BE LEGIBLY MARKED WITH MAX. AVAILABLE FAULT CURRENT, INCLUDING THE DATE THE FAULT CURRENT CALCULATIONS WERE PERFORMED, PER NEC 110.24

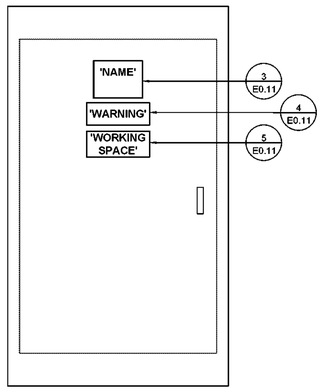
AVAILABLE FAULT CURRENT

AT PANEL MDP2: 27,461 AMPS
AT PANEL MO: 8,046 AMPS
AT PANEL G: 3,947 AMPS
AT PANEL P11: 16,764 AMPS
AT PANEL P12: 14,965 AMPS
AT PANEL IT1: 5,414 AMPS
AT PANEL IT2: 3,564 AMPS
AT PANEL P21: 15,177 AMPS
AT PANEL P22: 15,177 AMPS
AT PANEL M31: 12,424 AMPS



1 **RISER DIAGRAM - ADDITION**
NOT TO SCALE

TYPICAL ALL SPD'S THIS PROJECT:
1. SURGE PROTECTION DEVICE (SPD) SHALL BE MOUNTED TO KEEP LEADS AS SHORT AS POSSIBLE.
2. SPD's ARE SHOWN WITH A 30A, 3 POLE BREAKER IN PANELBOARD BEING PROTECTED, MAKE CONNECTION WITH 4#10 AWG CONDUCTORS, IF SPD MANUFACTURER RECOMMENDS LARGER BREAKER OR LEADS, PROVIDE AT NO ADDITIONAL COST TO OWNER.
3. TYPICAL ALL SPD'S THIS PROJECT



2 **REQUIRED PANELBOAD NAMEPLATE & LABELS DETAIL**
NOT TO SCALE

Panel MDP2

TYPE:	208	120	VOLTS, 3 PHASE, 4 WIRE					PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE							XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM								ULSE LABEL
	NEMA -	1	ENCLOSURE							ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR TRIP/POLES	CKT #	PHASE LOAD VA A	B	C	CKT #	CKT BKR TRIP/POLES	LOAD VA	LOAD SERVED
PANEL MO	19,901	300/3	1	19,901			2	30/3		SPD
|	19,721	|	3		19,721		4	|	|	|
|	19,721	|	5			19,721	6	|	|	|
PANELS P11	8,921	150/3	7	19,957			8	150/3	11,036	PANEL M31
|	9,562	|	9		21,150		10	|	11,588	|
|	7,839	|	11			16,858	12	|	9,019	|
PANELS P12	7,250	150/3	13	15,122			14	150/3	7,872	PANELS P21
|	6,310	|	15		14,528		16	|	8,218	|
|	7,044	|	17			14,784	18	|	7,740	|
PANEL IT1	1,260	100/3	19	7,200			20	150/3	5,940	PANELS P22
|	1,840	|	21		10,740		22	|	8,900	|
|	1,880	|	23			10,010	24	|	8,130	|
PANEL G	7,792	100/3	25	7,792			26	200/3		SPARE
|	5,836	|	27		5,836		28	|		|
|	4,196	|	29			4,196	30	|		|
SPARE		60/3	31				32	100/3		SPARE
|		|	33				34	|		|
|		|	35				36	|		|
SPACE		-	37				38	-		SPACE
SPACE		-	39				40	-		SPACE
SPACE		-	41				42	-		SPACE
SPACE		-	43				44	-		SPACE
SPACE		-	45				46	-		SPACE
SPACE		-	47				48	-		SPACE
SPACE		-	49				50	-		SPACE
SPACE		-	51				52	-		SPACE
SPACE		-	53				54	-		SPACE

NOTES (AS APPLICABLE):						
			68,972	71,975	65,569	TOTAL PHASE VA
			583	600	546	TOTAL PHASE AMPS
			34%	35%	32%	PHASE BALANCE

1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.
2. SEE ESTIMATED LOAD SUMMARY FOR SERVICE SIZING CALCULATIONS.

1,000 A. BUS (COPPER, UNO)
1,000 A. MAIN CIRCUIT BREAKER
30 KAIC MINIMUM RATING
**GROUND FAULT PROTECTION REQUIRED AT MAIN

DEMAND SUMMARY:		CONN. (VA)	DEMAND FACTOR	DEMAND (VA)
TOTAL RECEPTACLES (VA) =	84,020			
RECEPTACLES FIRST 10 KVA		10,000	1.00	10,000
RECEPTACLES > 10 KVA		74,020	0.50	37,010
LIGHTING		12,040	1.25	15,050
MISCELLANEOUS EQUIPMENT		14,484	1.00	14,484
OTHER EQUIPMENT (CONTINUOUS)		8,500	1.25	10,625
LARGEST MOTOR			1.25	
HVAC EQUIPMENT (FLA = MCA X 0.8)		88,472	1.00	88,472
KITCHEN EQUIPMENT			1.00	
TOTAL CONNECTED (VA)		207,516		
TOTAL DEMAND (VA)				175,641
TOTAL DEMAND (AMPERES)				487.5
PANEL DEMAND LOADING VS RATING		48.8%		

Panel MO

TYPE: NEMA 3R	208	120	VOLTS, 3 PHASE, 4 WIRE					PROVIDE IF CHECKED	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE							XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	TOP								ULSE LABEL
	NEMA -	3R	ENCLOSURE							ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR TRIP/POLES	CKT #	PHASE LOAD VA A	B	C	CKT #	CKT BKR TRIP/POLES	LOAD VA	LOAD SERVED
HP9	4,909	70/3	1	4,909			2	30/3		SPD
|	4,909	|	3		4,909		4	|	|	|
|	4,909	|	5			4,909	6	|	|	|
HP11	5,793	80/3	7	8,762			8	40/3	2,969	HP10
|	5,793	|	9		8,762		10	|	2,969	|
|	5,793	|	11			8,762	12	|	2,969	|
RCP: MECH CTYRD	360	20/1	13	5,510			14	70/3	5,150	HP12
SPARE		20/1	15		5,150		16	|	5,150	|
SPARE		20/1	17			5,150	18	|	5,150	|
RCPS: EXTERIOR 1ST FLOOR NORTH	720	20/1	19	720			20	20/1		SPARE
RCPS: EXTERIOR 1ST FLOOR EAST	900	20/1	21		900		22	20/1		SPARE
RCPS: EXTERIOR 1ST FLOOR SOUTH	900	20/1	23			900	24	20/1		SPARE
SPARE		20/1	25				26	20/1		SPARE
SPARE		20/1	27				28	20/1		SPARE
SPARE		20/1	29				30	20/1		SPARE
SPARE		20/1	31				32	20/1		SPARE
SPARE		20/1	33				34	20/1		SPARE
SPARE		20/1	35				36	20/1		SPARE
SPARE		20/1	37				38	20/1		SPARE
SPARE		20/1	39				40	20/1		SPARE
SPARE		20/1	41				42	20/1		SPARE

NOTES (AS APPLICABLE):						
			19,901	19,721	19,721	TOTAL PHASE VA
			166	164	164	TOTAL PHASE AMPS
			34%	33%	33%	PHASE BALANCE

1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.
2. SEE ESTIMATED LOAD SUMMARY FOR SERVICE SIZING CALCULATIONS.

400 A. BUS (COPPER, UNO)
300 A. MAIN CIRCUIT BREAKER
10 KAIC MINIMUM RATING

DEMAND SUMMARY:		CONN. (VA)	DEMAND FACTOR	DEMAND (VA)
TOTAL RECEPTACLES (VA) =	2,880			
RECEPTACLES FIRST 10 KVA		2,880	1.00	2,880
RECEPTACLES > 10 KVA			0.50	
LIGHTING			1.25	
MISCELLANEOUS EQUIPMENT			1.00	
OTHER EQUIPMENT (CONTINUOUS)			1.25	
LARGEST MOTOR			1.25	
HVAC EQUIPMENT (FLA = MCA X 0.8)		56,463	1.00	56,463
KITCHEN EQUIPMENT			1.00	
TOTAL CONNECTED (VA)		59,343		
TOTAL DEMAND (VA)				59,343
TOTAL DEMAND (AMPERES)				164.7
PANEL DEMAND LOADING VS RATING		54.9%		

ADDITIONAL NOTES (AS APPLICABLE):
3. NUMBERS IN PARENTHASIS REPRESENT KITCHEN EQUIPMENT NUMBERS.
4. PROVIDE CIRCUIT BREAKER LOCKING DEVICE WHERE NOTED AND FOR FACU AND UNIT TYPE SMOKE DETECTOR CIRCUITS.
5. PROVIDE ARC FAULT CIRCUIT BREAKERS FOR ALL 120V, 15A & 20A PATIENT ROOM BRANCH CIRCUITS SUPPLYING OUTLETS AND DEVICES.
6. COORDINATE SPD CIRCUIT BREAKER TRIP WITH SPD PROVIDED.
5. SHUNT TRIP CIRCUIT BREAKER.
7. GFCI CIRCUIT BREAKER.
8. EXISTING LOADS ARE ESTIMATED.
9. KITCHEN EQUIPMENT DEMAND FACTOR PER NEC TABLE 220.56
10. THE MCB SHALL BE 100% RATED & PROVIDED WITH AN ARC ENERGY REDUCTION MAINTENANCE SWITCH PER NEC ART. 240.87.
11. PROVIDE CB WITH SHUNT TRIP ACCESSORY.

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL SEAL 023311 ENGINEER W. ALLEN CRIBB
02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Electrical Power Riser Diagram and Schedules

Rev.	Date	Notes

E0.08

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Panel M31

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE		PROVIDE	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE							IF	XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	TOP							CHECKED		ULSE LABEL
	NEMA -	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR TRIP/POLES	CKT #	PHASE LOAD VA A	B	C	CKT #	CKT BKR TRIP/POLES	LOAD VA	LOAD SERVED
EWH1 D.S.	2,250	30/2	1	2,250			2	15/3		SPARE
|	2,250	|	3		2,250		4	|		|
AH1224 D.S & AH1223 D.S.	42	15/2	5			42	6	|		|
|	42	|	7	42			8	15/2		SPARE
AH1219 D.S.,AH1220 D.S., AH1221 D.S., AH1222 D.S.	466	15/2	9		466		10	|		|
|	466	|	11			1,106	12	20/1	640	RCPS & CP1 D.S.: MECH LOFT
AH'S 2ND FLOOR NORTH WEST	587	15/2	13	893			14	20/1	306	LTS: MECH LOFT
|	587	|	15		941		16	15/2	354	AH'S 2ND FLOOR NORTH EAST
AH'S 2ND FLOOR SOUTH WEST	707	15/2	17			1,061	18	|	354	|
|	707	|	19	1,040			20	15/2	333	AH'S 2ND FLOOR SOUTH EAST
HR'S 2ND FLOOR WEST	787	15/2	21		1,120		22	|	333	|
|	787	|	23			6,811	24	90/3	6,024	DOAS5 D.S.
HR'S 2ND FLOOR WEST	787	15/2	25	6,811			26	|	6,024	|
|	787	|	27		6,811		28	|	6,024	|
SPARE		20/1	29				30	20/1		SPARE
SPARE		20/1	31				32	20/1		SPARE
SPARE		20/1	33				34	20/1		SPARE
SPARE		20/1	35				36	20/1		SPARE
SPARE		20/1	37				38	20/1		SPARE
SPARE		20/1	39				40	20/1		SPARE
SPARE		20/1	41				42	20/1		SPARE
NOTES (AS APPLICABLE):				11,036	11,588	9,019	TOTAL PHASE VA		225	A. BUS (COPPER, UNO)
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.				92	97	75	TOTAL PHASE AMPS		150	A. MAIN CIRCUIT BREAKER
2. SEE ESTIMATED LOAD SUMMARY FOR SERVICE SIZING CALCULATIONS.				35%	37%	29%	PHASE BALANCE		22	KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)
TOTAL RECEPTACLES (VA) =	640		
RECEPTACLES FIRST 10 KVA	640	1.00	640
RECEPTACLES > 10 KVA		0.50	
LIGHTING	306	1.25	383
MISCELLANEOUS EQUIPMENT	4,500	1.00	4,500
OTHER EQUIPMENT (CONTINUOUS)		1.25	
LARGEST MOTOR		1.25	
HVAC EQUIPMENT (FLA = MCA X 0.8)	26,197	1.00	26,197
KITCHEN EQUIPMENT		1.00	
TOTAL CONNECTED (VA)	31,643		
TOTAL DEMAND (VA)			31,719
TOTAL DEMAND (AMPERES)			88.0
PANEL DEMAND LOADING VS RATING	58.7%		

Panel G

TYPE: NEMA 3R	208	120	VOLTS,	3	PHASE,	4	WIRE		PROVIDE	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE							IF	XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	TOP							CHECKED		ULSE LABEL
	NEMA -	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR TRIP/POLES	CKT #	PHASE LOAD VA A	B	C	CKT #	CKT BKR TRIP/POLES	LOAD VA	LOAD SERVED
BLDG RPZ	2,496	30/2	1	2,496			2	30/3		SPD
|	2,496	|	3		2,496		4	|		|
IRRIGATION RPZ	2,496	30/2	5			2,496	6	|		|
|	2,496	|	7	5,296			8	30/2	2,800	GEN BLOCK HEATER
SPARE		20/1	9		2,800		10	|	2,800	|
LEAK DETECTION	400	20/1	11			1,200	12	20/1	800	GEN BATTERY CHARGER
SPARE		20/1	13				14	20/1		SPARE
SPARE		20/1	15		540		16	20/1	540	RCPS: GEN SCREEN WALL
SPARE		20/1	17			500	18	20/1	500	GEN CTRLS
SPARE		20/1	19				20	20/1		SPARE
SPARE		20/1	21				22	20/1		SPARE
SPARE		20/1	23				24	20/1		SPARE
SPARE		20/1	25				26	20/1		SPARE
SPARE		20/1	27				28	20/1		SPARE
SPARE		20/1	29				30	20/1		SPARE
NOTES (AS APPLICABLE):				7,792	5,836	4,196	TOTAL PHASE VA		100	A. BUS (COPPER, UNO)
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.				65	49	35	TOTAL PHASE AMPS		100	A. MAIN CIRCUIT BREAKER
2. SEE ESTIMATED LOAD SUMMARY FOR SERVICE SIZING CALCULATIONS.				44%	33%	24%	PHASE BALANCE		10	KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)
TOTAL RECEPTACLES (VA) =	540		
RECEPTACLES FIRST 10 KVA	540	1.00	540
RECEPTACLES > 10 KVA		0.50	
LIGHTING		1.25	
MISCELLANEOUS EQUIPMENT	9,984	1.00	9,984
OTHER EQUIPMENT (CONTINUOUS)	7,300	1.25	9,125
LARGEST MOTOR		1.25	
HVAC EQUIPMENT (FLA = MCA X 0.8)		1.00	
KITCHEN EQUIPMENT		1.00	
TOTAL CONNECTED (VA)	17,824		
TOTAL DEMAND (VA)			19,649
TOTAL DEMAND (AMPERES)			54.5
PANEL DEMAND LOADING VS RATING	54.5%		

Panel P11

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE		PROVIDE	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE							IF	XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	TOP							CHECKED		ULSE LABEL
	NEMA -	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR TRIP/POLES	CKT #	PHASE LOAD VA A	B	C	CKT #	CKT BKR TRIP/POLES	LOAD VA	LOAD SERVED
LTS: 1ST FLOOR WEST SIDE PERIMETER	1,512	20/1	1	3,024			2	20/1	1,512	LTS: 1ST FLOOR EAST SIDE PERIMETER
LTS: 1ST FLOOR WEST SIDE INTERIOR	1,030	20/1	3		2,142		4	20/1	1,112	LTS: 1ST FLOOR EAST SIDE INTERIOR
LTS: 1ST & 2ND FLOOR LOBBY	770	20/1	5			1,278	6	20/1	508	LTS: EXTERIOR VIA LC1
RCPS: ELECT RM	540	20/1	7	1,440			8	20/1	900	RCPS: CORR 336A, OFFICE 336, VEST 334
RCPS: OFFICE, VEST	1,080	20/1	9		2,160		10	20/1	1,080	RCPS: OFFICES
RCPS: OFFICES, CORR	1,080	20/1	11			2,160	12	20/1	1,080	RCPS: OFFICES, CORR
RCPS: OFFICES	1,080	20/1	13	2,160			14	20/1	1,080	RCPS: OFFICES
RCPS: OFFICES, CORR	1,080	20/1	15		2,160		16	20/1	1,080	RCPS: OFFICES
RCPS: OFFICES, CORR	1,080	20/1	17			2,160	18	20/1	1,080	RCPS: OFFICES, CORR
RCPS: OFFICES	1,080	20/1	19	1,510			20	20/1	430	RCP: EWC (NOTE 3)
RCPS: OFFICES 308, 310 CORR 306A	900	20/1	21		1,233		22	15/2	333	AH'S 1ST FLOOR N.E.
RCPS: FLOOR BOXES OPEN OFFICE	900	20/1	23			1,233	24	|	333	|
SPARE		20/1	25	499			26	15/2	499	AH'S 1ST FLOOR S.E.
RCPS: OFFICES	1,080	20/1	27		1,579		28	|	499	|
RCPS: OPEN OFFICE	720	20/1	29			1,008	30	15/3	288	HR'S 1ST FLOOR E
SPARE		20/1	31	288			32	|	288	|
SPARE		20/1	33		288		34	|	288	|
SPARE		20/1	35				36	20/1		SPARE
SPARE		20/1	37				38	20/1		SPARE
SPARE		20/1	39				40	20/1		SPARE
SPARE		20/1	41				42	20/1		SPARE
NOTES (AS APPLICABLE):				8,921	9,562	7,839	TOTAL PHASE VA		225	A. BUS (COPPER, UNO)
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.				74	80	65	TOTAL PHASE AMPS		150	A. MAIN LUGS AND/OR FEEDER RATING
2. SEE ESTIMATED LOAD SUMMARY FOR SERVICE SIZING CALCULATIONS.				34%	36%	30%	PHASE BALANCE		22	KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)
TOTAL RECEPTACLES (VA) =	17,350		
RECEPTACLES FIRST 10 KVA	10,000	1.00	10,000
RECEPTACLES > 10 KVA	7,350	0.50	3,675
LIGHTING	6,444	1.25	8,055
MISCELLANEOUS EQUIPMENT		1.00	
OTHER EQUIPMENT (CONTINUOUS)		1.25	
LARGEST MOTOR		1.25	
HVAC EQUIPMENT (FLA = MCA X 0.8)	2,529	1.00	2,529
KITCHEN EQUIPMENT		1.00	
TOTAL CONNECTED (VA)	26,323		
TOTAL DEMAND (VA)			24,259
TOTAL DEMAND (AMPERES)			67.3
PANEL DEMAND LOADING VS RATING	44.9%		

ADDITIONAL NOTES (AS APPLICABLE):
3. GFCI CIRCUIT BREAKER.

Panel P12

TYPE:	208	120	VOLTS,	3	PHASE,	4	WIRE		PROVIDE	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE							IF	XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	TOP							CHECKED		ULSE LABEL
	NEMA -	1	ENCLOSURE								ISOLATED GROUND BAR

LOAD SERVED	LOAD VA	CKT BKR TRIP/POLES	CKT #	PHASE LOAD VA A	B	C	CKT #	CKT BKR TRIP/POLES	LOAD VA	LOAD SERVED
RCPS: OFFICES 310, 312, VEST 311	1,080	20/1	1	1,440			2	20/1	360	RCPS: COPY RM
RCPS: OFFICE, CORR, LOBBY	720	20/1	3		1,080		4	20/1	360	RCPS: COPY RM
RCPS: OFFICES	1,080	20/1	5			2,180	6	20/1	1,100	RCP: COPIER
RCPS: OFFICES, CORR	1,080	20/1	7	2,180			8	20/1	1,100	RCP: COPIER
RCPS: OFFICES	1,080	20/1	9		2,160		10	20/1	1,080	RCPS: CORR, OFFICES
RCPS: OFFICES, CORR	1,080	20/1	11			1,260	12	20/1	180	RCPS: OFFICES
RCPS: OFFICES	1,260	20/1	13	2,340			14	20/1	1,080	RCPS: CORR, OFFICES
RCPS: FLOOR BOXES OPEN OFFICE	540	20/1	15		1,620		16	20/1	1,080	RCPS: CORR, OFFICES
RCPS: FLOOR BOXES OPEN OFFICE	540	20/1	17			1,620	18	20/1	1,080	RCPS: OFFICE, VEST
RCPS: MENS, WOMENS	360	20/1	19	360			20	20/1		SPARE
AH'S 1ST FLOOR N.W	520	15/2	21		520		22	20/1		SPARE
|	520	|	23			1,600	24	20/1	1,080	RCPS: CORR 324A, OFFICES 322, 323
AH'S 1ST FLOOR S.W.	546	15/2	25	546			26	20/1		SPARE
|	546	|	27		546		28	20/1		SPARE
HR'S 1ST FLOOR W	384	15/3	29			384	30	20/1		SPARE
|	384	|	31	384			32	20/1		SPARE
|	384	|	33		384		34	20/1		SPARE
SPARE		20/1	35				36	20/1		SPARE
SPARE		20/1	37				38	20/1		SPARE
SPARE		20/1	39				40	20/1		SPARE
SPARE		20/1	41				42	20/1		SPARE
NOTES (AS APPLICABLE):				7,250	6,310	7,044	TOTAL PHASE VA		225	A. BUS (COPPER, UNO)
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.				60	53	59	TOTAL PHASE AMPS		150	A. MAIN LUGS AND/OR FEEDER RATING
2. SEE ESTIMATED LOAD SUMMARY FOR SERVICE SIZING CALCULATIONS.				35%	31%	34%	PHASE BALANCE		22	KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)
TOTAL RECEPTACLES (VA) =	17,320		
RECEPTACLES FIRST 10 KVA	10,000	1.00	10,000
RECEPTACLES > 10 KVA	7,320	0.50	3,660
LIGHTING		1.25	
MISCELLANEOUS EQUIPMENT		1.00	
OTHER EQUIPMENT (CONTINUOUS)		1.25	
LARGEST MOTOR		1.25	
HVAC EQUIPMENT (FLA = MCA X 0.8)	3,284	1.00	3,284
KITCHEN EQUIPMENT		1.00	
TOTAL CONNECTED (VA)	20,604		
TOTAL DEMAND (VA)			16,944
TOTAL DEMAND (AMPERES)			47.0
PANEL DEMAND LOADING VS RATING	31.4%		

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL SEAL 023311 ENGINEER WILLIAM ALLEN CRIBB
02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Electrical Panel Schedules

Rev.	Date	Notes

E0.09

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Panel P21

TYPE:	208	120	VOLTS, 3 PHASE, 4 WIRE					PROVIDE	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE						IF	XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	TOP						CHECKED		ULSE LABEL
	NEMA -	1	ENCLOSURE							ISOLATED GROUND BAR

	LOAD	CKT BKR	CKT	PHASE LOAD VA			CKT	CKT BKR	LOAD	
LOAD SERVED	VA	TRIP/POLES	#	A	B	C	#	TRIP/POLES	VA	LOAD SERVED
LTS: 2ND FLOOR WEST SIDE PERIMETER	1,596	20/1	1	3,192			2	20/1	1,596	LTS: 2ND FLOOR EAST SIDE PERIMETER
LTS: 2ND FLOOR WEST SIDE INTERIOR	986	20/1	3		2,098		4	20/1	1,112	LTS: 2ND FLOOR EAST SIDE INTERIOR
RCPS: OFFICES	1,080	20/1	5			1,800	6	20/1	720	RCPS: FLOOR BOXES OPEN OFFICE
RCPS: OFFICES, CORR	1,080	20/1	7	1,800			8	20/1	720	RCPS: FLOOR BOXES OPEN OFFICE
RCPS: OFFICES	1,080	20/1	9		2,160		10	20/1	1,080	RCPS: OFFICES
RCPS: OFFICES, CORR	1,080	20/1	11			2,160	12	20/1	1,080	RCPS: CORR, OFFICES
RCPS: OFFICES, CORR	1,080	20/1	13	2,160			14	20/1	1,080	RCPS: OFFICES
RCPS: OFFICES	1,080	20/1	15		2,160		16	20/1	1,080	RCPS: OFFICES
RCPS: OFFICES, CORR	900	20/1	17			1,980	18	20/1	1,080	RCPS: CORR, OFFICES
RCPS: OFFICE	720	20/1	19	720			20	20/1		SPARE
RCPS: CONF RM, STORAGE	720	20/1	21		1,800		22	20/1	1,080	RCPS: CORR, OFFICES
RCPS: CONF RM	720	20/1	23			1,800	24	20/1	1,080	RCPS: OFFICES
SPARE		20/1	25				26	20/1		SPARE
SPARE		20/1	27				28	20/1		SPARE
SPARE		20/1	29				30	20/1		SPARE
SPARE		20/1	31				32	20/1		SPARE
SPARE		20/1	33				34	20/1		SPARE
SPARE		20/1	35				36	20/1		SPARE
SPARE		20/1	37				38	20/1		SPARE
SPARE		20/1	39				40	20/1		SPARE
SPARE		20/1	41				42	20/1		SPARE
				7,872	8,218	7,740	TOTAL PHASE VA			
				66	68	65	TOTAL PHASE AMPS			
				33%	34%	32%	PHASE BALANCE			

NOTES (AS APPLICABLE):
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.
2. SEE ESTIMATED LOAD SUMMARY FOR SERVICE SIZING CALCULATIONS.

225 A. BUS (COPPER, UNO)
150 A. MAIN LUGS AND/OR FEEDER RATING
22 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)
TOTAL RECEPTACLES (VA) = 18,540			
RECEPTACLES FIRST 10 KVA	10,000	1.00	10,000
RECEPTACLES > 10 KVA	8,540	0.50	4,270
LIGHTING	5,290	1.25	6,613
MISCELLANEOUS EQUIPMENT		1.00	
OTHER EQUIPMENT (CONTINUOUS)		1.25	
LARGEST MOTOR		1.25	
HVAC EQUIPMENT (FLA = MCA X 0.8)		1.00	
KITCHEN EQUIPMENT		1.00	
TOTAL CONNECTED (VA)	23,830		
TOTAL DEMAND (VA)			20,883
TOTAL DEMAND (AMPERES)			58.0
PANEL DEMAND LOADING VS RATING	38.6%		

Panel P22

TYPE:	208	120	VOLTS, 3 PHASE, 4 WIRE					PROVIDE	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE						IF	XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM						CHECKED		ULSE LABEL
	NEMA -	1	ENCLOSURE							ISOLATED GROUND BAR

	LOAD	CKT BKR	CKT	PHASE LOAD VA			CKT	CKT BKR	LOAD	
LOAD SERVED	VA	TRIP/POLES	#	A	B	C	#	TRIP/POLES	VA	LOAD SERVED
RCP: BRK RM	180	20/1	1	900			2	20/1	720	RCPS: OFFICE
RCP: BRK RM COFFEE	1,500	20/1	3		2,220		4	20/1	720	RCPS: POKE-THRUS OPEN OFFICE
RCP: BREK RM REFRIG	1,200	20/1	5			1,920	6	20/1	720	RCPS: POKE-THRUS OPEN OFFICE
RCP: BRK RM	180	20/1	7	1,200			8	20/1	1,080	RCPS: CORR, OFFICES
RCPS: LOBBY, CUST. CORR, BRK RM	720	20/1	9		1,800		10	20/1	1,080	CORR, OFFICES
RCP: EWC (NOTE 3)	430	20/1	11			1,510	12	20/1	1,080	RCPS: OFFICES
RCPS: OFFICE	720	20/1	13	1,620			14	20/1	900	RCPS: CORR, OFFICES
RCPS: OFFICES	1,080	20/1	15		2,160		16	20/1	1,080	RCPS: OFFICES
RCPS: CORR, OFFICES	1,080	20/1	17			2,160	18	20/1	1,080	RCPS: CORR, OFFICES
RCPS: OFFICES	1,080	20/1	19	1,440			20	20/1	360	RCPS: MENS, WOMENS
RCPS: CORR, OFFICES	1,080	20/1	21		1,440		22	20/1	360	RCPS: COPY RM
RCPS: OFFICES	1,080	20/1	23			1,440	24	20/1	360	RCPS: COPY RM
FIRST RESPONDERS CABINET	180	20/1	25	720			26	20/1	540	RCPS: ELECT ROOM
FIRST RESPONDERS CABINET	180	20/1	27		1,280		28	20/1	1,100	RCP: COPIER
SPARE		20/1	29			1,100	30	20/1	1,100	RCP: COPIER
SPARE		20/1	31				32	20/1		SPARE
SPARE		20/1	33				34	20/1		SPARE
SPARE		20/1	35				36	20/1		SPARE
SPARE		20/1	37				38	20/1		SPARE
SPARE		20/1	39				40	20/1		SPARE
SPARE		20/1	41				42	20/1		SPARE
				5,940	8,900	8,130	TOTAL PHASE VA			
				50	74	68	TOTAL PHASE AMPS			
				26%	39%	35%	PHASE BALANCE			

NOTES (AS APPLICABLE):
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.
2. SEE ESTIMATED LOAD SUMMARY FOR SERVICE SIZING CALCULATIONS.

225 A. BUS (COPPER, UNO)
150 A. MAIN LUGS AND/OR FEEDER RATING
22 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)
TOTAL RECEPTACLES (VA) = 22,970			
RECEPTACLES FIRST 10 KVA	10,000	1.00	10,000
RECEPTACLES > 10 KVA	12,970	0.50	6,485
LIGHTING		1.25	
MISCELLANEOUS EQUIPMENT		1.00	
OTHER EQUIPMENT (CONTINUOUS)		1.25	
LARGEST MOTOR		1.25	
HVAC EQUIPMENT (FLA = MCA X 0.8)		1.00	
KITCHEN EQUIPMENT		1.00	
TOTAL CONNECTED (VA)	22,970		
TOTAL DEMAND (VA)			16,485
TOTAL DEMAND (AMPERES)			45.8
PANEL DEMAND LOADING VS RATING	30.5%		

ADDITIONAL NOTES (AS APPLICABLE):
3. GFCI CIRCUIT BREAKER.

Panel IT1

TYPE:	208	120	VOLTS, 3 PHASE, 4 WIRE					PROVIDE	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE						IF	XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	TOP						CHECKED		ULSE LABEL
	NEMA -	1	ENCLOSURE							ISOLATED GROUND BAR

	LOAD	CKT BKR	CKT	PHASE LOAD VA			CKT	CKT BKR	LOAD	
LOAD SERVED	VA	TRIP/POLES	#	A	B	C	#	TRIP/POLES	VA	LOAD SERVED
RCP: SERVER RM	180	20/1	1	180			2	30/3		SPD
RCP: SERVER RM	360	20/1	3		360		4	|		|
RCP: SERVER RM	360	20/1	5			360	6	|		|
RCP: SERVER RM	360	20/1	7	360			8	20/1		SPARE
NAC POWER SUPPLY (NOTE 3)	400	20/1	9		760		10	20/1	360	RCP: SERVER RM
SECURITY SYSTEM POWER SUPPLY (NOTE 3)	400	20/1	11			760	12	20/1	360	RCP: SERVER RM
SPARE		20/1	13				14	20/1		SPARE
SPARE		20/1	15				16	20/1		SPARE
SPARE		20/1	17				18	20/1		SPARE
PANEL IT2 (2ND FLOOR)	720	40/3	19	720			20	20/1		SPARE
|	720	|	21		720		22	20/1		SPARE
|	760	|	23			760	24	20/1		SPARE
				1,260	1,840	1,880	TOTAL PHASE VA			
				11	15	16	TOTAL PHASE AMPS			
				25%	37%	38%	PHASE BALANCE			

NOTES (AS APPLICABLE):
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.
2. SEE ESTIMATED LOAD SUMMARY FOR SERVICE SIZING CALCULATIONS.

100 A. BUS (COPPER, UNO)
100 A. MAIN CIRCUIT BREAKER
10 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)
TOTAL RECEPTACLES (VA) = 3,780			
RECEPTACLES FIRST 10 KVA	3,780	1.00	3,780
RECEPTACLES > 10 KVA		0.50	
LIGHTING		1.25	
MISCELLANEOUS EQUIPMENT		1.00	
OTHER EQUIPMENT (CONTINUOUS)	1,200	1.25	1,500
LARGEST MOTOR		1.25	
HVAC EQUIPMENT (FLA = MCA X 0.8)		1.00	
KITCHEN EQUIPMENT		1.00	
TOTAL CONNECTED (VA)	4,980		
TOTAL DEMAND (VA)			5,280
TOTAL DEMAND (AMPERES)			14.7
PANEL DEMAND LOADING VS RATING	14.7%		

ADDITIONAL NOTES (AS APPLICABLE):
3. PROVIDE CIRCUIT BREAKER LOCKING DEVICE

Panel IT2

TYPE:	208	120	VOLTS, 3 PHASE, 4 WIRE					PROVIDE	XX	EQUIPMENT GROUND BUS
BOLT-ON	MOUNT:	SURFACE						IF	XX	100 % NEUTRAL BUS
HINGED TRIM	FEED:	BOTTOM						CHECKED		ULSE LABEL
	NEMA -	1	ENCLOSURE							ISOLATED GROUND BAR

	LOAD	CKT BKR	CKT	PHASE LOAD VA			CKT	CKT BKR	LOAD	
LOAD SERVED	VA	TRIP/POLES	#	A	B	C	#	TRIP/POLES	VA	LOAD SERVED
RCP: SERVER RM	360	20/1	1	720			2	20/1	360	RCP: SERVER RM
RCP: SERVER RM	360	20/1	3		720		4	20/1	360	RCP: SERVER RM
RCP: SERVER RM	360	20/1	5			360	6	20/1		SPARE
SPARE		20/1	7				8	20/1		SPARE
SPARE		20/1	9				10	20/1		SPARE
NAC POWER SUPPLY (NOTE 3)	400	20/1	11			400	12	20/1		SPARE
SPARE		20/1	13				14	20/1		SPARE
SPARE		20/1	15				16	20/1		SPARE
SPARE		20/1	17				18	20/1		SPARE
SPARE		20/1	19				20	20/1		SPARE
SPARE		20/1	21				22	20/1		SPARE
SPARE		20/1	23				24	20/1		SPARE
				720	720	760	TOTAL PHASE VA			
				6	6	6	TOTAL PHASE AMPS			
				33%	33%	35%	PHASE BALANCE			

NOTES (AS APPLICABLE):
1. COORDINATE CIRCUIT BREAKER TRIP WITH EQUIPMENT.
2. SEE ESTIMATED LOAD SUMMARY FOR SERVICE SIZING CALCULATIONS.

100 A. BUS (COPPER, UNO)
40 A. MAIN CIRCUIT BREAKER
10 KAIC MINIMUM RATING

DEMAND SUMMARY:	CONN. (VA)	DEMAND FACTOR	DEMAND (VA)
TOTAL RECEPTACLES (VA) = 1,800			
RECEPTACLES FIRST 10 KVA	1,800	1.00	1,800
RECEPTACLES > 10 KVA		0.50	
LIGHTING		1.25	
MISCELLANEOUS EQUIPMENT		1.00	
OTHER EQUIPMENT (CONTINUOUS)	400	1.25	500
LARGEST MOTOR		1.25	
HVAC EQUIPMENT (FLA = MCA X 0.8)		1.00	
KITCHEN EQUIPMENT		1.00	
TOTAL CONNECTED (VA)	2,200		
TOTAL DEMAND (VA)			2,300
TOTAL DEMAND (AMPERES)			6.4
PANEL DEMAND LOADING VS RATING	16.0%		

ADDITIONAL NOTES (AS APPLICABLE):
3. PROVIDE CIRCUIT BREAKER LOCKING DEVICE

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023311 WILLEN CRUSE
02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Electrical Panel Schedules

Rev.	Date	Notes

E0.10

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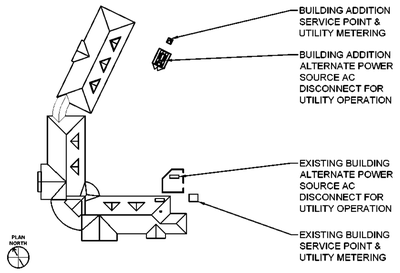
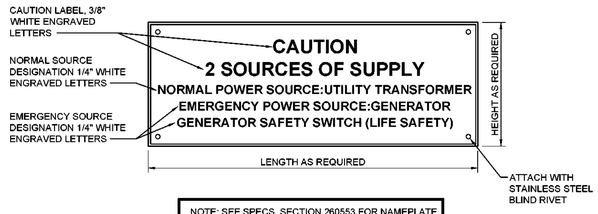
CAUTION:

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM THE FOLLOWING SOURCES WITH DISCONNECTS LOCATED AS SHOWN

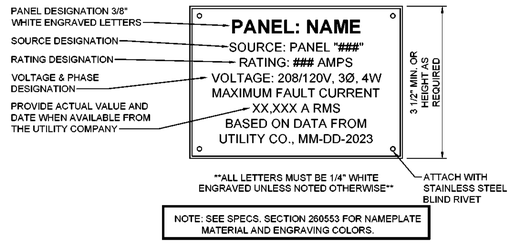


1 CAUTION SERVICE LOCATION DETAIL
NOT TO SCALE



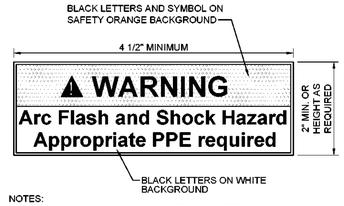
NOTE: SEE SPECS. SECTION 260553 FOR NAMEPLATE MATERIAL AND ENGRAVING COLORS.

2 CAUTION NAMEPLATE DETAIL
NOT TO SCALE



NOTE: SEE SPECS. SECTION 260553 FOR NAMEPLATE MATERIAL AND ENGRAVING COLORS.

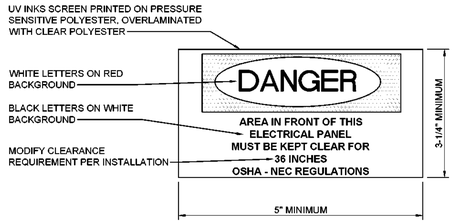
3 TYPICAL PANELBOARD NAMEPLATE DETAIL
NOT TO SCALE



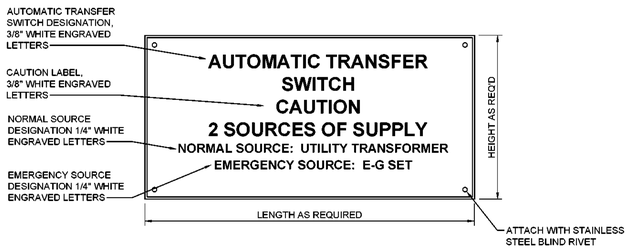
NOTES:
1. LABEL SHOWN CAN BE SOURCED FROM SAFETYSIGN.COM, OTHER SUPPLIERS ARE COMPLIANTSIGNS.COM & SETON.COM

2. THIS WARNING LABEL MINIMALLY COMPLIES WITH NEC, HOWEVER IF ELECTRICAL EQUIPMENT IS LIKELY TO REQUIRE EXAMINATION OR MAINTENANCE WHILE ENERGIZED A DETAILED SHORT CIRCUIT AND ARC FLASH HAZARD ANALYSIS IS RECOMMENDED.

4 ELECTRICAL EQUIPMENT WARNING LABEL DETAIL
NOT TO SCALE

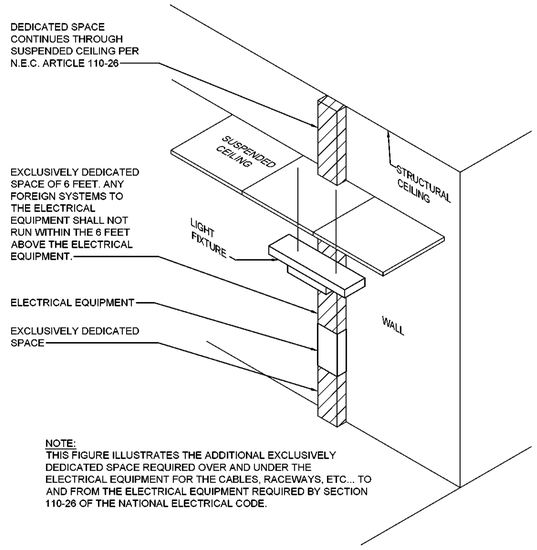


5 NEC WORKING SPACE LABEL DETAIL
NOT TO SCALE



NOTE: SEE SPECS. SECTION 260553 FOR NAMEPLATE MATERIAL AND ENGRAVING COLORS.

6 AUTOMATIC TRANSFER SWITCH NAMEPLATE DETAIL
NOT TO SCALE



NOTE:
THIS FIGURE ILLUSTRATES THE ADDITIONAL EXCLUSIVELY DEDICATED SPACE REQUIRED OVER AND UNDER THE ELECTRICAL EQUIPMENT FOR THE CABLES, RACEWAYS, ETC... TO AND FROM THE ELECTRICAL EQUIPMENT REQUIRED BY SECTION 110-26 OF THE NATIONAL ELECTRICAL CODE.

7 DEDICATED SPACE FOR ELECTRICAL
NOT TO SCALE

TABLE 110.26(A)(1) - WORKING SPACES

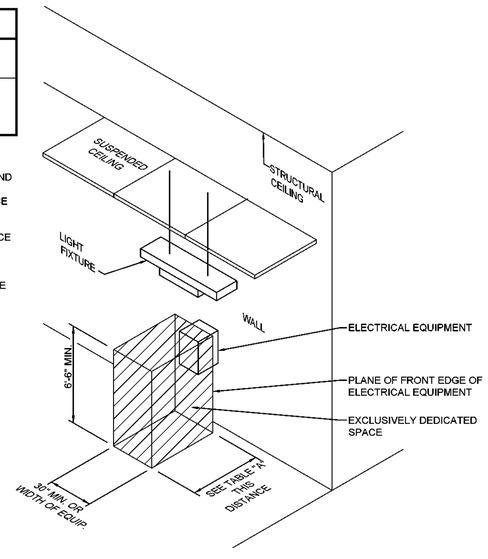
NOMINAL VOLTAGE TO GROUND	MINIMUM CLEAR DISTANCE (FEET)		
	CONDITION 1	CONDITION 2	CONDITION 3
0 - 150	900mm (3 ft)	900mm (3 ft)	900mm (3 ft)
151 - 600	900mm (3 ft)	1.0m (3 ft 6 in.)	1.2 m (4 ft.)
601 - 1000	900mm (3 ft)	1.2 m (4 ft.)	1.5 m (5 ft.)

NOTE: WHERE THE "CONDITIONS" ARE AS FOLLOWS:

CONDITION 1 - EXPOSED LIVE PARTS ON ONE SIDE OF WORKING SPACE AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE THAT ARE EFFECTIVELY GUARDED BY INSULATING MATERIALS.

CONDITION 2 - EXPOSED LIVE PARTS ON ONE SIDE OF THE WORKING SPACE AND GROUNDED PARTS ON THE OTHER SIDE OF WORKING SPACE. CONCRETE BRICK, OR TILE WALLS SHALL BE CONSIDERED GROUNDED.

CONDITION 3 - EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORK SPACE



8 WORKING CLEARANCE FOR ELECTRICAL
NOT TO SCALE

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NORTH CAROLINA PROFESSIONAL SEAL 023311 ENGINEER WILLIAM ALLEN CRIBB
02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Electrical Details

Rev.	Date	Notes

E0.11

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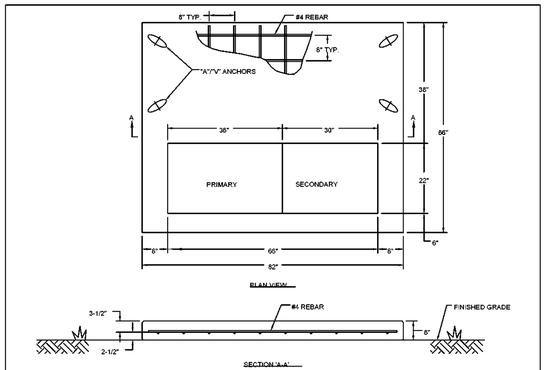


NOTES:

1. THIS STANDARD PRACTICE APPLIES TO THE COASTAL AREA ONLY OF DUKE ENERGY PROGRESS. COMPANY REPRESENTATIVE WILL IDENTIFY 'COASTAL AREA' AS DEFINED BY DUKE ENERGY.
2. CUSTOMER TO PROVIDE AND INSTALL TRANSFORMER PAD PER REFERENCED DOCUMENT IN APPENDIX C PAGE 6.
3. THE COMPANY RESERVES THE RIGHT TO REFUSE SERVICE TO NEW INSTALLATIONS THAT DO NOT MEET DUKE ENERGY REQUIREMENTS.
4. REFERENCE APPENDIX C, PAGE 7 TO DETERMINE IF CURBING AND ABSORPTION BED IS REQUIRED.
5. PROTECTIVE POLES ARE REQUIRED WHEN TRANSFORMERS ARE EXPOSED TO VEHICLE TRAFFIC. SEE FIGURE 61 FOR PROTECTIVE POLE DETAILS.
6. THERE SHALL BE MINIMUM CLEARANCES OF 10' IN FRONT OF THE TRANSFORMER AND 3' ON ALL OTHER SIDES OF THE TRANSFORMER. SEE FIGURES 52 AND 53 FOR MORE DETAILS ON CLEARANCES.
7. TRANSFORMER MUST BE LOCATED IN AN AREA THAT ALLOWS SAFE ACCESS BY DUKE ENERGY CONSTRUCTION AND MAINTENANCE EQUIPMENT IN WET OR DRY WEATHER.
8. CONSIDER FROST ACTION, DRAINAGE, AND LOCAL SOIL CONDITIONS WHEN PREPARING SITE FOR PAD. SOIL UNDERNEATH PADS SHALL BE LEVELED AND COMPACTED. SOIL SHALL ALSO BE FREE OF ROOTS AND OTHER ORGANIC MATERIALS TO PREVENT SETTLING AND EROSION. SOD MAY BE REQUIRED AROUND PAD TO PREVENT SOIL EROSION.
9. CUSTOMER SHALL INSTALL THE CONDUIT FOR THE PRIMARY CONDUCTORS AS CLOSE TO THE CENTER OF THE PRIMARY AREA AS PRACTICAL. THE SECONDARY CONDUITS SHALL BE INSTALLED TO THE RIGHT INSIDE OF THE SECONDARY AREA. SEE APPENDIX C, PAGE 6 FOR PAD INSTALLATION DETAILS AND SPECIFICATIONS.
10. ALL CONDUITS SHALL BE CUT SO THAT THE TOP OF THE CONDUIT IS FLUSH WITH THE PAD.
11. PRECAST PAD SUPPLIERS ARE REQUIRED TO PROVIDE THE PADS WITH RECESSED "A/V" ANCHORS, TO BE USED FOR LIFTING THE PADS.

REVISED	BY	CHK'D	APPR
3			
2	2/20/20	KAMES	FLETCHER	GRAHAM
1	8/29/16	MORGAN	HUDSON	ADCOCK
0	3/4/19	KAMES	KAMES	ADCOCK

DUKE ENERGY.

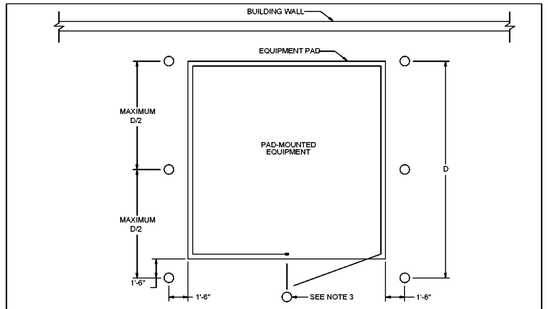
SMALL FLAT PADS FOR THREE-PHASE PAD-MOUNTED TRANSFORMERS

DEC	DEM	DEP	DEF
		X	

APPENDIX C - PAGE 4

1 DUKE ENERGY SMALL FLAT PAD DETAIL

NOT TO SCALE



NOTES:

1. PROTECTIVE POLES CAN BE INSTALLED ON ALL SIDES OF PAD-MOUNTED EQUIPMENT THAT ARE SUBJECT TO REGULAR VEHICLE TRAFFIC. THEIR USE IS AT THE DISCRETION OF LOCAL ENGINEERING AND WILL BE THE CUSTOMER'S RESPONSIBILITY TO PROVIDE AND INSTALL AFTER ALL REASONABLE EFFORTS TO LOCATE THE PAD-MOUNTED EQUIPMENT ELSEWHERE HAVE BEEN EXHAUSTED.
2. POLES SHALL BE EVENLY SPACED ALONG THE SIDES OF THE PAD-MOUNTED EQUIPMENT, NO WIDER THAN HALF THE DIMENSION OF THE SIDE THEY ARE PROTECTING. EXCEPTIONS TO THIS ALONG SIDES WITH DOORS ARE ALLOWED IN ORDER TO ACCOMMODATE NOTE 3.
3. ON ANY SIDE OF PAD-MOUNTED EQUIPMENT WITH DOORS, THIS POLE SHALL BE CENTRALLY LOCATED BETWEEN THE DOORS AND MUST ACCOMMODATE THE DOOR SWING OF THE EQUIPMENT. IT SHALL BE EITHER REMOVABLE OR COLLAPSIBLE. REMOVABLE OR COLLAPSIBLE DESIGNS OTHER THAN WHAT ARE SHOWN MUST BE APPROVED BY LOCAL ENGINEERING.
4. POLES LOCATED ON ANY SIDE OF PAD-MOUNTED EQUIPMENT SHALL NOT INTERFERE WITH THE SAFE OPERATION AND EXPECTED MAINTENANCE OR REPLACEMENT OF THAT EQUIPMENT.
5. POLES SHALL BE PAINTED YELLOW OR OUTFITTED WITH A YELLOW BOLLARD COVER OR POST SLEEVE.

APPLIED EITHER AROUND THE TOP OF THE BOLLARD OR EXTENDING VERTICALLY DOWN THE LENGTH OF

MUST BE ON THE SIDE FACING ANY ANTICIPATED TRAFFIC.

REVISED	BY	CHK'D	APPR
3			
2	10/21/19	KAMES	KAMES	ADCOCK
1	3/4/19	KAMES	KAMES	ADCOCK
0	10/29/15	SIMPSON	KAMES	ADCOCK

DUKE ENERGY.

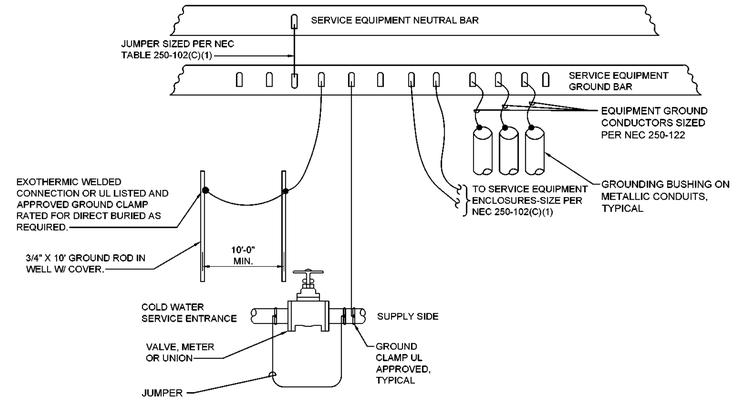
PROTECTIVE POLES FOR PAD-MOUNTED EQUIPMENT

DEC	DEM	DEP	DEF
X		X	

FIG 61

2 DUKE ENERGY TRANSFORMER BOLLARD DETAIL

NOT TO SCALE



4 SERVICE GROUNDING DETAIL

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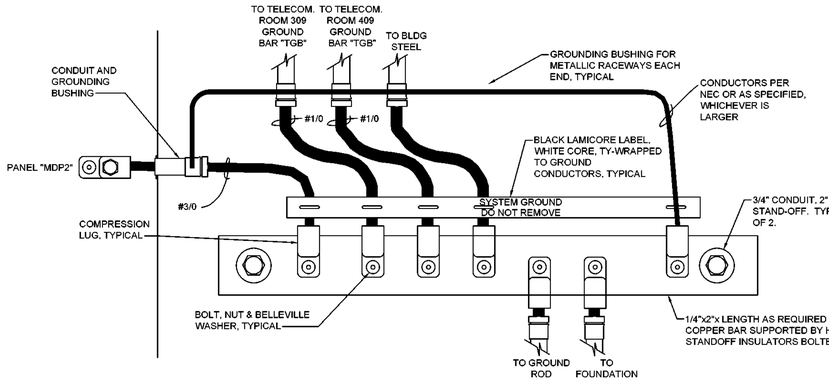
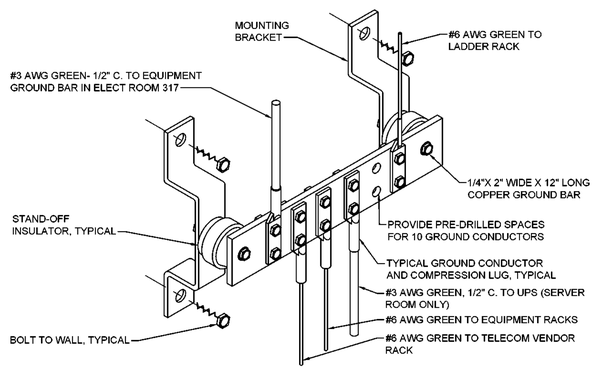


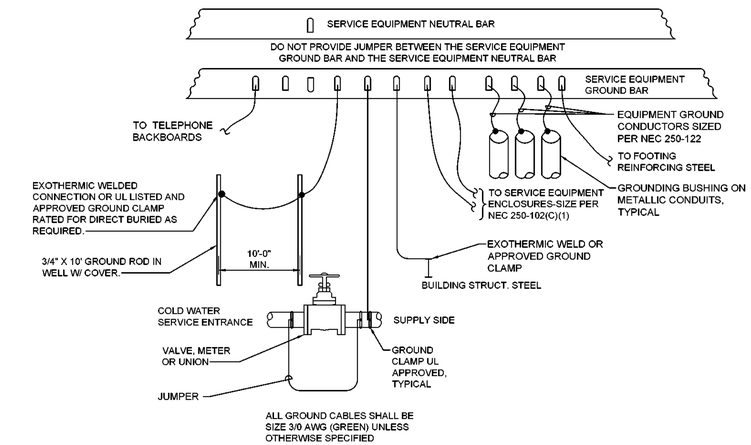
5 EQUIPMENT GROUND "EGB" BAR DETAIL EGB

NOT TO SCALE



6 TELECOMMUNICATIONS GROUND BAR DETAIL TGB

NOT TO SCALE



7 REMOTE BUILDING SERVICE GROUNDING DETAIL

NOT TO SCALE

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023311 WILLEN CRIBB

02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
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Construction Drawings

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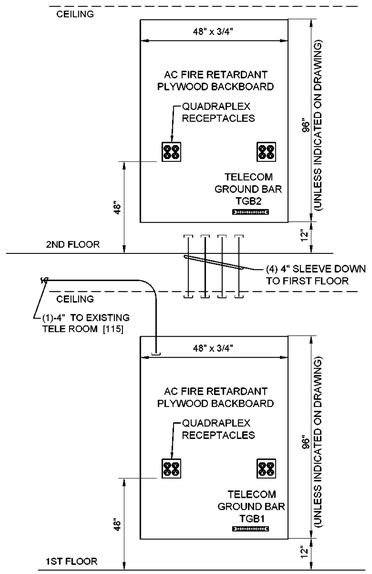

1 TELECOM BACKBOARD DETAIL
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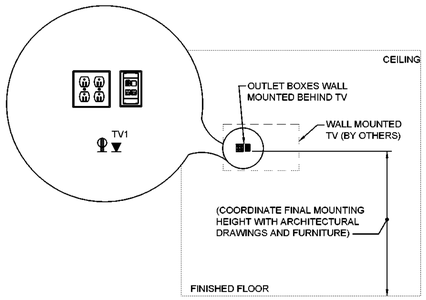

2 TELEVISION MOUNTING DETAIL
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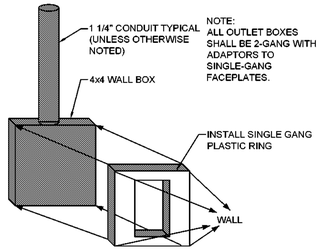

3 DATA OUTLET PATHWAY DETAIL
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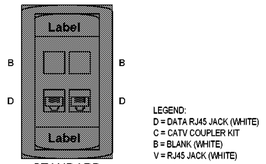

4 DATA OUTLET ELEVATION DETAIL
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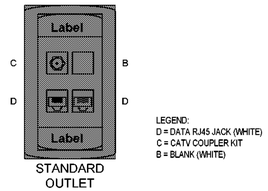

5 TV OUTLET ELEVATION DETAIL
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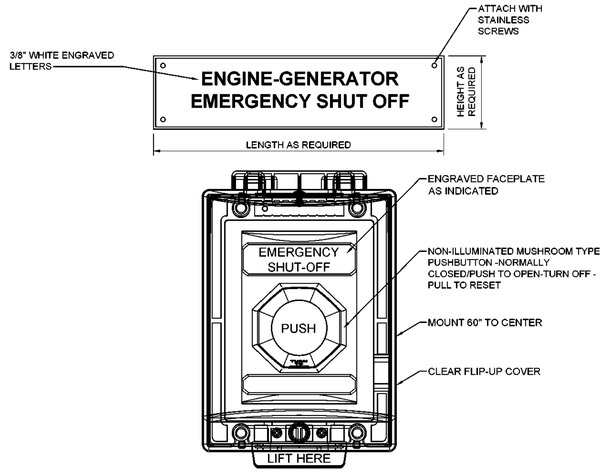
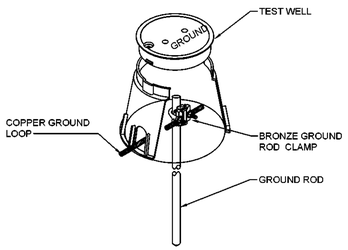


6 ENGINE-GENERATOR EMERGENCY POWER OFF SWITCH "EPO" AND ENGRAVED NAMEPLATE DETAIL
NOT TO SCALE



7 TEST WELL
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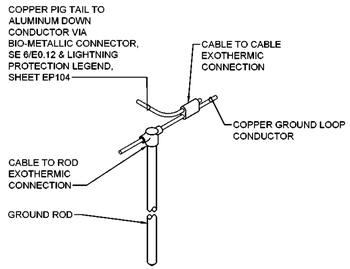
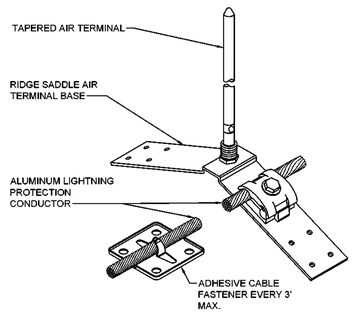


8 GROUND ROD
NOT TO SCALE



9 AIR TERMINAL DETAILS
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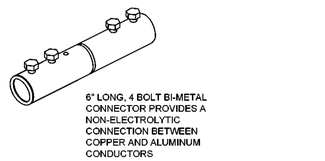
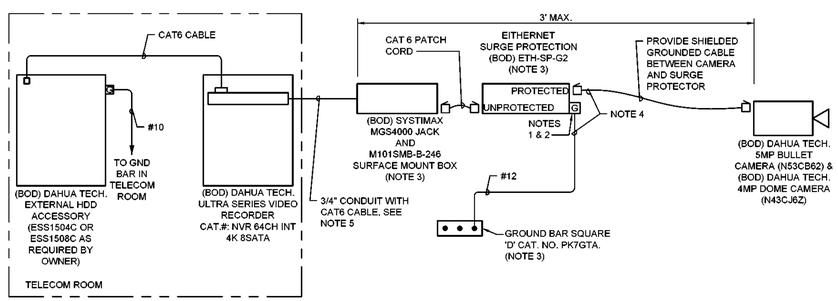


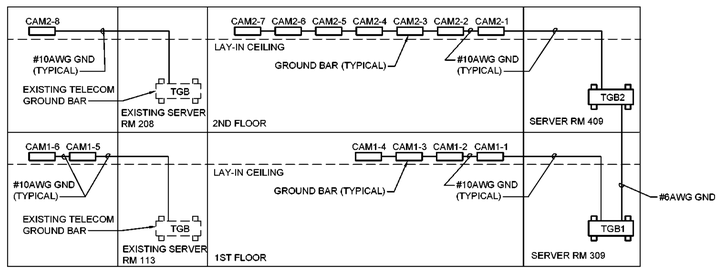
10 BIMETALLIC CONNECTOR DETAIL
NOT TO SCALE

CAMERA NOTES:

1. GROUND WIRES SHALL BE INSTALLED WITH RADIUS BEND (NO 90° BENDS).
2. CONTRACTOR SHALL PROVIDE FORK TYPE CRIMP LUGS FOR CONNECTING GROUND WIRE TO SURGE PROTECTION DEVICES.
3. CONTRACTOR SHALL PROVIDE DEVICES INDICATED, DEVICE MUST BE SURFACE MOUNTED ON INTERIOR WALL ABOVE LAY-IN CEILING .
4. GROUND CONDUCTOR LENGTH BETWEEN SURGE PROTECTION DEVICE AND GROUND BAR SHALL BE SHORTER THAN CABLE LENGTH BETWEEN SURGE PROTECTION DEVICE AND CAMERA.
5. CAT 6 CABLE TO BE ROUTED IN J-HOOKS ON 1ST & 2ND FLOORS.
6. CAMERA VENDOR SHALL COORDINATE LOCATION OF CAMERA EQUIPMENT ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION OF GROUNDING CONDUIT.
7. BASIS OF DESIGN (BOD)



11 CAMERA WIRING DETAIL
NOT TO SCALE



12 CAMERA GROUNDING RISER
NOT TO SCALE

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02/22/2024

Leland Town Hall Addition & Renovations
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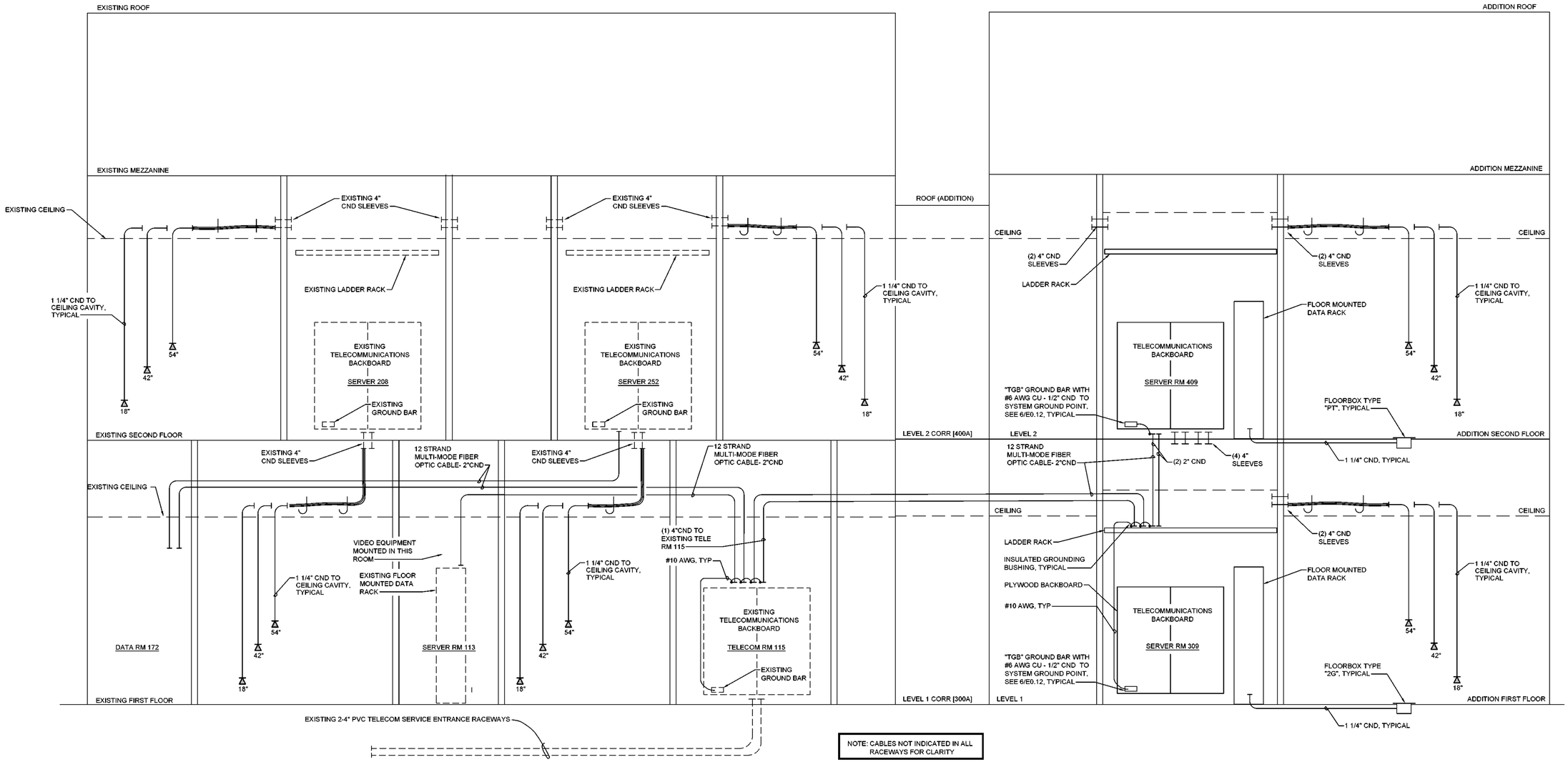

NOTE: CABLES NOT INDICATED IN ALL RACEWAYS FOR CLARITY

1 TELECOMMUNICATIONS / DATA RISER DIAGRAM

NOT TO SCALE

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TELECOM / DATA RISER DIAGRAM

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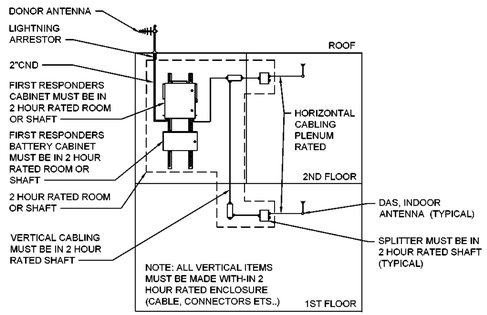
FIRST RESPONDERS INSTALLATION NOTES

1. ALL WIRING SHALL BE IN ACCORDANCE WITH LOCAL AND NATIONAL CODES, INCLUDING NFPA 72 (2013 EDITION) AND NEC.
2. A FIRST RESPONDERS SYSTEM IS AN EMERGENCY RESPONDER RADIO ENHANCED SYSTEM IN COMPLIANCE WITH THE NC FIRE CODE, SECTION 510.
3. WHERE REQUIRED, WIRING SHALL BE RUN IN MINIMUM 3/4" CONDUIT. SURFACE METAL RACEWAY IS ACCEPTABLE.
4. PLENUM RATED COAXIAL CABLE WITHOUT CONDUIT, MAY BE ACCEPTABLE FOR HORIZONTAL RUNS IN AREAS OTHER THAN WHERE WATERPROOF DEVICES ARE REQUIRED. HOWEVER, CONDUIT SHALL BE USED TO PENETRATIONS IN RATED WALLS SHALL BE MADE IN CONDUIT PER APPROPRIATE U.L. SYSTEM.
5. MANUFACTURER'S 1/2" COAXIAL CABLE SHALL BE USED FOR THE FIRST RESPONDERS SYSTEM. DUE TO ITS LOW OHM LOSS PROPERTIES.
6. THE DIRECTIONAL DONOR ANTENNA ON THE ROOF SHALL BE TIED INTO THE BUILDING GROUNDING SYSTEM.
7. ALL CABLES USED FOR FIRST RESPONDERS SHALL BE GROUNDED TO THE BUILDING GROUNDING SYSTEM.
8. THE CABLE BETWEEN THE DONOR ANTENNA AND THE AMPLIFIER MAY BE RUN TO THE ROOF, BUT IT MUST BE IN CONDUIT.
9. A LIGHTNING ARRESTOR SHALL BE INSTALLED ON THE ANTENNA.
10. THE CABLE FROM THE DONOR ANTENNA TO THE AMPLIFIER SHALL BE SEPARATED FROM THE RISER CABLE FROM THE FIRST RESPONDERS SYSTEM TO THE INDOOR ANTENNA, THIS REQUIREMENT APPLIES TO THE RISER.
    - IF BOTH CABLES ARE NOT IN CONDUIT, THE MINIMUM SEPARATION SHALL BE SIX (6) FEET.
    - IF AT LEAST ONE CABLE IS IN CONDUIT, THE MINIMUM SEPARATION SHALL BE THREE (3) FEET.
    - THESE CABLES ARE ALLOWED TO CROSS A MAXIMUM OF ONE TIME.
11. THE FIRST RESPONDERS AMPLIFIER ENCLOSURE SHALL BE INSTALLED ON METAL STRUT CHANNEL (TO ALLOW AIRFLOW). SEE INSTALLATION DIAGRAM.
12. THE FIRST RESPONDERS AMPLIFIER AND BATTERY ENCLOSURES SHALL BE GROUNDED TO THE BUILDING GROUNDING SYSTEM UTILIZING A SHORT, DIRECT PATH WITH THE MINIMUM NUMBER OF BENDS (GROUNDING CABLES SHALL NOT REVERSE DIRECTION WHEN CONNECTING TO TERMINATION POINTS.)
13. A.C. WIRES SHALL BE RUN IN SEPARATE CONDUIT FROM D.C. WIRING, SUCH THAT A SYSTEM ALARM DOES NOT DE-ENERGIZE THE CONTROL PANEL. MINIMUM SIZE WIRE TO BE AWG 12 THHN. PROTECTION AGAINST VOLTAGE TRANSIENTS AND SURGES SHALL BE INSTALLED AT THE ELECTRICAL PANELBOARD AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
    - PRIMARY AC POWER TO THE FIRST RESPONDERS AMPLIFIER SHALL BE DEDICATED CIRCUIT.
    - REDUNDANT AC POWER TO THE FIRST RESPONDERS AMPLIFIER SHALL BE A 120VAC CIRCUIT. (PROVIDING A SECOND (REDUNDANT) POWER CIRCUIT IS PER THE MANUFACTURERS RECOMMENDED PRACTICE.)
    - CIRCUIT DISCONNECTING MEANS SHALL BE PERMANENTLY IDENTIFIED BY THE SYSTEM TYPE: i.e. "EMERGENCY COMMUNICATION SYSTEM" (ECS)
14. CONDUIT FOR THE DONOR (ROOF) ANTENNA AND FOR THE RISER COAXIAL CABLE SHALL BE PARALLEL TO THE FIRST RESPONDERS ENCLOSURE. THESE CONDUITS SHALL TERMINATE WITH A BUSHING WITHIN TWO (2) FEET OF THE BOTTOM OF THE ENCLOSURE. THE FIRST RESPONDERS INSTALLER SHALL MAKE THE CONNECTION PROVIDED, PRE-WIRED 1/4" FLEX CABLE FROM THE FIRST RESPONDERS SYSTEM.
15. INSTALLATION REQUIREMENTS TO COMPLY WITH NFPA 72, SECTION 24.3.6.8:
    - THE RISER COAXIAL CABLE SHALL BE INSTALLED IN A 2 HOUR RATED ENCLOSURE OR SHAFT. (2 HOUR RATED COAXIAL CABLE IS NOT AVAILABLE AT THE CORRECT LOW OHM LOSS RATING.)
    - THE SPLITTER CONNECTIONS BETWEEN THE RISER CABLE AND THE HORIZONTAL FEEDER CABLE SHALL ALSO BE MADE WITH A 2 HOUR RATED ENCLOSURE. THE FEEDER CABLE PASSAGE THROUGH THAT 2 HOUR ENCLOSURE SHALL BE FIRE STOPPED WITH THE APPROPRIATE U.L. SYSTEM.
    - ALL FEEDER CABLES SHALL BE PLENUM RATED AT A MINIMUM. (FEEDER CABLES ARE THE HORIZONTAL RUNS TO THE DAS.)
16. WHEN SPLITTER CONNECTIONS ARE IN CONDUIT, PROVIDE A MINIMUM 12 INCH x 12 INCH JUNCTION COX TO MAKE THE CONNECTION.
17. THE FIRST RESPONDERS ANNUNCIATOR SHALL BE INSTALLED NEAR THE FIRE ALARM CONTROL PANEL.
18. ALL FIELD WIRING SHALL BE CHECKED FOR SHORTS, OPENS, AND GROUNDS BEFORE MAKING CONNECTIONS.
19. SEE MANUFACTURERS SHEETS FOR MOUNTING DETAILS.
20. ALL JUNCTION BOX COVERS SHALL BE RED IN COLOR. THOSE IN FINISHED ARES ARE PERMITTED TO MATCH THE FINISH COLOR.
21. ALL PENETRATIONS THROUGH RATED WALLS SHALL BE SEALED USING APPROPRIATE U.L. SYSTEM.
22. PROVIDE THE FOLLOWING ALARMS TO THE FIRE ALARM CONTROLS PANEL.
    a. AC FAIL
    b. LOW BATTERY
    c. CHARGER FAIL
    d. BOOSTER FAIL
    e. ANTENNA MALFUNCTION
    f. SYSTEM COMPONENT FAIL

1



3 FIRST RESPONDERS RISER DIAGRAM
NOT TO SCALE

FIRST RESPONDERS EQUIPMENT LIST

EQUIPMENT FOR THE FIRST RESPONDERS SYSTEM LISTED BELOW IS BASIS OF DESIGN.

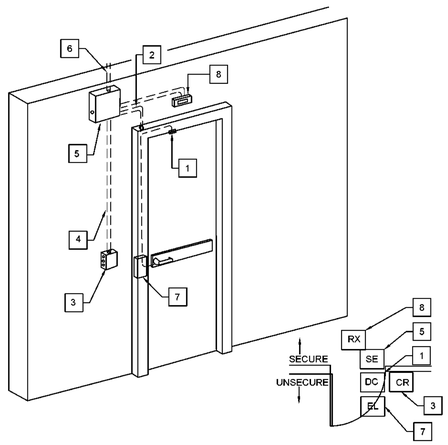
1. COMBA CRITICAL POINT VERSION 3 / NEXT GENERATION PUBLIC SAFETY SOLUTION 700/800MHz CLASS A/B 27/33dBm BI-DIRECTIONAL AMPLIFIER BDA V3 NG (RX78V3-A2727P0-S1/S0/C0) AND BATTERY BACKUP UNIT BBU V3 NG 60AH (BBUV3-LFP48060).
2. COMBA OUTDOOR DIRECTIONAL YAGI ANTENNA (OY-MN-V11P).
3. COMBA INDOOR WIDE BAND OMNI ANTENNA (IXO-360VO3NO-54).
4. COMBA WIDEBAND TAPPER (CO-FSxx-ON300C(I)).
5. COMBA WIDEBAND POWER SPLITTER 2/3/4WAY, LOW PIM(-153dBc), 555-2700MHz, N FEMALE, 50W.
6. COMBA JUMPER CABLE, 0.141 TYPE. (JS-NMNMxF-R141, JS-NMNFxF-R141).
7. COMMSCOPE HELIAX AIR COAXIAL CABLE (AL4RPV-50) PLENUM RATED AIR DIELECTRIC COAXIAL CABLE CORRUGATED ALUMINUM, 1/2", OFF WHITE PVC JACKET.
7. COMMSCOPE HELIAX LOW DENSITY FOAM COAXIAL CABLE (LDF4-50A) CORRUGATED COPPER, 1/2", BLACK PE JACKET.
8. JMA WIRELESS N MALE CONNECTOR FOR 1/2" ANNULAR PLENUM CABLE (UPL-NM-12).

1

FIRST RESPONDERS PROJECT NOTES IN TESTING AND INSTALLATION SEQUENCING

1. A PRELIMINARY SITE SURVEY IS NEEDED TO DETERMINE THE EXISTING dBm SIGNAL STRENGTH.
2. A MORE DETAILED SURVEY WILL MAP THE BUILDING ONCE THE BUILDING IS SUBSTANTIALLY COMPLETED.
3. THE NEXT SIGNAL STRENGTH SURVEY WILL COMPLY WITH THE 2018 NCFC, 510.5.3 AND NFPA 72, 24.5.2.1 (2013 EDITION)
    - EACH FLOOR SHALL BE DIVIDED INTO 20 (APPROXIMATELY) EQUAL TEST AREAS, THE WORST CASE SIGNAL STRENGTH READING SHALL BE RECORDED. PROVIDE 90 PERCENT FLOOR AREA RADIO COVERAGE.
    - CRITICAL AREAS, IF PRESENT, SHALL BE SURVEYED SEPARATE FROM THE EQUAL TEST AREAS:
    --- EXIT STAIRS
    --- EXIT PASSAGEWAYS
    --- ELEVATOR LOBBIES
    --- AT STANDPIPE CABINETS
    --- SPRINKLER SECTIONAL VALVE LOCATIONS
    --- AHJ MAY REQUIRE ADDITIONAL LOCATIONS.

    -- CRITICAL AREAS SHALL BE PROVIDED WITH 99 PERCENT RADIO COVERAGE.
4. THE MINIMUM SIGNAL STRENGTH OF -95 dBm IS REQUIRED.



1 ACS SINGLE DOOR - ELECTRIC STRIKE W/ REQUEST TO EXIT
NOT TO SCALE

ELECTRICAL GENERAL NOTES:

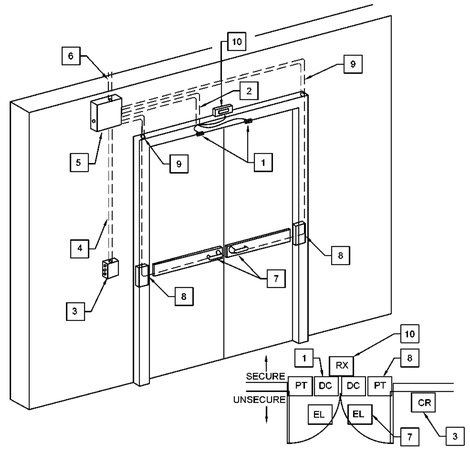
A. DOOR DETAIL INDICATES DOOR HANDLE OR CRASH-BAR ON SECURED SIDE OF DOOR FOR REFERENCE ONLY. LOCK POWER WILL VARY DEPENDING ON LOCK TYPE AND DOOR HARDWARE. CONTRACTOR WILL CROSS REFERENCE WITH DOOR SCHEDULE/SPECIFICATIONS TO CONFIRM ALL FINAL REQUIREMENTS

B. ALL CONDUITS SHALL BE CONCEALED; UNLESS OTHERWISE NOTED.

C. PROVIDE AND INSTALL PULL STRINGS IN ALL CONDUITS.

KEYED NOTES

1. DOOR CONTACT [DC]: PROVIDE FLUSH MOUNTED DOOR STATUS MONITOR.
2. DOOR CONTACT/LOCKING HARDWARE CONDUIT: PROVIDE 1/2" C. FROM DOOR FRAME TO SECURITY ENCLOSURE ABOVE DOOR.
3. READER/KEYPAD [CR]: PROVIDE 4"X4"X2-1/8" FLUSH BACK-BOX AND SINGLE GANG MUD RING MOUNTED ON NON-SECURED SIDE OF DOOR AT 42" AFF.
4. READER/KEYPAD CONDUIT: PROVIDE 1/2" C. FROM JUNCTION BOX TO SECURITY ENCLOSURE ABOVE DOOR.
5. SECURITY ENCLOSURE ABOVE DOOR ON SECURE SIDE [SE]: PROVIDE 12"X12"X4" PAINTABLE ENCLOSURE MOUNTED ABOVE FINISHED ACCESSIBLE CEILING OR 10' AFF IN AREAS WITHOUT A CEILING ON SECURED SIDE OF DOOR.
6. SECURITY ENCLOSURE CONDUIT: PROVIDE 1" C. TO NEAREST ACCESSIBLE CEILING, CABLE TRAY OR TELECOM ROOM.
7. ELECTRIFIED STRIKE [EL]: INTERNAL ELECTRIFIED STRIKE, SHOWN FOR REFERENCE ONLY.
8. REQUEST TO EXIT [RX]: PROVIDE MOTION RX DEVICE CENTERED AND MOUNTED TO TOP OF DOOR FRAME. PROVIDE SINGLE GANG J-BOX MOUNTED HORIZONTALLY, ROUTE CABLING INTO DOOR FRAME AND UP TO SECURITY ENCLOSURE ON SECURE SIDE.



2 ACS DOUBLE DOOR - ELECTRIFIED HARDWARE W/ REQUEST TO EXIT
NOT TO SCALE

ELECTRICAL GENERAL NOTES:

A. DOOR DETAIL INDICATES DOOR HANDLE OR CRASH-BAR ON SECURED SIDE OF DOOR FOR REFERENCE ONLY. LOCK POWER WILL VARY DEPENDING ON LOCK TYPE AND DOOR HARDWARE. CONTRACTOR WILL CROSS REFERENCE WITH DOOR SCHEDULE/SPECIFICATIONS TO CONFIRM ALL FINAL REQUIREMENTS.

B. ALL CONDUITS SHALL BE CONCEALED; UNLESS OTHERWISE NOTED.

C. PROVIDE AND INSTALL PULL STRINGS IN ALL CONDUITS.

KEYED NOTES

1. DOOR CONTACT [DC]: PROVIDE FLUSH MOUNTED DOOR STATUS MONITOR.
2. DOOR CONTACT CONDUIT: PROVIDE 1/2" C. FROM DOOR FRAME TO SECURITY ENCLOSURE ABOVE DOOR.
3. READER/KEYPAD [CR]: PROVIDE 4"X4"X2-1/8" FLUSH BACK-BOX AND SINGLE GANG MUD RING MOUNTED ON NON-SECURED SIDE OF DOOR AT 42" AFF.
4. READER/KEYPAD CONDUIT: PROVIDE 1/2" C. FROM JUNCTION BOX TO SECURITY ENCLOSURE ABOVE DOOR.
5. SECURITY ENCLOSURE ABOVE DOOR ON SECURE SIDE: PROVIDE 12"X12"X4" PAINTABLE ENCLOSURE MOUNTED ABOVE FINISHED ACCESSIBLE CEILING OR 10' AFF IN AREAS WITHOUT A CEILING ON SECURED SIDE OF DOOR.
6. SECURITY ENCLOSURE CONDUIT: PROVIDE 1" C. TO NEAREST ACCESSIBLE CEILING, CABLE TRAY OR TELECOM ROOM.
7. ELECTRIFIED LOCKSET [EL]: INTERNAL ELECTRIFIED LOCKSET WITH PIR REX SWITCH, SHOWN FOR REFERENCE ONLY.
8. POWER TRANSFER HINGE [PT]: HINGE WITH ISOLATED ELECTRICAL CONNECTIVITY, SHOWN FOR REFERENCE ONLY.
9. POWER TRANSFER HINGE/ELECTRIFIED LOCKSET CONDUIT [PT]: PROVIDE 1/2" C. FROM DOOR FRAME TO SECURITY ENCLOSURE.
10. REQUEST TO EXIT [RX]: PROVIDE MOTION RX DEVICE CENTERED AND MOUNTED TO TOP OF DOOR FRAME. PROVIDE SINGLE GANG J-BOX MOUNTED HORIZONTALLY, ROUTE CABLING INTO DOOR FRAME AND UP TO SECURITY ENCLOSURE ON SECURE SIDE.

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023311 WILLIAM ALLEN ORTIBB
03/08/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

ACCESS CONTROLS AND FIRST RESPONDERS DETAILS

Rev.	Date	Notes
1	03.06.24	OWNER REVIEW

E0.15

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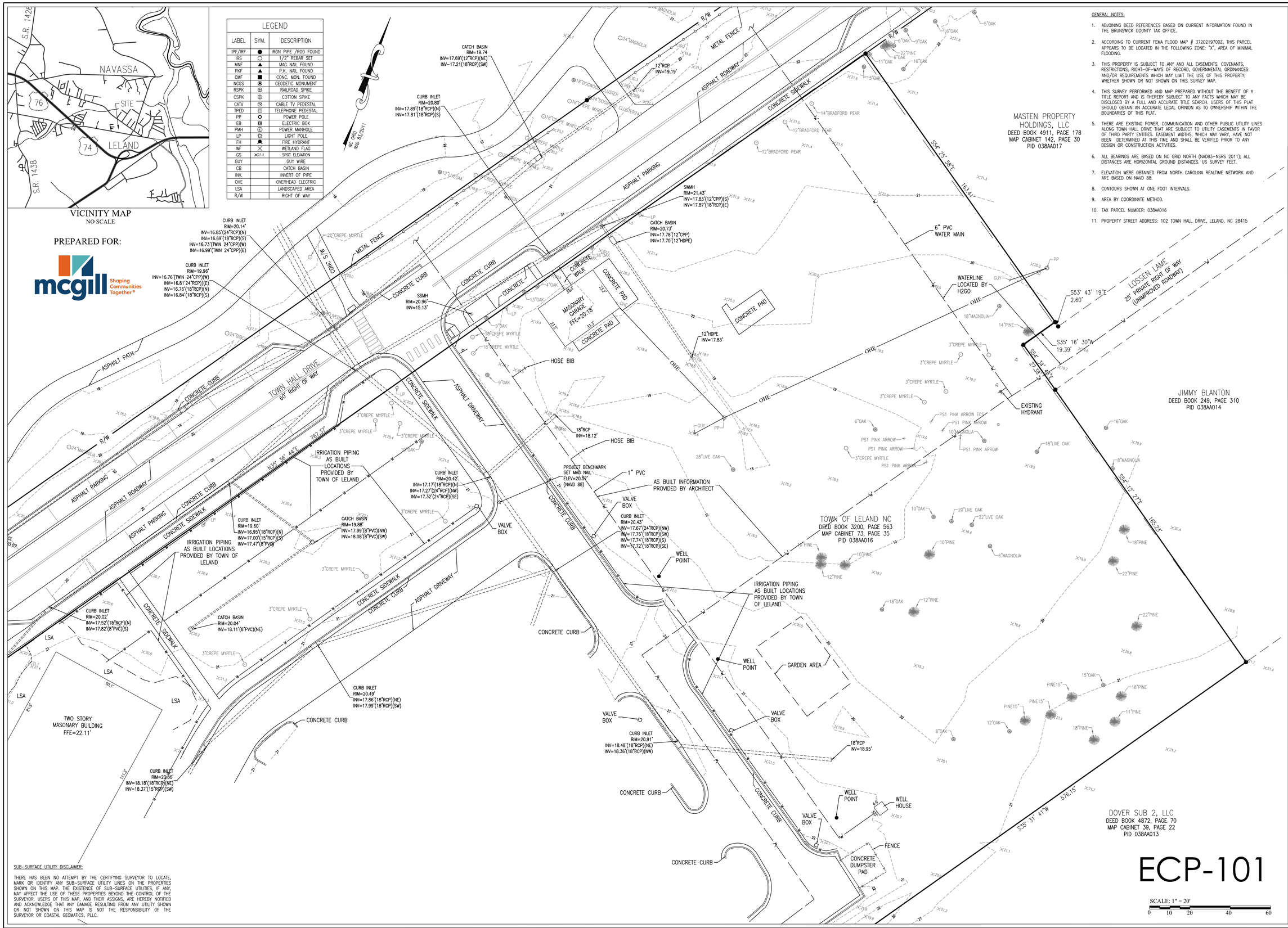
VICINITY MAP
NO SCALE

PREPARED FOR:

mcgill Shaping Communities Together®

LEGEND

LABEL	SYM.	DESCRIPTION
IPF/IRF	●	IRON PIPE /ROD FOUND
IRS	○	1/2" REBAR SET
MNF	▲	MAG NAIL FOUND
PKF	▲	P.K. NAIL FOUND
CMF	■	CONC. MON. FOUND
NCGS	◈	GEODETIC MONUMENT
RSPK	⊕	RAILROAD SPIKE
CSPK	⊕	COTTON SPIKE
CATV	⊗	CABLE TV PEDESTAL
TPED	⊡	TELEPHONE PEDESTAL
PP	○	POWER POLE
EB	▥	ELECTRIC BOX
PMH	⊡	POWER MANHOLE
LP	☼	LIGHT POLE
FH	☗	FIRE HYDRANT
WF	×	WETLAND FLAG
GS	×23.5	SPOT ELEVATION
GUY		GUY WIRE
CB		CATCH BASIN
INV.		INVERT OF PIPE
OHE		OVERHEAD ELECTRIC
LSA		LANDSCAPED AREA
R/W		RIGHT OF WAY



GENERAL NOTES:

1. ADJOINING DEED REFERENCES BASED ON CURRENT INFORMATION FOUND IN THE BRUNSWICK COUNTY TAX OFFICE.
2. ACCORDING TO CURRENT FEMA FLOOD MAP # 3720219700Z, THIS PARCEL APPEARS TO BE LOCATED IN THE FOLLOWING ZONE: "X", AREA OF MINIMAL FLOODING.
3. THIS PROPERTY IS SUBJECT TO ANY AND ALL EASEMENTS, COVENANTS, RESTRICTIONS, RIGHT-OF-WAYS OF RECORD, GOVERNMENTAL ORDINANCES AND/OR REQUIREMENTS WHICH MAY LIMIT THE USE OF THIS PROPERTY; WHETHER SHOWN OR NOT SHOWN ON THIS SURVEY MAP.
4. THIS SURVEY PERFORMED AND MAP PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS THEREBY SUBJECT TO ANY FACTS WHICH MAY BE DISCLOSED BY A FULL AND ACCURATE TITLE SEARCH. USERS OF THIS PLAT SHOULD OBTAIN AN ACCURATE LEGAL OPINION AS TO OWNERSHIP WITHIN THE BOUNDARIES OF THIS PLAT.
5. THERE ARE EXISTING POWER, COMMUNICATION AND OTHER PUBLIC UTILITY LINES ALONG TOWN HALL DRIVE THAT ARE SUBJECT TO UTILITY EASEMENTS IN FAVOR OF THIRD PARTY ENTITIES. EASEMENT WIDTHS, WHICH MAY VARY, HAVE NOT BEEN DETERMINED AT THIS TIME AND SHALL BE VERIFIED PRIOR TO ANY DESIGN OR CONSTRUCTION ACTIVITIES.
6. ALL BEARINGS ARE BASED ON NC GRID NORTH (NAD83-NSRS 2011); ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES. US SURVEY FEET.
7. ELEVATION WERE OBTAINED FROM NORTH CAROLINA REALTIME NETWORK AND ARE BASED ON NAVD 88.
8. CONTOURS SHOWN AT ONE FOOT INTERVALS.
9. AREA BY COORDINATE METHOD.
10. TAX PARCEL NUMBER: 038AA016
11. PROPERTY STREET ADDRESS: 102 TOWN HALL DRIVE, LELAND, NC 28415

SUB-SURFACE UTILITY DISCLAIMER:

THERE HAS BEEN NO ATTEMPT BY THE CERTIFYING SURVEYOR TO LOCATE, MARK OR IDENTIFY ANY SUB-SURFACE UTILITY LINES ON THE PROPERTIES SHOWN ON THIS MAP. THE EXISTENCE OF SUB-SURFACE UTILITIES, IF ANY, MAY AFFECT THE USE OF THESE PROPERTIES BEYOND THE CONTROL OF THE SURVEYOR. USERS OF THIS MAP, AND THEIR ASSIGNS, ARE HEREBY NOTIFIED AND ACKNOWLEDGE THAT ANY DAMAGE RESULTING FROM ANY UTILITY SHOWN OR NOT SHOWN ON THIS MAP IS NOT THE RESPONSIBILITY OF THE SURVEYOR OR COASTAL GEOMATICS, PLLC.

ECP-101

SCALE: 1" = 20'
0 10 20 40 60

Revisions

COASTALGEOMATICS
LAND SURVEYING • MAPPING • PLANNING
Physical Address: 5041-3 Main Street, Shallotte, NC 28470
Mailing Address: Post Office Box 1560, Shallotte, NC 28459
Telephone: 910-356-1800 ~ www.coastalgeomatics.com
Firm License # P-2248

EXISTING CONDITIONS SURVEY FOR:
TOWN OF LELAND
OF
TOWN HALL EXPANSION PROJECT
TOWN OF LELAND, NORTWEST TOWNSHIP
BRUNSWICK COUNTY, NORTH CAROLINA

Date: 02-27-2023
Scale: 1"= 20'
Drawn By: DML
Checked By: CDS

EXISTING CONDITIONS

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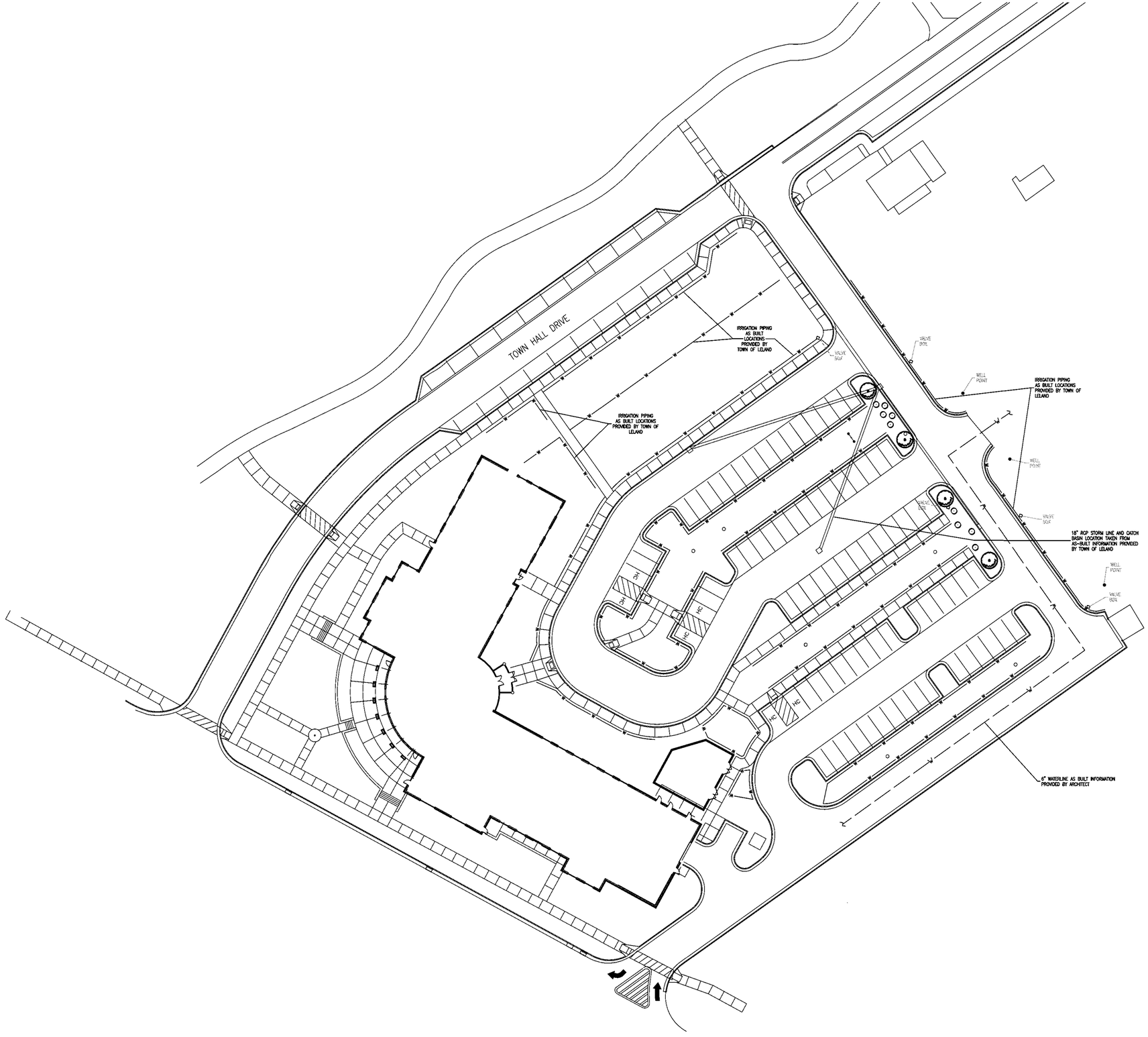
PROJECT NO. 4900.48



100% CONSTRUCTION DRAWINGS FOR REVIEW PURPOSES ONLY NOT RELEASED FOR CONSTRUCTION

30 0 15 30 60
GRAPHIC SCALE DIVISION VALUE = 30 FEET

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SIGNED AND DATED:
Digitally signed by Alex D. Lapinsky
Alex D. Lapinsky Date: 2024.03.05 14:30:24-05'00'

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED IN ACCORDANCE WITH THE STANDARD CERTIFICATION REQUIREMENTS FOUND IN NC ADMINISTRATIVE CODE 21-56.1103(E). THIS DIGITAL SIGNATURE HAS BEEN FOUND BY THE NC BOARD OF EXAMINERS FOR ENGINEERS AND SURVEYORS TO MEET THESE STANDARDS. PLEASE CONTACT THE SIGNER IF YOU NEED ASSISTANCE IN VALIDATING THE SIGNATURE.

NORTH CAROLINA PROFESSIONAL SEAL 042192 ENGINEER ALEXANDER D. LAPINSKY

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Issue Date: February 12, 2024

Existing Conditions Plan

Rev.	Date	Notes

ECP-101A

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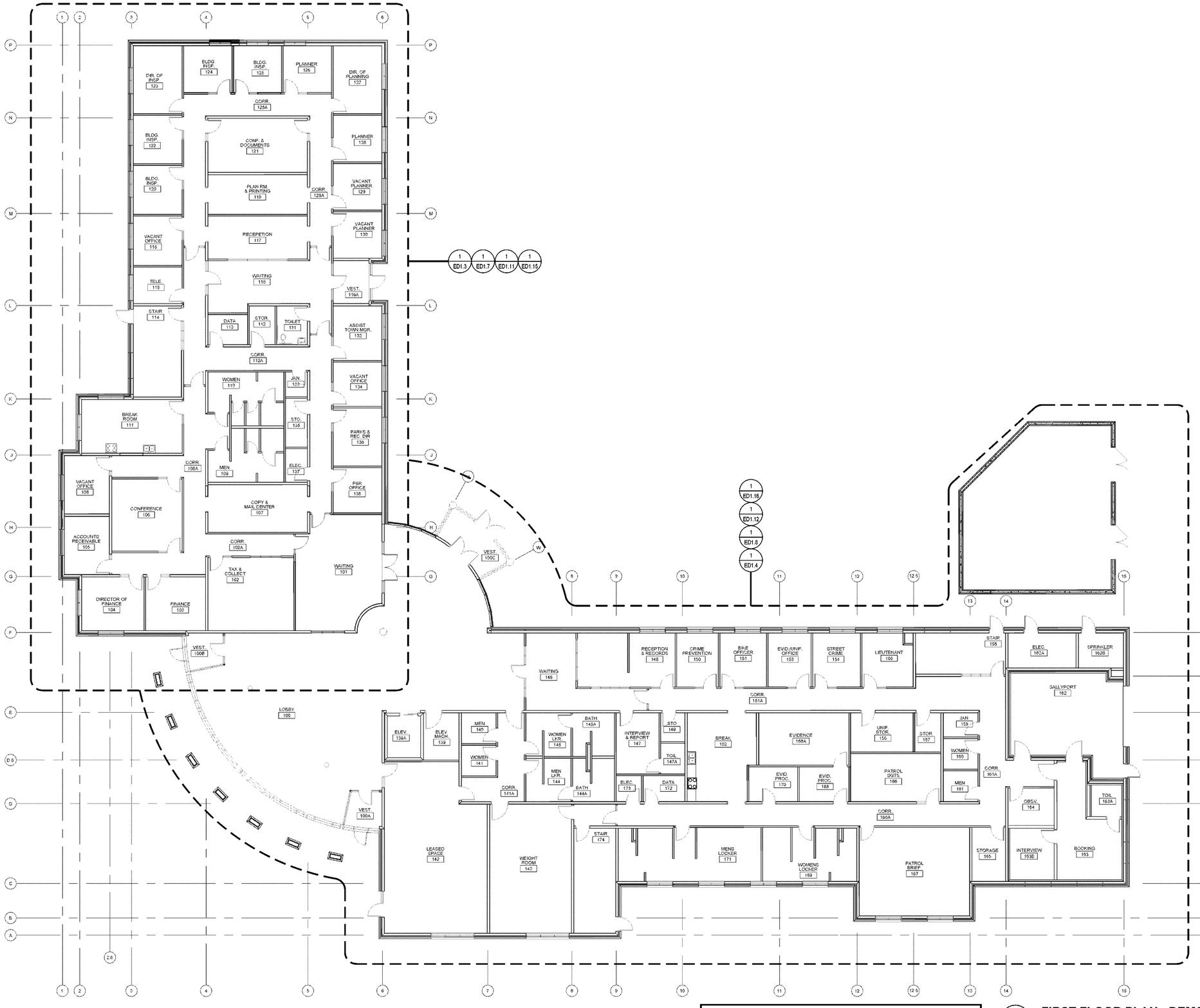

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

1 **FIRST FLOOR PLAN - DEMOLITION WORK**
1" = 10'-0"

PLAN NORTH

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023311 W. ALLEN CRIBB
02/22/2024

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

First Floor Plan - Demolition Work

Rev.	Date	Notes

ED1.1

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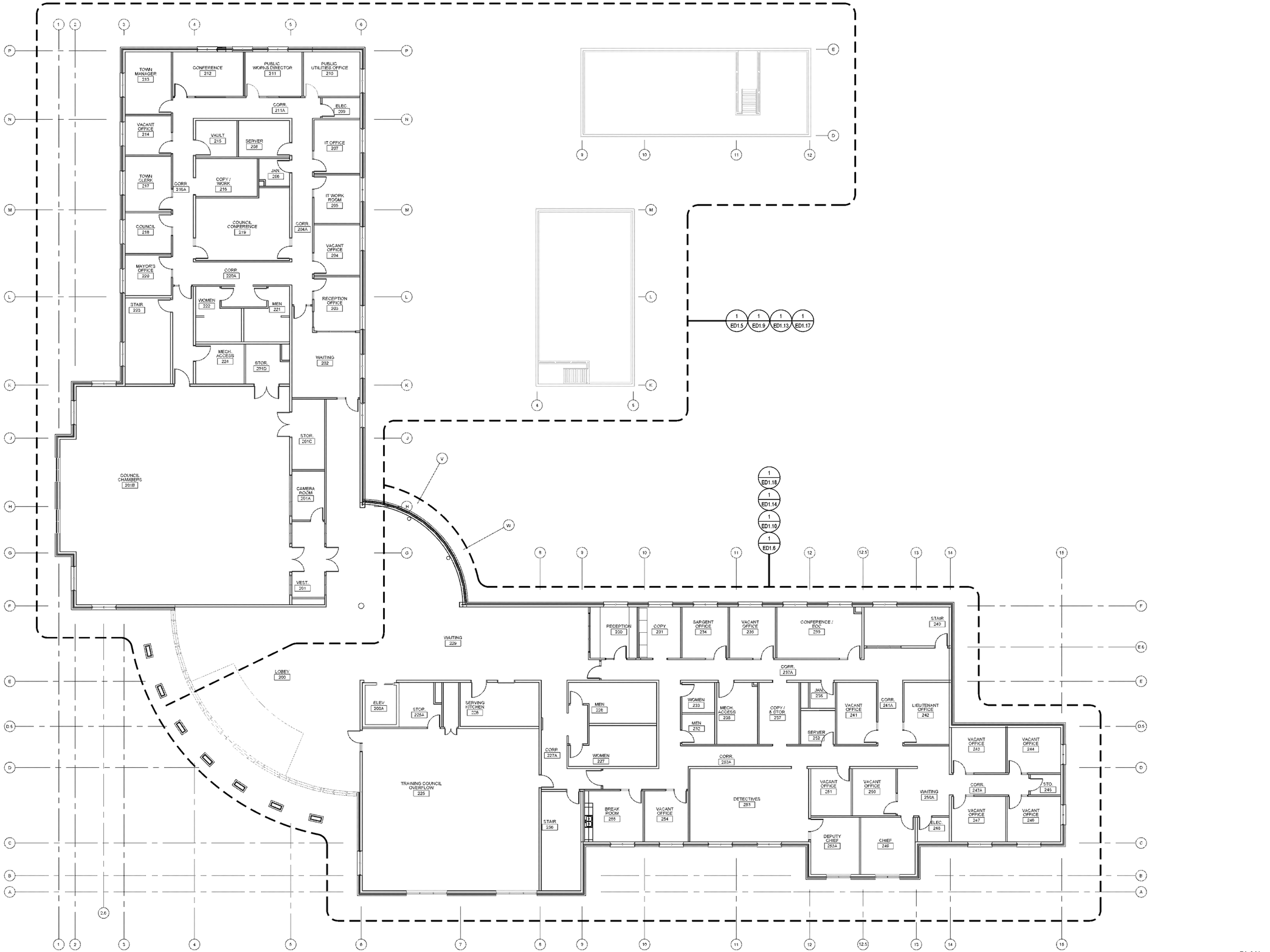

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

1 **SECOND FLOOR PLAN - DEMOLITION**
1" = 10'-0"

PLAN NORTH

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02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Second Floor Plan - Demolition Work

Rev.	Date	Notes

ED1.2

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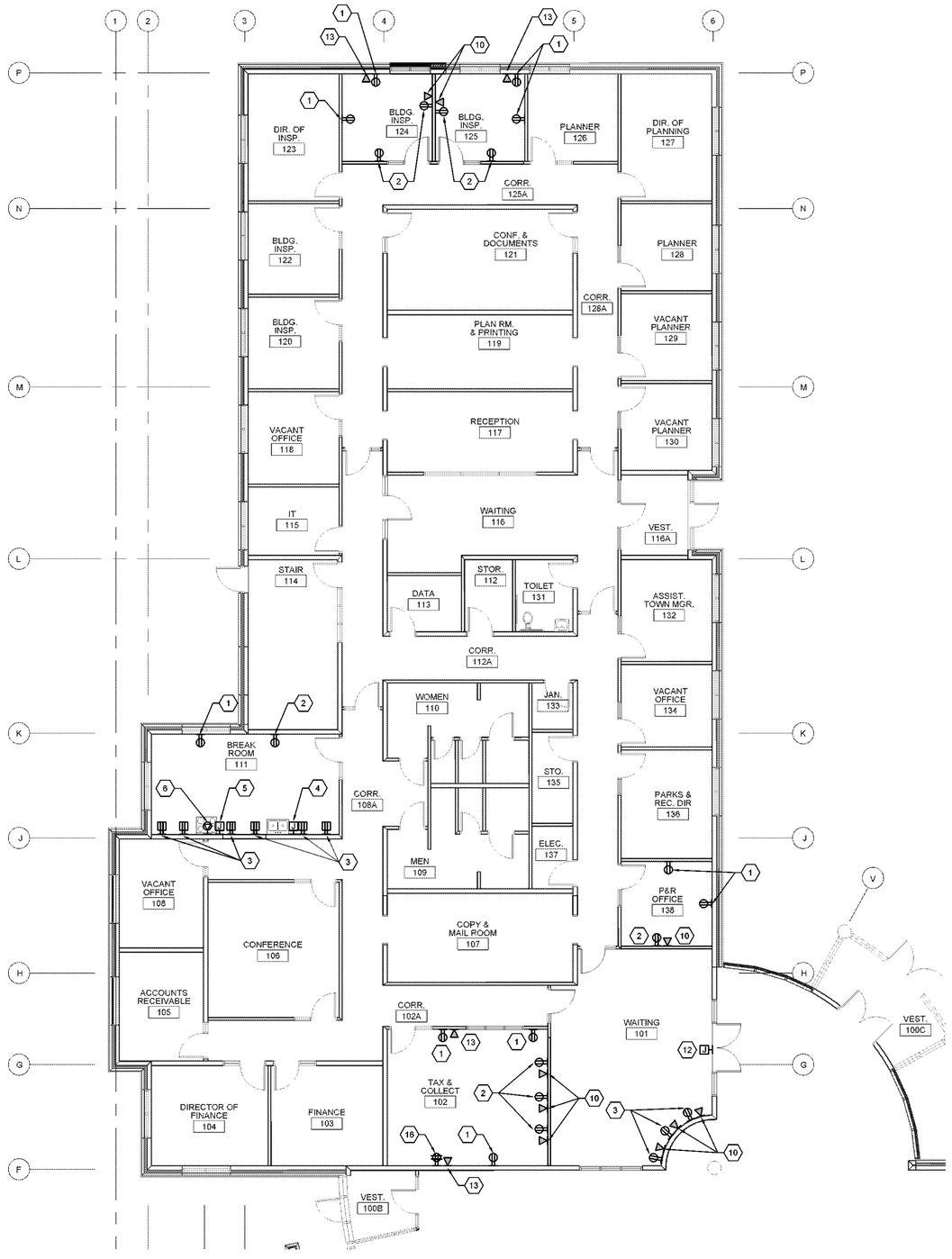

1 **POWER FIRST FLOOR PLAN - DEMOLITION WORK**

1/8" = 1'-0"

PLAN NORTH

KEYED POWER DEMOLITION NOTES

1. EXISTING DUPLEX RECEPTACLE TO REMAIN. RECONNECT/RECONFIGURE EXISTING MULTIWIRE BRANCH CIRCUITS AS REQUIRED TO PROVIDE CODE COMPLIANT OPERATIONAL CIRCUIT.
2. REMOVE EXISTING DUPLEX RECEPTACLE, OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS. RECONNECT/ RECONFIGURE EXISTING MULTIWIRE BRANCH CIRCUITS AS REQUIRED TO PROVIDE CODE COMPLIANT OPERATIONAL CIRCUIT.
3. REMOVE EXISTING DUPLEX RECEPTACLE, OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS TO SOURCE,
4. REMOVE EXISTING DISHWASHER OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS TO SOURCE
5. REMOVE EXISTING RANGE HOOD OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS TO SOURCE
6. REMOVE EXISTING RANGE RECEPTACLE, OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS TO SOURCE
7. REMOVE EXISTING FLOORBOX, RACEWAYS AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS TO SOURCE OR RECONNECT AS REQUIRED. REMOVE EXISTING TELECOM/DATA CABLES TO SOURCE. FILL EXISTING FLOOR OPENING TO MATCH SURROUNDING CONDITIONS
8. REMOVE EXISTING TELEVISION DEVICE, OUTLET BOX AND ASSOCIATED CABLES TO SOURCE, TYPICAL
9. NOT USED
10. REMOVE EXISTING TELECOMMUNICATION DEVICES, OUTLET BOX, RACEWAY AND TELECOM/DATA CABLES TO SOURCE, TYPICAL
11. EXISTING DUPLEX RECEPTACLE TO REMAIN. RECONNECT/RECONFIGURE EXISTING BRANCH CIRCUIT CONDUCTORS AS REQUIRED TO PROVIDE CODE COMPLIANT OPERATIONAL CIRCUIT.
12. REMOVE EXISTING DOOR CONTROL POWER CONNECTION. RECONNECT/ RECONFIGURE EXISTING BRANCH CIRCUIT AS REQUIRED TO PROVIDE CODE COMPLIANT OPERATIONAL CIRCUIT.
13. EXISTING TELECOMMUNICATIONS DEVICE TO REMAIN
14. EXISTING POKE THRU FLOOR BOX TO REMAIN
15. REMOVE EXISTING BRANCH CIRCUIT CONNECTION
16. EXISTING QUAD RECEPTACLE TO REMAIN
17. REMOVE EXISTING DUPLEX RECEPTACLE. EXISTING OUTLET BOX AND BRANCH CIRCUIT CONDUCTORS TO REMAIN FOR REUSE/RECONNECTION TO NEW RECEPTACLE

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023311 W. ALLEN CRIBB
02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Power First Floor Plan - Demolition Work

Rev.	Date	Notes

ED1.3

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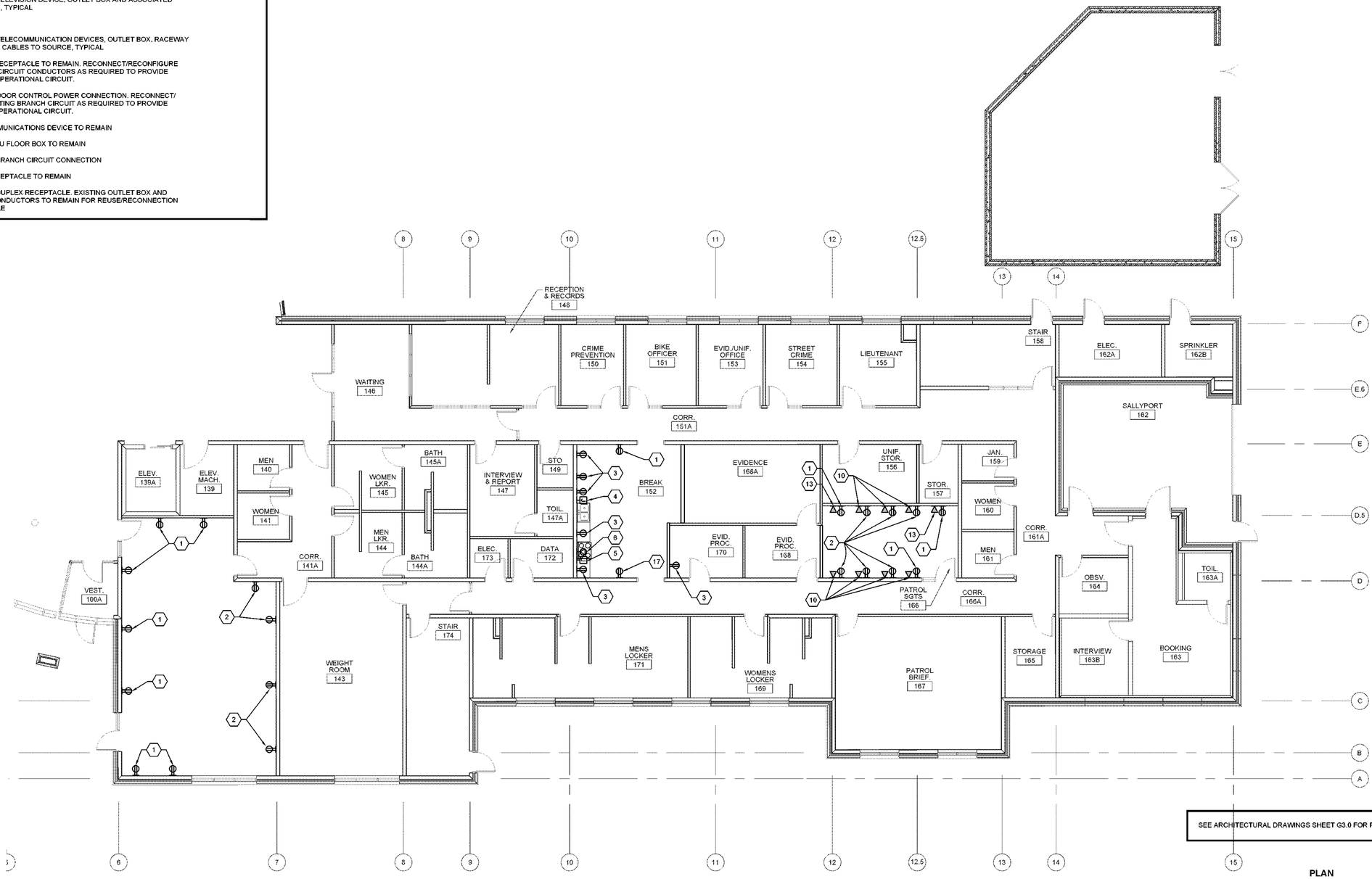
KEYED POWER DEMOLITION NOTES

1. EXISTING DUPLEX RECEPTACLE TO REMAIN. RECONNECT/RECONFIGURE EXISTING MULTIWIRE BRANCH CIRCUITS AS REQUIRED TO PROVIDE CODE COMPLIANT OPERATIONAL CIRCUIT.
2. REMOVE EXISTING DUPLEX RECEPTACLE, OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS. RECONNECT/ RECONFIGURE EXISTING MULTIWIRE BRANCH CIRCUITS AS REQUIRED TO PROVIDE CODE COMPLIANT OPERATIONAL CIRCUIT.
3. REMOVE EXISTING DUPLEX RECEPTACLE, OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS TO SOURCE.
4. REMOVE EXISTING DISHWASHER OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS TO SOURCE
5. REMOVE EXISTING RANGE HOOD OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS TO SOURCE
6. REMOVE EXISTING RANGE RECEPTACLE, OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS TO SOURCE
7. REMOVE EXISTING FLOORBOX, RACEWAYS AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS TO SOURCE OR RECONNECT AS REQUIRED. REMOVE EXISTING TELECOM/DATA CABLES TO SOURCE. FILL EXISTING FLOOR OPENING TO MATCH SURROUNDING CONDITIONS
8. REMOVE EXISTING TELEVISION DEVICE, OUTLET BOX AND ASSOCIATED CABLES TO SOURCE, TYPICAL
9. NOT USED
10. REMOVE EXISTING TELECOMMUNICATION DEVICES, OUTLET BOX, RACEWAY AND TELECOM/DATA CABLES TO SOURCE, TYPICAL
11. EXISTING DUPLEX RECEPTACLE TO REMAIN. RECONNECT/RECONFIGURE EXISTING BRANCH CIRCUIT CONDUCTORS AS REQUIRED TO PROVIDE CODE COMPLIANT OPERATIONAL CIRCUIT.
12. REMOVE EXISTING DOOR CONTROL POWER CONNECTION. RECONNECT/ RECONFIGURE EXISTING BRANCH CIRCUIT AS REQUIRED TO PROVIDE CODE COMPLIANT OPERATIONAL CIRCUIT.
13. EXISTING TELECOMMUNICATIONS DEVICE TO REMAIN
14. EXISTING POKE THRU FLOOR BOX TO REMAIN
15. REMOVE EXISTING BRANCH CIRCUIT CONNECTION
16. EXISTING QUAD RECEPTACLE TO REMAIN
17. REMOVE EXISTING DUPLEX RECEPTACLE. EXISTING OUTLET BOX AND BRANCH CIRCUIT CONDUCTORS TO REMAIN FOR REUSE/RECONNECTION TO NEW RECEPTACLE



1 POWER FIRST FLOOR PLAN - DEMOLITION WORK
1/8" = 1'-0"

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02/22/2024

Leland Town Hall Addition & Renovations
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Construction Drawings

Issue Date: February 23, 2024

Power First Floor Plan - Demolition Work

Rev.	Date	Notes

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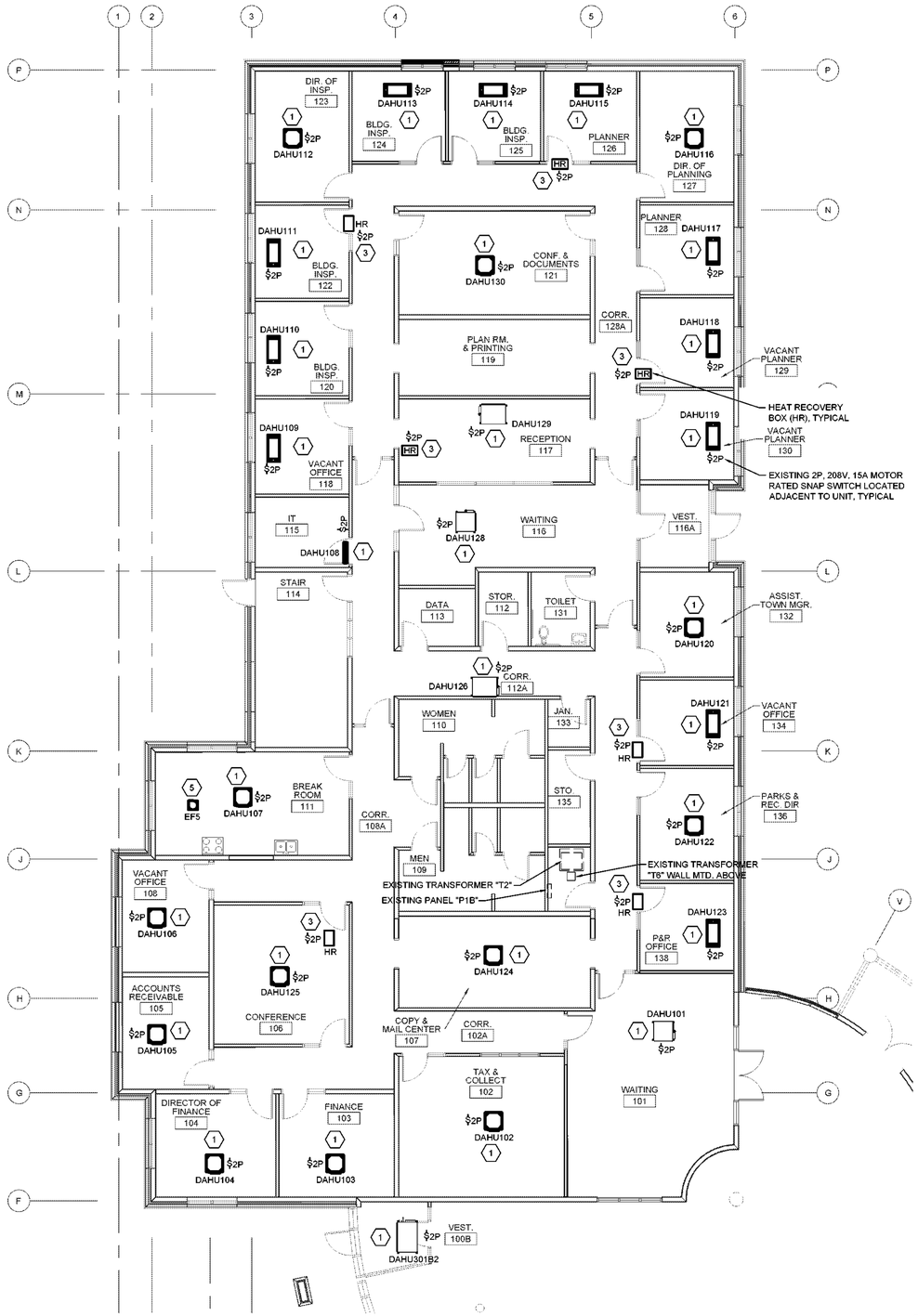

1 **MECHANICAL POWER FIRST FLOOR PLAN - DEMOLITION WORK**
1/8" = 1'-0"

PLAN NORTH

KEYED MECHANICAL POWER DEMOLITION NOTES

1. REMOVE AND SECURE EXISTING DAHU BRANCH CIRCUIT POWER CONNECTION FOR RECONNECTION TO NEW DAHU. EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH TO REMAIN
2. REMOVE EXISTING OUTDOOR UNIT BRANCH CIRCUIT RACEWAY AND CONDUCTORS TO SOURCE.
3. REMOVE AND SECURE EXISTING HEAT RECOVERY BOX (HR) BRANCH CIRCUIT POWER CONNECTION FOR RECONNECTION TO NEW HEAT RECOVERY BOX. EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH TO REMAIN.
4. REMOVE AND SECURE EXISTING ERV BRANCH CIRCUIT POWER CONNECTION FOR RECONNECT TO NEW ERV. EXISTING SAFETY SWITCH TO REMAIN
5. EXISTING EXHAUST FAN TO BE REMOVED. REMOVE EXISTING BRANCH CIRCUIT TO SOURCE
6. EXISTING EXHAUST FAN TO REMAIN

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mech Power First Floor Plan - Demolition Work

Rev.	Date	Notes

ED1.5

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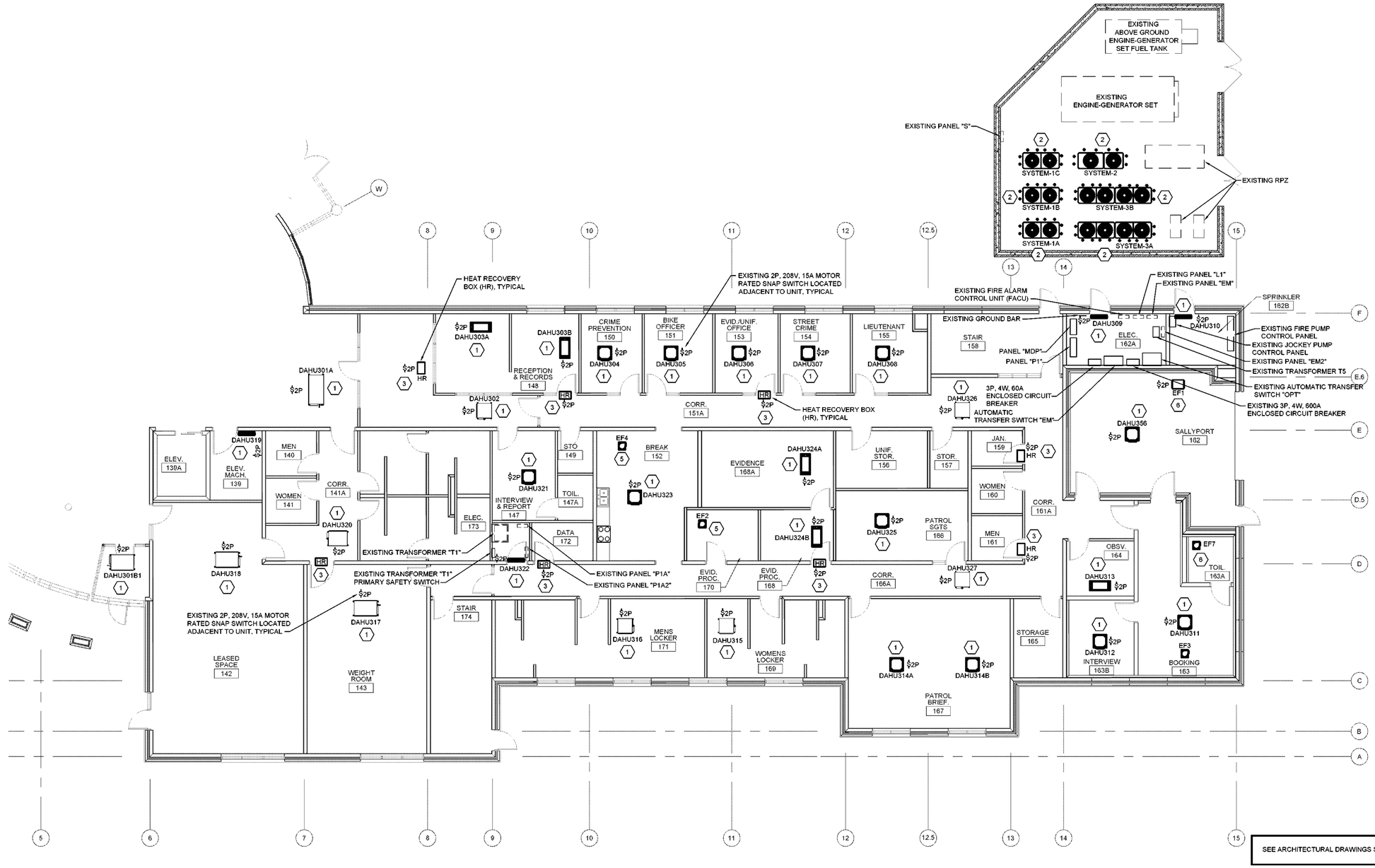
KEYED MECHANICAL POWER DEMOLITION NOTES

1. REMOVE AND SECURE EXISTING DAHU BRANCH CIRCUIT POWER CONNECTION FOR RECONNECTION TO NEW DAHU. EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH TO REMAIN
2. REMOVE EXISTING OUTDOOR UNIT BRANCH CIRCUIT RACEWAY AND CONDUCTORS TO SOURCE.
3. REMOVE AND SECURE EXISTING HEAT RECOVERY BOX (HR) BRANCH CIRCUIT POWER CONNECTION FOR RECONNECTION TO NEW HEAT RECOVERY BOX. EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH TO REMAIN.
4. REMOVE AND SECURE EXISTING ERV BRANCH CIRCUIT POWER CONNECTION FOR RECONNECT TO NEW ERV. EXISTING SAFETY SWITCH TO REMAIN
5. EXISTING EXHAUST FAN TO BE REMOVED. REMOVE EXISTING BRANCH CIRCUIT TO SOURCE
6. EXISTING EXHAUST FAN TO REMAIN



SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

1 **MECHANICAL POWER FIRST FLOOR PLAN - DEMOLITION WORK**
1/8" = 1'-0"

PLAN NORTH

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02/22/2024

Leland Town Hall Addition & Renovations
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Construction Drawings

Issue Date: February 23, 2024

Mech Power First Floor Plan - Demolition Work

Rev.	Date	Notes

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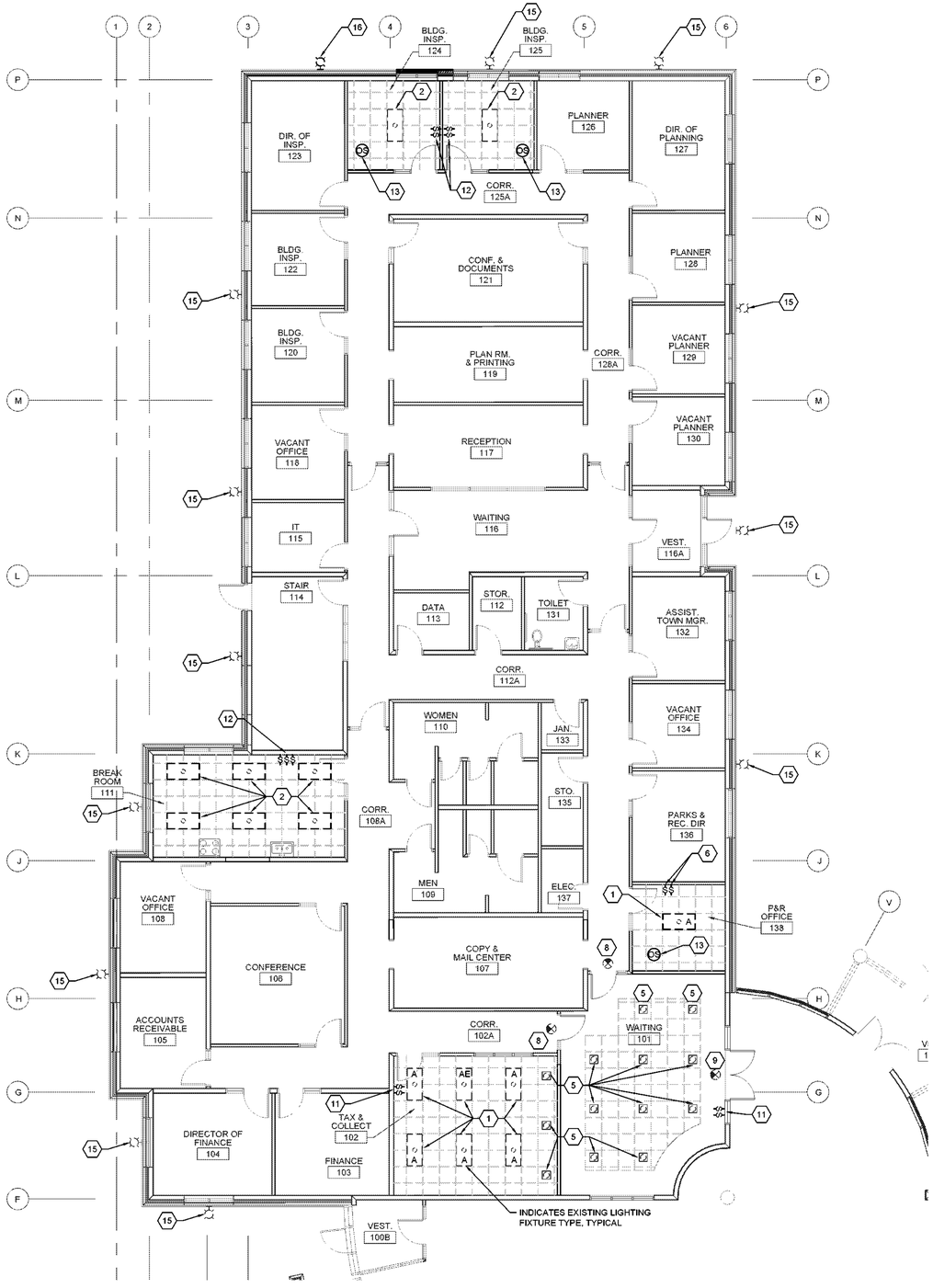

1 **LIGHTING FIRST FLOOR PLAN - DEMOLITION WORK**
1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

KEYED LIGHTING DEMOLITION NOTES

1. SALVAGE EXISTING 2x4 LAY-IN FLUORESCENT LIGHTING FIXTURE FOR RELOCATION/REINSTALLATION
2. REMOVE EXISTING 2x4 LAY-IN FLUORESCENT LIGHTING FIXTURE. DELIVER TO OWNER OR AT OWNERS OPTION DISPOSE OF PROPERLY
3. REMOVE EXISTING PENDANT MOUNTED FLUORESCENT LIGHTING FIXTURE. DELIVER TO OWNER OR AT OWNERS OPTION, DISPOSE OF PROPERLY
4. SALVAGE EXISTING FLUORESCENT DOWNLIGHT FIXTURE FOR RELOCATION/REINSTALLATION
5. REMOVE EXISTING FLUORESCENT DOWNLIGHT. DELIVER TO OWNER OR AT OWNERS OPTION DISPOSE OF PROPERLY
6. EXISTING LIGHT SWITCH TO REMAIN
7. REMOVE EXISTING WALL MOUNTED FLUORESCENT LIGHTING FIXTURE. DELIVER TO OWNER OR AT OWNERS OPTION DISPOSE OF PROPERLY
8. EXISTING CEILING MOUNTED EXIT FIXTURE TO REMAIN
9. SALVAGE EXISTING CEILING MOUNTED EXIT FIXTURE FOR RELOCATION/REINSTALLATION
10. EXISTING FLUORESCENT DOWNLIGHT FIXTURE TO REMAIN
11. REMOVE EXISTING SWITCH, SWITCH LEGS, OUTLET BOX AND ASSOCIATED RACEWAY AND BRANCH CIRCUIT CONDUCTORS
12. REMOVE EXISTING SWITCH AND SWITCH LEGS. EXISTING OUTLET BOX AND ASSOCIATED RACEWAY AND BRANCH CIRCUIT CONDUCTORS TO REMAIN FOR REUSE
13. REMOVE EXISTING OCCUPANCY SENSOR AND ASSOCIATED CONDUCTORS
14. NOT USED
15. REMOVE EXISTING WALL MOUNTED EXTERIOR LIGHTING FIXTURE. EXISTING OUTLET BOX AND LIGHTING BRANCH CIRCUIT CONDUCTORS TO REMAIN FOR REUSE/RECONNECTION TO NEW LIGHTING FIXTURES
16. REMOVE EXISTING WALL MOUNTED EXTERIOR LIGHTING FIXTURE. EXISTING OUTLET BOX AND LIGHTING BRANCH CIRCUIT CONDUCTORS TO REMAIN. PROVIDE AND INSTALL NEW STAINLESS STEEL BLANK PLATE ON EXISTING OUTLET BOX

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Lighting First Floor Plan - Demolition Work

Rev.	Date	Notes

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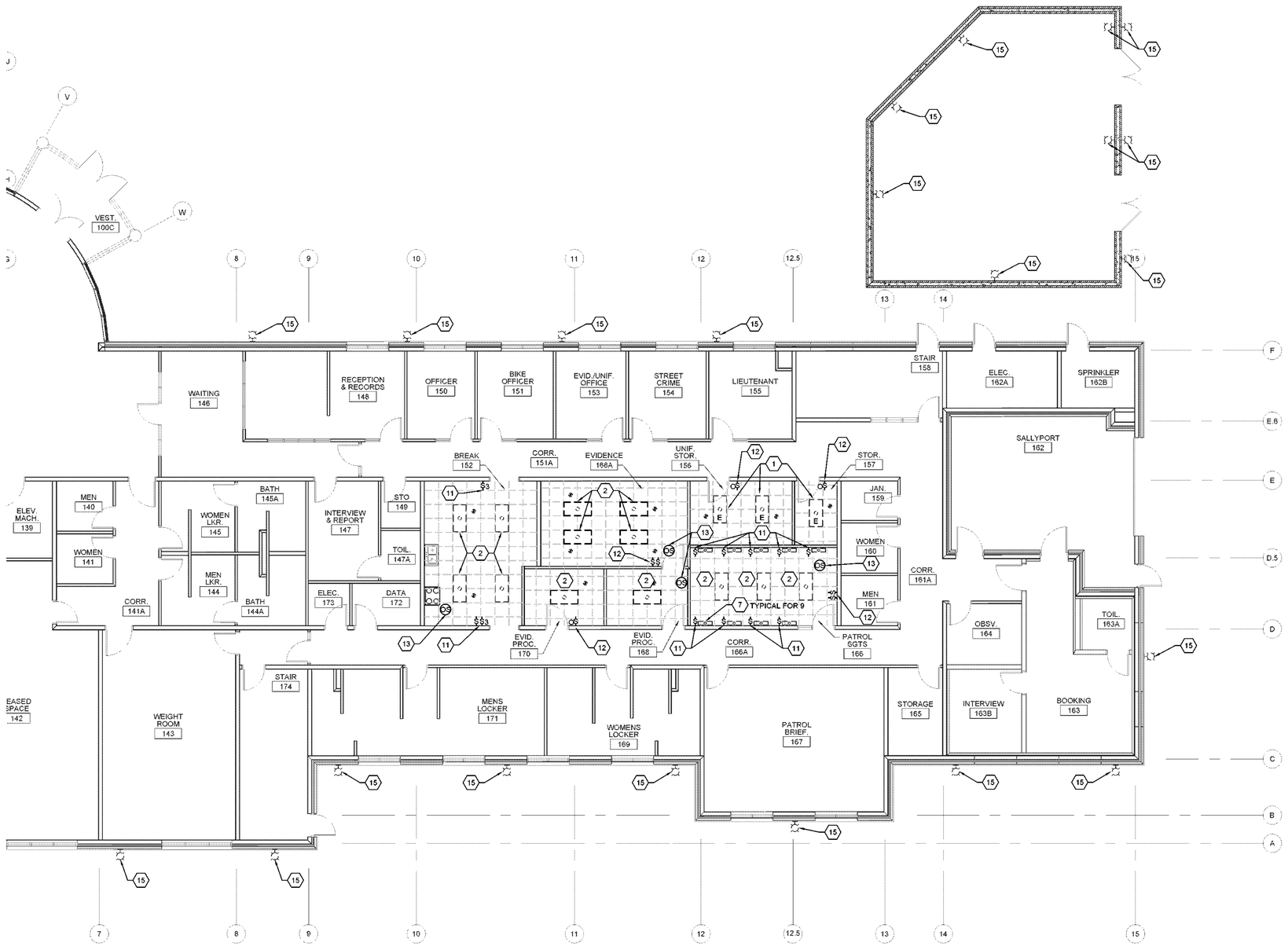

KEYED LIGHTING DEMOLITION NOTES

1. SALVAGE EXISTING 2x4 LAY-IN FLUORESCENT LIGHTING FIXTURE FOR RELOCATION/REINSTALLATION
2. REMOVE EXISTING 2x4 LAY-IN FLUORESCENT LIGHTING FIXTURE. DELIVER TO OWNER OR AT OWNERS OPTION DISPOSE OF PROPERLY
3. REMOVE EXISTING PENDANT MOUNTED FLUORESCENT LIGHTING FIXTURE. DELIVER TO OWNER OR AT OWNERS OPTION, DISPOSE OF PROPERLY
4. SALVAGE EXISTING FLUORESCENT DOWNLIGHT FIXTURE FOR RELOCATION/REINSTALLATION
5. REMOVE EXISTING FLUORESCENT DOWNLIGHT. DELIVER TO OWNER OR AT OWNERS OPTION DISPOSE OF PROPERLY
6. EXISTING LIGHT SWITCH TO REMAIN
7. REMOVE EXISTING WALL MOUNTED FLUORESCENT LIGHTING FIXTURE. DELIVER TO OWNER OR AT OWNERS OPTION DISPOSE OF PROPERLY
8. EXISTING CEILING MOUNTED EXIT FIXTURE TO REMAIN
9. SALVAGE EXISTING CEILING MOUNTED EXIT FIXTURE FOR RELOCATION/REINSTALLATION
10. EXISTING FLUORESCENT DOWNLIGHT FIXTURE TO REMAIN
11. REMOVE EXISTING SWITCH, SWITCH LEGS, OUTLET BOX AND ASSOCIATED RACEWAY AND BRANCH CIRCUIT CONDUCTORS
12. REMOVE EXISTING SWITCH AND SWITCH LEGS. EXISTING OUTLET BOX AND ASSOCIATED RACEWAY AND BRANCH CIRCUIT CONDUCTORS TO REMAIN FOR REUSE
13. REMOVE EXISTING OCCUPANCY SENSOR AND ASSOCIATED CONDUCTORS
14. NOT USED
15. REMOVE EXISTING WALL MOUNTED EXTERIOR LIGHTING FIXTURE. EXISTING OUTLET BOX AND LIGHTING BRANCH CIRCUIT CONDUCTORS TO REMAIN FOR REUSE/RECONNECTION TO NEW LIGHTING FIXTURES
16. REMOVE EXISTING WALL MOUNTED EXTERIOR LIGHTING FIXTURE. EXISTING OUTLET BOX AND LIGHTING BRANCH CIRCUIT CONDUCTORS TO REMAIN. PROVIDE AND INSTALL NEW STAINLESS STEEL BLANK PLATE ON EXISTING OUTLET BOX

1 LIGHTING FIRST FLOOR PLAN - DEMOLITION WORK
1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL SEAL 023311 ENGINEER W. ALLEN CRIBB
02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Lighting First Floor Plan - Demolition Work

Rev.	Date	Notes

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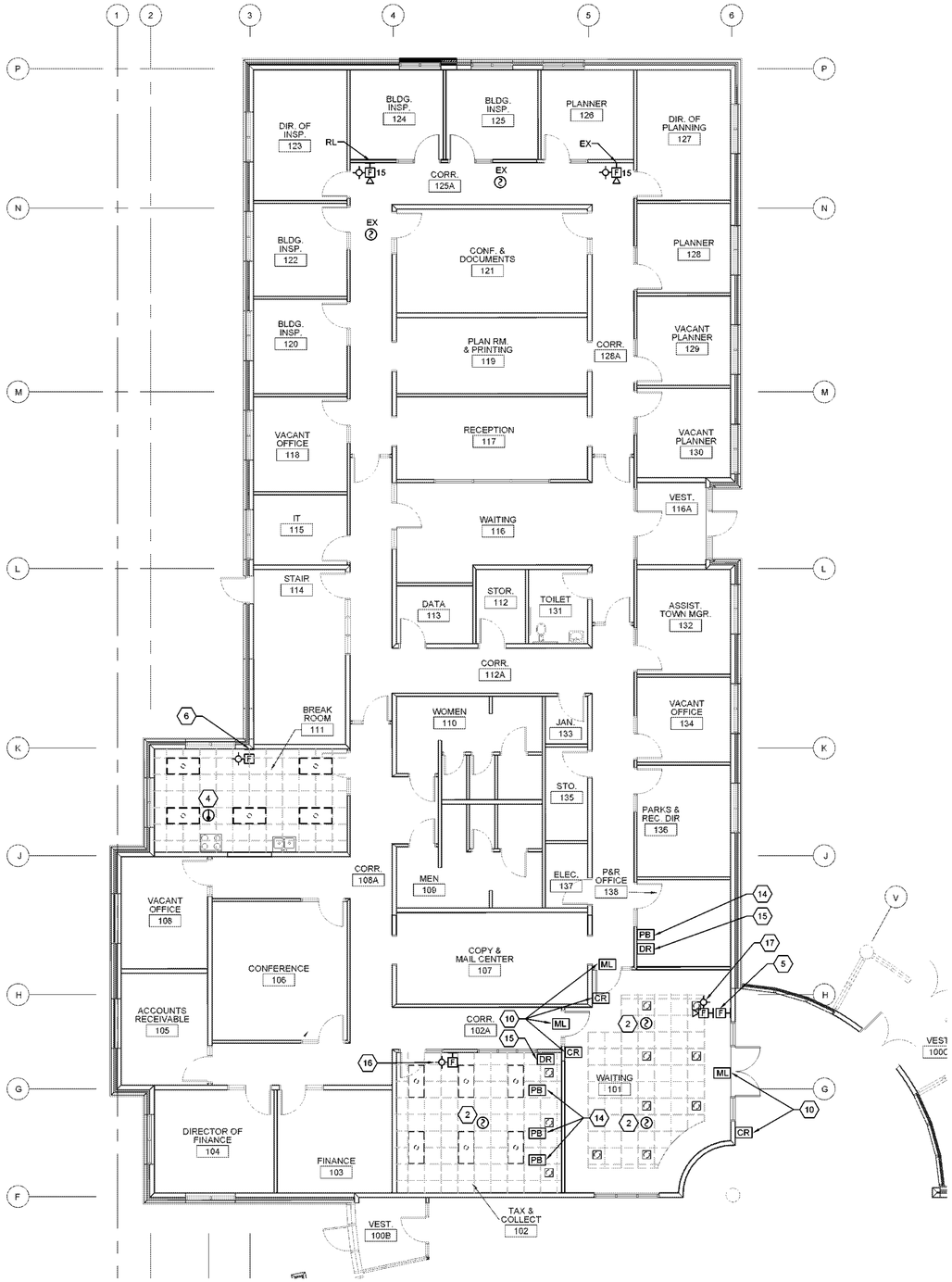

1 **SYSTEMS FIRST FLOOR PLAN - DEMOLITION WORK**
1/8" = 1'-0"

PLAN NORTH

KEYED SYSTEMS DEMOLITION NOTES

1. EXISTING CEILING MOUNTED SMOKE DETECTOR TO REMAIN
2. SALVAGE EXISTING CEILING MOUNTED SMOKE DETECTOR FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED CABLES, RACEWAYS, ETC.
3. REMOVE EXISTING CEILING MOUNTED SMOKE DETECTOR AND DELIVER TO OWNER. REMOVE ABANDONED CABLES, RACEWAYS, ETC.
4. SALVAGE EXISTING CEILING MOUNTED HEAT DETECTOR FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED CABLES, RACEWAYS, ETC.
5. SALVAGE EXISTING FIRE ALARM MANUAL STATION FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
6. EXISTING WALL MOUNTED FIRE ALARM AURAL/VISUAL DEVICE TO REMAIN
7. REMOVE EXISTING WALL MOUNTED FIRE ALARM AURAL/VISUAL DEVICE AND DELIVER TO OWNER. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
8. SALVAGE EXISTING WALL MOUNTED FIRE ALARM AURAL/VISUAL DEVICE FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
9. EXISTING ACCESS CARD CONTROL TO REMAIN
10. SALVAGE EXISTING ACCESS CARD CONTROL AND DOOR MAG LOCK FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC..
11. DISABLE AND ABANDON EXISTING ACCESS CARD CONTROL AND DOOR MAGNETIC LOCK IN PLACE. REMOVE ABANDONED CABLES, CONDUCTORS, ETC.
12. EXISTING PANIC PUSHBUTTON TO REMAIN
13. SALVAGE EXISTING PANIC SYSTEM PUSHBUTTON FOR RELOCATION/ REINSTALLATION IN ROOMS 119. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
14. REMOVE EXISTING PANIC SYSTEM PUSHBUTTON AND DELIVER TO OWNER. REMOVE ABANDONED OUTLET BOX, RACEWAY, CABLES, CONDUCTORS, ETC.
15. REMOVE EXISTING DOOR RELEASE PUSHBUTTON AND DELIVER TO OWNER. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
16. REMOVE EXISTING WALL MOUNTED FIRE ALARM VISUAL DEVICE AND DELIVER TO OWNER. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
17. SALVAGE EXISTING WALL MOUNTED FIRE ALARM AURAL/VISUAL DEVICE FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
18. SALVAGE EXISTING WALL MOUNTED FIRE ALARM VISUAL DEVICE FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
19. EXISTING WALL MOUNTED FIRE ALARM VISUAL DEVICE TO REMAIN.
20. EXISTING PANIC ALARM SYSTEM SECTIONAL CORRIDOR LIGHT TO REMAIN.
21. SALVAGE EXISTING DOOR RELEASE PUSHBUTTON AND DELIVER TO OWNER.

SYSTEMS DEMOLITION NOTES

1. RECONNECT EXISTING FIRE ALARM SYSTEM INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS THAT ARE DISCONNECTED AS PART OF THE SYSTEM DEMOLITION TO PROVIDE A FULLY OPERATIONAL SYSTEM
2. RECONNECT EXISTING DOOR ACCESS CONTROL SYSTEM CIRCUITS THAT ARE DISCONNECTED AS PART OF THE SYSTEM DEMOLITION TO PROVIDE A FULLY OPERATIONAL SYSTEM
3. RECONNECT EXISTING PANIC SYSTEM CONTROL CIRCUITS THAT ARE DISCONNECTED AS PART OF THE SYSTEM DEMOLITION TO PROVIDE A FULLY OPERATIONAL SYSTEM

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Systems First Floor Plan - Demolition Work

Rev.	Date	Notes

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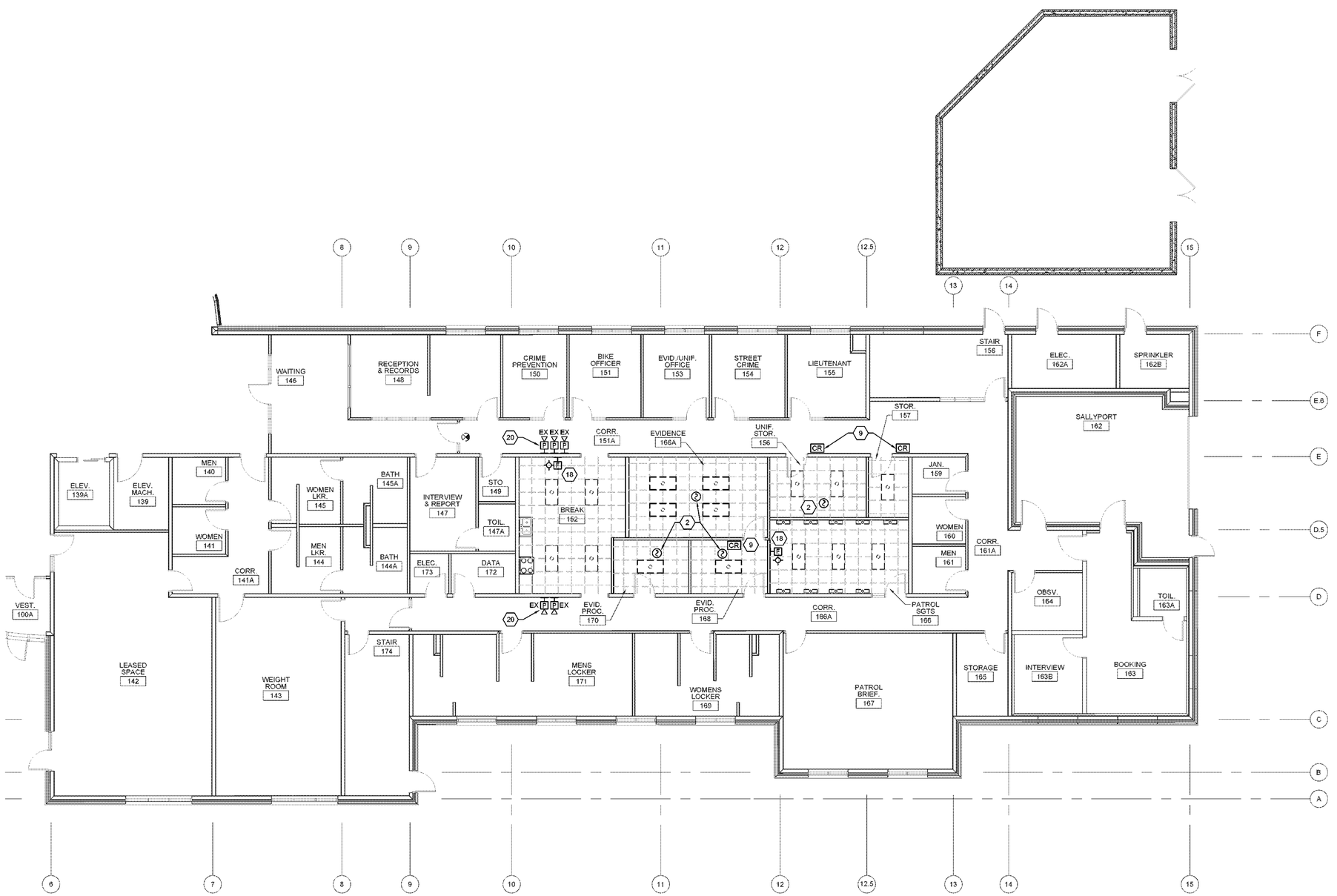

KEYED SYSTEMS DEMOLITION NOTES

1. EXISTING CEILING MOUNTED SMOKE DETECTOR TO REMAIN
2. SALVAGE EXISTING CEILING MOUNTED SMOKE DETECTOR FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED CABLES, RACEWAYS, ETC.
3. REMOVE EXISTING CEILING MOUNTED SMOKE DETECTOR AND DELIVER TO OWNER. REMOVE ABANDONED CABLES, RACEWAYS, ETC.
4. SALVAGE EXISTING CEILING MOUNTED HEAT DETECTOR FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED CABLES, RACEWAYS, ETC.
5. SALVAGE EXISTING FIRE ALARM MANUAL STATION FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
6. EXISTING WALL MOUNTED FIRE ALARM AURAL/VISUAL DEVICE TO REMAIN
7. REMOVE EXISTING WALL MOUNTED FIRE ALARM AURAL/VISUAL DEVICE AND DELIVER TO OWNER. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
8. SALVAGE EXISTING WALL MOUNTED FIRE ALARM AURAL/VISUAL DEVICE FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
9. EXISTING ACCESS CARD CONTROL TO REMAIN
10. SALVAGE EXISTING ACCESS CARD CONTROL AND DOOR MAG LOCK FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC..
11. DISABLE AND ABANDON EXISTING ACCESS CARD CONTROL AND DOOR MAGNETIC LOCK IN PLACE. REMOVE ABANDONED CABLES, CONDUCTORS, ETC.
12. EXISTING PANIC PUSHBUTTON TO REMAIN
13. SALVAGE EXISTING PANIC SYSTEM PUSHBUTTON FOR RELOCATION/ REINSTALLATION IN ROOMS 119. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
14. REMOVE EXISTING PANIC SYSTEM PUSHBUTTON AND DELIVER TO OWNER. REMOVE ABANDONED OUTLET BOX, RACEWAY, CABLES, CONDUCTORS, ETC.
15. REMOVE EXISTING DOOR RELEASE PUSHBUTTON AND DELIVER TO OWNER. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
16. REMOVE EXISTING WALL MOUNTED FIRE ALARM VISUAL DEVICE AND DELIVER TO OWNER. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
17. SALVAGE EXISTING WALL MOUNTED FIRE ALARM AURAL/VISUAL DEVICE FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
18. SALVAGE EXISTING WALL MOUNTED FIRE ALARM VISUAL DEVICE FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
19. EXISTING WALL MOUNTED FIRE ALARM VISUAL DEVICE TO REMAIN.
20. EXISTING PANIC ALARM SYSTEM SECTIONAL CORRIDOR LIGHT TO REMAIN.
21. SALVAGE EXISTING DOOR RELEASE PUSHBUTTON AND DELIVER TO OWNER.

SYSTEMS DEMOLITION NOTES

1. RECONNECT EXISTING FIRE ALARM SYSTEM INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS THAT ARE DISCONNECTED AS PART OF THE SYSTEM DEMOLITION TO PROVIDE A FULLY OPERATIONAL SYSTEM
2. RECONNECT EXISTING DOOR ACCESS CONTROL SYSTEM CIRCUITS THAT ARE DISCONNECTED AS PART OF THE SYSTEM DEMOLITION TO PROVIDE A FULLY OPERATIONAL SYSTEM
3. RECONNECT EXISTING PANIC SYSTEM CONTROL CIRCUITS THAT ARE DISCONNECTED AS PART OF THE SYSTEM DEMOLITION TO PROVIDE A FULLY OPERATIONAL SYSTEM

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

1 **SYSTEMS FIRST FLOOR PLAN - DEMOLITION WORK**
1/8" = 1'-0"
0 4' 8' 16'

PLAN NORTH

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02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Systems First Floor Plan - Demolition Work

Rev.	Date	Notes

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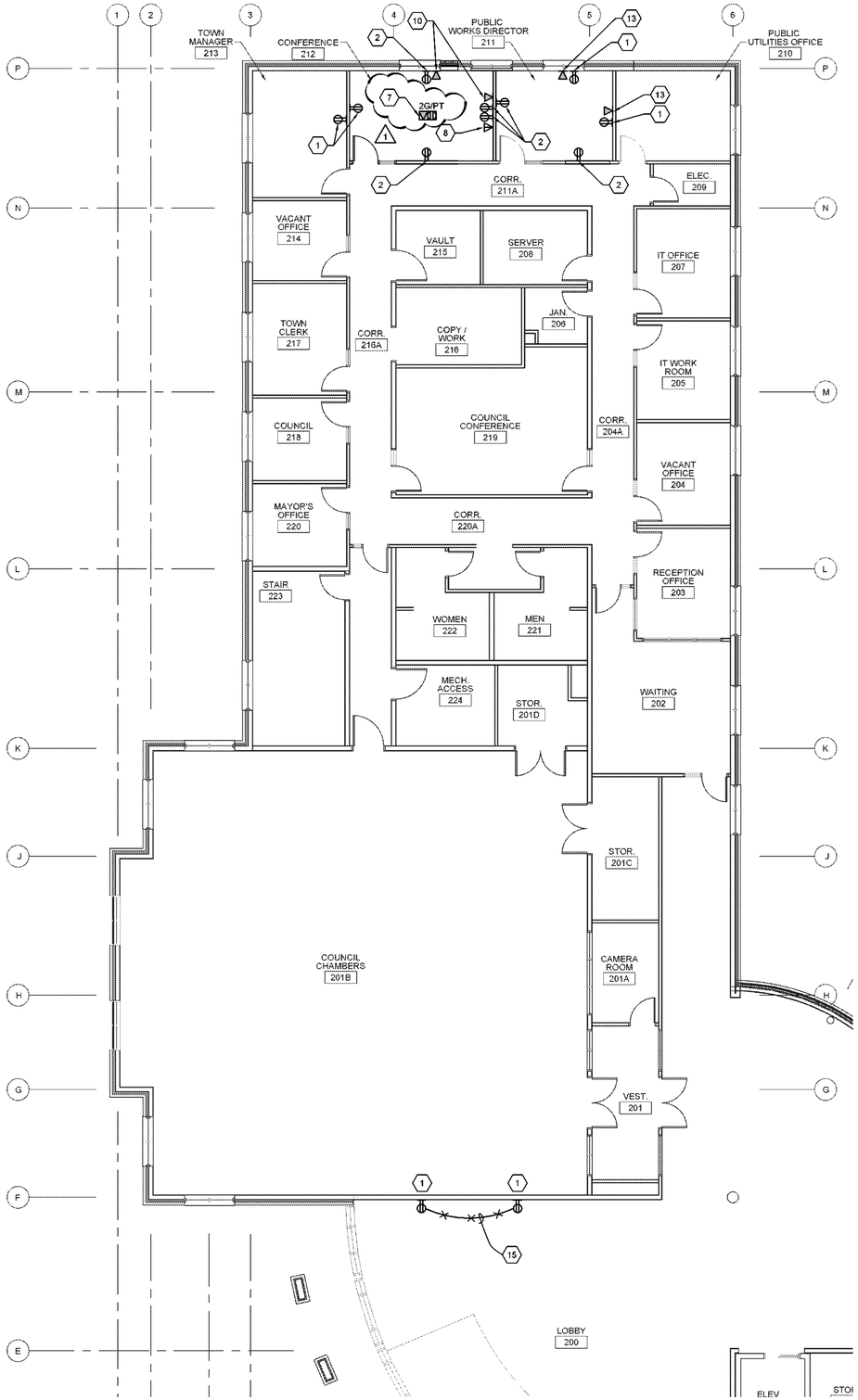

1 **POWER SECOND FLOOR PLAN - DEMOLITION WORK**
1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

KEYED POWER DEMOLITION NOTES

1. EXISTING DUPLEX RECEPTACLE TO REMAIN. RECONNECT/RECONFIGURE EXISTING MULTIWIRE BRANCH CIRCUITS AS REQUIRED TO PROVIDE CODE COMPLIANT OPERATIONAL CIRCUIT.
2. REMOVE EXISTING DUPLEX RECEPTACLE, OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS. RECONNECT/ RECONFIGURE EXISTING MULTIWIRE BRANCH CIRCUITS AS REQUIRED TO PROVIDE CODE COMPLIANT OPERATIONAL CIRCUIT.
3. REMOVE EXISTING DUPLEX RECEPTACLE, OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS TO SOURCE,
4. REMOVE EXISTING DISHWASHER OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS TO SOURCE
5. REMOVE EXISTING RANGE HOOD OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS TO SOURCE
6. REMOVE EXISTING RANGE RECEPTACLE, OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS TO SOURCE
7. (1) SALVAGE EXISTING POKE THRU FLOORBOX FOR RELCOATION/REINSTALALTION. REMOVE ASSOCIATED RACEWAYS AND BRANCH CIRCUIT CONDUCTORS TO SOURCE OR RECONNECT AS REQUIRED. REMOVE EXISTING TELECOM/DATA CABLES TO SOURCE. FILL EXISTING FLOOR OPENING TO MATCH SURROUNDING CONDITIONS
8. REMOVE EXISTING TELEVISION DEVICE, OUTLET BOX AND ASSOCIATED CABLES TO SOURCE, TYPICAL
9. NOT USED
10. REMOVE EXISTING TELECOMMUNICATION DEVICES, OUTLET BOX, RACEWAY AND TELECOM/DATA CABLES TO SOURCE, TYPICAL
11. EXISTING DUPLEX RECEPTACLE TO REMAIN. RECONNECT/RECONFIGURE EXISTING BRANCH CIRCUIT CONDUCTORS AS REQUIRED TO PROVIDE CODE COMPLIANT OPERATIONAL CIRCUIT.
12. REMOVE EXISTING DOOR CONTROL POWER CONNECTION. RECONNECT/ RECONFIGURE EXISTING BRANCH CIRCUIT AS REQUIRED TO PROVIDE CODE COMPLIANT OPERATIONAL CIRCUIT.
13. EXISTING TELECOMMUNICATIONS DEVICE TO REMAIN
14. EXISTING POKE THRU FLOOR BOX TO REMAIN
15. REMOVE EXISTING BRANCH CIRCUIT CONNECTION
16. EXISTING QUAD RECEPTACLE TO REMAIN
17. REMOVE EXISTING DUPLEX RECEPTACLE. EXISTING OUTLET BOX AND BRANCH CIRCUIT CONDUCTORS TO REMAIN FOR REUSE/RECONNECTION TO NEW RECEPTACLE

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL SEAL 023311 ENGINEER W. ALLEN CRIBB
03/08/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Power Second Floor Plan - Demolition Work

Rev.	Date	Notes
1	03.06.24	OWNER REVIEW

ED1.11

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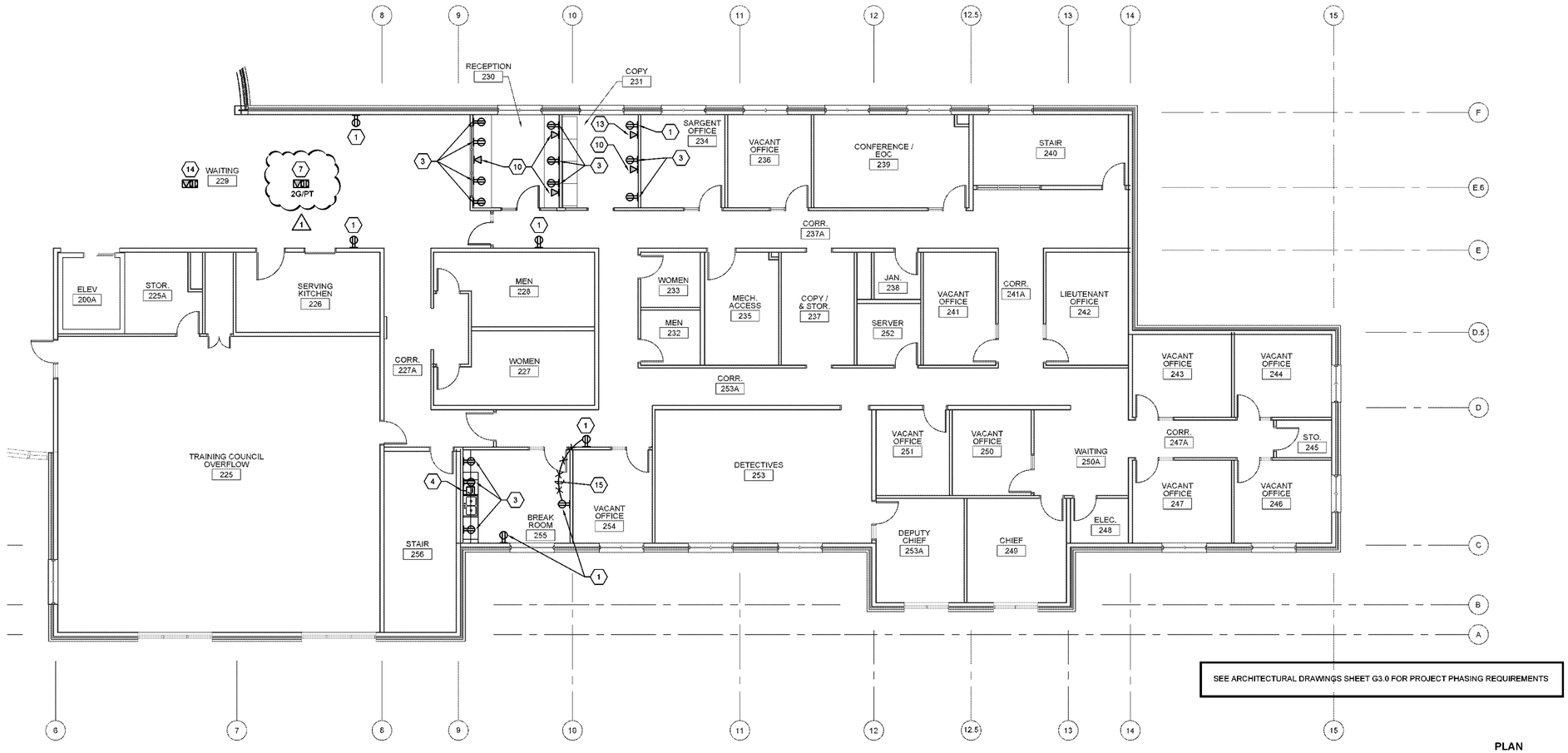
KEYED POWER DEMOLITION NOTES

1. EXISTING DUPLEX RECEPTACLE TO REMAIN. RECONNECT/RECONFIGURE EXISTING MULTIWIRE BRANCH CIRCUITS AS REQUIRED TO PROVIDE CODE COMPLIANT OPERATIONAL CIRCUIT.
2. REMOVE EXISTING DUPLEX RECEPTACLE, OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS. RECONNECT/ RECONFIGURE EXISTING MULTIWIRE BRANCH CIRCUITS AS REQUIRED TO PROVIDE CODE COMPLIANT OPERATIONAL CIRCUIT.
3. REMOVE EXISTING DUPLEX RECEPTACLE, OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS TO SOURCE,
4. REMOVE EXISTING DISHWASHER OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS TO SOURCE
5. REMOVE EXISTING RANGE HOOD OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS TO SOURCE
6. REMOVE EXISTING RANGE RECEPTACLE, OUTLET BOX, RACEWAY AND ASSOCIATED BRANCH CIRCUIT CONDUCTORS TO SOURCE
7. SALVAGE EXISTING POKE THRU FLOORBOX FOR RELCOATION/REINSTALALTION. REMOVE ASSOCIATED RACEWAYS AND BRANCH CIRCUIT CONDUCTORS TO SOURCE OR RECONNECT AS REQUIRED. REMOVE EXISTING TELECOM/DATA CABLES TO SOURCE. FILL EXISTING FLOOR OPENING TO MATCH SURROUNDING CONDITIONS
8. REMOVE EXISTING TELEVISION DEVICE, OUTLET BOX AND ASSOCIATED CABLES TO SOURCE. TYPICAL
9. NOT USED
10. REMOVE EXISTING TELECOMMUNICATION DEVICES, OUTLET BOX, RACEWAY AND TELECOM/DATA CABLES TO SOURCE. TYPICAL
11. EXISTING DUPLEX RECEPTACLE TO REMAIN. RECONNECT/RECONFIGURE EXISTING BRANCH CIRCUIT CONDUCTORS AS REQUIRED TO PROVIDE CODE COMPLIANT OPERATIONAL CIRCUIT.
12. REMOVE EXISTING DOOR CONTROL POWER CONNECTION. RECONNECT/ RECONFIGURE EXISTING BRANCH CIRCUIT AS REQUIRED TO PROVIDE CODE COMPLIANT OPERATIONAL CIRCUIT.
13. EXISTING TELECOMMUNICATIONS DEVICE TO REMAIN
14. EXISTING POKE THRU FLOOR BOX TO REMAIN
15. REMOVE EXISTING BRANCH CIRCUIT CONNECTION
16. EXISTING QUAD RECEPTACLE TO REMAIN
17. REMOVE EXISTING DUPLEX RECEPTACLE. EXISTING OUTLET BOX AND BRANCH CIRCUIT CONDUCTORS TO REMAIN FOR REUSE/RECONNECTION TO NEW RECEPTACLE



SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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

PLAN NORTH

0 4' 8' 16'

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03/08/2024

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Issue Date: February 23, 2024

Power Second Floor Plan - Demolition Work

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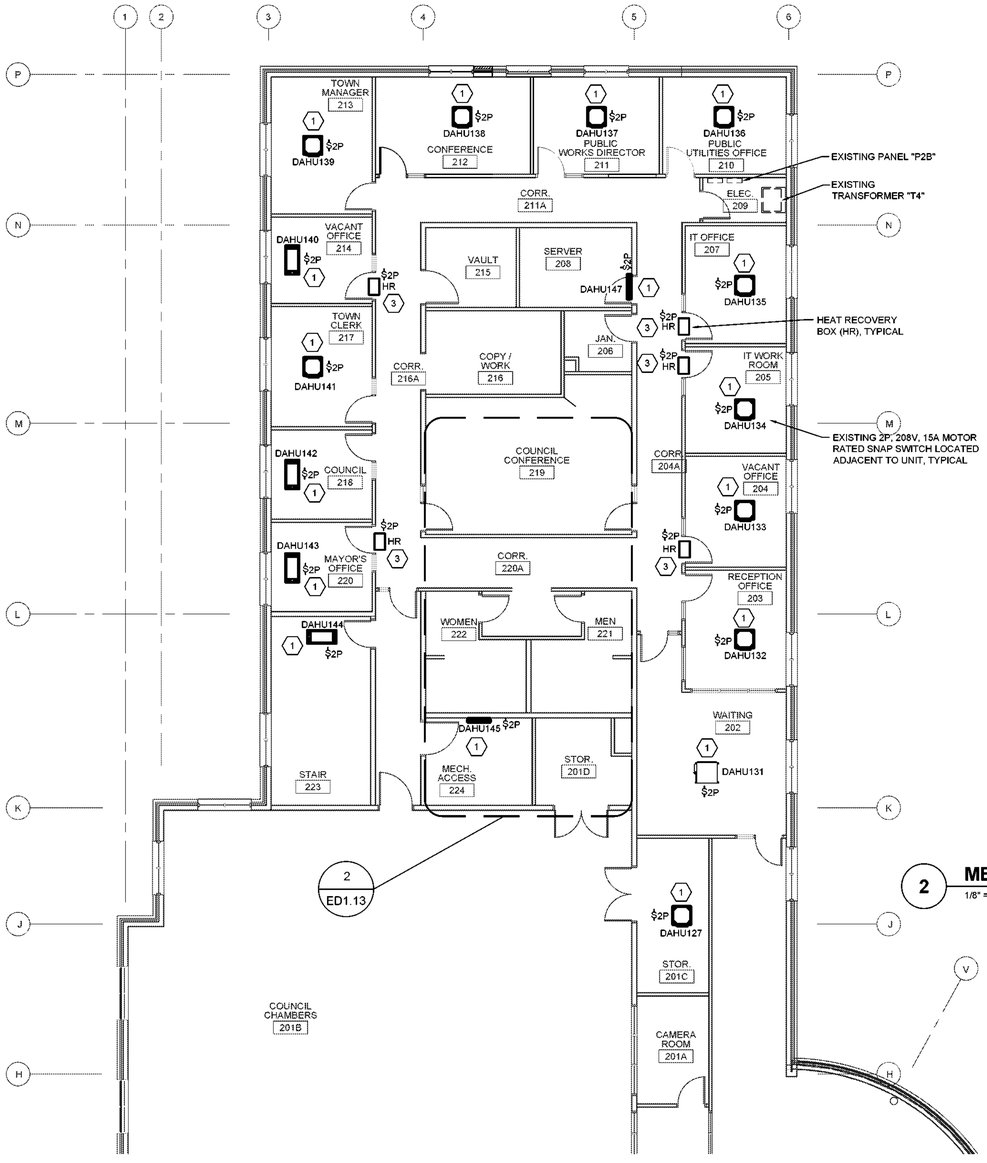
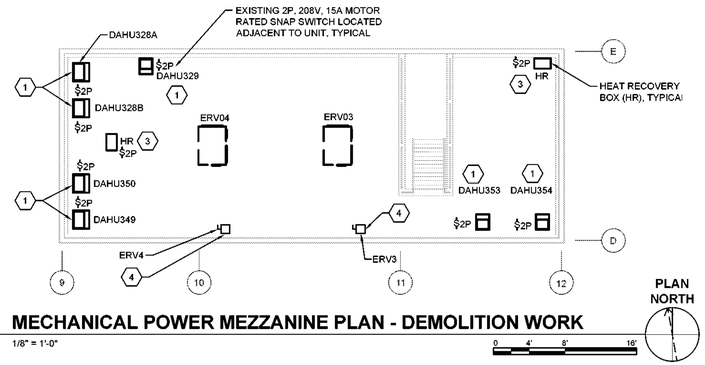


1 MECHANICAL POWER SECOND FLOOR PLAN - DEMOLITION WORK

1/8" = 1'-0"

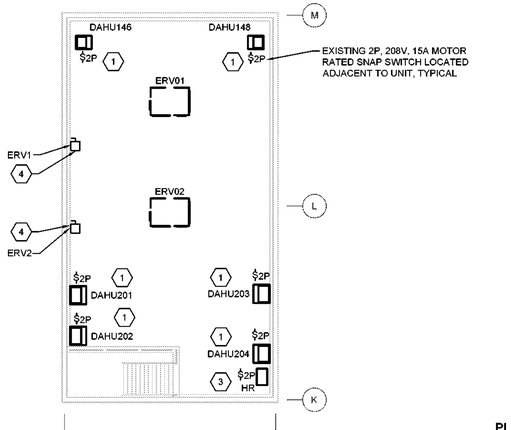
PLAN NORTH



3 MECHANICAL POWER MEZZANINE PLAN - DEMOLITION WORK

1/8" = 1'-0"

PLAN NORTH



2 MECHANICAL POWER MEZZANINE PLAN - DEMOLITION WORK

1/8" = 1'-0"

PLAN NORTH

KEYED MECHANICAL POWER DEMOLITION NOTES

1. REMOVE AND SECURE EXISTING DAHU BRANCH CIRCUIT POWER CONNECTION FOR RECONNECTION TO NEW DAHU. EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH TO REMAIN
2. REMOVE EXISTING OUTDOOR UNIT BRANCH CIRCUIT RACEWAY AND CONDUCTORS TO SOURCE.
3. REMOVE AND SECURE EXISTING HEAT RECOVERY BOX (HR) BRANCH CIRCUIT POWER CONNECTION FOR RECONNECTION TO NEW HEAT RECOVERY BOX. EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH TO REMAIN.
4. REMOVE AND SECURE EXISTING ERV BRANCH CIRCUIT POWER CONNECTION FOR RECONNECT TO NEW ERV. EXISTING SAFETY SWITCH TO REMAIN
5. EXISTING EXHAUST FAN TO BE REMOVED. REMOVE EXISTING BRANCH CIRCUIT TO SOURCE
6. EXISTING EXHAUST FAN TO REMAIN

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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02/22/2024

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Mech Power Second Floor Plan - Demolition Work

Rev.	Date	Notes

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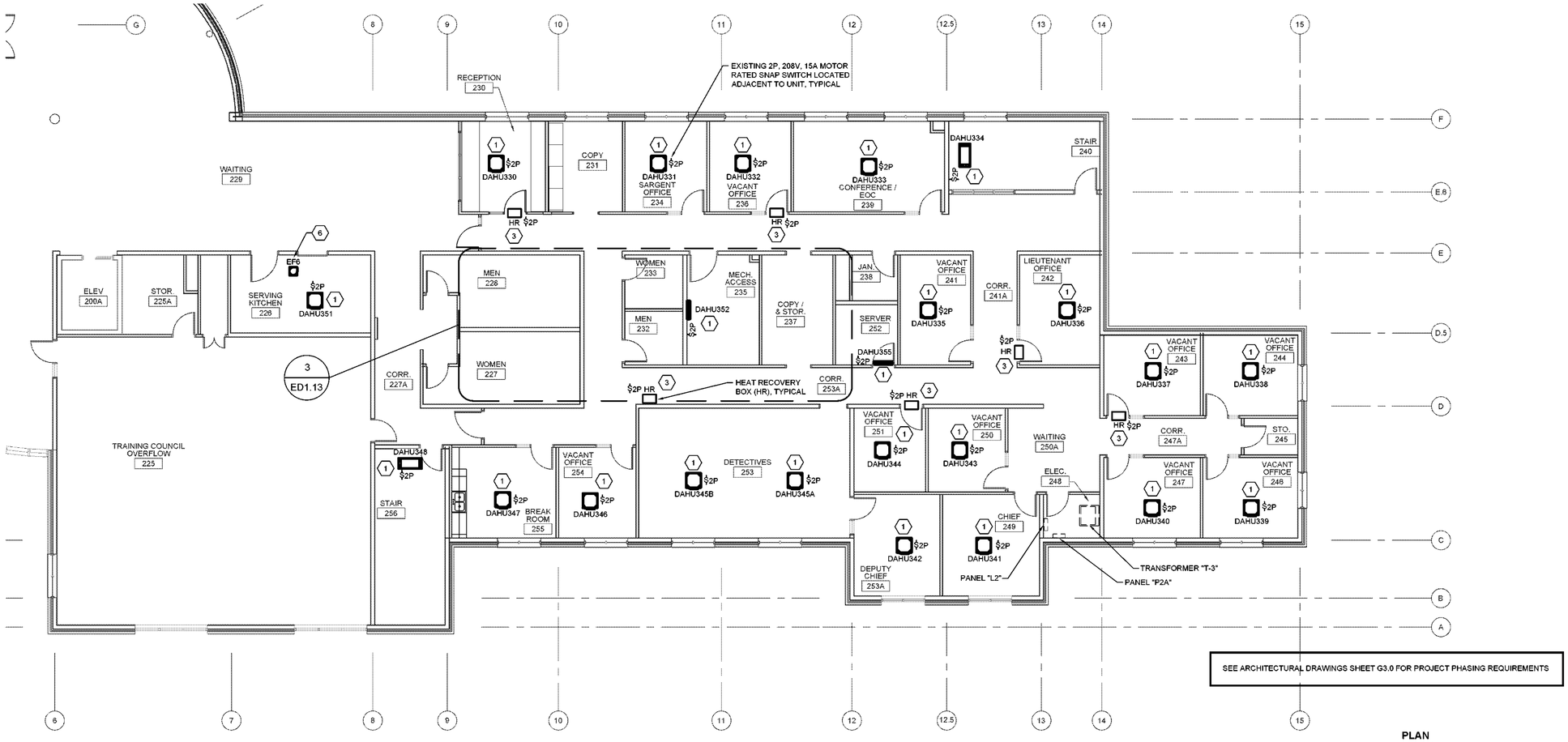
KEYED MECHANICAL POWER DEMOLITION NOTES

1. REMOVE AND SECURE EXISTING DAHU BRANCH CIRCUIT POWER CONNECTION FOR RECONNECTION TO NEW DAHU. EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH TO REMAIN
2. REMOVE EXISTING OUTDOOR UNIT BRANCH CIRCUIT RACEWAY AND CONDUCTORS TO SOURCE.
3. REMOVE AND SECURE EXISTING HEAT RECOVERY BOX (HR) BRANCH CIRCUIT POWER CONNECTION FOR RECONNECTION TO NEW HEAT RECOVERY BOX. EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH TO REMAIN.
4. REMOVE AND SECURE EXISTING ERV BRANCH CIRCUIT POWER CONNECTION FOR RECONNECT TO NEW ERV. EXISTING SAFETY SWITCH TO REMAIN
5. EXISTING EXHAUST FAN TO BE REMOVED. REMOVE EXISTING BRANCH CIRCUIT TO SOURCE
6. EXISTING EXHAUST FAN TO REMAIN



SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

1 **MECHANICAL POWER SECOND FLOOR PLAN - DEMOLITION WORK**
1/8" = 1'-0"

PLAN NORTH

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NORTH CAROLINA PROFESSIONAL SEAL 023311 ENGINEER WILLIAM ALLEN CRIBB
02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mech Power Second Floor Plan - Demolition Work

Rev.	Date	Notes

ED1.14

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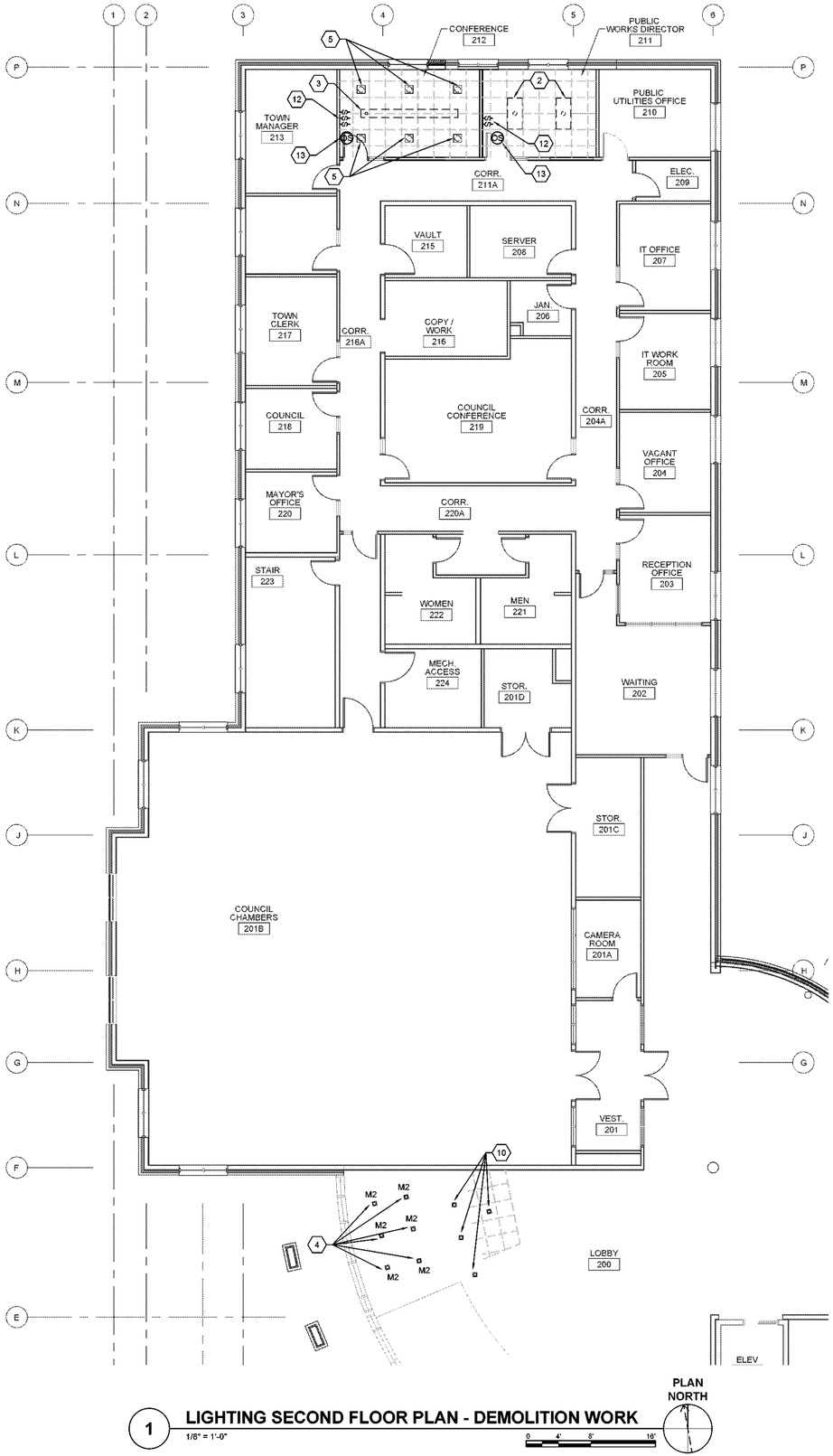

1 LIGHTING SECOND FLOOR PLAN - DEMOLITION WORK

1/8" = 1'-0"

KEYED LIGHTING DEMOLITION NOTES

1. SALVAGE EXISTING 2x4 LAY-IN FLUORESCENT LIGHTING FIXTURE FOR RELOCATION/REINSTALLATION
2. REMOVE EXISTING 2x4 LAY-IN FLUORESCENT LIGHTING FIXTURE. DELIVER TO OWNER OR AT OWNERS OPTION DISPOSE OF PROPERLY
3. REMOVE EXISTING PENDANT MOUNTED FLUORESCENT LIGHTING FIXTURE. DELIVER TO OWNER OR AT OWNERS OPTION, DISPOSE OF PROPERLY
4. SALVAGE EXISTING FLUORESCENT DOWNLIGHT FIXTURE FOR RELOCATION/REINSTALLATION
5. REMOVE EXISTING FLUORESCENT DOWNLIGHT. DELIVER TO OWNER OR AT OWNERS OPTION DISPOSE OF PROPERLY
6. EXISTING LIGHT SWITCH TO REMAIN
7. REMOVE EXISTING WALL MOUNTED FLUORESCENT LIGHTING FIXTURE. DELIVER TO OWNER OR AT OWNERS OPTION DISPOSE OF PROPERLY
8. EXISTING CEILING MOUNTED EXIT FIXTURE TO REMAIN
9. SALVAGE EXISTING CEILING MOUNTED EXIT FIXTURE FOR RELOCATION/REINSTALLATION
10. EXISTING FLUORESCENT DOWNLIGHT FIXTURE TO REMAIN
11. REMOVE EXISTING SWITCH, SWITCH LEGS, OUTLET BOX AND ASSOCIATED RACEWAY AND BRANCH CIRCUIT CONDUCTORS
12. REMOVE EXISTING SWITCH AND SWITCH LEGS. EXISTING OUTLET BOX AND ASSOCIATED RACEWAY AND BRANCH CIRCUIT CONDUCTORS TO REMAIN FOR REUSE
13. REMOVE EXISTING OCCUPANCY SENSOR AND ASSOCIATED CONDUCTORS
14. NOT USED
15. REMOVE EXISTING WALL MOUNTED EXTERIOR LIGHTING FIXTURE. EXISTING OUTLET BOX AND LIGHTING BRANCH CIRCUIT CONDUCTORS TO REMAIN FOR REUSE/RECONNECTION TO NEW LIGHTING FIXTURES
16. REMOVE EXISTING WALL MOUNTED EXTERIOR LIGHTING FIXTURE. EXISTING

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023311 WILLIAM ALLEN CRIBB
02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Lighting Second Floor Plan - Demolition Work

Rev.	Date	Notes

ED1.15

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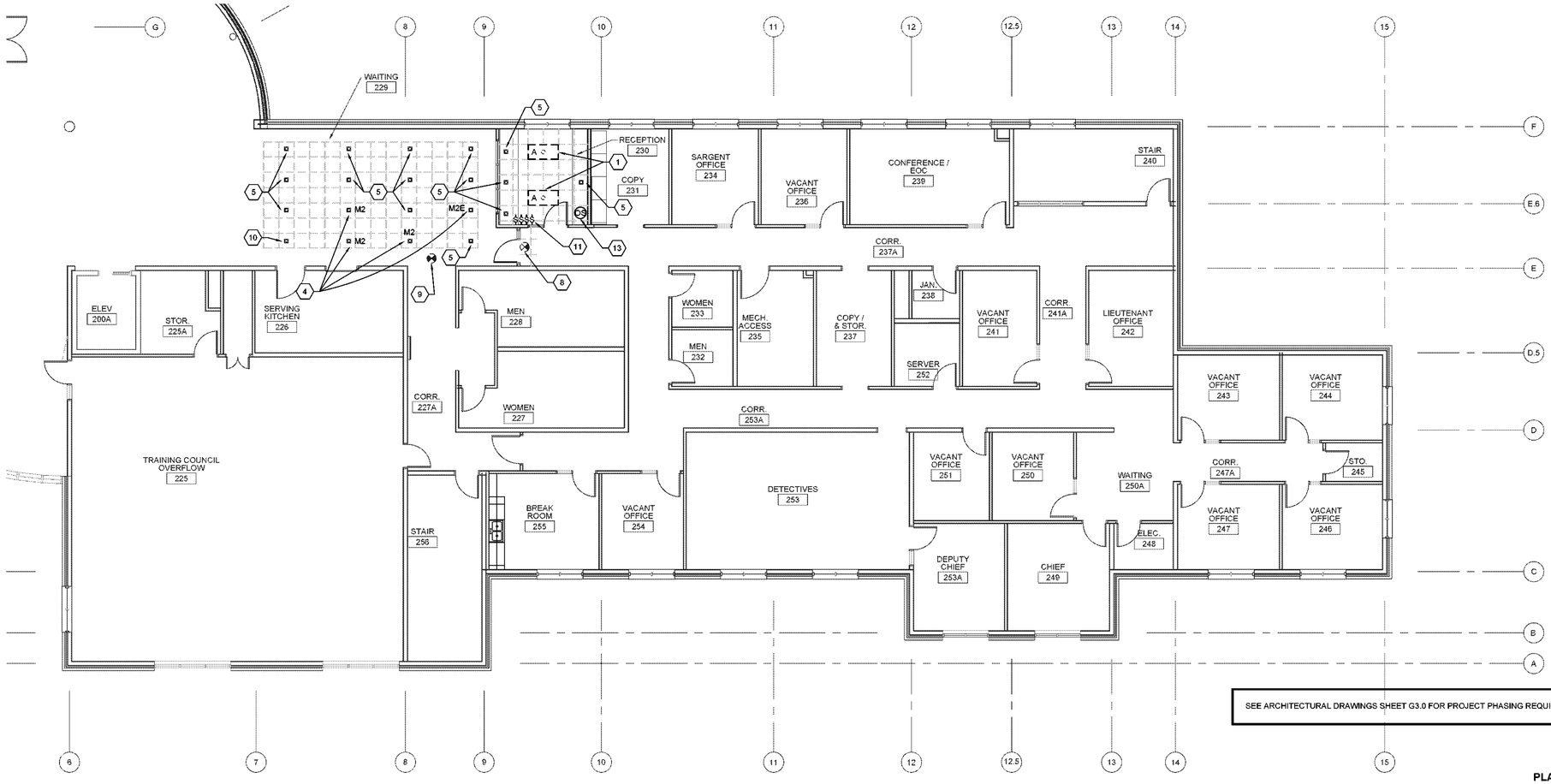
KEYED LIGHTING DEMOLITION NOTES

1. SALVAGE EXISTING 2x4 LAY-IN FLUORESCENT LIGHTING FIXTURE FOR RELOCATION/REINSTALLATION
2. REMOVE EXISTING 2x4 LAY-IN FLUORESCENT LIGHTING FIXTURE. DELIVER TO OWNER OR AT OWNERS OPTION DISPOSE OF PROPERLY
3. REMOVE EXISTING PENDANT MOUNTED FLUORESCENT LIGHTING FIXTURE. DELIVER TO OWNER OR AT OWNERS OPTION, DISPOSE OF PROPERLY
4. SALVAGE EXISTING FLUORESCENT DOWNLIGHT FIXTURE FOR RELOCATION/REINSTALLATION
5. REMOVE EXISTING FLUORESCENT DOWNLIGHT. DELIVER TO OWNER OR AT OWNERS OPTION DISPOSE OF PROPERLY
6. EXISTING LIGHT SWITCH TO REMAIN
7. REMOVE EXISTING WALL MOUNTED FLUORESCENT LIGHTING FIXTURE. DELIVER TO OWNER OR AT OWNERS OPTION DISPOSE OF PROPERLY
8. EXISTING CEILING MOUNTED EXIT FIXTURE TO REMAIN
9. SALVAGE EXISTING CEILING MOUNTED EXIT FIXTURE FOR RELOCATION/REINSTALLATION
10. EXISTING FLUORESCENT DOWNLIGHT FIXTURE TO REMAIN
11. REMOVE EXISTING SWITCH, SWITCH LEGS, OUTLET BOX AND ASSOCIATED RACEWAY AND BRANCH CIRCUIT CONDUCTORS
12. REMOVE EXISTING SWITCH AND SWITCH LEGS. EXISTING OUTLET BOX AND ASSOCIATED RACEWAY AND BRANCH CIRCUIT CONDUCTORS TO REMAIN FOR REUSE
13. REMOVE EXISTING OCCUPANCY SENSOR AND ASSOCIATED CONDUCTORS
14. NOT USED
15. REMOVE EXISTING WALL MOUNTED EXTERIOR LIGHTING FIXTURE. EXISTING OUTLET BOX AND LIGHTING BRANCH CIRCUIT CONDUCTORS TO REMAIN FOR REUSE/RECONNECTION TO NEW LIGHTING FIXTURES



SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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

PLAN NORTH

0 4' 8' 16'

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023311 WILLEN CHIBB
02/22/2024

Leland Town Hall Addition & Renovations
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Construction Drawings

Issue Date: February 23, 2024

Lighting Second Floor Plan - Demolition Work

Rev.	Date	Notes

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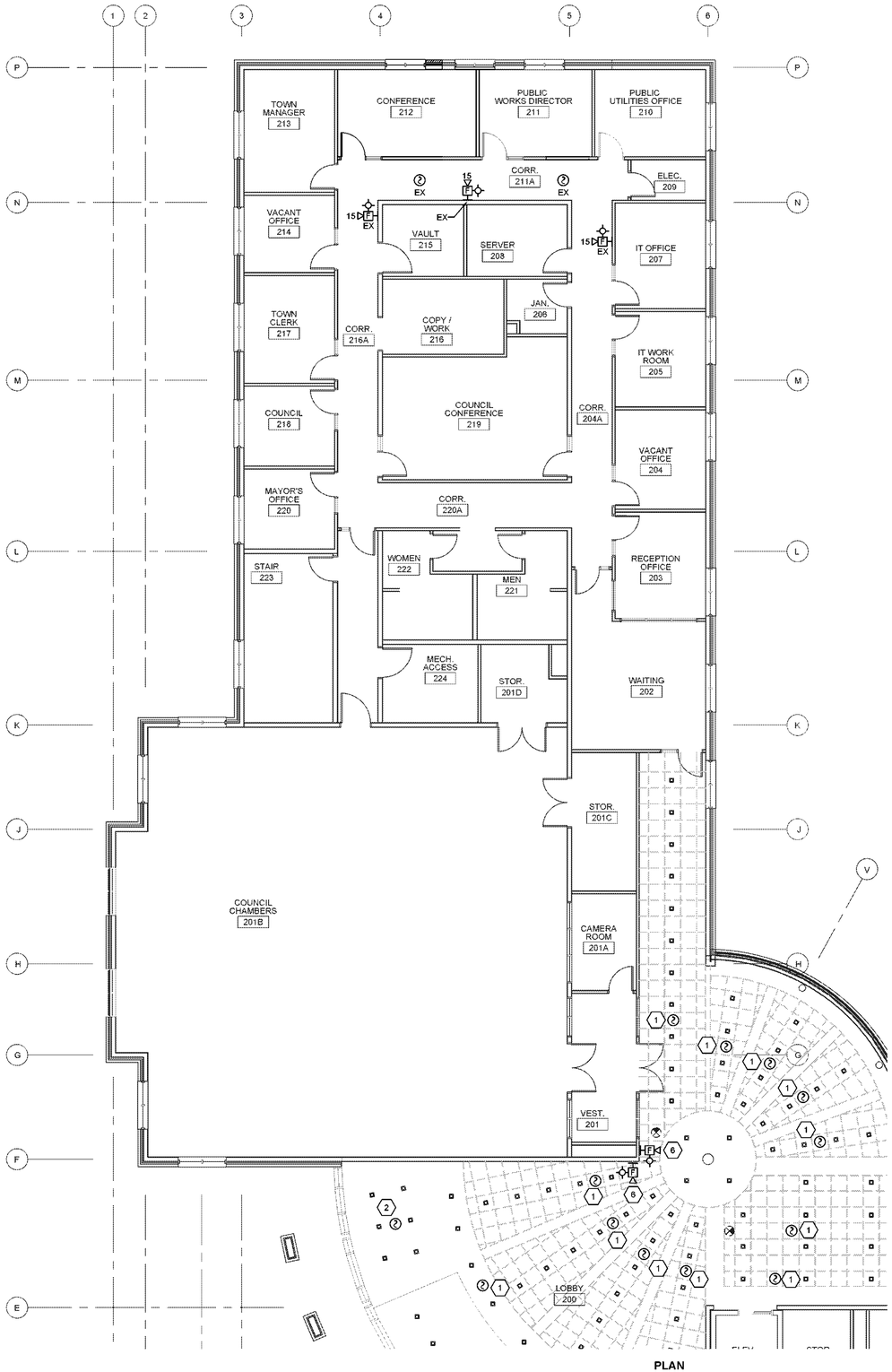

1 **SYSTEMS SECOND FLOOR PLAN - DEMOLITION WORK**
1/8" = 1'-0"

KEYED SYSTEMS DEMOLITION NOTES

1. EXISTING CEILING MOUNTED SMOKE DETECTOR TO REMAIN
2. SALVAGE EXISTING CEILING MOUNTED SMOKE DETECTOR FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED CABLES, RACEWAYS, ETC.
3. REMOVE EXISTING CEILING MOUNTED SMOKE DETECTOR AND DELIVER TO OWNER. REMOVE ABANDONED CABLES, RACEWAYS, ETC.
4. SALVAGE EXISTING CEILING MOUNTED HEAT DETECTOR FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED CABLES, RACEWAYS, ETC.
5. SALVAGE EXISTING FIRE ALARM MANUAL STATION FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
6. EXISTING WALL MOUNTED FIRE ALARM AURAL/VISUAL DEVICE TO REMAIN
7. REMOVE EXISTING WALL MOUNTED FIRE ALARM AURAL/VISUAL DEVICE AND DELIVER TO OWNER. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
8. SALVAGE EXISTING WALL MOUNTED FIRE ALARM AURAL/VISUAL DEVICE FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
9. EXISTING ACCESS CARD CONTROL TO REMAIN
10. SALVAGE EXISTING ACCESS CARD CONTROL AND DOOR MAG LOCK FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC..
11. DISABLE AND ABANDON EXISTING ACCESS CARD CONTROL AND DOOR MAGNETIC LOCK IN PLACE. REMOVE ABANDONED CABLES, CONDUCTORS, ETC.
12. EXISTING PANIC PUSHBUTTON TO REMAIN
13. SALVAGE EXISTING PANIC SYSTEM PUSHBUTTON FOR RELOCATION/ REINSTALLATION IN ROOMS 119. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
14. REMOVE EXISTING PANIC SYSTEM PUSHBUTTON AND DELIVER TO OWNER. REMOVE ABANDONED OUTLET BOX, RACEWAY, CABLES, CONDUCTORS, ETC.
15. REMOVE EXISTING DOOR RELEASE PUSHBUTTON AND DELIVER TO OWNER. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
16. REMOVE EXISTING WALL MOUNTED FIRE ALARM VISUAL DEVICE AND DELIVER TO OWNER. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
17. SALVAGE EXISTING WALL MOUNTED FIRE ALARM AURAL/VISUAL DEVICE FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
18. SALVAGE EXISTING WALL MOUNTED FIRE ALARM VISUAL DEVICE FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
19. EXISTING WALL MOUNTED FIRE ALARM VISUAL DEVICE TO REMAIN.
20. EXISTING PANIC ALARM SYSTEM SECTIONAL CORRIDOR LIGHT TO REMAIN.
21. SALVAGE EXISTING DOOR RELEASE PUSHBUTTON AND DELIVER TO OWNER.

SYSTEMS DEMOLITION NOTES

1. RECONNECT EXISTING FIRE ALARM SYSTEM INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS THAT ARE DISCONNECTED AS PART OF THE SYSTEM DEMOLITION TO PROVIDE A FULLY OPERATIONAL SYSTEM
2. RECONNECT EXISTING DOOR ACCESS CONTROL SYSTEM CIRCUITS THAT ARE DISCONNECTED AS PART OF THE SYSTEM DEMOLITION TO PROVIDE A FULLY OPERATIONAL SYSTEM
3. RECONNECT EXISTING PANIC SYSTEM CONTROL CIRCUITS THAT ARE DISCONNECTED AS PART OF THE SYSTEM DEMOLITION TO PROVIDE A FULLY OPERATIONAL SYSTEM

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL SEAL 023311 ENGINEER W. ALLEN CRIBB
02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Systems Second Floor Plan - Demolition Work

Rev.	Date	Notes

ED1.17

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KEYED SYSTEMS DEMOLITION NOTES

1. EXISTING CEILING MOUNTED SMOKE DETECTOR TO REMAIN
2. SALVAGE EXISTING CEILING MOUNTED SMOKE DETECTOR FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED CABLES, RACEWAYS, ETC.
3. REMOVE EXISTING CEILING MOUNTED SMOKE DETECTOR AND DELIVER TO OWNER. REMOVE ABANDONED CABLES, RACEWAYS, ETC.
4. SALVAGE EXISTING CEILING MOUNTED HEAT DETECTOR FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED CABLES, RACEWAYS, ETC.
5. SALVAGE EXISTING FIRE ALARM MANUAL STATION FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
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11. DISABLE AND ABANDON EXISTING ACCESS CARD CONTROL AND DOOR MAGNETIC LOCK IN PLACE. REMOVE ABANDONED CABLES, CONDUCTORS, ETC.
12. EXISTING PANIC PUSHBUTTON TO REMAIN
13. SALVAGE EXISTING PANIC SYSTEM PUSHBUTTON FOR RELOCATION/ REINSTALLATION IN ROOMS 119. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
14. REMOVE EXISTING PANIC SYSTEM PUSHBUTTON AND DELIVER TO OWNER. REMOVE ABANDONED OUTLET BOX, RACEWAY, CABLES, CONDUCTORS, ETC.
15. REMOVE EXISTING DOOR RELEASE PUSHBUTTON AND DELIVER TO OWNER. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
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17. SALVAGE EXISTING WALL MOUNTED FIRE ALARM AURAL/VISUAL DEVICE FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
18. SALVAGE EXISTING WALL MOUNTED FIRE ALARM VISUAL DEVICE FOR RELOCATION/REINSTALLATION. REMOVE ABANDONED OUTLET BOX, RACEWAYS, CABLES, CONDUCTORS, ETC.
19. EXISTING WALL MOUNTED FIRE ALARM VISUAL DEVICE TO REMAIN.
20. EXISTING PANIC ALARM SYSTEM SECTIONAL CORRIDOR LIGHT TO REMAIN.
21. SALVAGE EXISTING DOOR RELEASE PUSHBUTTON AND DELIVER TO OWNER.

SYSTEMS DEMOLITION NOTES

1. RECONNECT EXISTING FIRE ALARM SYSTEM INITIATING DEVICE AND NOTIFICATION APPLIANCE CIRCUITS THAT ARE DISCONNECTED AS PART OF THE SYSTEM DEMOLITION TO PROVIDE A FULLY OPERATIONAL SYSTEM
2. RECONNECT EXISTING DOOR ACCESS CONTROL SYSTEM CIRCUITS THAT ARE DISCONNECTED AS PART OF THE SYSTEM DEMOLITION TO PROVIDE A FULLY OPERATIONAL SYSTEM
3. RECONNECT EXISTING PANIC SYSTEM CONTROL CIRCUITS THAT ARE DISCONNECTED AS PART OF THE SYSTEM DEMOLITION TO PROVIDE A FULLY OPERATIONAL SYSTEM

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

PLAN NORTH

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

0 4' 8' 16'

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023311 WILLEN CRIBB
02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Systems Second Floor Plan - Demolition Work

Rev.	Date	Notes

ED1.18

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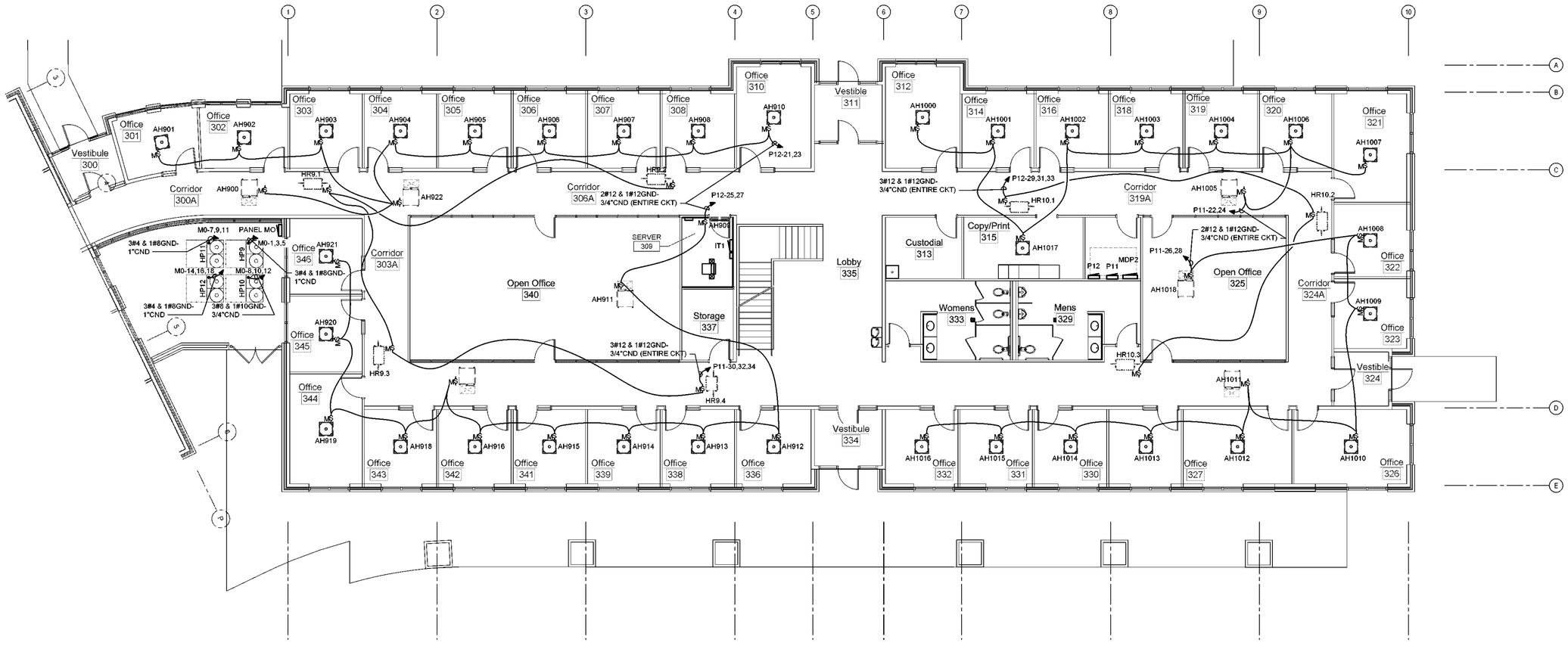

1 HVAC POWER FIRST FLOOR PLAN - NEW WORK

1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023311 WILLEN CRUSE

02/22/2024

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

HVAC Power First Floor Plan - New Work

Rev.	Date	Notes

EH1.1

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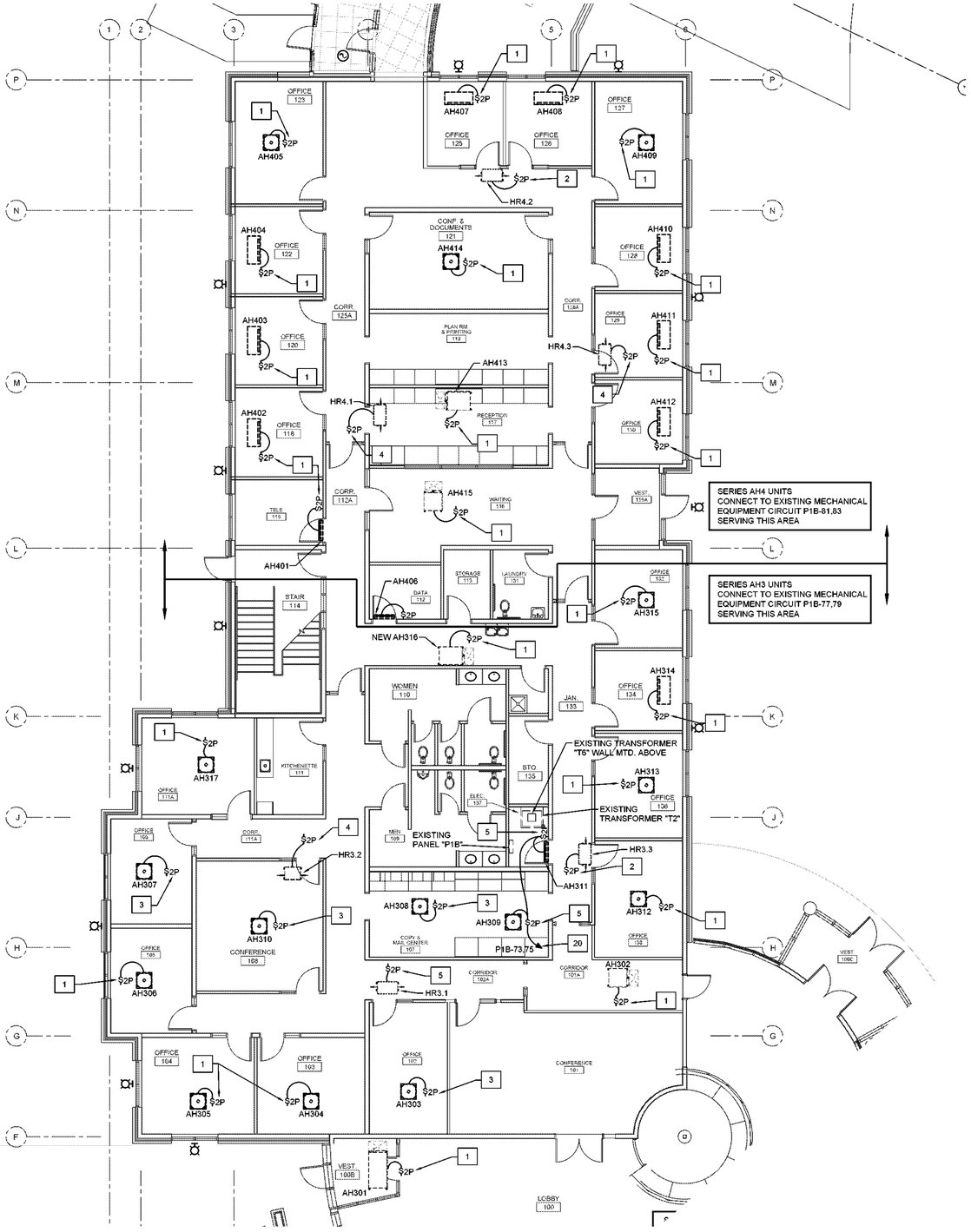

1 **MECHANICAL POWER FIRST FLOOR PLAN - NEW WORK**
1/8" = 1'-0"

KEYED NOTES

1. EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH DISCONNECT, FIELD VERIFY EXACT LOCATION. RECONNECT EXISTING BRANCH CIRCUIT SERVING REMOVED AH UNIT TO NEW AH UNIT SERVING THIS SPACE. MATCH EXISTING BRANCH CIRCUIT CONDUCTOR AMPACITY.
2. EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH DISCONNECT, FIELD VERIFY EXACT LOCATION. RECONNECT EXISTING BRANCH CIRCUIT SERVING REMOVED HEAT RECOVERY BOX TO NEW HEAT RECOVERY BOX. MATCH EXISTING BRANCH CIRCUIT CONDUCTOR AMPACITY.
3. RELOCATE EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH DISCONNECT TO ADJACENT NEW AH UNIT SERVING THIS SPACE. EXTEND AND RECONNECT EXISTING BRANCH CIRCUIT SERVING REMOVED AH UNIT TO NEW AH UNIT SERVING THIS SPACE. MATCH EXISTING BRANCH CIRCUIT CONDUCTOR AMPACITY.
4. RELOCATE EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH DISCONNECT TO ADJACENT NEW HEAT RECOVERY BOX. EXTEND AND RECONNECT EXISTING BRANCH CIRCUIT SERVING REMOVED HEAT RECOVERY BOX TO NEW HEAT RECOVERY BOX. MATCH EXISTING BRANCH CIRCUIT CONDUCTOR AMPACITY.
5. NEW 2P, 208V, 15A MOTOR RATED SNAP SWITCH DISCONNECT LOCATED ABOVE CEILING ADJACENT TO NEW EQUIPMENT. CONNECT TO EXISTING 208 VOLT MECHANICAL EQUIPMENT CIRCUIT SERVING THIS AREA.
6. EXISTING EXHAUST FAN.
7. NEW EXHAUST FAN. CONNECT TO EXISTING EXHAUST FAN BRANCH CIRCUIT SERVING THIS AREA. CONNECT FAN TO NEW WALL MOUNTED ON/OFF SWITCH.
8. NEW EXHAUST FAN. CONNECT TO EXISTING EXHAUST FAN BRANCH CIRCUIT SERVING THIS AREA. FAN TO OPERATE CONTINUOUSLY.
9. EXISTING APS UNIT TO REMAIN.
10. 3#10 & 1#10 GND - 1/2" CND. RECONFIGURE AND REUSE EXISTING 1/2" CND. TO EXISTING PANEL "P1".
11. NEW 3P, 480V, 30A FUSIBLE SAFETY SWITCH, NEMA-1 ENCLOSURE, 30A FUSES.
12. NOT USED.
13. NEW 2P, 208V, 15A MOTOR RATED SNAP SWITCH DISCONNECT LOCATED ADJACENT TO NEW EQUIPMENT.
14. HOMERUN TO EXISTING CIRCUIT BREAKER LOCATED IN EXISTING PANEL "S".
15. HOMERUN TO NEW CIRCUIT BREAKER LOCATED IN EXISTING PANEL "S".
16. NEW 1P, 120V, 20A MOTOR RATED SNAP SWITCH DISCONNECT LOCATED ADJACENT TO NEW MECHANICAL EQUIPMENT. CONNECT TO SPARE 1/20 CIRCUIT BREAKER LOCATED IN EXISTING PANEL "P1A".
17. NOT USED.
18. 3#8 & 1#10 GND - 3/4" CND.
19. NEW 3P, 480V, 60A FUSIBLE SAFETY SWITCH, NEMA-1 ENCLOSURE, 40A FUSES.

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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02/22/2024

Leland Town Hall Addition & Renovations
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Leland, NC 28451

Construction Drawings

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Mechanical Power First Floor Plan - New Work

Rev.	Date	Notes

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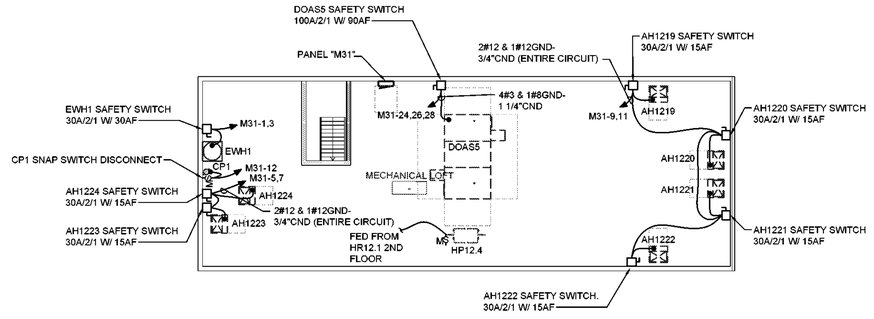
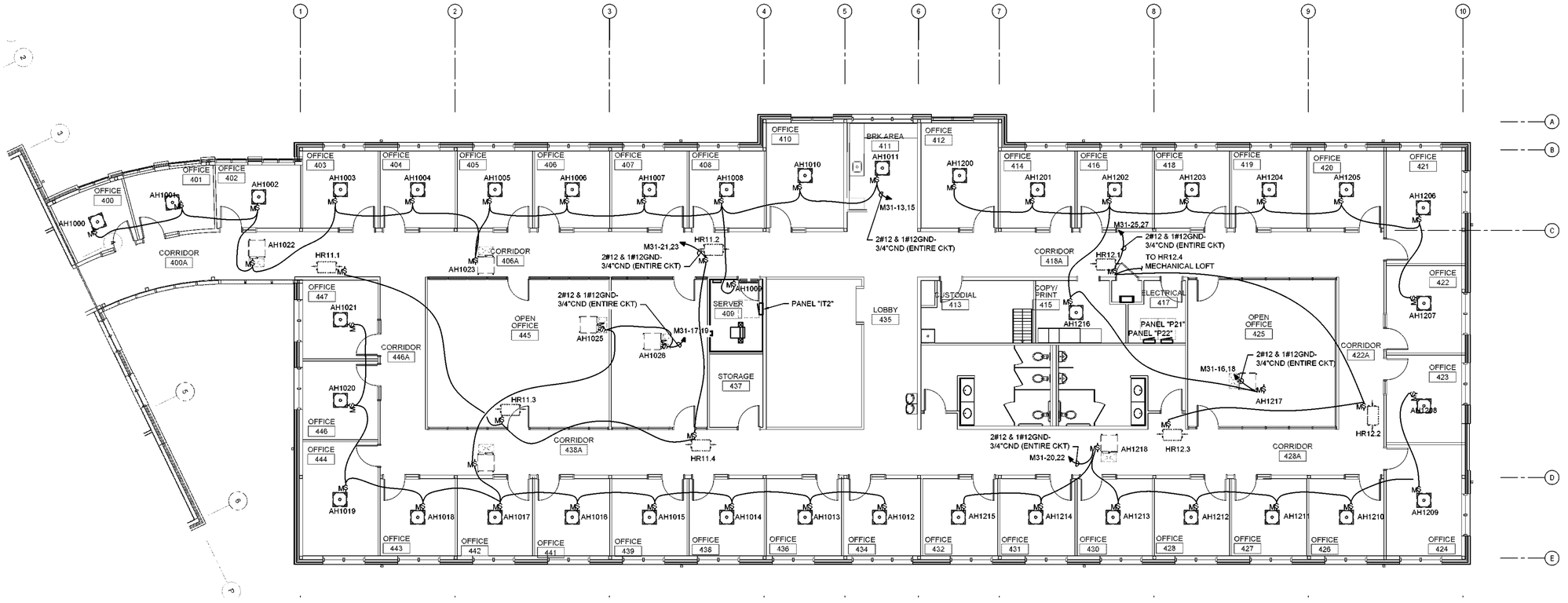


2 **MECHANICAL LOFT - NEW WORK HVAC POWER**

1/8" = 1'-0"



1 **HVAC POWER SECOND FLOOR PLAN - NEW WORK**

1/8" = 1'-0"

PLAN NORTH

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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HVAC Power Second Floor Plan - New Work

Rev.	Date	Notes

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KEYED NOTES

1. EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH DISCONNECT. FIELD VERIFY EXACT LOCATION. RECONNECT EXISTING BRANCH CIRCUIT SERVING REMOVED AH UNIT TO NEW AH UNIT SERVING THIS SPACE. MATCH EXISTING BRANCH CIRCUIT CONDUCTOR AMPACITY.
2. EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH DISCONNECT. FIELD VERIFY EXACT LOCATION. RECONNECT EXISTING BRANCH CIRCUIT SERVING REMOVED HEAT RECOVERY BOX TO NEW HEAT RECOVERY BOX. MATCH EXISTING BRANCH CIRCUIT CONDUCTOR AMPACITY.
3. RELOCATE EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH DISCONNECT TO ADJACENT NEW AH UNIT SERVING THIS SPACE. EXTEND AND RECONNECT EXISTING BRANCH CIRCUIT SERVING REMOVED AH UNIT TO NEW AH UNIT SERVING THIS SPACE. MATCH EXISTING BRANCH CIRCUIT CONDUCTOR AMPACITY.
4. RELOCATE EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH DISCONNECT TO ADJACENT NEW HEAT RECOVERY BOX. EXTEND AND RECONNECT EXISTING BRANCH CIRCUIT SERVING REMOVED HEAT RECOVERY BOX TO NEW HEAT RECOVERY BOX. MATCH EXISTING BRANCH CIRCUIT CONDUCTOR AMPACITY.
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7. NEW EXHAUST FAN. CONNECT TO EXISTING EXHAUST FAN BRANCH CIRCUIT SERVING THIS AREA. CONNECT FAN TO NEW WALL MOUNTED ON/OFF SWITCH.
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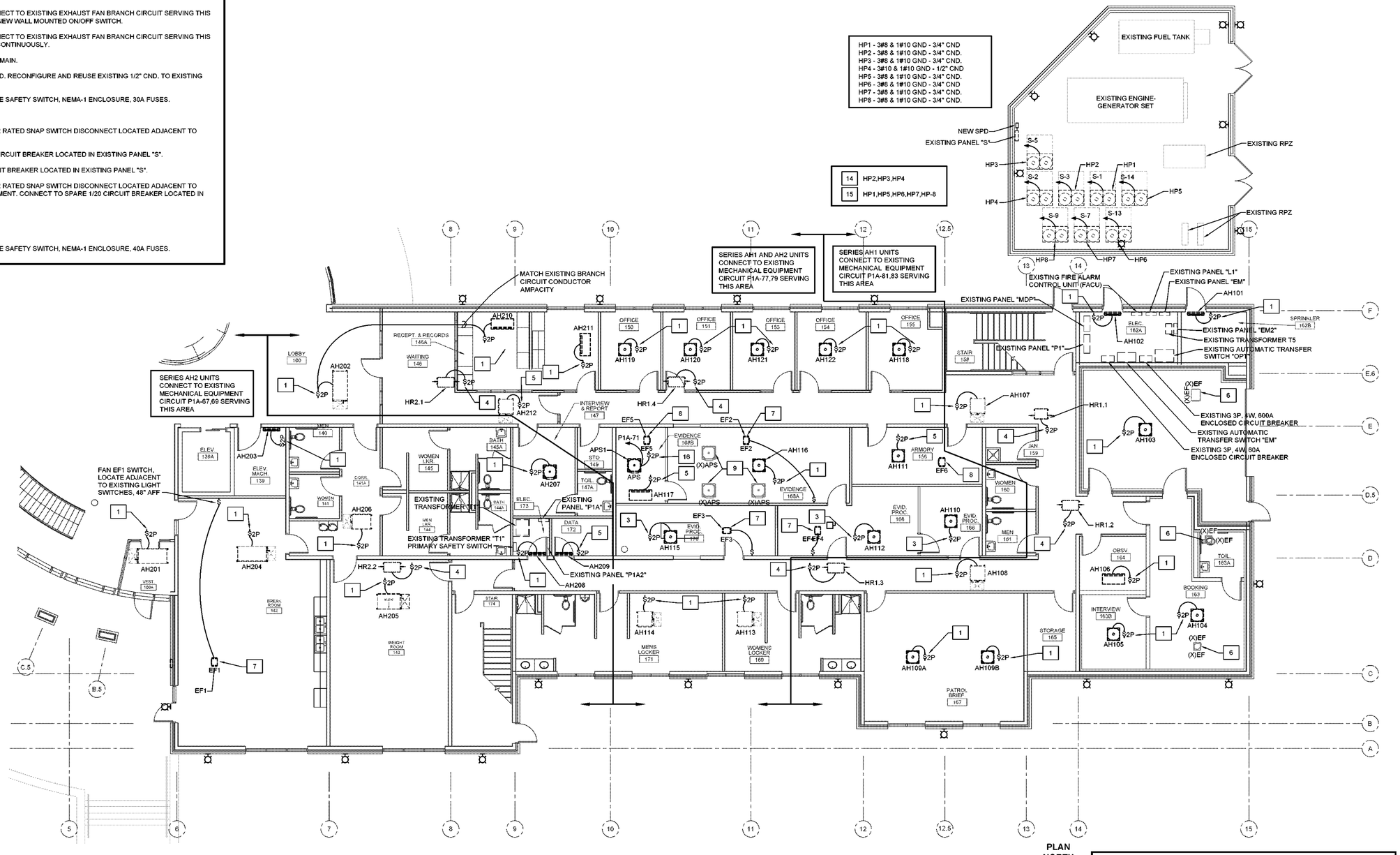
9. EXISTING APS UNIT TO REMAIN.
10. 3#10 & 1#10 GND - 1/2" CND. RECONFIGURE AND REUSE EXISTING 1/2" CND. TO EXISTING PANEL "P1".
11. NEW 3P, 480V, 30A FUSIBLE SAFETY SWITCH, NEMA-1 ENCLOSURE, 30A FUSES.
12. NOT USED.
13. NEW 2P, 208V, 15A MOTOR RATED SNAP SWITCH DISCONNECT LOCATED ADJACENT TO NEW EQUIPMENT.
14. HOMERUN TO EXISTING CIRCUIT BREAKER LOCATED IN EXISTING PANEL "S".
15. HOMERUN TO NEW CIRCUIT BREAKER LOCATED IN EXISTING PANEL "S".
16. NEW 1P, 120V, 20A MOTOR RATED SNAP SWITCH DISCONNECT LOCATED ADJACENT TO NEW MECHANICAL EQUIPMENT. CONNECT TO SPARE 1/20 CIRCUIT BREAKER LOCATED IN EXISTING PANEL "P1A".
17. NOT USED.
18. 3#8 & 1#10 GND - 3/4" CND.
19. NEW 3P, 480V, 60A FUSIBLE SAFETY SWITCH, NEMA-1 ENCLOSURE, 40A FUSES.



1 **MECHANICAL POWER FIRST FLOOR PLAN - NEW WORK**
1/8" = 1'-0"

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Mechanical Power First Floor Plan - New Work

Rev.	Date	Notes

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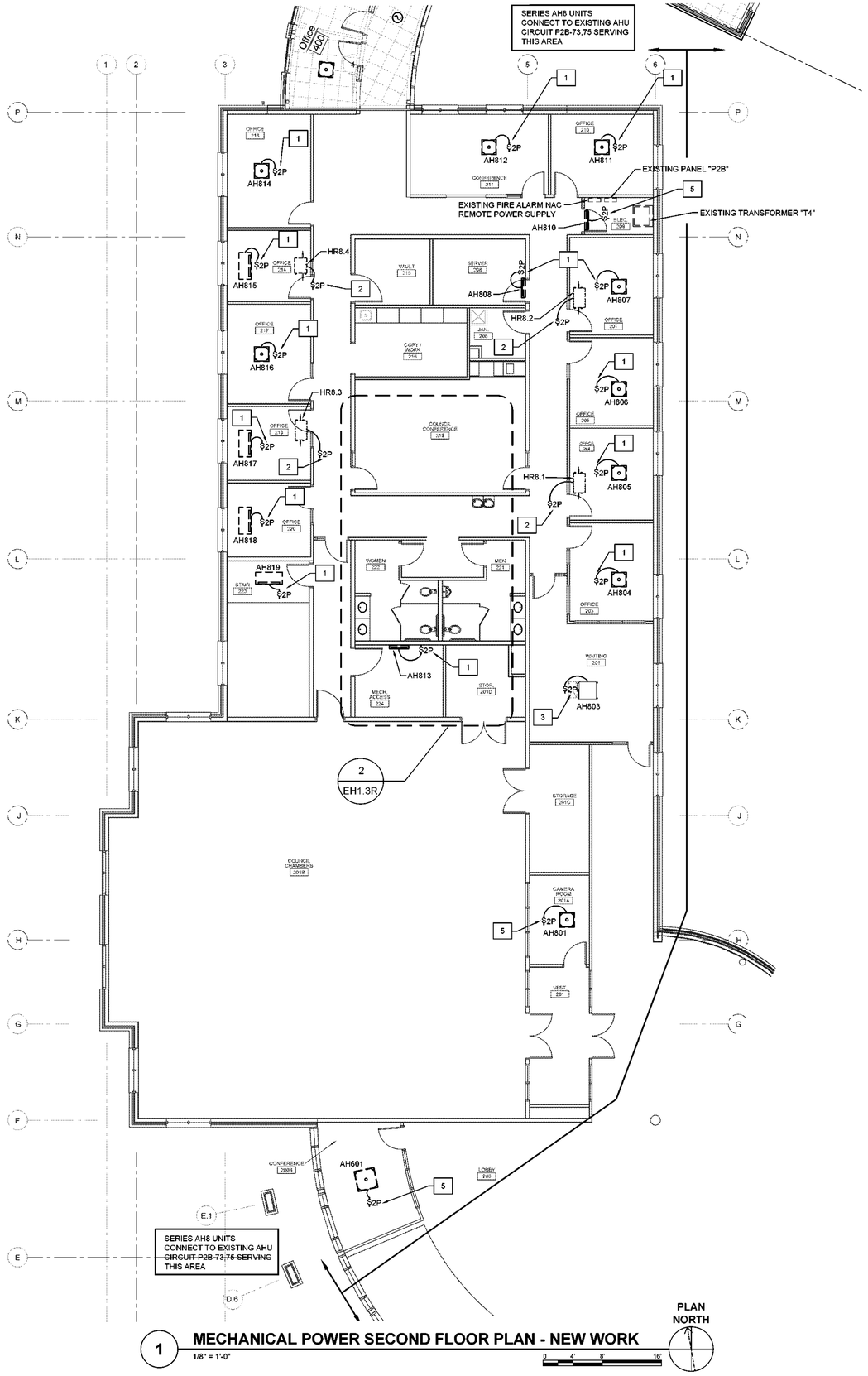
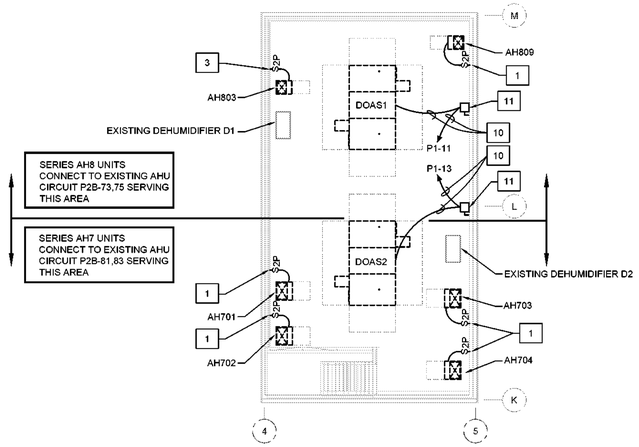


1 MECHANICAL POWER SECOND FLOOR PLAN - NEW WORK

1/8" = 1'-0"



2 MECHANICAL POWER MEZZANINE PLAN - NEW WORK

1/8" = 1'-0"

KEYED NOTES

1	EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH DISCONNECT. FIELD VERIFY EXACT LOCATION. RECONNECT EXISTING BRANCH CIRCUIT SERVING REMOVED AH UNIT TO NEW AH UNIT SERVING THIS SPACE. MATCH EXISTING BRANCH CIRCUIT CONDUCTOR AMPACITY.
2	EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH DISCONNECT, FIELD VERIFY EXACT LOCATION. RECONNECT EXISTING BRANCH CIRCUIT SERVING REMOVED HEAT RECOVERY BOX TO NEW HEAT RECOVERY BOX. MATCH EXISTING BRANCH CIRCUIT CONDUCTOR AMPACITY.
3	RELOCATE EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH DISCONNECT TO ADJACENT NEW AH UNIT SERVING THIS SPACE. EXTEND AND RECONNECT EXISTING BRANCH CIRCUIT SERVING REMOVED AH UNIT TO NEW AH UNIT SERVING THIS SPACE. MATCH EXISTING BRANCH CIRCUIT CONDUCTOR AMPACITY.
4	RELOCATE EXISTING 2P, 208V, 15A MOTOR RATED SNAP SWITCH DISCONNECT TO ADJACENT NEW HEAT RECOVERY BOX. EXTEND AND RECONNECT EXISTING BRANCH CIRCUIT SERVING REMOVED HEAT RECOVERY BOX TO NEW HEAT RECOVERY BOX. MATCH EXISTING BRANCH CIRCUIT CONDUCTOR AMPACITY.
5	NEW 2P, 208V, 15A MOTOR RATED SNAP SWITCH DISCONNECT LOCATED ABOVE CEILING ADJACENT TO NEW EQUIPMENT. CONNECT TO EXISTING 208 VOLT MECHANICAL EQUIPMENT CIRCUIT SERVING THIS AREA.
6	EXISTING EXHAUST FAN.
7	NEW EXHAUST FAN. CONNECT TO EXISTING EXHAUST FAN BRANCH CIRCUIT SERVING THIS AREA. CONNECT FAN TO NEW WALL MOUNTED ON/OFF SWITCH.
8	NEW EXHAUST FAN. CONNECT TO EXISTING EXHAUST FAN BRANCH CIRCUIT SERVING THIS AREA. FAN TO OPERATE CONTINUOUSLY.
9	EXISTING APS UNIT TO REMAIN.
10	3#10 & 1#10 GND - 1/2" CND. RECONFIGURE AND REUSE EXISTING 1/2" CND. TO EXISTING PANEL "P1".
11	NEW 3P, 480V, 30A FUSIBLE SAFETY SWITCH, NEMA-1 ENCLOSURE, 30A FUSES.
12	NOT USED.
13	NEW 2P, 208V, 15A MOTOR RATED SNAP SWITCH DISCONNECT LOCATED ADJACENT TO NEW EQUIPMENT.
14	HOMERUN TO EXISTING CIRCUIT BREAKER LOCATED IN EXISTING PANEL "S".
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18	3#8 & 1#10 GND - 3/4" CND.
19	NEW 3P, 480V, 60A FUSIBLE SAFETY SWITCH, NEMA-1 ENCLOSURE, 40A FUSES.

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02/22/2024

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Construction Drawings

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Mechanical Power Second Floor Plan - New Work

Rev.	Date	Notes

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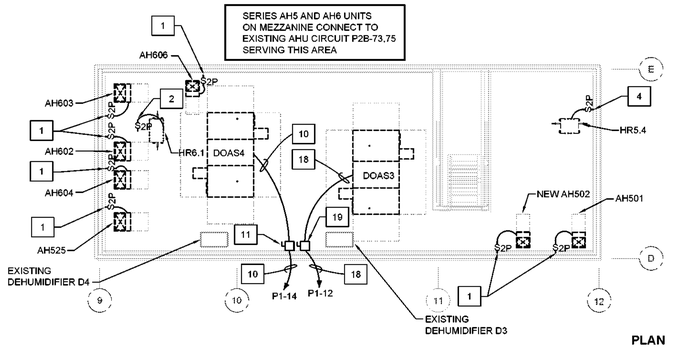
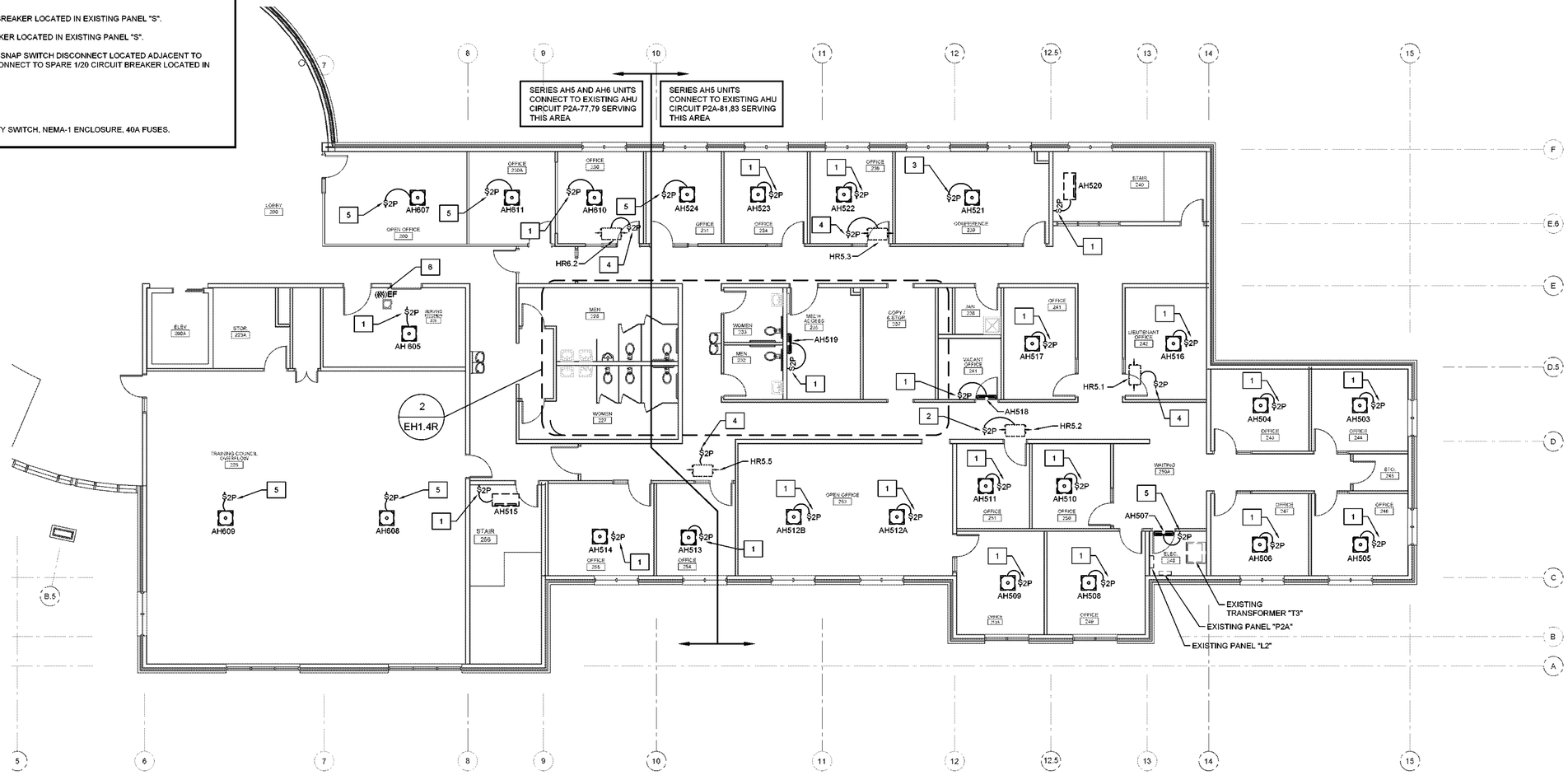


2 MECHANICAL POWER MEZZANINE PLAN - NEW WORK
1/8" = 1'-0"



1 MECHANICAL POWER SECOND FLOOR PLAN - NEW WORK
1/8" = 1'-0"

PLAN NORTH

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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02/22/2024

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Construction Drawings

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Rev.	Date	Notes

EH1.4R

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KEYED NOTES

1	EXISTING (EX) 2x4 LAY-IN FLUORESCENT LIGHTING FIXTURE, TYPICAL.
2	RELOCATED (RL) EXISTING 2x4 LAY-IN FLUORESCENT LIGHTING FIXTURE, TYPICAL.
3	NOT USED.
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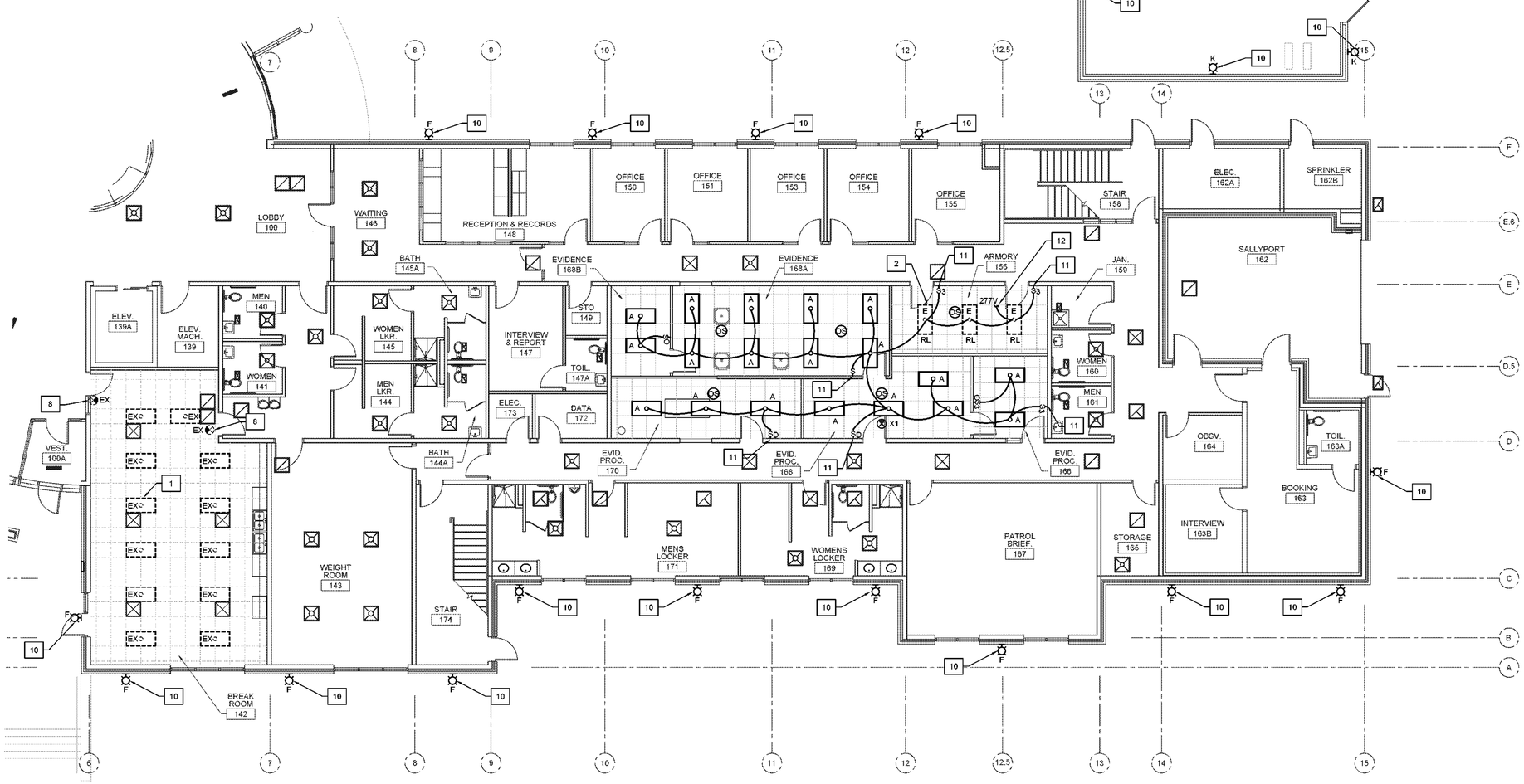
11	NEW SWITCH OR SWITCHES INSTALLED IN EXISTING OUTLET BOX.
12	CONNECT TO EXISTING 277 VOLT (277) LIGHTING CIRCUIT SERVING THIS AREA.
13	NOT USED.
14	EXISTING SWITCH.



1 **LIGHTING FIRST FLOOR PLAN - NEW WORK**
1/8" = 1'-0"

PLAN NORTH

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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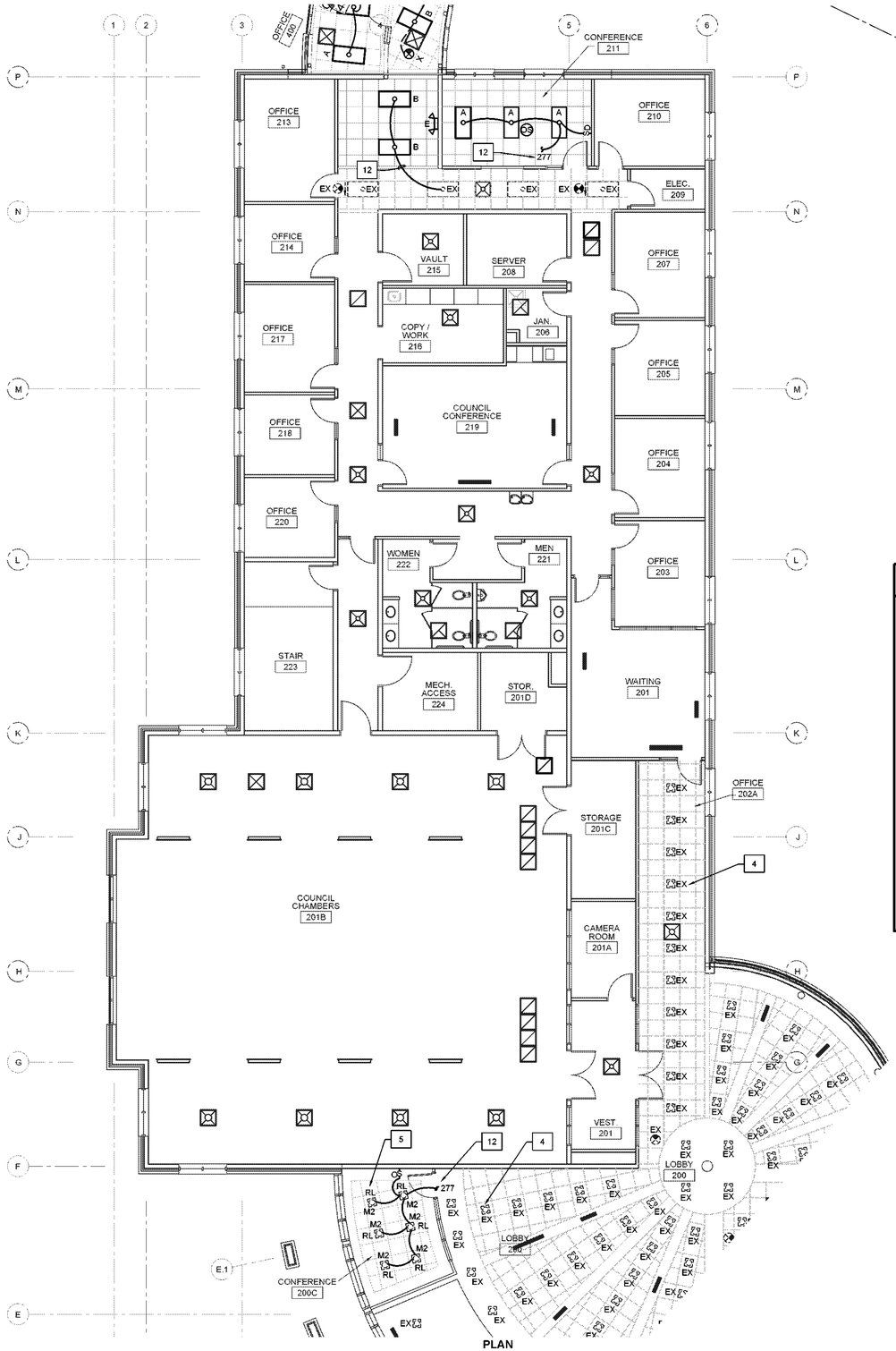

1 **LIGHTING SECOND FLOOR PLAN - NEW WORK**
1/8" = 1'-0"

KEYED NOTES

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13	NOT USED.
14	EXISTING SWITCH.

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Lighting Second Floor Plan - New Work

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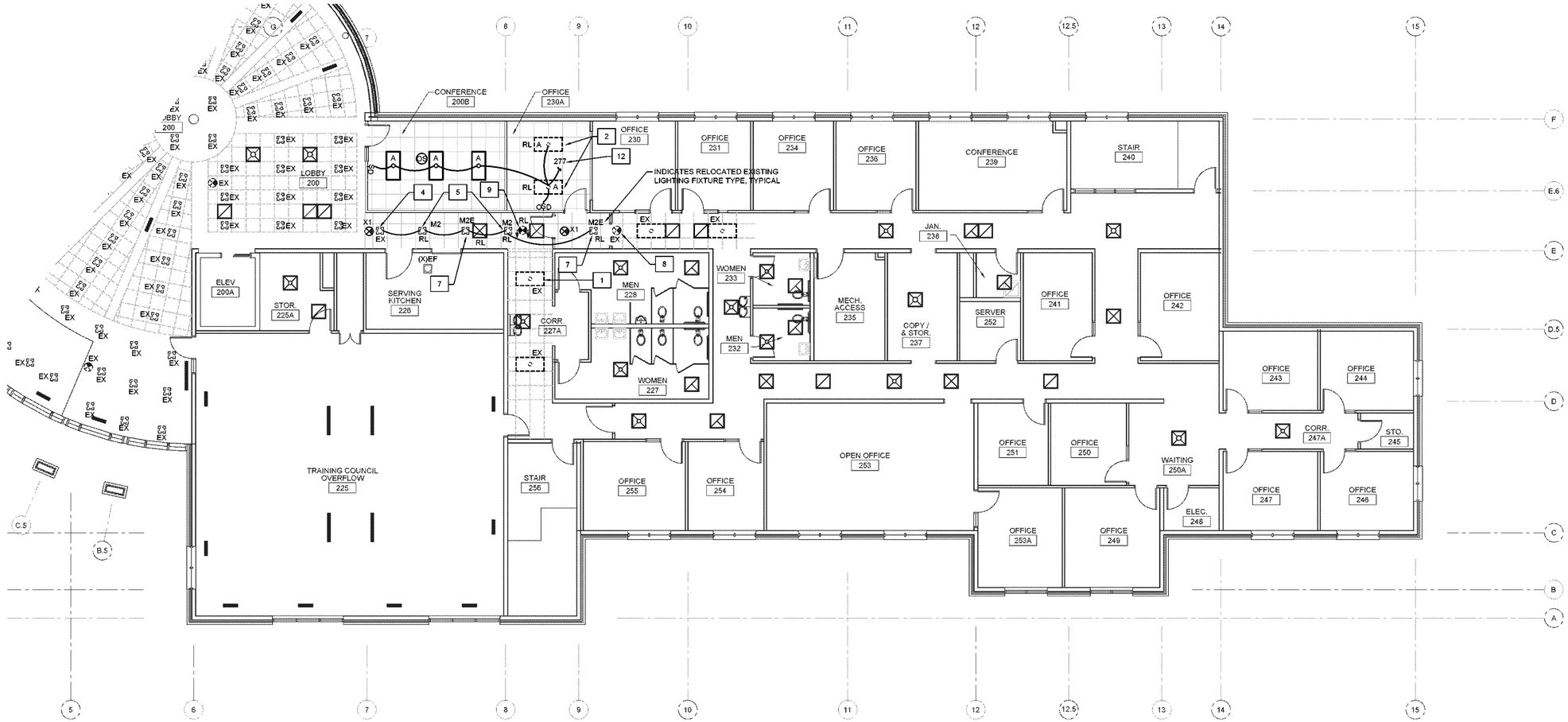

1 LIGHTING SECOND FLOOR PLAN - NEW WORK
1/8" = 1'-0"

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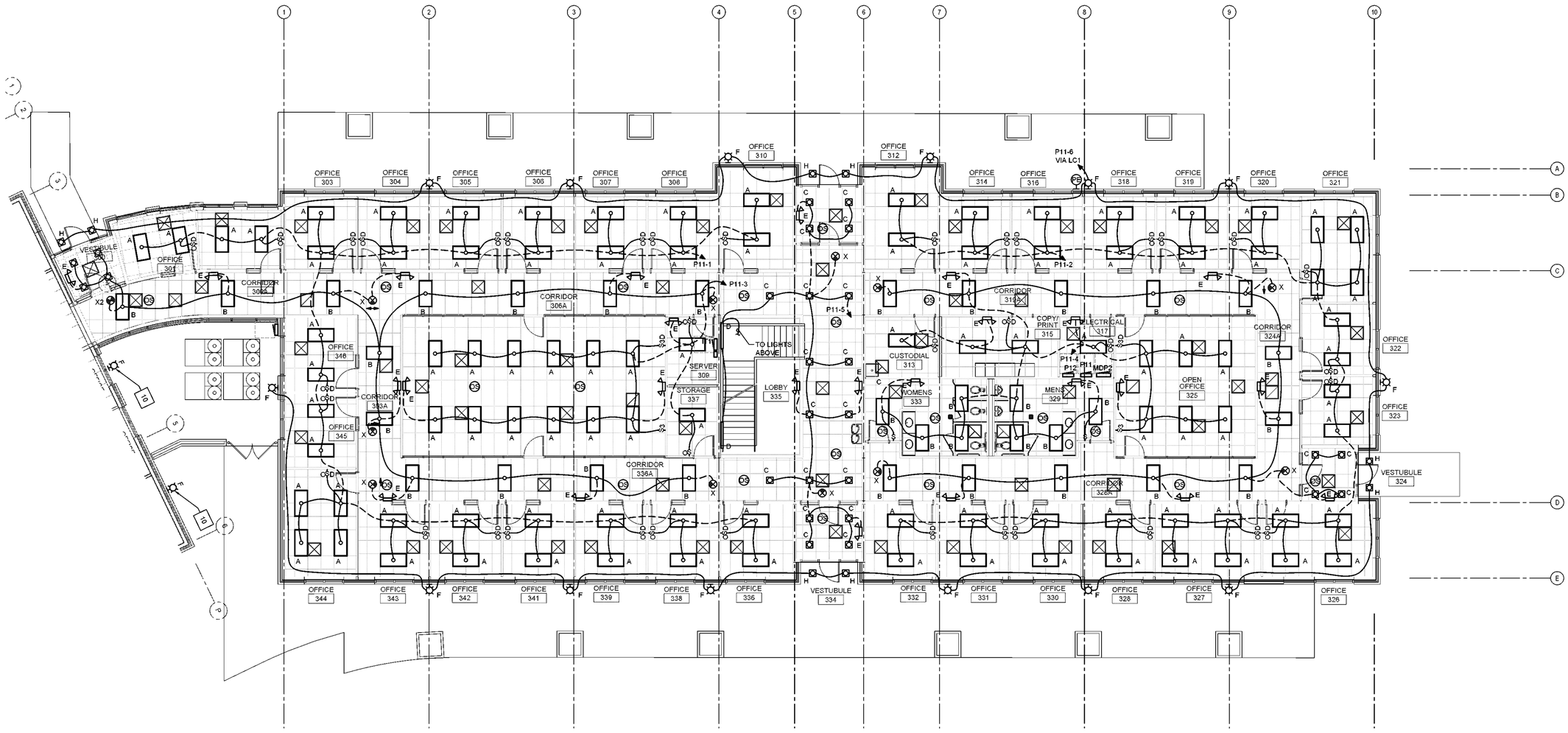

1 **LIGHTING FIRST FLOOR PLAN - NEW WORK**
1/8" = 1'-0"

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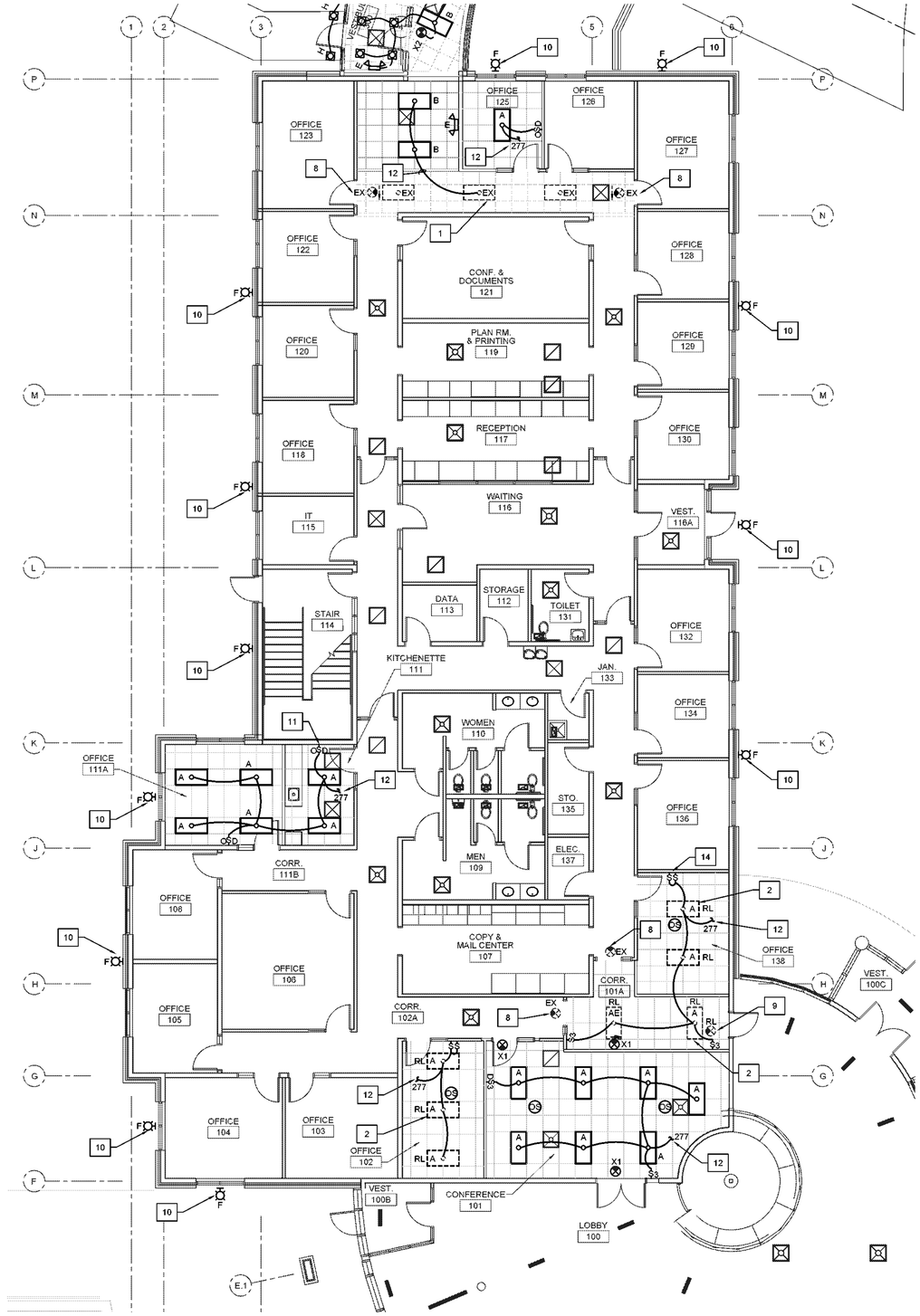

1 **LIGHTING FIRST FLOOR PLAN - NEW WORK**
1/8" = 1'-0"

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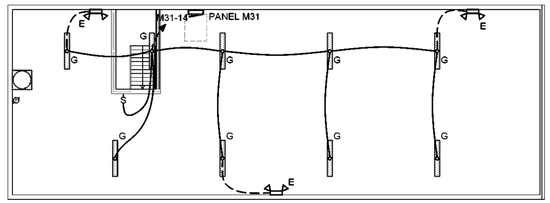
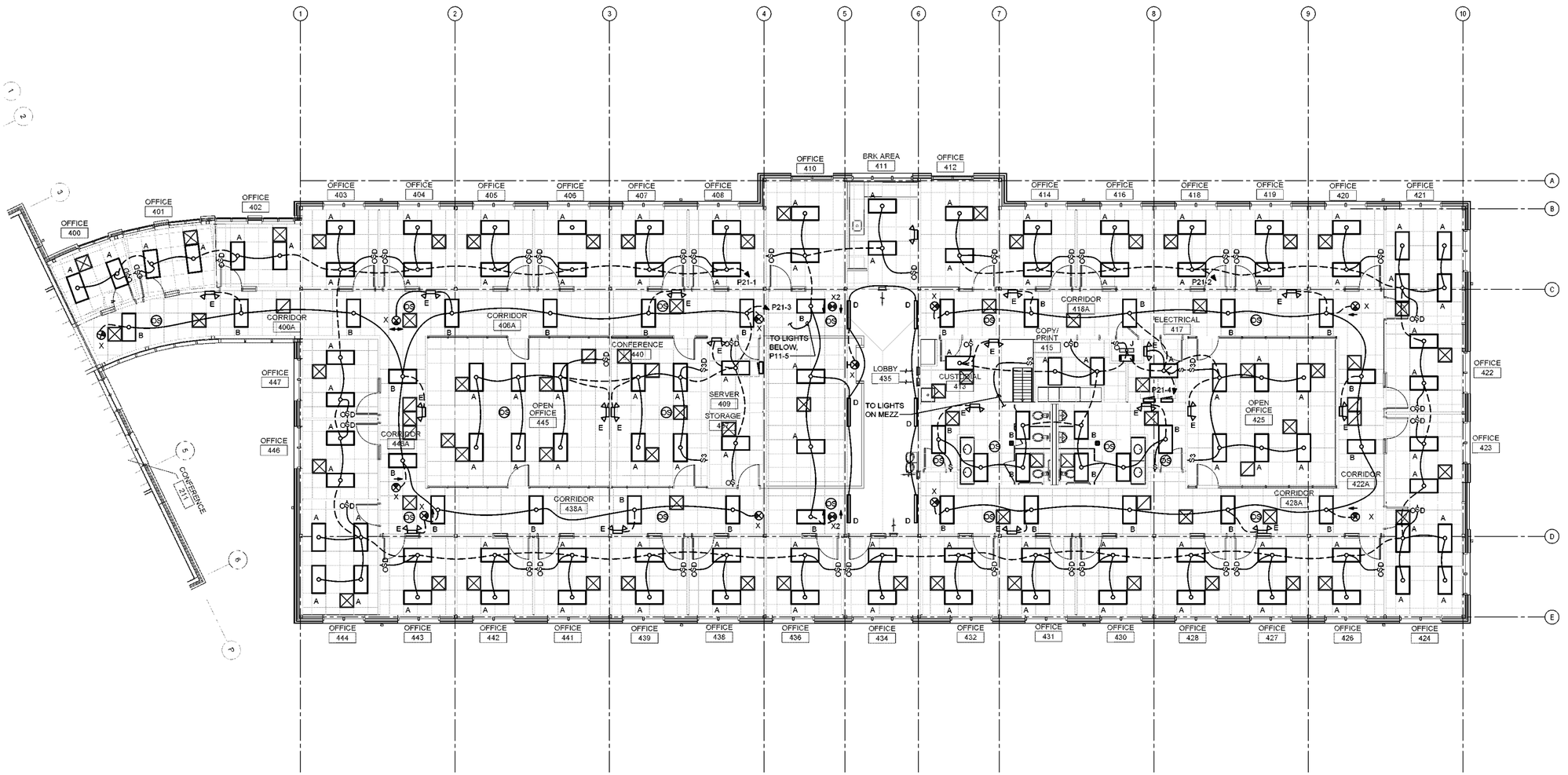


PLAN NORTH

2 MECHANICAL LOFT - NEW WORK LIGHTING

1/4" = 1'-0"

0 2' 4' 8'



PLAN NORTH

1 LIGHTING SECOND FLOOR PLAN - NEW WORK

1/8" = 1'-0"

0 4' 8' 16'

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL SEAL 023311 ENGINEER W. ALLEN CRIBB
02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Lighting Second Floor Plan and Loft- New Work

Rev.	Date	Notes

EL1.2

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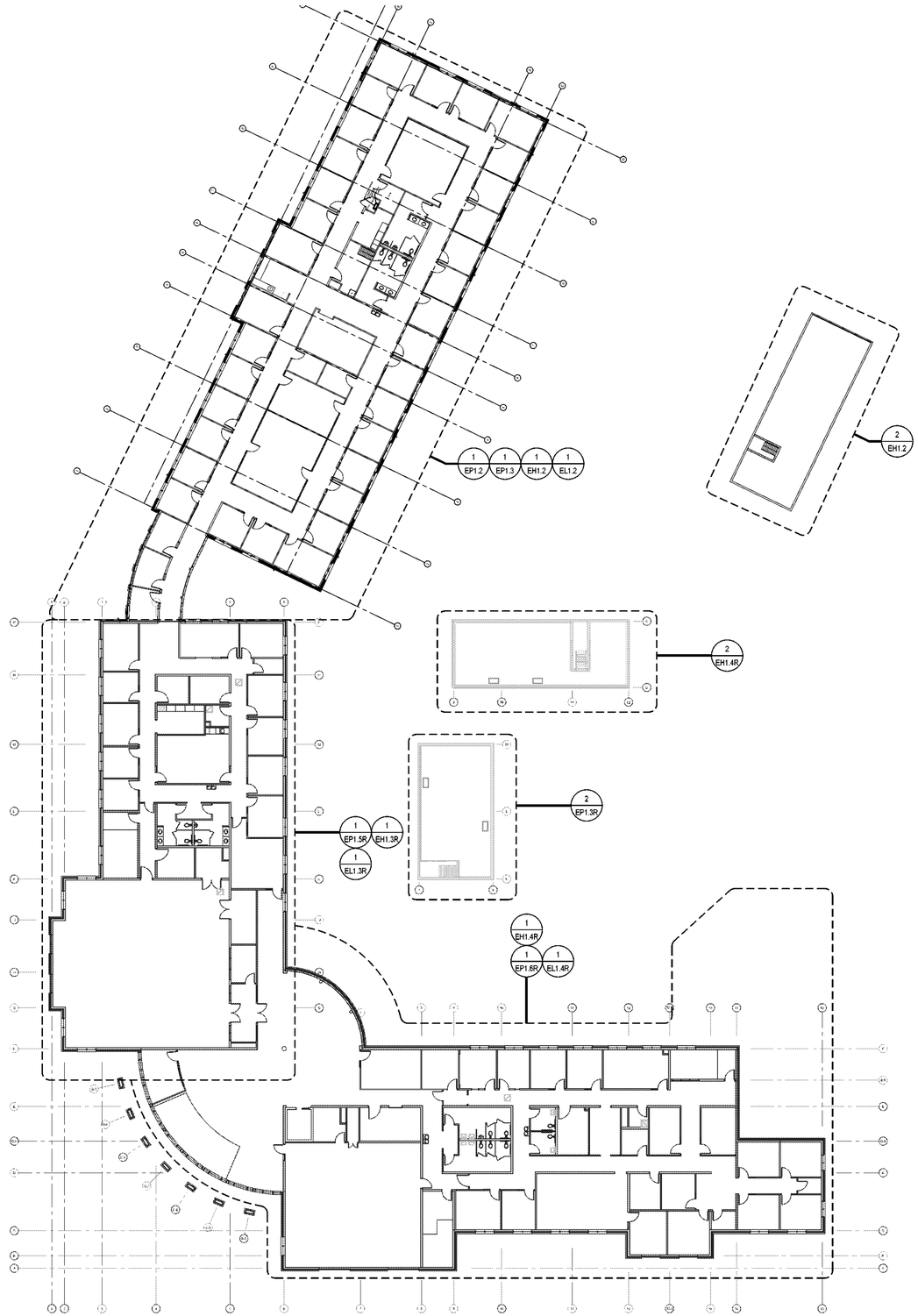

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1 **SECOND FLOOR NEW WORK - KEY PLAN**
1" = 20'-0"

PLAN NORTH

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02/22/2024

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Second Floor New Work - Key Plan

Rev.	Date	Notes

EP1.2R

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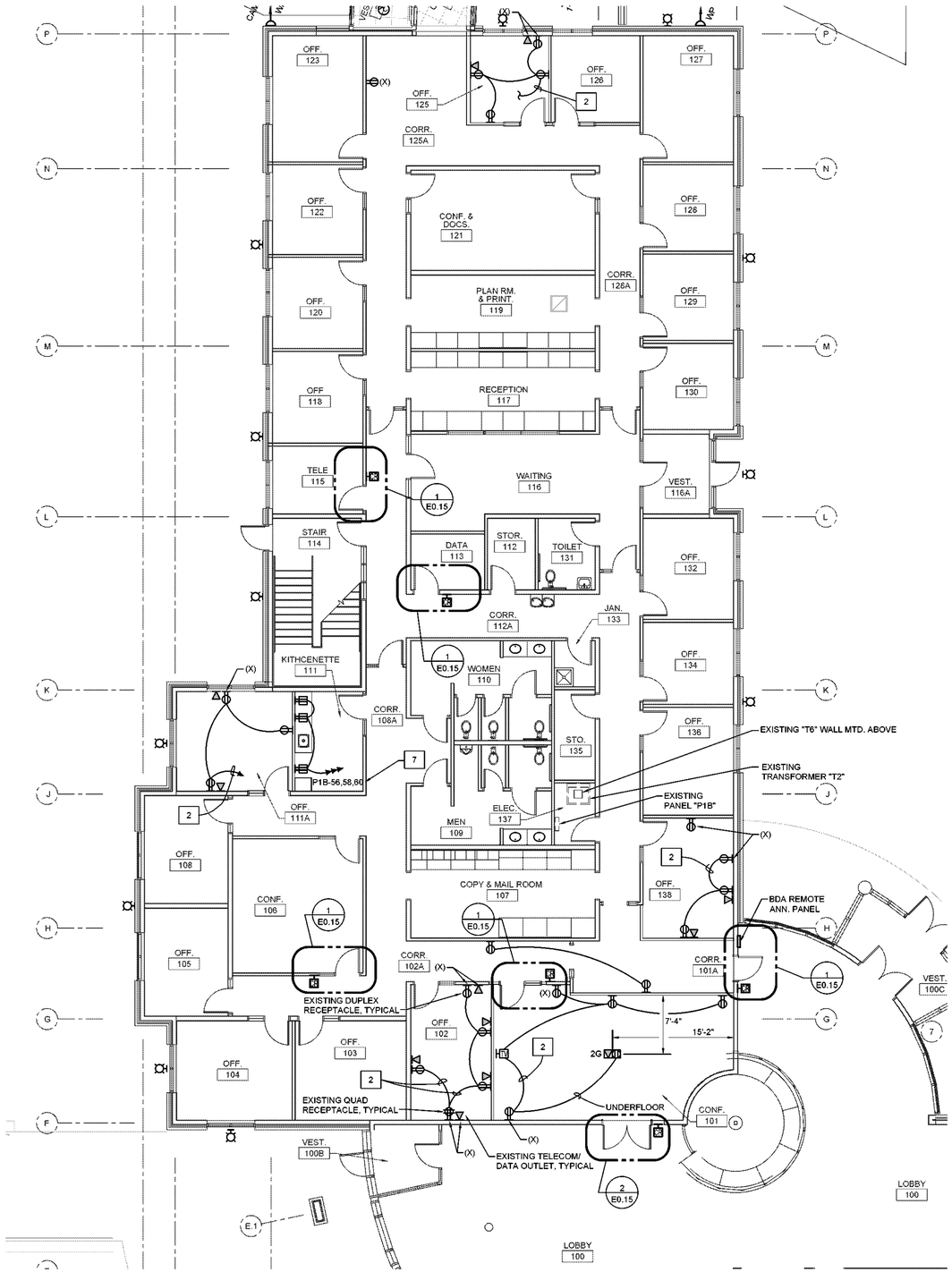

1 POWER FIRST FLOOR PLAN - NEW WORK

1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16'

KEYED NOTES

1	NOT USED.
2	CONNECT TO EXISTING 120V RECEPTACLE CIRCUIT SERVING THIS AREA PRIOR TO DEMOLITION.
3	NOT USED.
4	HOMERUN TO NEW 1/30 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P2A.
5	HOMERUN TO EXISTING 1/20 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P1A, TYPICAL.
6	HOMERUN TO SPARE 1/20 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P1A2, TYPICAL.
7	HOMERUN TO SPARE 1/20 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P1B, TYPICAL
8	HOMERUN TO SPARE 1/20 CIRCUIT BREAKER LOCATED IN EXISTING PANEL "P2A, TYPICAL
9	RECONNECT EXISTING WIRING DEVICES TO EXISTING MULTI-CIRCUIT HOMERUN SERVING THIS SPACE. MATCH EXISTING BRANCH CIRCUIT CONDUCTOR AMPACITY.
10	FAN EF-1 CONTROL SWITCH. LOCATED ADJACENT TO EXISTING LIGHT SWITCHES, 48" AFF
11	NOT USED.
12	HOME RUN TO NEW 1/30 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P2B.
13	HOMERUN TO SPARE 1/20 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P2B.

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02/22/2024

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Power First Floor Plan - New Work

Rev.	Date	Notes

EP1.3R

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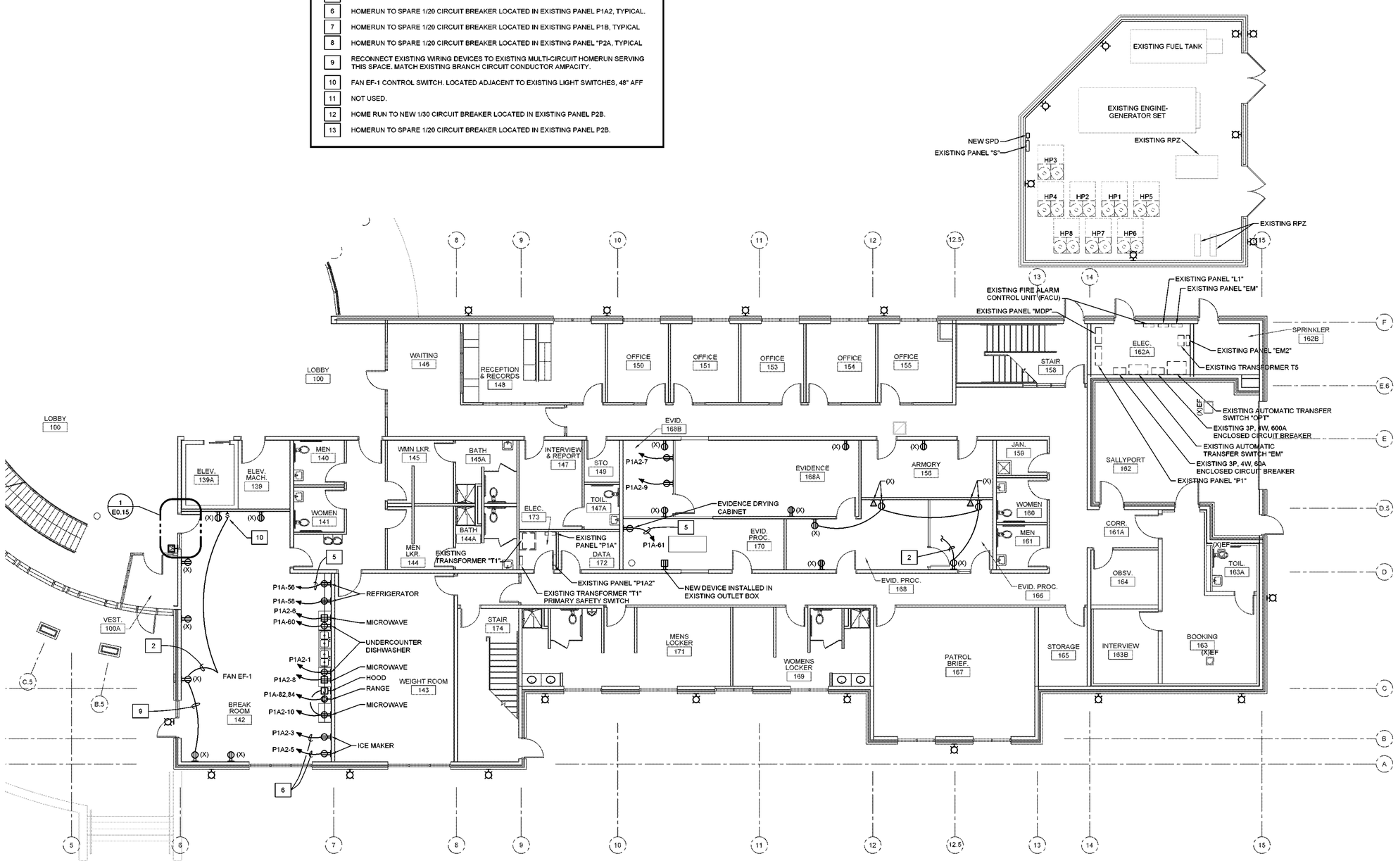
KEYED NOTES

1	NOT USED.
2	CONNECT TO EXISTING 120V RECEPTACLE CIRCUIT SERVING THIS AREA PRIOR TO DEMOLITION.
3	NOT USED.
4	HOMERUN TO NEW 1/30 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P2A.
5	HOMERUN TO EXISTING 1/20 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P1A, TYPICAL.
6	HOMERUN TO SPARE 1/20 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P1A2, TYPICAL.
7	HOMERUN TO SPARE 1/20 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P1B, TYPICAL
8	HOMERUN TO SPARE 1/20 CIRCUIT BREAKER LOCATED IN EXISTING PANEL "P2A, TYPICAL
9	RECONNECT EXISTING WIRING DEVICES TO EXISTING MULTI-CIRCUIT HOMERUN SERVING THIS SPACE. MATCH EXISTING BRANCH CIRCUIT CONDUCTOR AMPACITY.
10	FAN EF-1 CONTROL SWITCH. LOCATED ADJACENT TO EXISTING LIGHT SWITCHES, 48" AFF
11	NOT USED.
12	HOME RUN TO NEW 1/30 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P2B.
13	HOMERUN TO SPARE 1/20 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P2B.



1 POWER FIRST FLOOR PLAN - NEW WORK
1/8" = 1'-0"

PLAN NORTH

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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Power First Floor Plan - New Work

Rev.	Date	Notes

EP1.4R

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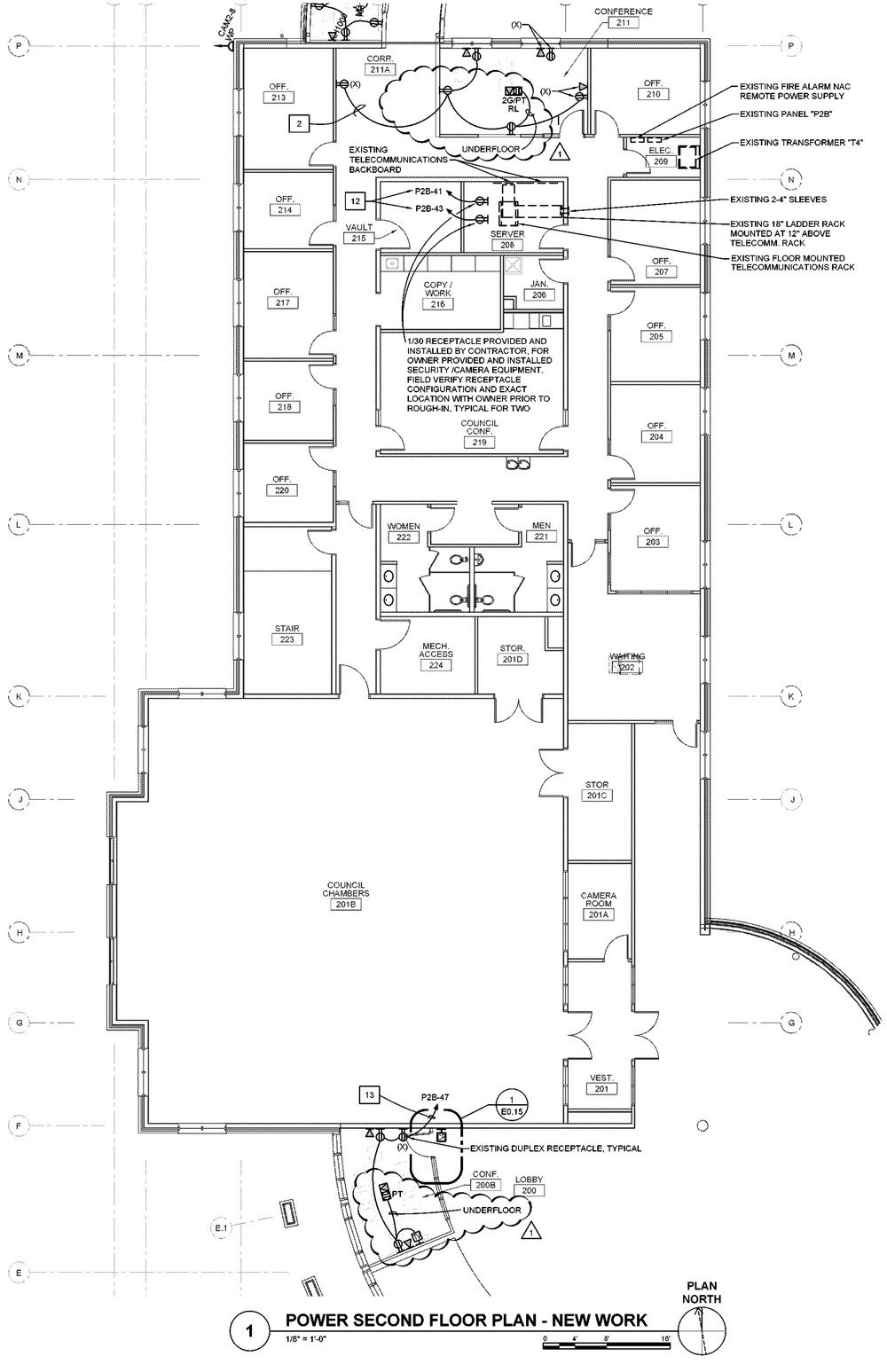

1 **POWER SECOND FLOOR PLAN - NEW WORK**
1/8" = 1'-0"

0 4' 8' 16'

KEYED NOTES

1	NOT USED.
2	CONNECT TO EXISTING 120V RECEPTACLE CIRCUIT SERVING THIS AREA PRIOR TO DEMOLITION.
3	NOT USED.
4	HOMERUN TO NEW 1/30 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P2A.
5	HOMERUN TO EXISTING 1/20 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P1A, TYPICAL.
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03/08/2024

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Power Second Floor Plan - New Work

Rev.	Date	Notes
1	03.06.24	OWNER REVIEW

EP1.5R

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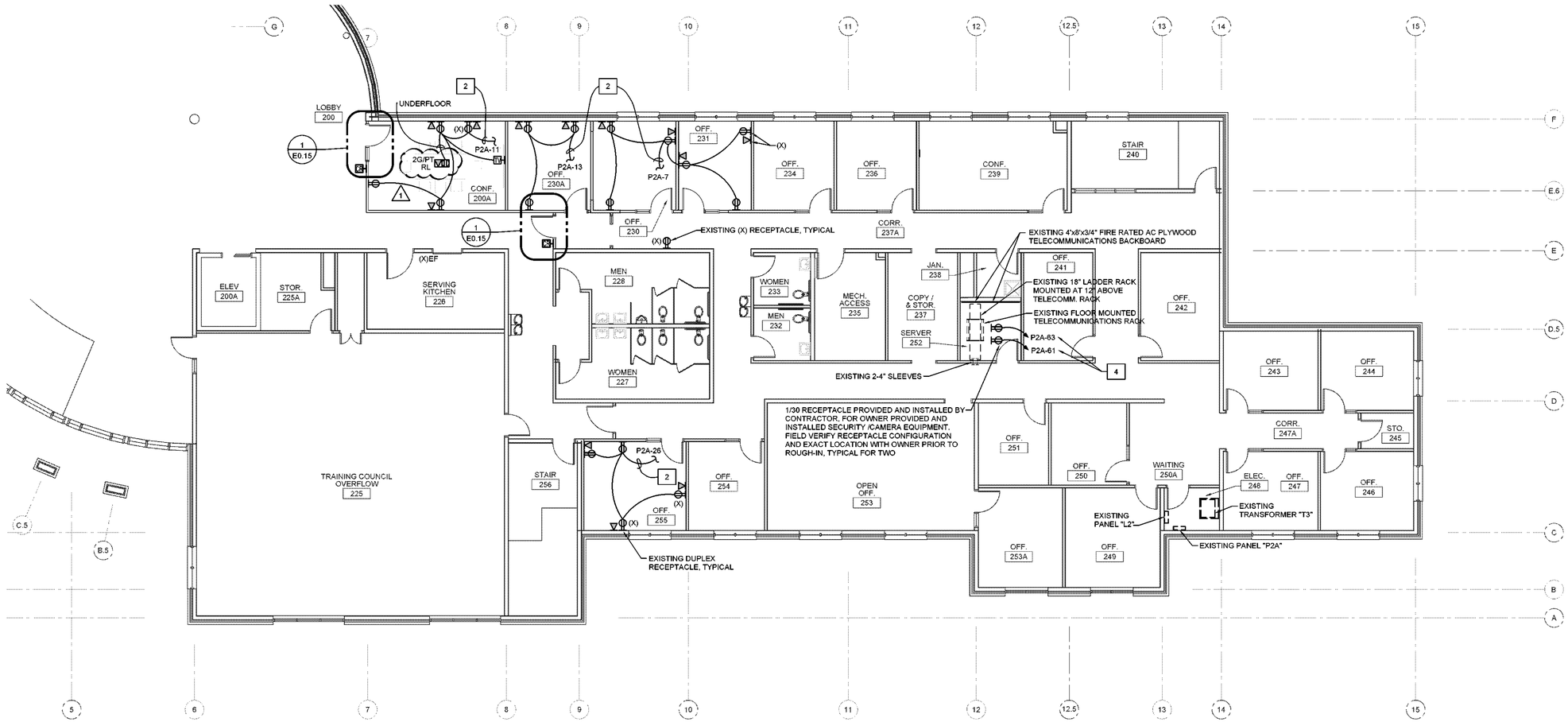
KEYED NOTES

1	NOT USED.
2	CONNECT TO EXISTING 120V RECEPTACLE CIRCUIT SERVING THIS AREA PRIOR TO DEMOLITION.
3	NOT USED.
4	HOMERUN TO NEW 1/30 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P2A.
5	HOMERUN TO EXISTING 1/20 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P1A, TYPICAL.
6	HOMERUN TO SPARE 1/20 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P1A2, TYPICAL.
7	HOMERUN TO SPARE 1/20 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P1B, TYPICAL
8	HOMERUN TO SPARE 1/20 CIRCUIT BREAKER LOCATED IN EXISTING PANEL "P2A, TYPICAL
9	RECONNECT EXISTING WIRING DEVICES TO EXISTING MULTI-CIRCUIT HOMERUN SERVING THIS SPACE. MATCH EXISTING BRANCH CIRCUIT CONDUCTOR AMPACITY.
10	FAN EF-1 CONTROL SWITCH, LOCATED ADJACENT TO EXISTING LIGHT SWITCHES, 48" AFF
11	NOT USED.
12	HOME RUN TO NEW 1/30 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P2B.
13	HOMERUN TO SPARE 1/20 CIRCUIT BREAKER LOCATED IN EXISTING PANEL P2B.



1 **POWER SECOND FLOOR PLAN - NEW WORK**
1/8" = 1'-0"

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Power Second Floor Plan - New Work

Rev.	Date	Notes
1	03.06.24	OWNER REVIEW

EP1.6R

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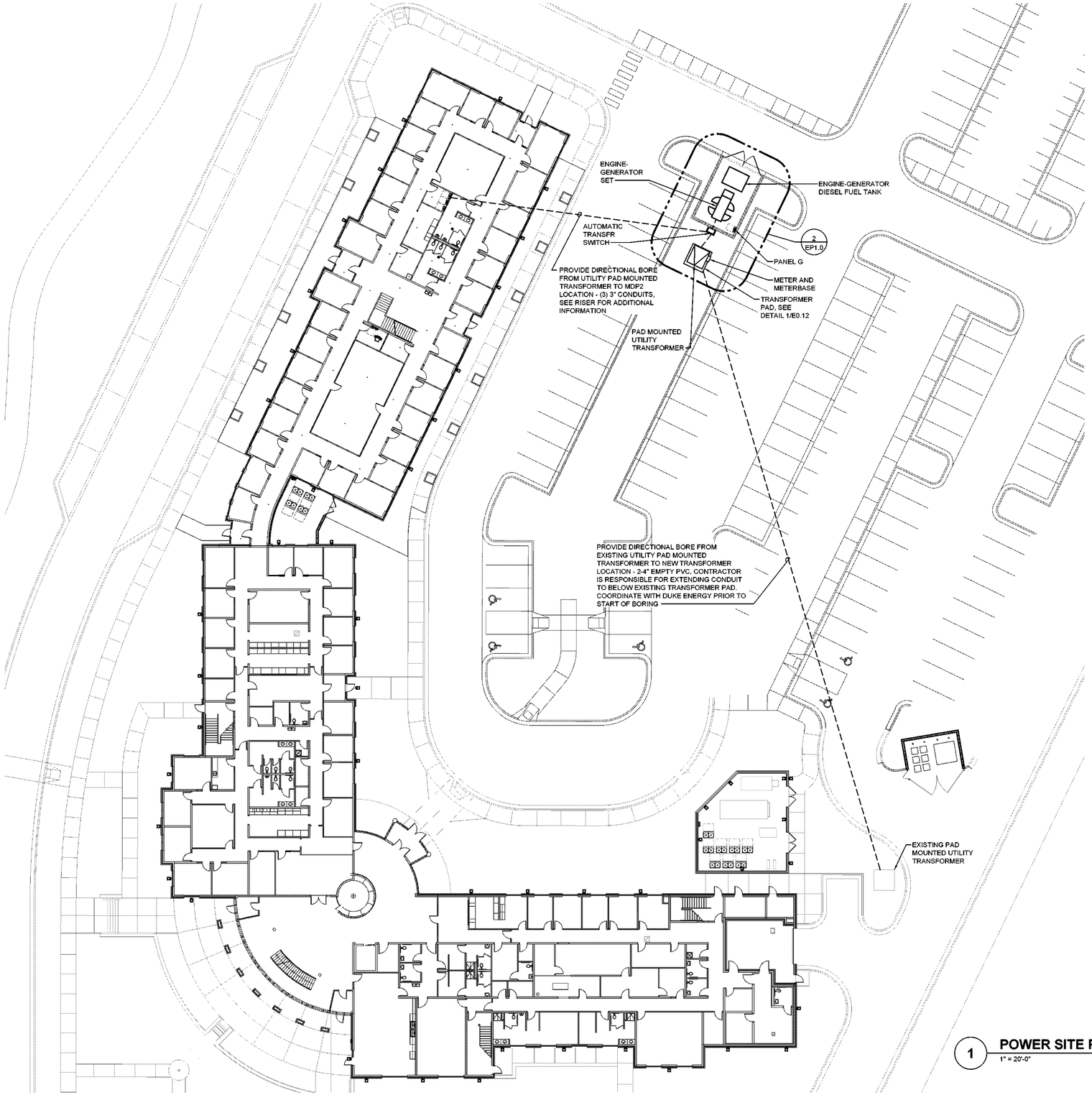
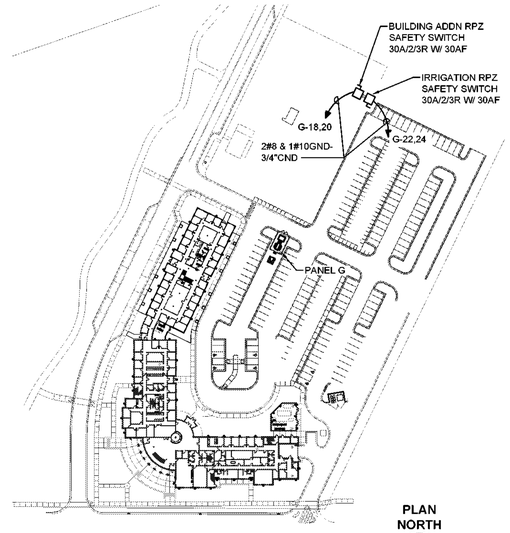


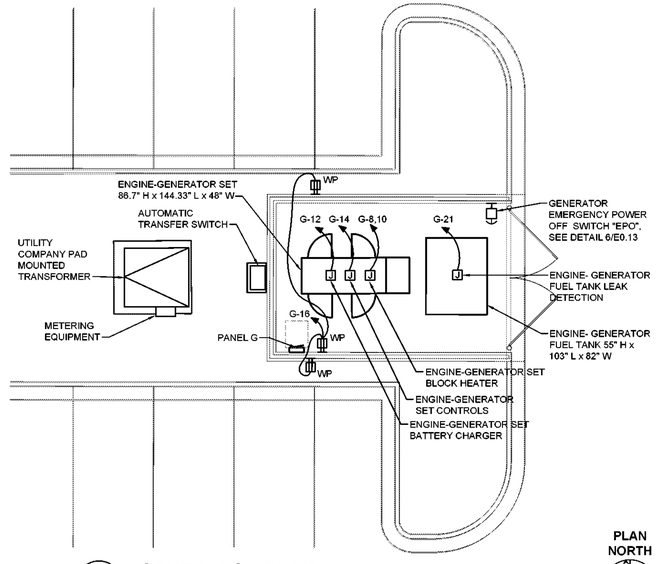
1 **POWER SITE PLAN - NEW WORK**
1" = 20'-0"

PLAN NORTH



3 **SITE PLAN - RPZ POWER**
1" = 100'-0"

PLAN NORTH



2 **GENERATOR PLAN**
1/8" = 1'-0"

PLAN NORTH

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02/22/2024

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POWER SITE PLAN - NEW WORK

Rev.	Date	Notes

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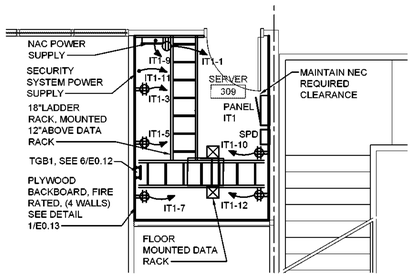
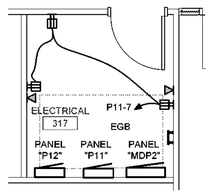


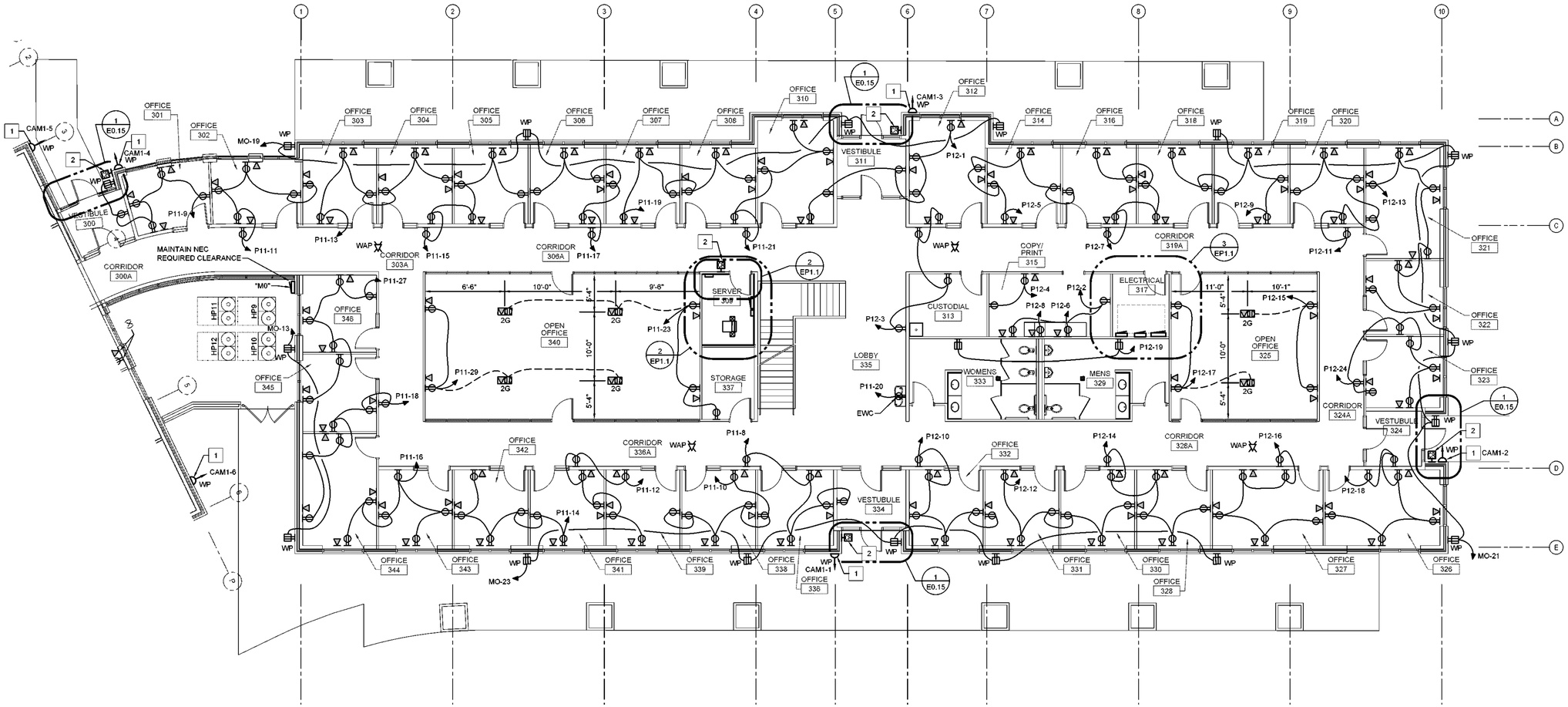
2 ENLARGED POWER PLAN - SERVER 309
1/4" = 1'-0"



3 ENLARGED POWER PLAN - ELECTRCIAL 317
1/4" = 1'-0"

KEYED NOTES

1. CAMERA: 4MP EYEBALL CAMERA WITH WALL MOUNT BRACKET, MOUNTED AT SOFFIT HEIGHT 8'-0"AFF, VERIFY MOUNTING HEIGHT WITH ARCHITECT. PROVIDE FLUSH MOUNTED 4 SQUARE SQUARE BOX ON EXTERIOR WITH 1"CND THRU WALL TO INTERIOR OF BUILDING. PROVIDE (1) SHIELDED CAT6 (POE) + GROUND BAR JUST ABOVE CEILINGS INSIDE AT EACH CAMERA, CAT 6 CABLE ROUTED IN J-HOOKS ABOVE CEILINGS FROM CAMERA LOCATION TO CAMERA RACK (GROUND NOT NEEDED FROM GND BAR TO CAMERA). SEE DETAILS 11 & 12, DRAWING E0.13
2. CARD READER: SEE ACS DOOR DETAILS ON E0.15.



1 POWER FIRST FLOOR PLAN - NEW WORK
1/8" = 1'-0"

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02/22/2024

Leland Town Hall Addition & Renovations
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Construction Drawings

Issue Date: February 23, 2024

Power First Floor Plan - New Work

Rev.	Date	Notes

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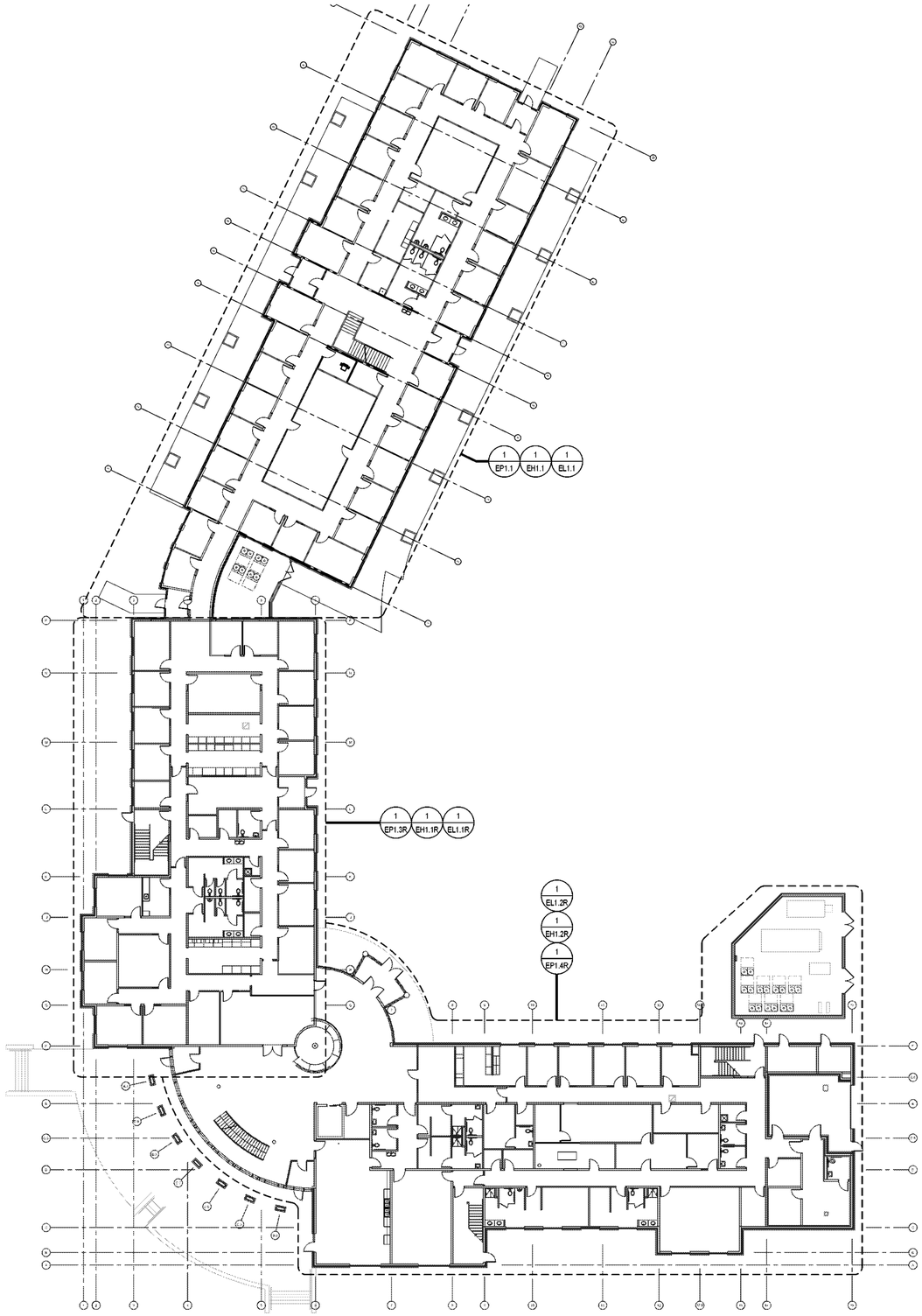

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

1 **FIRST FLOOR NEW WORK - KEY PLAN**
1" = 20'-0"

PLAN NORTH

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02/22/2024

Leland Town Hall Addition & Renovations

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First Floor New Work - Key Plan

Rev.	Date	Notes

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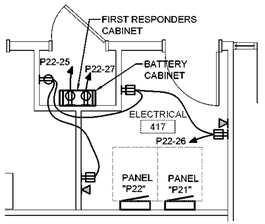
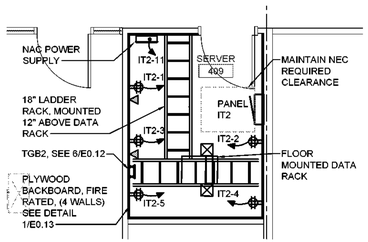


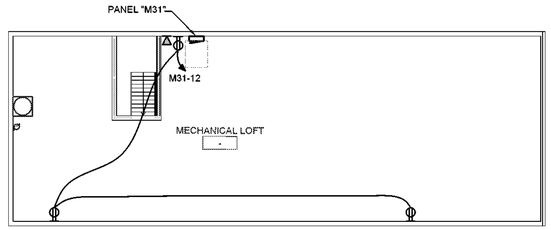
3 **ENLARGED POWER PLAN - ELECTRCIAL 417**
1/4" = 1'-0"

PLAN NORTH



2 **ENLARGED POWER PLAN - SERVER 409**
1/4" = 1'-0"

PLAN NORTH

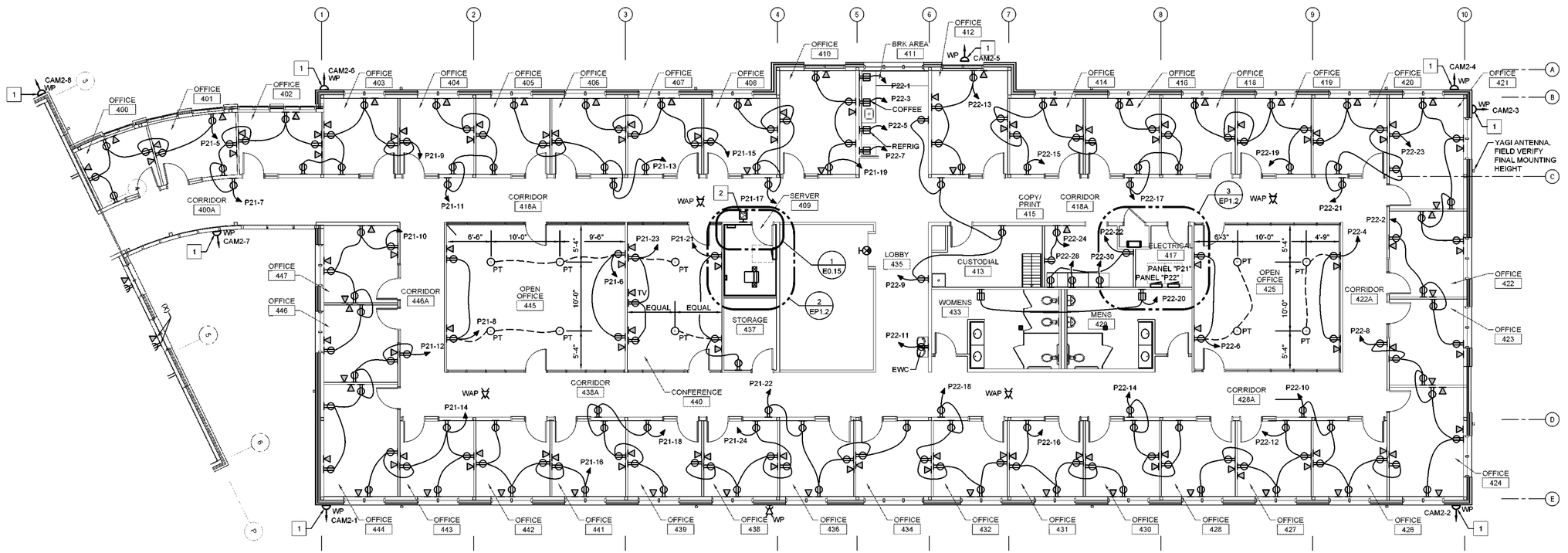


4 **MECHANICAL LOFT - NEW WORK POWER**
1/4" = 1'-0"

PLAN NORTH

KEYED NOTES

1. CAMERA: 5MP BULLET CAMERA, WALL MOUNTED 1'-6" BELOW FACE OF 2ND FLOOR EAVE. VERIFY FINAL MOUNTING HEIGHT WITH ARCHITECT. PROVIDE FLUSH MOUNTED 4 SQUARE SQUARE BOX ON EXTERIOR WITH 1"CND THRU WALL TO INTERIOR OF BUILDING. PROVIDE (1) SHIELDED CAT6 (POE) + GROUND BAR JUST ABOVE CEILINGS INSIDE AT EACH CAMERA. CAT 6 CABLE ROUTED IN J-HOOKS ABOVE CEILINGS FROM CAMERA LOCATION TO CAMERA RACK (GROUND NOT NEEDED FROM GND BAR TO CAMERA). SEE DETAILS 11 & 12, DRAWING E0.13
2. CARD READER: SEE ACS DOOR DETAILS ON E0.15.



1 **POWER SECOND FLOOR PLAN - NEW WORK**
1/8" = 1'-0"

PLAN NORTH

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02/22/2024

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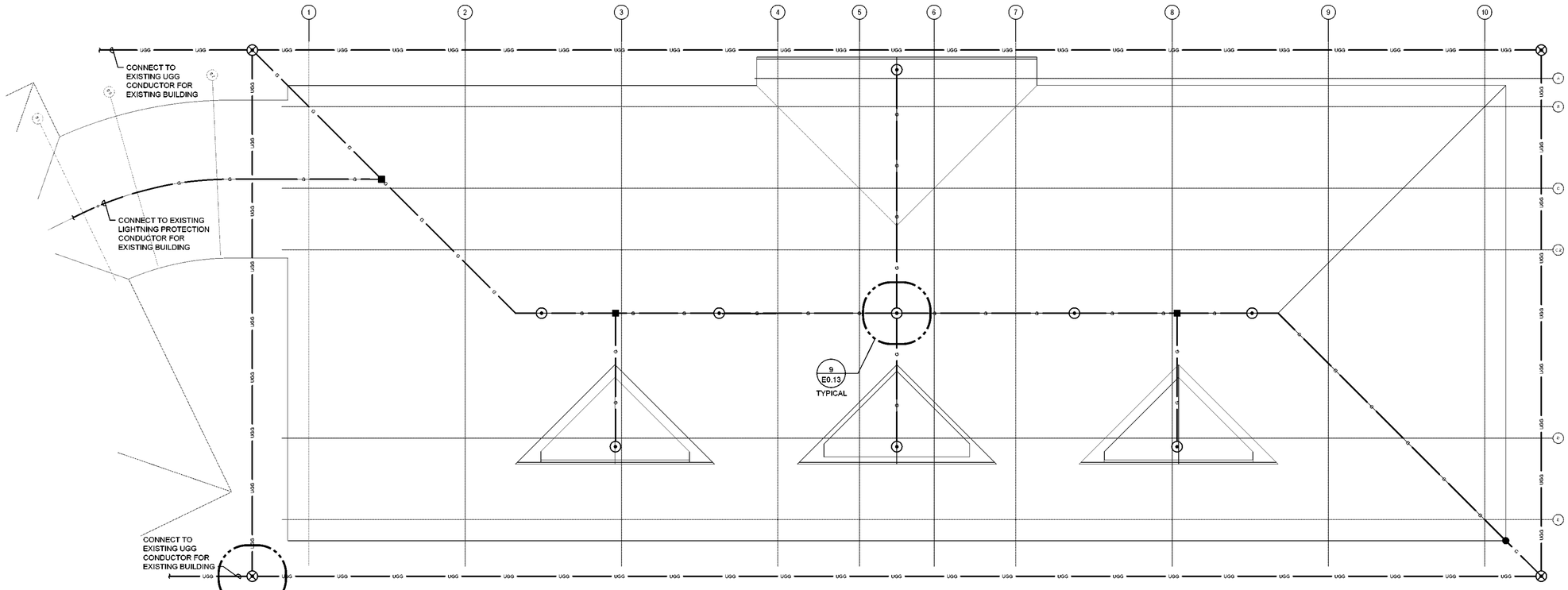
LIGHTNING PROTECTION LEGEND

SYMBOL	DESCRIPTION
⊙	ALUMINUM AIR TERMINAL IN ALUMINUM BASE NFPA 780 CLASS II, HEIGHT 24", UON, SEE 9/E0.13
⊗	GROUND ROD, 3/4"x10'-0" LONG COPPER-CLAD IN TEST WELL, SEE 7/E0.13
—— G ——	CLASS 1 ALUMINUM GROUND CONDUCTOR ON ROOF
—— UGG ——	1/0 COPPER GROUND GROUND LOOP BELOW GRADE
■	BI-METALLIC SPLICE CONNECTOR TO CONNECT SURFACE BUILDING MOUNTED OR MECHANICAL EQUIPMENT ALUMINUM DOWN-CONDUCTOR TO PIG TAIL FROM GROUND ROD. SPLICE CONNECTOR TO BE INSTALLED 18" ABOVE FINISHED GRADE, SEE 10/E0.13
◌	GROUNDING ELECTRODE CONDUCTOR, 10' COILED ABOVE GRADE
●	ALUMINUM GROUND CONDUCTOR DOWN FROM ROOF TO 18" ABOVE FINISHED GRADE TO BI-METALLIC SPLICE CONNECTION TO COPPER PIGTAIL FROM GROUND RING

LIGHTNING PROTECTION NOTES

1. LIGHTNING PROJECTION SYSTEM MUST BE INSTALLED IN ACCORDANCE WITH NFP780.
2. COMPLETED SYSTEM MUST HAVE A UL MASTER LABEL.
3. IF DOWN CONDUCTORS ARE INSTALLED ON (X)TERIOR OF BUILDING THEY MUST BE PROTECTED IN CONDUIT AND THE CONDUIT PAINTED TO MATCH BUILDING (X)TERIOR AS CLOSELY AS POSSIBLE.



1 GROUNDING AND LIGHTNING PROTECTION FLOOR PLAN - NEW WORK
1/8" = 1'-0"

SEE ARCHITECTURAL DRAWINGS SHEET G3.0 FOR PROJECT PHASING REQUIREMENTS

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NORTH CAROLINA PROFESSIONAL SEAL 023311 ENGINEER W. ALLEN CRIBB
02/22/2024

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Construction Drawings

Issue Date: February 23, 2024

Grounding and Lightning Protection Floor Plan - New Work

Rev.	Date	Notes

EP1.3

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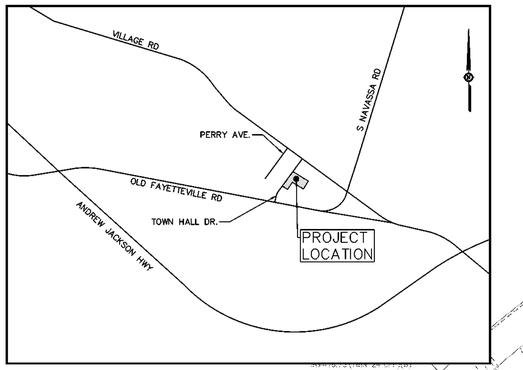

VICINITY MAP

NOT TO SCALE

LEGEND

- LIMITS OF DISTURBANCE
- SILT FENCE
- TEMPORARY CONSTRUCTION ENTRANCE
- INLET PROTECTION

NOTES:

1. PRIOR TO STARTING ANY WORK CONTRACTOR IS TO INSTALL TEMPORARY CONSTRUCTION/SECURITY CHAIN LINK FENCE AROUND COMPLETE PERIMETER OF LIMITS OF WORK OF THE BUILDING ADDITION AND ADJACENT PARKING LOT. FENCING TO BE 6' MINIMUM HEIGHT FREESTANDING WITH WINDSCREEN AND WEIGHTED SANDBAG FOOTINGS.
2. ALL EXISTING INLETS TO RECEIVE SILTSACK INLET PROTECTION. REMOVE INLET PROTECTION ONCE PERMANENT MEASURES ARE ESTABLISHED. PERMANENT MEASURES ARE CONSIDERED ACHIEVED WHEN THE PARKING LOT IS PAVED AND A UNIFORM PERENNIAL VEGETATIVE COVER IS ESTABLISHED ON ALL SEEDED AREAS.

TOWN HALL DRIVE

INLET TO RECEIVE SILT SACK INLET PROTECTION (TYP.)

TEMPORARY CONSTRUCTION ENTRANCE

TREE PROTECTION

LIMIT OF DISTURBANCE

SILT FENCE (TYP.)

TEMPORARY CONSTRUCTION ENTRANCE

100% CONSTRUCTION DRAWINGS FOR REVIEW PURPOSES ONLY NOT RELEASED FOR CONSTRUCTION

GRAPHIC SCALE 20 0 10 20 40 — DIVISION VALUE = 20 FEET

CALL 811 BEFORE YOU DIG — SAFE DIGGING PARTNER

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SIGNED AND DATED:
Digitally signed by Alex D. Lapinsky
Alex D. Lapinsky Date: 2024.03.05 14:30:49-05'00'

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED IN ACCORDANCE WITH THE STANDARD CERTIFICATION REQUIREMENTS FOUND IN NC ADMINISTRATIVE CODE 21-56.1103(E). THIS DIGITAL SIGNATURE HAS BEEN FOUND BY THE NC BOARD OF EXAMINERS FOR ENGINEERS AND SURVEYORS TO MEET THESE STANDARDS. PLEASE CONTACT THE SIGNER IF YOU NEED ASSISTANCE IN VALIDATING THE SIGNATURE.

NORTH CAROLINA PROFESSIONAL SEAL 042192 ENGINEER ALEXANDER D. LAPINSKY

Leland Town Hall Addition & Renovations

102 Town Hall Drive
Leland, NC 28451

Issue Date: February 12, 2024

Erosion and Sedimentation Control Plan

Rev.	Date	Notes

ES-101

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GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes			
	Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a)	Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b)	High Quality Water (HQW) Zones	7	None
(c)	Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d)	Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e)	Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to maintain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

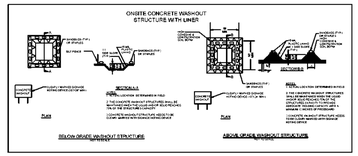
1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those un-attended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside the limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• *Within 24 hours*, an oral or electronic notification. • *Within 7 calendar days*, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• *Within 24 hours*, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses. [40 CFR 122.41(m)(3)]	• *A report at least ten days before the date of the bypass, if possible*. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses. [40 CFR 122.41(m)(3)]	• *Within 24 hours*, an oral or electronic notification. • *Within 7 calendar days*, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment.[40 CFR 122.41(l)(7)]	• *Within 24 hours*, an oral or electronic notification. • *Within 7 calendar days*, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6)]. • Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

EROSION & SEDIMENTATION CONTROL NARRATIVE

PROJECT DESCRIPTION

THE PURPOSE OF THE PROJECT IS THE CONSTRUCTION OF A 21,200 SF 2-STORY ADDITION, HVAC UPGRADE AND 6,000 SF OF INTERIOR RENOVATIONS TO THE EXISTING LELAND TOWN HALL BUILDING, A PARKING LOT EXPANSION ADJACENT TO THE BUILDING ADDITION, AND RELATED SITEWORK.

1.93 ACRES WILL BE DISTURBED AS PART OF THIS PROJECT. THE LIMITS OF DISTURBANCE ARE DEFINED ON THE PLANS.

ADJACENT PROPERTY

THE PROJECT IS BOUND TO THE NORTH BY VILLAGE ROAD; TO THE EAST BY MULTIFAMILY CONDOS ON PARCEL #038AA013, TO THE WEST BY TOWN HALL DRIVE AND SOUTH BY OLD FAYETTEVILLE ROAD. THE LAND USAGE ON THE ADJACENT PARCELS IS MAINLY RESIDENTIAL AND COMMERCIAL. NO UNDEVELOPED PARCELS ARE PRESENT IN THE VICINITY OF THE SITE THE SITE IS LOCATED IN AN URBAN AREA DUE TO ITS LOCATION WITHIN TOWN OF LELAND'S CITY LIMITS.

EXISTING SITE CONDITIONS

THE EXISTING TOWN HALL SITE CURRENTLY CONTAINS THE TOWN HALL BUILDING AND ASSOCIATED PARKING; IT DRAINS TO TWO EXISTING STORMWATER COLLECTION SYSTEMS. ONE LOCATED NEAR THE CENTER OF THE SITE AND THE OTHER IN THE SOUTHEAST CORNER OF THE SITE. THE EXISTING STORMWATER DRAINAGE SYSTEM FLOWS FROM EAST TO WEST ACROSS THE SITE.

THE PROJECT AREA CONTAINS FLAT TO GRADUAL SLOPES. IN GENERAL, THE SITE SLOPES TOWARDS THE EXISTING STORMWATER COLLECTION SYSTEMS.

SOILS

A SOIL BORING REPORT WAS PERFORMED BY ECS SOUTHEAST, LLP, DATED FEBRUARY 23, 2023, AS PART OF THIS WORK. GROUNDWATER WAS FOUND APPROXIMATELY 10.25' TO 11' BELOW EXISTING GRADE. A SOILS REPORT FROM THE NRCS WAS ALSO GENERATED FOR THE PROJECT. ACCORDING TO THE NRCS SOIL SURVEY MAP THE SOILS AT THE SITE ARE BAYMEADE FINE SAND, AND BAYMEADE AND MARVYN SOILS. BAYMEADE SOILS FALL IN THE HYDROLOGIC SOIL GROUP A CLASSIFICATION AND ARE CONSIDERED WELL DRAINED; BAYMEADE AND MARVYN SOILS FALL IN THE HYDROLOGIC SOIL GROUP A/B CLASSIFICATION AND ARE ALSO CONSIDERED WELL DRAINED SOILS. BOTH SOIL CLASSIFICATIONS ON-SITE ARE IN THE "VERY LOW" RUNOFF CLASS.

EROSION & SEDIMENT CONTROL MEASURES

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION & SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE NORTH CAROLINA EROSION & SEDIMENT CONTROL PLANNING AND DESIGN MANUAL. THE CONTRACTOR SHALL SECURE AND MAINTAIN ON SITE A COPY OF EACH PUBLICATION AND ADHERE TO ALL PRACTICES CONTAINED THEREIN WHICH MAY BE PERTINENT TO THIS PROJECT.

THE MAIN CONTROL MEASURES PROPOSED TO PREVENT THE TRANSPORT OF SEDIMENT OFF-SITE ARE INLET PROTECTION DEVICES AND SILT FENCE. AREAS OF DISTURBANCE WILL BE KEPT TO A MINIMUM DURING THE PROJECT. DISTURBED AREAS WILL BE QUICKLY STABILIZED WITH PERMANENT SURFACES DUE TO THE NEED FOR THE PROJECT FEATURES TO BE AVAILABLE FOR USE BY THE TOWN. THE SOILS ON-SITE, DUE TO THEIR LOW RUNOFF POTENTIALS AND GRADUAL (FLAT) SLOPES, WILL HELP REDUCE THE TOTAL AMOUNT OF RUNOFF THAT'S GENERATED FROM THE PROJECT. THE COMBINATION OF THE ON-SITE SOILS, PROJECT CONSTRUCTION SEQUENCE, AND PROPOSED CONTROL MEASURES ARE ANTICIPATED TO PREVENT THE TRANSPORT OF SEDIMENT OFF-SITE. THE AFOREMENTIONED REASONS ARE PROVIDED FOR JUSTIFICATION OF THE LACK OF A SEDIMENT CONTROL DEVICE THAT DEWATERS FROM THE TOP FOR THE PROPOSED PROJECT.

STRUCTURAL PRACTICES

1. TOPSOILING / STOCKPILE – 6.04: TOPSOIL IS TO BE STRIPPED FROM THE AREA OF CONSTRUCTION AND STOCKPILED IN DESIGNATED AREAS AND STABILIZED AS REQUIRED.
2. TREE PROTECTION – 6.05: TREE PROTECTION FENCE IS TO BE USED TO IDENTIFY AND PROTECT VEGETATION ON SITE FROM DAMAGE DURING CONSTRUCTION AS SHOWN ON THE PLANS. IT IS ALSO TO PREVENT THE UNNECESSARY REMOVAL OF VEGETATION DURING CONSTRUCTION. LIMITS OF TREE PROTECTION MAY BE MODIFIED THROUGHOUT CONSTRUCTION TO ENSURE THE SURVIVAL OF THE VEGETATION DESIGNATED ON THE PLANS.
3. CONSTRUCTION ENTRANCE – 6.06: TEMPORARY CONSTRUCTION ENTRANCES ARE BE INSTALLED AND MAINTAINED THROUGHOUT CONSTRUCTION. A TEMPORARY CONSTRUCTION ENTRANCE SHALL BE PROVIDED FOR ANY PHASE OR PORTION OF A PHASE CONNECTING TO A PAVED ROADWAY. ANY AND ALL MATERIAL OR DEBRIS TRACKED ONTO A PUBLIC OR PRIVATE ROAD WILL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM ROADS BY SHOVELING OR SWEEPING AND MAY BE TRANSPORTED TO A SEDIMENT CONTROLLED DISPOSAL AREA.
4. TEMPORARY SEEDING – 6.10: ALL DENUDED AREAS LEFT DORMANT FOR EXTENDED PERIODS OF TIME SHALL BE SEEDED WITH FAST GERMINATING VEGETATION. SELECTION OF THE SEED WILL DEPEND ON THE TIME OF YEAR IT IS APPLIED.
5. PERMANENT SEEDING – 6.11: ALL AREAS NOT OTHERWISE DENUDED ON THE PLAN WITHIN THE LIMITS OF CONSTRUCTION OR WITHIN STORMWATER CONVEYANCE SYSTEMS LOCATED IN DRAINAGE EASEMENTS RECEIVING RUNOFF FROM CONSTRUCTION ACTIVITIES ARE TO BE SEEDED WITH APPROVED VEGETATION. SELECTION OF SEED WILL DEPEND ON TIME OF YEAR IT IS APPLIED.
6. HARDWARE CLOTH AND GRAVEL INLET PROTECTION – 6.51: CLOTH AND GRAVEL INLET PROTECTION WILL BE INSTALLED AS SHOWN ON PLANS TO PREVENT SEDIMENT FROM ENTERING YARD INLETS, GRATED STORM DRAINS, OR DROP INLETS DURING CONSTRUCTION. UTILIZING INLET PROTECTION ALLOWS EARLY USE OF THE STORM DRAIN SYSTEM.
7. SILT FENCE BARRIER – 6.62: SILT FENCE SEDIMENT BARRIERS WILL BE INSTALLED AS SHOWN ON PLAN. UNLESS OTHERWISE SPECIFIED, THE SILT FENCE WILL ALSO REPRESENT THE LIMITS OF CONSTRUCTION AND DISTURBANCE.

MANAGEMENT STRATEGIES

1. LAND DISTURBING ACTIVITIES SHALL BE PLANNED & CONDUCTED TO LIMIT EXPOSURE TO THE SHORTEST FEASIBLE TIME.
2. INSPECT AND REPAIR ALL EROSION CONTROL MEASURES.
3. INSTALL ADDITIONAL EROSION CONTROL MEASURES AS NEEDED THROUGH THE LIFE OF THE PROJECT.
4. STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH GENERAL PERMIT NCG 010000.
5. MAINTAIN ALL FACILITIES THROUGHOUT THE CONSTRUCTION OPERATION.
6. UPON ESTABLISHMENT & STABILIZATION OF VEGETATION, REMOVE ALL EROSION CONTROL MEASURES AND STABILIZE.

PERMANENT STABILIZATION

AFTER CONSTRUCTION ALL GRASSED AREAS ARE TO BE PERMANENTLY STABILIZED WITH TOPSOIL AND SEEDING UNLESS SODDING OR SPRIGGING IS OTHERWISE SPECIFIED. SEEDING IS TO FOLLOW THE GUIDELINES AS FOUND ON THIS PLAN. ANY CUT AND FILL SLOPES FOUND TO BE EXCESSIVELY ERODING AFTER PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL STABILIZATION MEASURES UNTIL THE PROBLEM IS CORRECTED. IF ADDITIONAL STABILIZATION MEASURES ARE REQUIRED, EROSION CONTROL MATTING AND/OR SOD MAY BE USED.

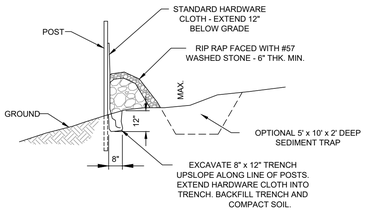
EROSION CONTROL DESIGN

ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL. SELECTION OF EROSION AND SEDIMENT CONTROL PRACTICES TAKES INTO ACCOUNT THE EXISTING TOPOGRAPHY AND VEGETATION. THE PRIMARY EROSION CONTROL PRACTICE FOR RUNOFF FROM CONSTRUCTION ACTIVITIES FOR THIS PROJECT IS SILT FENCE. INLET PROTECTION AND A TEMPORARY CONSTRUCTION ENTRANCE WILL BE USED TO PREVENT SEDIMENT FROM LEAVING THE PROJECT SITE.

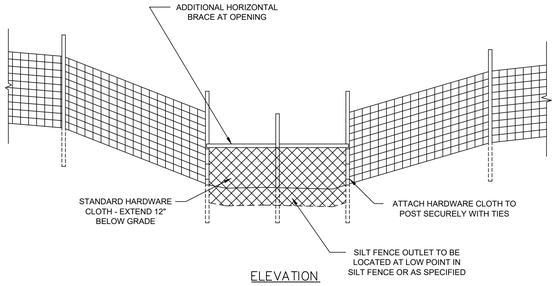
SEQUENCE OF CONSTRUCTION

THE FOLLOWING SEQUENCE OF CONSTRUCTION IS GENERAL AND COVERS MAJOR WORK ITEMS. THIS SEQUENCE IS PROVIDED AS A GUIDE FOR LIMITING EROSION AND THE LOSS OF SEDIMENT TO OFF-SITE AREAS. IT IS NOT INTENDED TO LIMIT THE CONTRACTOR TO CERTAIN MEANS, METHODS AND/OR TIMES FOR DOING WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SCHEDULING AND PERFORMING HIS/HER WORK. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PREVENTING ERODED SOILS FROM LEAVING THE SITE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER SHOULD THERE BE ANY FORESEEN SIGNIFICANT CONFLICTS WITH THE INTENT OF THIS SEQUENCE AND SHALL PROVIDE IN WRITING TO THE ENGINEER RECOMMENDATIONS FOR ALTERING THE SEQUENCE.

1. ACQUIRE ALL NECESSARY PERMITS AND APPROVALS.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND PRODUCT INFORMATION FOR ALL PROPOSED WORK TO THE ENGINEER FOR REVIEW AND APPROVAL AT LEAST TWO WEEKS PRIOR TO STARTING CONSTRUCTION.
3. ENGINEER CERTIFICATIONS ARE REQUIRED FOR THIS PROJECT. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL WORK REQUIRING CERTIFICATIONS WITH ENGINEER.
4. INSTALL TEMPORARY CONSTRUCTION ENTRANCE(S) AND REQUIRED SIGNAGE WHERE SHOWN ON THESE PLANS. THE STONE AREA OF THE CONSTRUCTION ENTRANCE IS TO BE CHECKED REGULARLY TO ENSURE IT IS SUFFICIENT TO REDUCE TRACKING OF MATERIAL OFF SITE. ANY AND ALL MATERIAL OR DEBRIS TRACKED ONTO A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM ROADS BY SHOVELING OR SWEEPING AND MAY BE TRANSPORTED TO A SEDIMENT CONTROLLED DISPOSAL AREA. LOCATION OF CONSTRUCTION ENTRANCE(S) SHOWN ON THESE PLANS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO INSTALLATION. CONSTRUCTION ENTRANCE SHALL NOT BE LOCATED WITHIN (3) FEET OF WATER METERS, SEWER CLEANOUTS, TRANSFORMERS, LIGHT POLES, FIRE HYDRANTS, AND ANY OTHER ABOVE GROUND APPURTENANCES.
5. ESTABLISH A WORKING PERIMETER WITH SILT FENCE AND TREE PROTECTION AS SHOWN ON THESE PLANS. SILT FENCE AND TREE PROTECTION ARE TO BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES ONE-THIRD THE HEIGHT TO THE TOP OF THE BARRIER. WHERE PUBLIC SIDEWALK EXISTS, CONTRACTOR SHALL ENSURE SILT FENCE AND TREE PROTECTION DOES NOT IMPEDE PEDESTRIAN TRAFFIC. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
6. INSTALL SILTSACK INLET AND/OR OUTLET PROTECTION ON ALL STORMWATER CONVEYANCE SYSTEMS RECEIVING RUNOFF FROM CONSTRUCTION ACTIVITIES. LOCATIONS SHOWN ON THE PLAN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR TO ENSURE COMPLIANCE WITH ALL LOCAL AND STATE REGULATIONS.
7. AFTER THE ABOVE ITEMS NO. 1, 4, 5, AND 6 ARE COMPLETE THE CONTRACTOR SHALL SCHEDULE AN ON-SITE PRECONSTRUCTION CONFERENCE WITH THE NCDEQ/LOS PERSONNEL NAMED ON THE EROSION CONTROL PERMIT, TOWN OF LELAND REPRESENTATIVE(S) AND THE ENGINEER PRIOR TO STARTING ANY LAND DISTURBING ACTIVITY.
8. ALL AREAS OUTSIDE OF LIMITS OF DISTURBANCE ARE NOT TO BE DISTURBED AND SHALL BE LEFT IN A NATURAL STATE.
9. ALL EROSION & SEDIMENT (E&S) CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE LATEST NC EROSION & SEDIMENT CONTROL PLANNING AND DESIGN MANUAL. THESE EROSION & SEDIMENT CONTROL MEASURES SHALL BE INSTALLED BEFORE CONSTRUCTION AND MAINTAINED UNTIL FINAL VEGETATIVE COVER IS ESTABLISHED. EROSION & SEDIMENT CONTROL MEASURES ARE TO BE CHECKED WEEKLY UNLESS OTHERWISE SPECIFIED AND AFTER EACH SIGNIFICANT RAINFALL EVENT.
10. DO ALL WORK REQUIRED TO CLEAR AND GRUB THE SITE WITHIN THE LIMITS SHOWN ON THESE PLANS, REMOVING EXISTING STRUCTURES, PAVED SURFACES, VEGETATION, FENCING, GRAVEL, TREES, AND OTHER FACILITIES AS REQUIRED TO PREPARE THE SITE FOR CONSTRUCTION. ALL SPOIL MATERIAL FROM THE SITE SHALL BE TRANSPORTED OFF SITE IMMEDIATELY AND DISPOSED OF IN A LEGAL MANNER. WASTE SITE MUST HAVE A STATE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN. SPOIL MATERIALS ARE NOT PERMITTED TO BE STOCKPILED ON SITE FOR ANY PERIOD OF TIME.
11. INSTALL UNDERGROUND UTILITIES AND STORM DRAINAGE, PROVIDING APPROVED SEDIMENT PROTECTION AT NEW DRAINAGE CONVEYANCE STRUCTURES AS REQUIRED, INCLUDING INLET AND/OR OUTLET PROTECTION. IF TEMPORARY DIVERSIONS ARE REQUIRED, TEMPORARY SEDIMENT FILTRATION & VELOCITY CONTROL MEASURES MUST BE INSTALLED. IMMEDIATELY UPON COMPLETION OF INSTALLATION, ALL DISTURBED AREAS ARE TO BE LEVELED OUT, SEEDED, AND MULCHED. DISTURBED AREAS ARE NOT TO LAY EXPOSED LONGER THAN OUTLINED IN THE NPDES STABILIZATION TABLE SHOWN IN THIS PLAN SET.
12. BEGIN BUILDING ADDITION CONSTRUCTION.
13. PLACE FILL MATERIAL AND ROUGH GRADE PARKING LOTS, CONSTRUCT CURB AND GUTTERS AND RIBBON CURB. PLACE STONE SUBBASE IN PARKING LOT AND DISTURB ONLY THE PORTION OF THE SITE NECESSARY FOR THE COMPLETION OF CONSTRUCTION. CONTRACTOR SHALL VERIFY THAT THE SUBBASE IS DRY AND MEETS ALL MATERIAL, INSTALLATION AND GRADE SPECIFICATIONS AND ENSURE THAT THE SUBBASE IS READY TO SUPPORT THE IMPOSED LOADS.
14. MILL OFF ACCESS DRIVE ASPHALT SURFACE.
15. PAVE PARKING LOT AND ACCESS DRIVE.
16. ESTABLISH FINAL GRADES FOR POSITIVE DRAINAGE. ALL DISTURBED AREAS SHALL BE GRADED TO A SMOOTH SURFACE AND FREE FROM ALL ROCKS GREATER THAN 3" DIA., DIRT CLODS, EQUIPMEN



SECTION



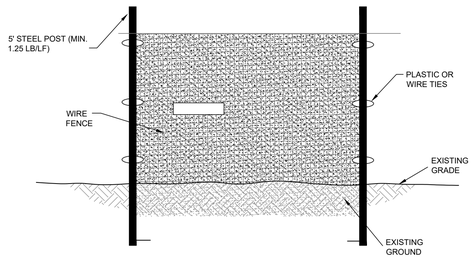
ELEVATION

NOTES:

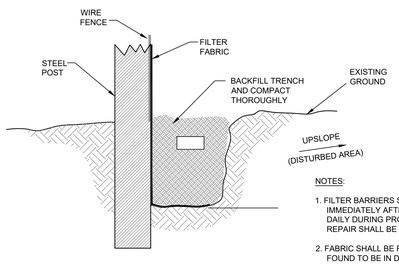
1. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND DAILY DURING PROLONGED RAINFALL. REPAIR SHALL BE MADE AS NECESSARY.
2. FABRIC SHALL BE REPLACED PROMPTLY IF FOUND TO BE IN DISREPAIR.
3. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER STORM EVENT AND WHEN DEPOSITS REACH APPROXIMATELY 1/3 HEIGHT OF BARRIER. SEDIMENT SHALL BE REMOVED IN ACCORDANCE WITH THE MINIMUM STANDARDS OF THE NORTH CAROLINA EROSION AND SEDIMENTATION CONTROL PLANNING AND DESIGN MANUAL.
4. SILT FENCE OUTLETS SHALL BE LOCATED AT LOW POINTS IN CONTINUOUS RUNS OF SILT FENCE.

SILT FENCE - OUTLET

NOT TO SCALE



SECTION VIEW



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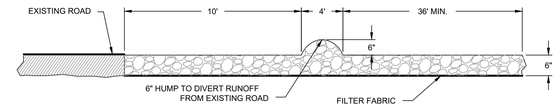
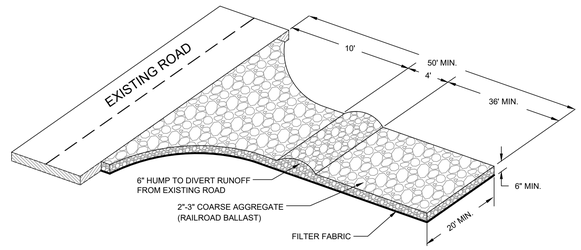
4. REFERENCE NCDEQ LAND QUALITY SECTION DESIGN MANUAL: 6.62.

SLOPE	SLOPE LENGTH(FT)	MAXIMUM AREA(SQFT)
<2%	100	10,000
2 TO 5%	75	7,500
5 TO 10%	50	5,000
10 TO 20%	25	2,500
>20%	15	1,500

SILT FENCE

NOT TO SCALE



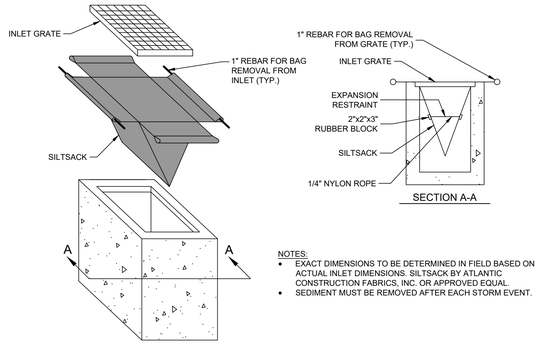


NOTES:

1. A STABILIZED PAD OF CRUSHED STONE SHALL BE LOCATED WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM AN EXISTING ROAD.
2. STONE TO BE 2 - 3 INCH WASHED STONE RAILROAD BALLAST.
3. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS OR EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
4. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC STREETS MUST BE REMOVED IMMEDIATELY.
5. WHEN NECESSARY WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING A PUBLIC STREET, WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN.
6. REFERENCE NCDEQ LAND QUALITY SECTION DESIGN MANUAL: 6.06.

TEMPORARY CONSTRUCTION ENTRANCE

NOT TO SCALE

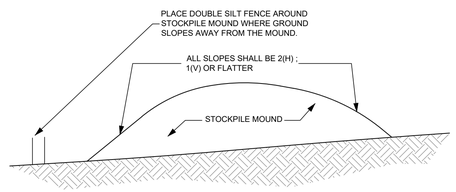


NOTES:

- EXACT DIMENSIONS TO BE DETERMINED IN FIELD BASED ON ACTUAL INLET DIMENSIONS. SILTSACK BY ATLANTIC CONSTRUCTION FABRICS, INC. OR APPROVED EQUAL.
- SEDIMENT MUST BE REMOVED AFTER EACH STORM EVENT.

SILTSACK INLET ROTECTION

NOT TO SCALE



STOCKPILE AREA

NOT TO SCALE

PERMANENT SEEDING SCHEDULE

ALL DISTURBED AREAS SHALL BE STABILIZED WITH A PERMANENT VEGETATIVE COVER WITHIN 14 CALENDAR DAYS. THE CONTRACTOR MAY USE METHODS AND SCHEDULES SHOWN BELOW; HOWEVER, THE CONTRACTOR IS REQUIRED TO ENGAGE A SOIL SPECIALIST AND HAVE SOIL TESTING PERMFORMED TO ENSURE DESIRED RESULTS BASED ON THE SOIL TYPE PRESENT, SEASONAL CONDITIONS AND OTHER FACTORS OF FINAL SITE CONDTIONS AFFECTING GROWTH. IRRIGATE AS NECESSARY TO OPTIMIZE GROWTH.

A. CULTIVATE AREA TO A DEPTH OF 5".
B. APPLY AGRICULTURAL LIME AT THE RATE OF 4,000 LBS. PER ACRE.
C. APPLY 10-20-20 COMMERCIAL FERTILIZER AT THE RATE OF 750 LBS PER ACRE.
D. SOW GRASS SEEDS AT THE FOLLOWING RATES:

KIND	RATE PER ACRE
COMMON BERMUDA GRASS (UNHULLED)	20 LBS.
COMMON BERMUDA GRASS (HULLED)	12 LBS.
PENSACOLA BAHIA GRASS	50 LBS.
KOREAN LESPEDEZA	25 LBS
TALL FESCUE	100 LBS.

E. MULCH WITH STRAW AT THE RATE OF 4,000 LBS PER ACRE AND ANCHOR BY TACKING WITH ASPHALT EMULSION, ROVING, NETTING, OR BY CRIMPING WITH A MULCH ANCHORING TOOL.

F. SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH BERMUDAGRASS SOD.

AS THE PROJECT AREA IS BEING OPENED UP AND THE EROSION CONTROL MEASURES INSTALLED, THE CONTRACTOR SHALL START A REGULAR MAINTENANCE SCHEDULE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A DENSE, HEALTHY, AND VIGOROUS GROUND COVER OVER ALL DISTURBED AREAS OF THIS PROJECT. THE GROUND COVER SHALL BE GRASS IN COMPLIANCE WITH THE PROJECT SPECIFICATIONS. THE CONTRACTOR SHALL MONITOR AND FULLY MAINTAIN THE GRASS COVER FOR A MINIMUM OF EIGHTEEN MONTHS FOLLOWING COMPLETION OF APPLICATION OF SEED, SPRIGS, AND/OR SOD AS CALLED OUT IN THE SPECIFICATIONS. SAID MAINTENANCE SHALL INCLUDE, BUT NOT NECESSARILY BE LIMITED TO, WATERING, MOWING, FERTILIZING, PEST CONTROL, AND WEED CONTROL. THE FIRM PERFORMING THE MAINTENANCE (EITHER CONTRACTOR OR SUBCONTRACTOR) SHALL BE A CREDENTIALED TURF ENTITY.

TEMPORARY SEEDING SCHEDULE

WHEN IT IS NOT POSSIBLE TO ESTABLISH A PERMANENT GRASS COVER IN A REASONABLY SHORT PERIOD OF TIME DUE TO CONDITIONS, A TEMPORARY GRASS COVER SHALL BE ESTABLISHED. THIS TEMPORARY COVER SHALL INCLUDE ANNUAL GRASSES OR SMALL GRAINS, SUCH AS RYE GRASS. PERMANENT VEGETATION MUST STILL BE ESTABLISHED. MULCH MUST BE APPLIED WHEN SEASONAL CONDITIONS DO NOT ALLOW PERMANENT OR TEMPORARY GRASS ESTABLISHMENT, BUT MUST BE USED FOR THE SHORTEST PRACTICAL DURATION, AND NOT WHEN PERMANENT OR TEMPORARY VEGETATION METHODS MAY BE USED. TOPSOIL SHALL BE USED WHEN NECESSARY TO ESTABLISH VEGETATIVE COVER.

THE CONTRACTOR MAY USE METHODS AND SCHEDULES SHOWN BELOW; HOWEVER, IT IS RECOMMENDED THAT THE CONTRACTOR CONSULT A SPECIALIST WITH ATTENTION GIVEN TO SITE SPECIFIC CONDITIONS.

WINTER AND EARLY SPRING

TYPE	RATE (lb/acre)
RYE (GRAIN)	120
ANNUAL LESPEDEZA	50

APPLY 2,000 LB/ACRE GROUND AGRICULTURE LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER

SUMMER

TYPE	RATE (lb/acre)
GERMAN MILLET	40

APPLY 2,000 LB/ACRE GROUND AGRICULTURE LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER

FALL

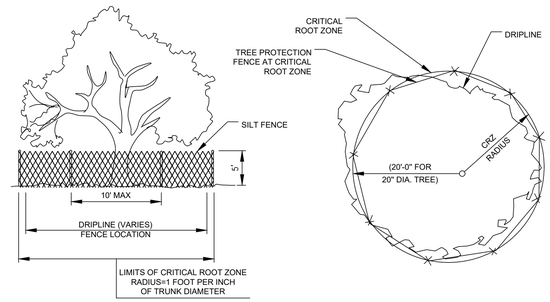
TYPE	RATE (lb/acre)
GERMAN MILLET	120

APPLY 2,000 LB/ACRE GROUND AGRICULTURE LIMESTONE AND 1,000 LB/ACRE 10-10-10 FERTILIZER

MULCH WITH STRAW AT THE RATE OF 4,000 LB/ACRE AND ANCHOR.

THE CONTRACTOR SHALL START A REGULAR MAINTENANCE SCHEDULE.

SEEDING SCHEDULE



TREE PROTECTION FENCE - SILT FENCE

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SIGNED AND DATED:
Alex D. Lapinsky
Digitally signed by Alex D. Lapinsky
Date: 2024.03.05 14:31:40-05'00'

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED IN ACCORDANCE WITH THE STANDARD CERTIFICATION REQUIREMENTS FOUND IN 3E ADMINISTRATIVE CODE 21--56.1103(E). THIS DIGITAL SIGNATURE HAS BEEN FOUND BY THE NC BOARD OF EXAMINERS FOR ENGINEERS AND SURVEYORS TO MEET THESE STANDARDS. PLEASE CONTACT THE SIGNER IF YOU NEED ASSISTANCE IN VALIDATING THE SIGNATURE.

NORTH CAROLINA PROFESSIONAL SEAL 042192 ENGINEER ALEXANDER D. LAPINSKY

Leland Town Hall Addition & Renovations
102 Town Hall Drive
Leland, NC 28451

Issue Date: February 12, 2024

Erosion and Sedimentation Control Details

Rev.	Date	Notes

ES-103

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