AHCS SUBSTANCE USE EXPANSION

INTERIOR RENOVATION

311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

BALZER PROJECT NO. 03230077.00

ABBREVIATIONS

AFF	ABOVE FINISH FLOOR	LW	LIGHTWEIGHT
AP	ACCESS PANEL	LTL	LINTEL
ACT	ACOUSTIC CEILING TILE	LL	LIVE LOAD
ACPL	ACOUSTICAL PLASTER	LVP	LUXURY VINYL PLANK
A/C	AIR CONDITIONING	LVR	LOUVER
ALUM	ALUMINUM		
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	MH	MAN HOLE
AB	ANCHOR BOLT	MFR	MANUFACTURER
ANOD	ANODIZED	MAS	MASONRY
APPROX	APPROXIMATELY	MO	MASONRY OPENING
AD	AREA DRAIN	MATL, MAT	MATERIAL
ARCH	ARCHITECT(URAL)	MAX	MAXIMUM
ASPH	ASPHALT	MECH	MECHANICAL
		MTL	METAL
		MTL BLDG MFR	METAL BUILDING MANUFACTURER
BP	BASE PLATE	MTD	METAL FLOOR DECKING
BSMT	BASEMENT	MRD	METAL ROOF DECKING
BM	BEAM	MIN	MINIMUM
BRG	BEARING	MISC	MISCELLANEOUS
BFF	BELOW FINISHED FLOOR	MB	MOISTURE BARRIER
BIT	BITUMINOUS	MLDG	MOLDING, MOULDING
BLKG	BLOCKING	MTG, MNTG	MOUNTING
BD	BOARD		
BOT	BOTTOM		
BRK	BRICK	N/A	NOT APPLICABLE
BC	BRICK COURSES	NOM	NOMINAL
BLDG	BUILDING	NIC	NOT IN CONTRACT
		NTS	NOT TO SCALE
		NO, #	NUMBER
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED		
CFOI	CONTRACTOR FURNISHED OWNER INSTALLED	OC	ON CENTER
CPT	CARPET	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CO	CASED OPENING	OFOI	OWNER FURNISHED
CSMT	CASEMENT		OWNER INSTALLED
CIP	CAST IN PLACE	OPG	OPENING
CLG	CEILING	OPP	OPPOSITE
C/H	CEILING HEIGHT	OPH, OPPH	OPPOSITE HAND
CL	CENTER LINE	OSB	ORIENTED STRAND BOARD
CT	CERAMIC TILE	OD	OUTSIDE DIAMETER
CH	CHAIR RAIL	OF	OUTSIDE FACE
CLR	CLEAR(ANCE)	OA	OVERALL
CLS	CLOSET	OH	OVERHANG
COL	COLUMN		
CONC	CONCRETE		
CMU	CONCRETE MASONRY UNIT	PNL	PANEL
CONST	CONSTRUCTION	PVMT	PAVEMENT
CONT	CONTINUOUS	PTD	PAINTED
CJ	CONTROL JOINT	PBD	PARTICLE BOARD
CORR	CORRIDOR	PLAST	PLASTER
CTR	COUNTER	PLAM	PLASTIC LAMINATE
CRS	COURSE	PLT	PLATE
		PLGL	PLATE GLASS
		PWD	PLYWOOD
DEM	DEMOLITION	PVC	POLYVINYL CHLORIDE
DEPT	DEPARTMENT	PFE	PORTABLE FIRE EXTINGUISHER
DIAG	DIAGONAL	LB	POUND
DIAM	DIAMETER	PSF	POUNDS/SQUARE FOOT
DIM	DIMENSION	PSI	POUNDS/SQUARE INCH
DO	DITTO	PC CONC	PRECAST CONCRETE
DIV	DIVISION	PREFIN	PREFINISHED
DR	DOOR	PL	PROPERTY LINE
DH	DOUBLE HUNG	PROP	PROPOSED
DS	DOWN SPOUT		
D	DRAIN		
DT	DRAIN TILE	QT	QUARRY TILE
DWG	DRAWING		
ELEC	ELECTRIC	RAD	RADIUS
EWC	ELECTRIC WATER COOLER	R	RISER
EP	ELECTRICAL PANEL BOARD	REC	RECEPTACLE/ELECTRICAL
ELEV	ELEVATION	REF	REFRIGERATOR
EMER	EMERGENCY	REG	REGISTER
ENCL	ENCLOSE, ENCLOSURE	REINF	REINFORCED
ENG	ENGINEER(ING)	REM	REMOVE
ENT	ENTRANCE	REQD	REQUIRED
EQ	EQUAL	RES	RESILIENT
EQUIP	EQUIPMENT	RET	RETURN
EXH	EXHAUST	RA	RETURN AIR
EXIST	EXISTING	REV	REVISION
EB	EXPANSION BOLT	RH	RIGHT HAND
EJ	EXPANSION JOINT	ROW	RIGHT OF WAY
EXT	EXTERIOR	RD	ROOF DRAIN
		RM	ROOM
		RO	ROUGH OPENING
FB	FACE BRICK		
FOB	FACE OF BRICK	SCH	SCHEDULE
FT	FEET, FOOT	SEC	SECTION
FN	FENCE	SHTH	SHEATHING
FIN	FINISH	SHT	SHEET
FIN FL	FINISH FLOOR	SIM	SIMILAR
FEC	FIRE EXTINGUISHER CABINET	SOG	SLAB ON GRADE
FHC	FIRE HOSE CABINET	SL DR	SLIDING DOOR
FPL	FIREPLACE	SC	SOLID CORE
FLR	FLOOR(ING)	SCW	SOLID CORE WOOD
FD	FLOOR DRAIN	SYP	SOUTHERN YELLOW PINE
FLUOR	FLUORESCENT	SPEC	SPECIFICATION
FTG	FOOTING	SPR	SPRINKLER
FDN	FOUNDATION	SF	SQUARE FEET
FRA	FRESH AIR	SS	STAINLESS STEEL
FBO	FURNISHED BY OTHERS	STOR	STORAGE
		STRUCT	STRUCTURAL
		SUSP	SUSPENDED
GA	GAGE, GAUGE	SYS	SYSTEM
GALV	GALVANIZED		
GC	GENERAL CONTRACTOR		
GL	GLASS	TELE	TELEPHONE
GLB	GLASS BLOCK	TV	TELEVISION
GD	GRADE, GRADING	THK	THICK(NESS)
GWB	GYPSUM WALL BOARD	TCP	THIN COAT PLASTER
GYP BD	GYPSUM BOARD	THRD	THRESHOLD
		THRU	THROUGH
HC	HANDICAP	TOIL	TOILET
HDWR	HARDWARE	T&G	TONGUE and GROOVE
HWD	HARDWOOD	TSL	TOP OF SLAB
HDR	HEADER	TOS	TOP OF STEEL
HTG	HEATING	TOW	TOP OF WALL
HVAC	HEATING/VENTING/AIR CONDITIONING	T	TREAD
HD	HEAVY DUTY	TYP	TYPICAL
HGT	HEIGHT		
HC	HOLLOW CORE		
HM	HOLLOW METAL	UNFIN	UNFINISHED
HORIZ	HORIZONTAL	UNO	UNLESS NOTED OTHERWISE
HB	HOSE BIBB		
HW	HOT WATER HEATER		
		VB	VAPOR BARRIER
		VTR	VENT THRU ROOF
ID	INSIDE DIAMETER	VERT	VERTICAL
INCL	INCLUDE(D)(ING)	VCB	VINYL COVE BASE
INSUL	INSULATE	VBS	VINYL BASE STRAIGHT
INT	INTERIOR	VCT	VINYL COMPOSITION TILE
		VWC	VINYL WALL COVERING
JAN	JANITOR'S CLOSET		
		WSCT	WAINSCOT
		WH, WLH	WALL HUNG
KIT	KITCHEN	WH	WALL HYDRANT
KD	KNOCK DOWN	WC	WATER CLOSET
KO	KNOCKOUT	WP	WATER PROOF
		WWF	WELDED WIRE FABRIC
		W	WIDTH, WIDE
LBL	LABEL	WIN	WINDOW
LAM	LAMINATE(D)	WG	WIRE GLASS
LAV	LAVATORY	WI	WITH
LH	LEFT HAND	W/O	WITHOUT
LG	LENGTH, LONG	WD	WOOD
		WB	WOOD BASE

SYMBOLS & MATERIALS

GRAPHIC STANDARDS

- 100A — DOOR NUMBER TAG
- Room name / 101 / 150 SF — ROOM NUMBER TAG
- 5 — WINDOW NUMBER TAG
- 1/A101 SIM — LETTER/NUMBER COMBINATION INDICATES ELEVATION OR DETAIL
- SHEET NUMBER WHERE ELEVATION, SECTION OR DETAIL IS DRAWN
- DRAWING DESIGNATION / SHEET DESIGNATION
- BUILDING SECTION
- REVISION CLOUD AND TAG
- SF101 — STOREFRONT ELEVATION
- X'-X" — SPOT ELEVATION
- 01 / A — COLUMN LINE
- 1/A1.01 / 1/A1.02 — MATCHLINE AND REFERENCES
- PROPERTY LINES
- S6-4.21 — WALL TAG
- (1)U419 — FIRE RATING TAG
- X — NOTE TAG
- #:12 — SLOPE
- DETAIL
- WALL SECTION
- EXTERIOR ELEVATION
- INTERIOR ELEVATION
- Name / Elevation — FLOOR/STRUCT LEVEL
- USE NUMBERS HORIZONTALLY, LEFT TO RIGHT USE LETTERS VERTICALLY, TOP TO BOTTOM

LIFE SAFETY LEGEND

- 0 OCC — ACTUAL NUMBER OF OCCUPANTS USING EGRESS COMPONENT
- ### OCC — EGRESS ELEMENT CAPACITY
- FE — FIRE EXTINGUISHER SEMI-RECESSED CABINET
- ILLUMINATED EXIT LIGHT (WITH BATTERY BACKUP OR TIED TO EMERGENCY CIRCUIT, SEE ELEC DRAWINGS)
- ILLUMINATED EXIT LIGHT WITH DIRECTIONAL ARROW (WITH BATTERY BACKUP OR TIED TO EMERGENCY CIRCUIT, SEE ELEC DRAWINGS)
- EMERGENCY EGRESS LIGHT WITH BACKUP BATTERY
- 1-HOUR RATED WALL
- 2-HOUR RATED WALL
- 3-HOUR RATED WALL
- SMOKE PARTITION
- PATH OF EGRESS

PHASE LEGEND

- **EXISTING WALLS AND DOORS TO REMAIN** — WALLS SHOWN WITHOUT PATTERNS, DOORS AT 45° ANGLE
- **NEW WALLS AND DOORS** — WALLS SHOWN WITH PATTERNS, DOORS AT 90° ANGLE
- **EXISTING WALLS AND DOORS TO BE REMOVED** — ALL ELEMENTS OR PORTIONS OF ELEMENTS SHOWN DASHED

MATERIAL LEGEND

- ALUMINUM
- BRICK (ELEVATION)
- BRICK (PLAN & SECTION)
- CONCRETE
- CONCRETE MASONRY UNIT
- EARTH OR COMPACTED FILL
- INSULATION BATTS
- RIGID INSULATION
- PLYWOOD (DETAILS)
- POROUS FILL
- GRAVEL BASE
- STEEL
- WOOD MILLWORK
- WOOD FRAMING OR BLOCKING
- WOOD SHIMS

PARTITION / WALL LEGEND

- EXISTING PARTITION / WALL
- WOOD FRAMED PARTITION / WALL
- WOOD FRAMED PARTITION / WALL STC CLASSIFIED
- METAL FRAMED PARTITION / WALL
- METAL FRAMED PARTITION / WALL STC CLASSIFIED
- METAL FRAMED PARTITION / WALL FIRE RATED ASSEMBLY
- CONCRETE MASONRY UNIT PARTITION / WALL
- BRICK VENEER
- CONCRETE PARTITION / WALL

WALL TAGS AND CODES LEGEND

ABBREVIATED WALL TAG: 6-4 — APPROXIMATE THICKNESS; WALL TYPE CODE

STANDARD WALL TAG: S6-4.21 — APPROXIMATE THICKNESS AND FINISH CODES; STRUCTURAL MATERIAL AND WALL TYPE CODE

WALL TAG WITH UL DATA: S6-4.21 (1)U419 — FIRE RATING AND UL ASSEMBLY CODE; APPROXIMATE THICKNESS AND FINISH CODES; STRUCTURAL MATERIAL AND WALL TYPE CODE

FLOOR FINISH LEGEND

- CERAMIC TILE (CT)
- VINYL COMPOSITE TILE (VCT)
- WOOD (WD)
- CARPET (CPT)
- CONCRETE (CONC)

CEILING LEGEND

- TYPICAL CEILING GRID SYSTEM, REFER TO SCHEDULE FOR DIMENSIONS AND TYPE
- GYPSUM WALL BOARD
- EXPOSED (OPEN) DECK, REFER TO STRUCTURAL DRAWINGS
- RECESSED CAN LIGHT FIXTURE, REFER TO ELEC DRAWINGS
- TYPICAL 2'X2' RECESSED LIGHT FIXTURE, REFER TO ELEC DRAWINGS
- TYPICAL 2'X4' RECESSED LIGHT FIXTURE, REFER TO ELEC DRAWINGS
- SOUND BATT INSULATION PLACED ABOVE CEILING MATERIAL

BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

PROJECT DIRECTORY

OWNER
ALLEGHANY HIGHLANDS COMMUNITY SERVICES
CONTACT: INGRID W. BARBER
ADDRESS: 205 E. HAWTHORNE STREET, COVINGTON, VIRGINIA 24426
PHONE: 540-965-2135
EMAIL: ibarber@ahcsb.org

ARCHITECT
BALZER & ASSOCIATES, INC.
CONTACT: ROBERT PILKINGTON
ADDRESS: 1208 CORPORATE CIRCLE, ROANOKE, VIRGINIA 24018
PHONE: 540-772-9580
EMAIL: rpilkington@balzer.cc
WEBSITE: www.balzer.cc

STRUCTURAL ENGINEER
BALZER & ASSOCIATES, INC.
CONTACT: MICHAEL FITZGERALD
ADDRESS: 1208 CORPORATE CIRCLE, ROANOKE, VIRGINIA 24018
PHONE: 540-772-9580
EMAIL: mfitzgerald@balzer.cc
WEBSITE: www.balzer.cc

MECH / PLUMBING ENGINEER
STOTTSBERG ENGINEERING
CONTACT: JOHN BERG
ADDRESS: PO BOX 876, FINCASTLE, VIRGINIA 24090
PHONE: 540-216-0331
EMAIL: john@stottsbergeng.com

ELECTRICAL ENGINEER
GIBSON ENGINEERING
CONTACT: DANIEL GIBSON
ADDRESS: 2100 LUBNA DRIVE, CHRISTIANSBURG, VIRGINIA
PHONE: 540-251-4470
EMAIL: gibsonengineeringllc@gmail.com

CODE SUMMARY - ALTERATIONS LEVEL 2

Project Description
This proposed project is Level 2 Alterations to an existing previously occupied building with a current or past Certificate of Occupancy issued by the Authority Having Jurisdiction (AHJ). This Level Alteration includes the elimination or addition of windows, elimination or addition of doors, the extension of a building system, and the installation of new equipment.

An addition to the existing structure is **not** proposed. The existing building is **not** in a Flood Hazard Area, and is **not** Historic.

This proposed project consists of the renovation of part of an existing building at 311 South Monroe Ave. and 320 East Pine Street. The existing structure is concrete masonry walls with some wood framing added and slab on grade. Existing partitions are wood. New partitions will be metal-framed. Roof framing is metal bar joists with a metal deck with intermittent metal beam/joist framing. Vertical building circulation will be provided by stairs, a ramp, and one (1) new elevator. **The building will be sprinklered.** The building consists of business spaces, a kitchen, restrooms, and storage spaces. The existing exterior finishes, painted CMU and board-and-batten siding will be retained on part of the building, while the 320 East Pine portion will receive EIFS. Existing steel windows will be replaced with aluminum storefront windows. New exterior doors will be hollow metal or storefront.

The proposed work under this permit includes a new sprinkler system, new offices, meeting rooms, and restrooms, as well as the construction of an elevator.

Code Edition
2021 Virginia Existing Building Code (VEBC) (2021 IEBC w/ Virginia Amendments)
2021 Virginia Construction Code (VCC) (2021 IBC w/ Virginia Amendments)

Project Summary

Apply	N/A	
(X)	(-)	Accessibility: Comply with VEBC Chapter 4.
(X)	(-)	Repairs: Comply with VEBC Chapter 5.
(X)	(-)	Alterations: Comply with VEBC Chapter 6.
(-)	(X)	Change of Occupancy: Comply with VEBC Chapters 7 or 14.
(-)	(X)	Additions: Comply with VEBC Chapter 8.
(-)	(X)	Historic Buildings: Comply with VEBC Chapter 9.
(-)	(X)	Moved Buildings: Comply with VEBC Chapter 10.
(-)	(X)	Retrofit Requirements: Comply with VEBC Chapter 11.
(X)	(-)	Construction Safeguards: Comply with VEBC Chapter 12.

Existing Use and Occupancy Classification Group(s): **B (VCC 304.1.1)**
Existing Construction Type: **VB**
Existing Building Height in Feet Above Grade Plane: **+/- 25 feet**
New Building Height in Feet Above Grade Plane: **30 feet (addition of elevator penthouse)**
Existing Number of Stories Above Grade Plane: **2 stories (unchanged)**
Existing Floor Area in Square Feet: **First Floor: 19,196 square feet (unchanged)**; **Second Floor: 4,515 square feet (unchanged)**
Existing Sprinkler System: **No**
New Sprinkler System Proposed: **Yes**
Allowable Building Height in Feet Above Grade Plane (VCC Table 504.3): 60 feet (S)
Allowable Number of Stories Above Grade Plane (VCC Table 504.4): 3 stories (S)
Allowable Area Factor in Square Feet (VCC Table 506.2): 27,000 SF (SM)

General Special Provisions and Special Detailed Requirements (VEBC Chapter 3):
1. Except as otherwise required by this code, materials permitted by the applicable code for new construction shall be used. Like materials shall be permitted for repairs and alterations, provided no hazard to life, health or property is created per Section 302.1.

Accessibility (VEBC Chapter 4):
1. Where proposed Alterations affect the area(s) of the primary function (i.e. **Day Room, Meeting Rooms**), the route to the primary function is made accessible and includes toilet facilities and drinking fountains.
   a. The costs of providing the accessible route are not required to exceed 20 percent of the costs of the alterations affecting the area(s) of primary function per Section 404.3 exception 1. Those proposed improvements are:
   b. Construction of, or improvements to, accessible ramps.
   c. Primary public entrance and exit doorways.
   d. Improvements to door hardware.
   e. Improvements to public restrooms.
   f. Construction of an elevator.

Alterations (VEBC Chapter 6):
1. Section 601.1 General: Proposed alterations to the building or structure shall comply with the requirements of the Virginia Construction Code (VCC) for new construction. Alterations shall be such that the existing building or structure is no less conforming to the provisions of the VCC than the existing building or structure was prior to the alteration. Portions of the building or structure not being altered shall not be required to comply with the requirements of the VCC.
2. Section 601.2.1 Level 1: Level 1 alterations include the removal without replacement of materials, elements, equipment, or fixtures, and the removal and replacement of existing elements, using new elements that serve the same purpose. Level 1 alterations shall comply with the applicable provisions of Section 602.
3. Section 601.2.2 Level 2: Level 2 alterations shall comply with the applicable provisions of Sections 602 and 603 and shall include the following:
   A. The addition or elimination of any door or window.
   B. The addition or elimination of any wall, floor, or ceiling assembly.
   C. The reconfiguration or extension of any system.
   D. The installation of any additional equipment, materials, elements, or fixtures
4. Section 601.4 Energy conservation: The proposed alterations to the existing building, building system, or structure shall conform to the applicable provisions of the Virginia Energy Code (VEC) as they relate to new construction without requiring the unaltered portions of the existing building, building system, or structure to comply with the VEC.
5. Section 602.2 Conformance: The proposed Alterations shall be done in a manner that maintains the following:
   A. Levels of fire protection for existing building elements shall be maintained.
   B. Level of protection for existing means of egress shall be maintained.
6. Section 602.3 Building elements and materials: All new work and new finishes shall comply with relevant sections of the VCC.
7. Section 603.3 Compliance: All new construction elements, components, systems, and spaces shall comply with the requirements of the VCC. With the following exceptions:
   A. Windows may be added without requiring compliance with the light and ventilation requirements of the VCC.
   B. The minimum ceiling height of the newly created habitable and occupiable spaces and corridors shall be 7 feet.

Fire Protection Systems (VCC Chapter 9)
1. An NFPA 13 Automatic Fire Sprinkler System is not required to be provided throughout building per Sections 903.2.1 thru 903.2.11. (B use, one story, fewer than 500 occupants, **but will be added to comply with Area Limitations in Table 506.2.**)
2. A Class I standpipe is not required to be provided per Section 905.3. (Building is less than four stories, no floor levels are more than 30 feet from fire department vehicle access.)
3. Fire extinguishers shall be provided per Section 906 and per Virginia Fire Prevention Code (VFPC) Section 906. See the Life Safety Plan(s) for the proposed locations.
4. A whole Fire Alarm and Detection System is not required per Section 907.2.2. (B occupancy: 1. occupant load is less than 500; 2. fewer than 100 persons above the level of exit discharge; 3. does not contain an ambulatory care facility). A fire sprinkler monitoring panel only with required notification devices adjacent to the monitoring panel will be provided.

Means of Egress (VCC Chapter 10):
Total calculated load is 277 occupants based on Maximum Floor Area Allowances Per Occupant per Table 1004.5.).

311 South Monroe Ave. portion

"No Work" Area, "Business Function	11,954 GSF @ 1 occupant per 150 GSF = 79.6 (80 occupants)
"Business" Function	2,350 GSF @ 1 occupant per 150 GSF = 15.6 (16 occupants)
"Business" Function (unconcentrated tables and chairs)	531 NSF @ 1 occupant per 15 NSF = 35.4 (36 occupants)

320 East Pine St. portion

First Floor "Business" Function	2,969 GSF @ 1 occupant per 150 GSF = 19.8 (20 occupants)
First Floor "Business" Function (unconcentrated tables and chairs)	1,352 NSF @ 1 occupant per 15 NSF = 90.1 (91 occupants)
Second Floor "Business" Function	4,470 GSF @ 1 occupant per 150 GSF = 29.8 (30 occupants)

1. Per Section 1004.9, every assembly occupancy room with greater than 50 occupants is proposed to have posted signs stating the total occupancy load for the space.
2. Maximum common path of travel per Table 1006.2.1 shall not be more than 100 feet. See the Life Safety Plan(s) for proposed configuration and distances.
3. Minimum number of Building Exits and Exit Access Doorways per story per Table 1006.3.3: 2 required, 5 provided.
4. Provide means of egress illumination per Section 1008.
5. Provide two-way communication systems for elevator(s) per Section 1009.8.
6. Provide accessibility compliant signage to all publicly accessed areas within the building. This includes but is not limited to restrooms, lobby areas, and mechanical rooms per Sections 1009.9, 1009.10, and 1009.11.
7. Minimum door width clearance shall not be less than 32 inches per Section 1010.1.1. 34 inches provided at the most restrictive point.
8. Doors are not required to swing in the direction of egress for where serving an area with 49 or fewer occupants per Section 1010.1.2.1.
9. All locks, latches and operations shall comply with Section 1010.1.3. All doors shall be equipped with lever handles or panic devices as required.
10. Panic hardware or fire exit hardware is not required based on Use Group(s).
11. Exit signs shall be provided per Section 1013. See the Life Safety Plan(s) for proposed configuration.
12. Maximum exit access travel distance per Table 1017.2 shall not be more than 300 feet, 101 feet provided. See the Life Safety Plan(s) for proposed configuration and distances.
13. Exit access corridor fire-resistance rating per Table 1020.2 is not required with sprinkler systems, Sprinklered, B Occupancy.
14. Minimum corridor width shall not be less than 44 inches per Table 1020.3. 48 inches provided at the most restrictive point.
15. Interior exit stairways and ramps fire-resistance rating per Section 1023.2 shall not be less than 1 hour (2 stories).
16. A sign shall be provided at each landing and termination of exit enclosures/stairwells designating the floor level per Section 1023.9. Posted signs shall comply with governing accessibility code(s).

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BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS
Roanoke / Richmond
Shenandoah Valley
New River Valley
www.balzer.cc
1208 Corporate Circle
Roanoke, VA 24018
540.772.9580

COMMONWEALTH OF VIRGINIA
ROBERT W. PILKINGTON
Lic. No. 013210
01/10/2025
ARCHITECT

AHCS SUBSTANCE USE EXPANSION
INTERIOR RENOVATION
COVER SHEET & CODE SUMMARY
311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

DRAWN BY	MFK
DESIGNED BY	RWP/MFK
CHECKED BY	RWP
DATE	01/10/2025
SCALE	As indicated
REVISIONS	

T1.01
PROJECT NO 03230077.00

OUTLINE SPECIFICATIONS

005000 CONTRACTING REQUIREMENTS
1. Contractor and all Subcontractors shall provide a Certificate of Insurance to the owner prior to starting any work on this project. Certificate of Insurance cannot be terminated or canceled without ten (10) days prior written notice to the Owner and satisfactory replacement is in place.

011000 SUMMARY
1. Contractor shall verify all existing conditions and drawing dimensions prior to commencing any work. Any inconsistencies shall be reported to the Architect in writing prior to commencing work. Failure to report inconsistencies will relieve Architect and Owner from any claim for additional work required related to the inconsistency.
2. Under no circumstances shall these drawings be used for shop drawings.
3. Work noted as "NIC" is not part of this contract and will be handled by Owner under separate contract.
4. Work not indicated on a part of the drawings, but reasonably implied to be similar to that shown at corresponding pieces, shall be repeated.
5. In case of conflict between the General Notes, Specifications, and Drawings, the most stringent requirements shall govern unless Architect instructs otherwise.
6. Not all details, equipment, systems, or materials sections are included in the documents. The Contractor shall base their bid on the supplied information, and shall also include any additional details, equipment, systems, or material required to deliver a complete and finished product to the Owner that are reasonably and normally included in a completed project of similar scope, in compliance with all laws, codes and ordinances.
7. Do not scale the drawings. Rely on written dimensions as given.
8. All interior dimensions shown on the plans are from face of stud unless otherwise noted. Exterior wall dimensions are from interior face of stud to exterior face of sheathing. Otherwise, all dimensions are from interior face of exterior wall to face of stud. Dimensions shown on floor plans, sections, elevations, and details are to face of stud, masonry, or concrete gridlines, unless otherwise noted.
9. All dimensions shown on the plans to accessible (ICC A117.1-2009) relevant building features/fixtures are from face of finish material (both floors and walls). Make special note of dimensions indicated as "clear" or "above finished floor".
10. Contractor shall obtain and maintain access on site to copies of all relevant code resources for reference. Editions shall be per the current version of the Virginia Construction Code (indicated in the code summary) and referenced standards per the Virginia Construction Code.

012100 ALLOWANCES
1. Lump sum allowances, unit-cost allowances, and quantity allowances shall include cost to Contractor of specific products and materials under allowance and shall include taxes, freight, and delivery to project site. Unless otherwise indicated, Contractor's costs for receiving and handling at project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the contract sum and not part of the allowance.
2. Contingency allowances are to provide an equitable way to reimburse Contractor for unknown costs associated with unforeseen events or systems during construction. Contractor's overhead, profit, and related costs for products and equipment under the contingency allowance are included in the allowance. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs. At project closeout, credit unused amounts remaining in the contingency allowance to Owner.

012200 UNIT PRICES
1. Unit price is an amount incorporated into the agreement, applicable during the duration of the work as a price per unit of measurement for materials, equipment, or services, or a portion of the work, added to or deducted from the contract sum by appropriate modification, if the scope of work or estimated quantities of work required by the contract documents are increased or decreased. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
2. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to contractor.
3. Agreements between Contractor and Owner shall include an agreed unit price for removal of unsatisfactory soil and replacement with satisfactory soil material. Unsatisfactory soil excavation and disposal off-site and replacement with satisfactory fill material or engineered fill from off-site, as required.
4. Agreements between Contractor and Owner shall include an agreed unit price for removal of unsatisfactory mass rock and replacement with satisfactory soil material. Mass rock excavation and disposal off-site and replacement with satisfactory fill material or engineered fill from off-site, as required.

012500 SUBSTITUTIONS
1. Proposed substitutions must be clarified and explained to the Owner and/or Architect whether they be for cause or convenience. Substitutions for cause are changes proposed by Contractor that are required due to changed project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms. Substitutions for convenience are changes proposed by Contractor or Owner that are not required in order to meet other project requirements but may offer advantage to Contractor or Owner.
2. Substitutions for specified products shall be equal to those specified in composition, physical properties, color and texture and appearance, and environmental qualities. All substitutions shall be submitted to the Architect and/or Owner for review and approval prior to construction.
3. Substitutions for specified materials and products shall be made only with prior approval from the Owner and/or Architect.
4. Substitution requests shall be made in writing a minimum of 30 days before material is to be installed. Request will provide documentation that substituted product complies with all specified properties and performance of original component or material.
5. Any cost savings will be returned to the Owner.
6. No increase to cost will be allowed except with prior approval from the Owner and/or Architect.

012900 PAYMENT PROCEDURES
1. Coordinate preparation of the Schedule of Values with preparation of Contractor's construction schedule. Arrange Schedule of Values consistent with format of AIA document G703.
2. Revise the Schedule of Values when change orders or construction change directives result in a change in the contract sum. Include at least one separate line item for each change order and construction change directive.
3. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Architect and Construction Manager and paid for by Owner. The date for each progress payment is indicated in the agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.

013000 ADMINISTRATIVE REQUIREMENTS (MEANS AND METHODS)
1. Balzer & Associates and their professional consultants will not have control of and will not be responsible for construction means, methods, sequences, or for safety precautions in connection with the work on this project or for the acts or omissions of the Contractor, Subcontractor, or any other persons performing any of the work on this site.
2. Contractor shall be responsible for all construction means, methods, techniques, sequences, and procedures and for safety precautions and programs as they relate to the work of this project.

013300 SHOP DRAWINGS AND SUBMITTALS
1. Shop drawings for materials shall be submitted to the Engineer/Architect and/or Owner for review prior to the start of fabrication or commencement of work.
2. A list of proposed shop drawing submittals with a schedule of required approval dates shall be submitted to the Architect within ten (10) days of issuance of contract. Balzer & Associates shall have a minimum of ten (10) working days to review all shop drawings and resubmittals.
3. Contractor shall provide three (3) printed copies of submittals and shop drawings or a digital copy. Digital copies are preferred.
4. No portion of the contract drawings may be reproduced for submittal as shop drawings unless authorized by Balzer & Associates, in writing.
5. Shop drawings shall bear the Contractor's stamp of approval, which shall constitute certification that they have verified all field measurements, construction criteria, materials, and similar data and have checked each drawing for completeness, coordination, and compliance with the contract documents. Unstamped submittals will be rejected without review.
6. Changes to shop drawings that are re-submitted must be clouded or otherwise clearly indicate the changes that have been made to a previously issued and reviewed drawing.
7. Where shop drawings are required, Architect/Engineer shall not be liable for work performed without shop drawings approved by their office.
8. On each submittal, clearly indicate deviations from requirements in the contract documents, including minor variations and limitations.
9. Shop drawings for sprinkler systems must clearly state they comply with the current adopted version of the National Fire Protection Agency (NFPA) code.
10. Shop drawings for fire alarm systems must clearly state they comply with the current adopted version of the National Fire Protection Agency (NFPA) code.

014000 QUALITY REQUIREMENTS
1. All materials shall be free from defects impairing strength, durability, or appearance.
2. All work shall be coordinated with other trades in order to avoid interference and preserve maximum headroom and avoid omissions.
3. Subcontractors, before starting their work shall check and verify their particular related requirements for compliance along with measurements, surface levels, and surface conditions near and about their work. It will be concluded that each Subcontractor understands and knows exactly what will be required. Commencement of work signifies acceptance of existing conditions as satisfactory.
4. Lay out all partitions before beginning construction to prevent errors by discrepancy, all partitions will be installed as noted on the drawings. Do not scale the drawings.
5. Each Contractor is responsible for first class workmanship and will assume all responsibility for the care and protection of their own work and materials from damage. They will make good any damage to their own or other work caused by themselves or workmen employed by them.

014100 REGULATORY REQUIREMENTS & APPLICABLE CODES
1. All construction must comply with all governing codes.
2. Contractor will abide by local area standards and related Occupational Safety and Health Administration (OSHA) standards for the safety of their employees on site. Balzer & Associates and their professional consultants will be held harmless by the Owner, Contractor and related awarded trades, on this project for accidents of injuries caused or accrued on this property during the construction of this project.
3. All designs, construction, materials, and workmanship shall comply with the governing building code(s), as a minimum level of construction detail and quality. All work included in the construction of this project shall comply with all applicable provisions of the code(s). By commencing construction, contractor acknowledges understanding of the code(s) and agrees to incorporate all required elements, whether indicated within the documents or not.
4. All areas shall be accessible in accordance with governing codes and amendments and applicable "Accessible and Usable Buildings and Facilities" (ICC A117.1-2017) accessibility guidelines.

015000 TEMPORARY WORK
1. Contractor shall be responsible for the design, engineering, permitting and erection of all temporary scaffolding, hoists, bracing, form work, sheeting, shoring, and underpinning necessary to perform the work.
2. Temporary bracing, sheeting, shoring, and similar temporary work, required to ensure the structural integrity/stability of the existing building, sidewalks, utilities, and similar building elements during construction shall be designed by a professional Engineer licensed in the Commonwealth of Virginia.
3. Contractor shall be responsible for all necessary temporary utilities and support facilities necessary to complete the work. All required fees for temporary services shall be included in the contract.
4. Provide any necessary temporary construction required to maintain Owner/Tenant/Patron use of the existing property outside of the limits of construction. Work required to maintain temporary egress patterns shall comply with applicable governing building code(s) and "Accessible and Usable Buildings and Facilities" (ICC A117.1-2017) guidelines, unless specifically approved by the local authority having jurisdiction.
5. Provide a secure staging and material storage area adjacent to the area of construction. Location shall be coordinated with the Owner's requirements.
6. Provide temporary barricades to separate construction areas for public safety around entire perimeter of construction area.
7. Provide periodic inspection of temporary barriers, barricades, enclosures, and temporary fencing to ensure their continuity and integrity.

015200 CONSTRUCTION FACILITIES
1. The Contractor shall protect all existing or newly installed finish work and surfaces from damage during construction and shall replace and/or repair all damaged surfaces caused by contractor or subcontractor personnel to the satisfaction of the Owner.
2. All Contractor and Sub-Contractors performing work on the premises shall be responsible for initiating, maintaining, and supervising a reasonable and prudent safety program including but not limited to the isolation of work areas and the prompt removal of any debris or tools which might endanger site visitors and staff of the owner.

017700 EXECUTION AND CLOSEOUT REQUIREMENTS (SUBSTANTIAL COMPLETION AND FINAL COMPLETION)
1. For final clean up and disposal, remove debris, rubbish, and waste material from the property to a lawful disposal area and pay all hauling and dumping costs. Conform to all pertaining federal, state, and local laws, regulations and orders upon completion of work. All construction areas shall be left vacuum-clean and free from debris. Clean all dust, dirt, stain, hand marks, paint spots, droppings, and other blemishes. After all other work is completed and just prior to turning the space over to the Owner, the Construction Manager will employ the services of a professional cleaning services to clean and wash down all installed equipment, service areas, along with the cleaning of all glass window/door surfaces prior to occupancy.
   a. Clean project site of rubbish, waste material, litter, and other foreign substances.
   b. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
   c. Remove debris and surface dust from limited-access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
   d. Clean flooring, removing debris, dirt, and staining; clean according to manufacturer's recommendations.
   e. Vacuum and mop concrete.
   f. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
   g. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
   h. Remove labels that are not permanent.
   i. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
   j. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
2. Replace all mechanical system filters with new filters (but before final air balance testing).
3. Contractor's list of incomplete items: prepare and submit a list of items to be completed and corrected (Contractor's "Punch List"), indicating the value of each item on the list and reasons why the work is incomplete.
4. Advise Owner of pending insurance changeover requirements.
5. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
6. Complete startup and testing of systems and equipment.
7. Perform preventive maintenance on equipment used prior to substantial completion.
8. Advise Owner of changeover in utility services.
9. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
10. Terminate and remove temporary facilities from project site, along with mockups, construction tools, and similar elements.
11. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.

017823 OPERATION AND MAINTENANCE DATA
1. Organize warranty documents into an orderly sequence based on the sequence of the outline specifications or table of contents of project manual.
2. Provide a warranties and bonds in PDF format. Assemble complete warranty and bond submittal package into a single electronic PDF file with bookmarks enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
3. Warranties in paper form: bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.

017839 PROJECT RECORD DOCUMENTS
1. At project completion Contractor shall provide one (1) complete set of as-built drawings indicating all discrepancies, changes, variance and/or deviation from the construction documents, and actual locations of concealed work, and full collection of warranties and operations instructions prior to final payment.
2. Mark record prints to show the actual installation, where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
3. Accurately record information in an acceptable drawing technique.
4. Record data as soon as possible after obtaining it.
5. Record and check the markup before enclosing concealed installations.
6. Cross-reference record prints to corresponding photographic documentation.
7. Types of items requiring marking include, but are not limited to, the following:
   a. Dimensional changes to drawings.
   b. Revisions to details shown on drawings.
   c. Depths of foundations.
   d. Locations and depths of underground utilities.
   e. Revisions to routing of piping and conduits.
   f. Revisions to electrical circuitry.
   g. Actual equipment locations.
   h. Duct size and routing.
   i. Locations of concealed internal utilities.
   j. Changes made by change order or change directive.
   k. Changes made following architect's written orders.
   l. Details not on the original contract drawings.
   m. Field records for variable and concealed conditions.
   n. Record information on the work that is shown only schematically.
   o. Mark important additional information that was either shown schematically or omitted from original drawings.

017900 DEMONSTRATION AND TRAINING
1. Engage a qualified facilitator to prepare instruction program and training modules, to coordinate instructors, and to coordinate between Contractor and Owner for number of participants, instruction times, and location.
2. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
3. Provide instruction at mutually agreed-on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
4. Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.

024000 DEMOLITION
1. Refer to the demolition plans and general notes for additional notes.

040200 UNIT MASONRY
(REFER STRUCTURAL NOTES FOR ADDITIONAL INFORMATION)
1. All concrete masonry work shall be in accordance with ACI 530-02 "Building Code Requirements for Masonry Structures".
2. All engineered concrete masonry shown on the contract drawings has been designed based on full allowable stresses. Special inspection by a qualified inspector shall be required.
3. Materials for concrete masonry walls shall be in accordance with the following specifications:
   A. Hollow load bearing units
      a. ASTM C90 TYPE 1, GRADE N,
      b. F'M = 1350 PSI ON THE NET AREA.
      c. MAXIMUM WEIGHT = 32 LBS PER 8" X 8" X 16" UNIT,
      d. 47 LBS PER 12" X 8" X 16" UNIT
   B. GROUT: ASTM C476, F'C = 2000 PSI

MORTAR: ASTM C270, TYPE M (below grade), S (structural), or N (veneer, non-structural).

1. All masonry shall be laid in running bond unless otherwise noted on the drawings. Build all masonry level, square, plumb, and true.
2. Build all masonry level, square, plumb, and true, using batts for closures only. Maintain minimum 1" clear airspace between face of sheathing/insulation and back of veneer brick. Veneer masonry shall extend typically a minimum of 6" below finished grade.
3. Provide mortar net, manufactured by wire-bond, above all flashing points. Install per manufacturer's written instructions.
4. All poured or pumped grout shall be fine grout, with slump 8"-10". Grouting to be placed in maximum 4'-0" lifts, grouting processes to be fully monitored and inspected by special inspections engineer. Provide inspection ports at bottom of each grout lift as required on the outside face of the CMU. Stop grout for each lift 1" below top of last CMU course, with the exception of the top course of the CMU wall. Immediately after walls have been grouted, vertical reinforcing bars shall be shaken a minimum of (10) times to vibrate the grout and provide adequate consolidation.
5. Mortar cross cells to contain grout in reinforced cells only. No spillage of grout into non-reinforced cells allowed. All hollow masonry walls that change in thickness or number of wythes shall have a course of solid or grout filled units at the transition.
6. Walls shall be grouted as soon as possible to prevent shrinkage cracking. Masonry shall be allowed to cure a minimum of 24 hours prior to grout placement.
7. The top of unfinished masonry work and all stored masonry materials shall be covered to protect the masonry material from the weather.
8. Masonry shall not be supported on wood girders or other form of wood construction. Provide steel lintels bearing on solid masonry above all openings.
9. Flashing and weeps shall be flexible flashing, 60mil self-adhesive rubberized asphalt sheet laminated to a cross laminated polyethylene film and 12oz hemmed stainless steel drip edge stopping 3/8" beyond face of wall. Install flashing above all window and door heads, below sills, at floor slab, at intersections of roofing and vertical walls and at other interruptions to downward flow of moisture. Turn up and seal ends of flashing to prevent horizontal migration of moisture. Provide open head weeps 24" on center at all flashing points. Top of flashing shall terminate behind wall moisture barrier.
10. Completed masonry work to be brushed and washed with warm clean water, and free of excess mortar. Clean all other work affected by mortar spills and washing. No acid allowed.
11. Provide vertical control joints at 25' on center in all masonry walls unless noted. Seal joints with non-sag sealant matching masonry color. Sealants used in control joints shall match mortar colors; sealants used around door and window openings shall match door or window frames.

040519 MASONRY ANCHORAGE AND REINFORCING
(REFER STRUCTURAL NOTES FOR ADDITIONAL INFORMATION)
1. All reinforcing steel shall be in accordance with ASTM A615, grade 60.
2. Provide rebar dowels of the same size and spacing as vertical reinforcing from wall and spread footings. Dowels shall have standard ACI hooks and shall lap 36x bar diameter with first lift of vertical reinforcing.
3. Provide standard 9 ga. galvanized steel truss type horizontal joint reinforcing at 16" on center for masonry walls greater than 4" thick, see drawings for vertical reinforcement.
4. Loose lintels shall conform to ASTM A36 for steel. All lintels to have 8" minimum bearing on one course of solid grouted masonry units, unless noted otherwise. All loose lintels to be provided by structural steel contractor.
5. Provide angle L5x31/2x5/16" for each 4" of masonry wall thickness over grilles, louvers, panel boxes, ducts and other miscellaneous openings not listed in schedule.

054000 COLD-FORMED METAL FRAMING
1. All galvanized studs, joists, and accessories shall be formed from steel that conforms to the requirements of ASTM A653 as set forth in the AISI "Specification for the Design of Cold-Formed Steel Structural Members," 2012 edition.
2. All light gauge steel studs shall be galvanized with a minimum of G60 (ASTM C955) or G40 (all others) coating.
3. Studs, runners, bracing and bridging shall be manufactured per ASTM C955.
4. See sheet S0.01 for further requirements.

055200 METAL RAILINGS (REFER TO STRUCTURAL NOTES FOR ADDITIONAL INFORMATION)
1. All metals railings should be free from defects impairing strength, durability, or appearance. Materials shall be made with structural properties to sustain safety or withstand strain and stresses to which normally subjected. All exposed fastenings to be of same materials, color, and finish as metal to which applied unless otherwise noted. As far as possible, all work shall be fitted, and shop assembled ready for erection.
2. Steel and iron shall be primed with universal shop primer. Railings and guardrails for exterior use shall be non-corrosive metals, or with exterior grade coatings.
3. Provide shop drawings for review. Engineering design of railings by Contractor.

060500 COMMON WORK RESULTS FOR WOODS, PLASTICS, AND COMPOSITES
1. Flush metal access panels shall be provided and installed wherever required by code or for the proper operation or maintenance of plumbing, mechanical or electrical equipment, whether or not indicated on the drawings. Coordinate size, location, fire rating, and type of access panel with other work.
2. Contractor shall provide and install all stiffeners, bracings, back-up plates, blocking, and supporting brackets required for the installation of all casework, toilet accessories and of all floor-mounted or suspended mechanical and electrical equipment.
3. All pipes, ducts, and bus ducts, which penetrate walls, ceilings, or floor construction, shall be installed to maintain the fire resistive rating and structural integrity of the assembly.
4. All walls shall be adequately braced to resist all horizontal loads from wind, earth, and construction loads during installation and until such time as permanent anchorage is in place. Heavy compaction equipment will not be allowed within a distance subtended by a 45-degree angle between the surface of the ground and any footing.

061000 ROUGH WOOD FRAMING
(REFER TO STRUCTURAL NOTES FOR ADDITIONAL INFORMATION)
1. Wood construction shall conform to the requirements of the American Institute of Timber Construction and the National Forest Products Association (National Design Specification for Wood Construction).
2. Contractor to provide wall blocking for all shelving, equipment, grab bars, mop holders, fixtures, and similar accessories for firm support. Coordinate with all Contractor, Owner and equipment supplier requirements prior to enclosing framing.
3. Wood treatment: pressure treat all sills and plates and any other wood in contact with masonry, concrete or ground, and as shown elsewhere on drawings. Pressure treatment shall comply with AWPB standards C2 and LP-22.
4. Fasteners for preservative treated wood shall be hot-dipped zinc coated galvanized steel, stainless steel, silicon bronze, or copper.

061000.10 FIRE TREATED LUMBER AND SHEATHING
1. Fire-retardant-treated framing lumber and sheathing (if shown) shall bear labels stating certification and have a flame spread of 25 or less (class A) when tested in accordance with ASTM E84 and Underwriters' Laboratories, inc.

061600 SHEATHING (AND SUBFLOORING)
(REFER TO STRUCTURAL NOTES FOR ADDITIONAL INFORMATION)
1. Plywood wall and roof sheathing shall conform to the Engineered Wood Association (APA) specifications, and be exterior grade and pressure treated where in direct contact with masonry or concrete. Thickness as indicated on drawings.
2. Oriented strand board (OSB) wall and roof sheathing shall conform to the Engineered Wood Association (APA) specifications, and be exterior grade and pressure treated where in direct contact with masonry or concrete. Thickness as indicated on drawings.
3. Parapet sheathing shall be consistent with wall sheathing materials unless otherwise noted.
4. Plywood subflooring shall be exterior grade and pressure treated where in direct contact with masonry or concrete. Thickness as indicated on drawings.
5. Where fasteners are exposed to weather, in ground contact, in contact with treated wood, or in areas of high relative humidity they shall be hot-dip galvanized.

061643 GYPSUM SHEATHING
1. Paper-surfaced gypsum sheathing shall be ASTM C1396, gypsum sheathing; with water-resistant-treated core and with water-repellent paper bonded to core's face, back, and long edges. Edge and end configuration shall be V-shaped, tongue-and-groove long edges; square ends.
2. Glass-mat gypsum wall and roof sheathing shall be thickness as indicated on drawings. Provide and install sealant and sheathing tape.
3. Parapet sheathing shall be consistent with wall sheathing materials unless otherwise noted.
4. Where fasteners are exposed to weather, in ground contact, in contact with treated wood, or in areas of high relative humidity they shall be hot-dip galvanized.
5. Applicable fire ratings are indicated by design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.
6. Air-barrier and water-resistant glass-mat gypsum sheathing assembly, and seals with adjacent construction, are to be capable of performing as a continuous air barrier and as a liquid-water drainage plane flashed to discharge to the exterior incidental condensation or water penetration. Air-barrier assemblies are to be capable of accommodating substrate movement and of sealing substrate expansion and control joints, construction material changes, penetrations, tie-ins to installed waterproofing, tie-ins to other installed air barriers, and transitions at perimeter conditions without deterioration and air leakage exceeding specified limits.
7. Provide primers, transition strips, termination strips, joint reinforcing fabric and strips, joint sealants, counterflashing strips, flashing sheets and metal termination bars, termination mastic, substrate patching materials, adhesives, tapes, foam sealants, lap sealants, and other accessory materials that are recommended in writing by sheathing manufacturer to produce a complete air-barrier assembly and that are compatible with primary air-barrier material and adjacent construction to which they may seal.

064023 INTERIOR ARCHITECTURAL WOODWORK
1. Interior standing and running trim for transparent finishes shall be premium grade white pine standard woodwork. Cuts may be plain-sliced, plain-sawn, rift cut, or quarter cut/sawn.
2. Interior standing and running trim for opaque finishes shall be economy grade white pine.
3. Closet and utility shelving shall be economy grade species to match woodwork used for opaque finishes. Finishes shall be opaque unless otherwise noted.
4. Interior frames and jambs for transparent finishes shall be premium grade white pine standard woodwork. Cuts may be plain-sliced, plain-sawn, rift cut, or quarter cut/sawn.
5. Interior frames and jambs for opaque finishes shall be economy grade white pine.
6. Interior wood stairs and railings shall be premium grade. Wood for transparent finishes shall be quarter-sawn red oak treads with plain-sawn hard maple handrails, bannisters, and newels. Wood for opaque finish shall be any closed-grain hardwood.

072100 THERMAL AND MOISTURE PROTECTION
1. Rigid perimeter insulation shall be ASTM C578, type IV; compressive strength: 25 lb. Per square inch, minimum (ASTM D1621); water absorption: 0.1% by volume, maximum (ASTM C272). Foam blowing agent shall provide at least 90% reduction in ozone depletion potential as compared with standard CFC blowing agents. Aged R-value: 4.4 per inch at 75°F - thickness as indicated or of thickness to achieve noted R-value.
2. Fiberglass batt insulation for concealed installations: kraft-faced thermal batt insulation complying with ASTM C665, type II, class C, with maximum flame spread of 25 and smoke-development of 450 or less.
3. Fiberglass batt insulation for exposed installations (including any facings): shall have a flame spread rating per current governing code. Insulation shall be FSK (foil) or PSK (poly) faced fiberglass thermal batt insulation complying with the flame spread requirements listed above, or unfaced high density mineral fiber, with strapping as required be held in place.
4. Exterior sealants shall be non-sag, silicone type. Color to match adjacent exterior materials, or exterior door or window frames. Submit samples to architect for approval. Note that more than one (1) sealant color may be required. Verify color locations with Architect prior to installation.
5. Include closed cell sill plate insulation, caulking of sills and plates and foam injections at window and door shim space.
6. Provide 15 mil vapor barrier under concrete slab on grade. Seal all joints and penetrations.
7. Provide 60 mil bituthene waterproofing membrane with 1/2" protection board at all below grade, exterior walls. Continue membrane and protection board over top of footing. Where grade is less than 8" below finish floor, extend membrane 12" up behind moisture barrier.
8. Moisture barrier vapor permeable fluid applied weather barrier, or equal. Continuous on all wall surfaces and integrated with embedded flashing components.

072400 EXTERIOR INSULATION AND FINISH SYSTEM (EIFS)
1. Provide a system with integral drainage system. Contractor to submit specifications and details to Architect for approval.
   A. Basis of design is Dryvit Outsulation MD.
   B. All ground floor applications and all facades exposed to abnormal stress or deliberate impacts, shall have the base coat reinforced with two layers of reinforcing mesh consisting of a minimum 15 oz/yd^2 first layer and a minimum 4.3oz/yd^2 second layer, and shall extend 8' minimum above finished grade.
   C. Expansion joints shall be located where the system abuts dissimilar materials, where the substrate changes, and in continuous elevations at intervals not exceeding 75 feet.
   D. These systems shall be held back from the adjoining material a minimum of 3/4" for sealant applications.
   E. Finish shall be selected by Architect and/or Owner.
   F. EIFS to be applied by a certified installer, a letter of compliance shall be sent to the architect and owner.
   G. EPS rigid insulation board shall comply with requirements outlined for rigid insulation.
   H. Provide EPS rigid insulation board fabricated with drainage channels on the back (sheathing) side to provide proper drainage of moisture to the exterior.
   I. Provide all flashing as required to maintain proper drainage to building exterior.
   J. Provide air/water-resistive barrier system, installed per manufacturer's instructions to provide water-tight system.
   K. Tape all and finish all seams and joints in substrate as required by EIFS manufacturer.
   L. All drips in EIFS trim (as shown in drawings) shall be factory-formed, "V" shape.
   M. Provide water infiltration prevention guarantee for 10 years.

075423 TPO ROOFING
1. Membrane roofing system shall be internally fabric- or scrim-reinforced, fabric-backed, TPO roofing system, white, 60 mil, fully adhered, and shall be installed per manufacturer's strict installation guide specifications.
2. Roof insulation R-30 minimum.
3. Membrane to be placed over glass-mat, water-resistant gypsum substrate and rigid insulation and stagger joints. Mechanically attach insulation with #14 screws as required by code. Provide all required adhesives, sealants, and fasteners as shown in drawings, consult manufacturer's specifications for sealant types required.
4. Contractor shall submit shop drawings to Architect for approval prior to installation. Provide all required boots, curbing, walk-pads (to and around all hatches, doors, and equipment) and incidental accessories, installed per roofing membrane manufacturer's guidelines.
5. Warranty period: 20 years, to include all flashing.

076000 GUTTERS AND FLASHING
1. All metal flashing work shall conform to latest edition of "Sheet Metal and Air Conditioning Contractors' National Association" (SMACNA) standard details.
2. Metal flashing and roof trim shall be stainless steel to be minimum 24 gage, ASTM A167, soft annealed, with no. 2d finish at intersections of roof and vertical walls and other interruptions to the downward flow of moisture. Metal flashing to be attached with screws and neoprene washers.
3. Gutters and downspouts shall be factory finished metal; 0.027 inch thick gutters, 0.020-inch-thick downspouts. Color as indicated in drawings.
4. All gutters to be "K" style pre-finished seamless metal with oversized downspouts, unless otherwise noted.
5. Roof scuppers and other stainless-steel flashing to be minimum 24 gage, ASTM A167, soft annealed, with no. 2d finish. Non-specific metal flashing shall be 24 gage aluminum, factory finished, color to match surrounding construction. All flashing to have watertight seams without exposed fasteners, detailed per SMACNA standards.
6. Basis of design for cap flashing is Metal Era Perma-Tite coping.
7. Cap flashing system to be .050" aluminum or 24-gauge galvanized steel, factory finished, color as shown in drawings. All cap flashing to be factory formed, designed with internal gutter/drain chair, detailed per SMACNA standards, and designed for thermal expansion/contraction. Cleats shall be 20-gauge galvanized steel, coping to have concealed splice plates to match coping color and finish, with no exposed fasteners. Install per manufacturer's written instructions, utilizing fasteners as specified by manufacturer for use with coping system and sub-structure indicated in drawings.
8. Provide flashing at all valleys and drip edge at all eaves. Provide aluminum drip edge (2" x 1-1/2"x 0.032") at all roof edges.

081130 METAL DOORS
1. Doors to be minimum 3'-0" wide x 7'-0" tall unless otherwise noted.
2. Exterior steel doors shall be ANSI/SDI-100, grade III, extra heavy duty, minimum 16-gauge galvanized steel faces, seams welded and ground smooth. Label where indicated on schedule. Insulated core, R-5 minimum.
3. Do not paint or conceal labels of fire rated elements.
4. Insulated glazing shall be (2) 1/4" thick float glass separated by a 1/2" dehydrated air space complying with ASTM E774. Temper units as required for non-insulated tempered units.
5. Non-insulated glazing shall be 1/4" thick, ASTM 1036, type1, quality Q5.
6. Tempered glazing shall be 1/4" thick, ASTM 1048, type 1, quality Q5, fully tempered.

081200 METAL FRAMES
1. Exterior frames shall be fabricated from 16-gauge galvanized steel. Frames with welded corners for exterior doors, unless instructed by owner otherwise. Provide weatherstripping for exterior doors. All frames to receive minimum 26-gauge mortar boxes in mortared in frames. Provide all anchorage devices as required for wall type. Anchors to be concealed type. Factory cut doors and frames for hardware installation.
2. Interior frames shall be fabricated from 18-gauge. Knock-down type, unless instructed by owner otherwise. Provide silencers on interior frames. All frames to receive minimum 26-gauge mortar boxes in mortared in frames. Provide all anchorage devices as required for wall type. Anchors to be concealed type. Factory cut doors and frames for hardware installation.
3. Do not paint or conceal labels of fire rated elements.

081400 WOOD DOORS
1. Interior rated wood doors shall be 1-3/4" thick, 5-ply, crossbanded construction, non-combustible core, premium grade wood face. Factory stain finish with satin polyurethane (matching edge) plain sliced SELECT white birch book match. Do not use NATURAL birch book match. Do not paint or conceal labels of fire rated elements. All doors and frames noted specifically with fire rating characteristics shall be installed and maintained with clearly identifiable labels with UL information. All labels shall remain unpainted or tarnished.
2. Interior non-rated wood doors shall be 1-3/4" thick, 7-ply, crossbanded construction, particle board core, premium grade wood face. Factory stain finish with satin polyurethane (matching edge) plain sliced SELECT white birch book match. Do not use NATURAL birch book match.
3. Insulated glazing shall be (2) 1/4" thick float glass separated by a 1/2" dehydrated air space complying with ASTM E774. Temper units as required for non-insulated tempered units.
4. Non-insulated glazing shall be 1/4" thick, ASTM 1036, type1, quality Q5.
5. Tempered glazing shall be 1/4" thick, ASTM 1048, type 1, quality Q5, fully tempered.

084113 ALUMINUM FRAMED ENTRANCES AND STOREFRONTS
1. Standard profile storefront systems shall be clear anodized finish, typical.
2. Storefronts installed in exterior wall construction shall be thermally broken.
3. The glazing system shall have gaskets on four sides.
4. Provide internal structural stiffeners, extruded sills and install per manufacturer standard details.
5. Glazing shall have a U-factor of 0.36 minimum and SHGC of 0.38.
6. Submit complete 1/4" scale minimum elevations and enlarged details and sample of finish for approval.
7. Doors shall be "medium stile" aluminum entrance doors, with 3-1/2" top and side rails and 12" bottom rail.
8. Provide standard manufacturer's door hardware as follows:
   A. Standard top, mid, and bottom hinges;
   B. Deadlock;
   C. Classic series exterior pull handle.
   D. Classic series interior push bar.
   E. Concealed overhead closer.
   F. Extruded aluminum threshold to comply with governing accessibility code.
   G. Weatherstripping and sweeps (all doors).
   H. See hardware schedules on drawings for additional information.
9. Provide storefront system; include anchorage, capable of withstanding wind load design pressures for component and cladding from the general structural notes.
10. All openings to receive storefront systems shall be field verified prior to fabrication.
11. All storefront glazing and commercial-glazed swinging entrance doors shall be tested for air leakage of 1.57 psf in accordance with ASTM E283 per Virginia Energy Conservation Code. For storefront glazing, maximum air leakage rate shall be 0.3 cubic feet per minute per square foot of fenestration area. For commercial-glazed swinging entrance doors, maximum air leakage rate shall be 1.00 cubic feet per minute per square foot of door area.
12. Provide .090 aluminum brake metal flashing, trim and subsills with finishes to match associated systems where indicated on drawings. Integrate with storefront members per manufacturer's recommendations to construct a leak-free assembly.
13. Tinted glass panels shall be aluminum metalized dual reflective polyester film with visible light transmission of 30%.
14. Provide a five-year system warranty for materials and workmanship. And a 10 year warranty for material finishes.
15. Storefront windows in 320 E. Pine St. portion of building to have interior and exterior simulated divided light muntins. Basis of design is Boyd Architectural Muntin Systems. Color to match storefront.

087100 DOOR HARDWARE
1. Provide a three (3) year warranty for materials and workmanship.
2. Provide "lever style" handles. Hardware shall be heavy duty commercial custom grade. All hinges to be permanently mounted to minimum height of 38" above finished floor thresholds to comply with governing accessibility code.
3. Hardware finish shall be identified among manufacturer's standard finishes and selected by Owner and/or Architect. Finishes shall be brushed nickel unless otherwise noted.
4. All locks to be master keyed to selected system. Coordinate with Owner for master/sub-master keying.

088300 MIRRORS
1. Provide a five (5) year warranty for materials and workmanship.
2. Comply with ASTM C1503, manufactured using a copper-free low-lead mirror coating process.
3. Provide flat polished mirror edges with aluminum j-channel hardware.
4. Provide concealed mounting hardware system adequate to carry weight of mirror bearing on supporting framing.

092000 GYPSUM BOARD (WALLS AND CEILINGS)
1. Gypsum board and wood assemblies shall be secured to studs at spacing indicated by gypsum board manufacturer with fasteners specified by same. Provide sheet steel zinc coated by hot dip process trim accessories complying with ASTM C1047. Trim includes corner bead, lc bead, screw heads, and irregularities. Sand smooth. Provide moisture resistant board in exterior soffits, bathrooms, around open tubs, and in laundry and janitor rooms. Provide cementitious board in all wet areas. Provide metal control joints so that linear dimensions between control joints do not exceed 30 feet and total area between control joints does not exceed 900 square feet. Bullnose all outside corners and all interior gypsum wall board returns at doors and windows.
2. All exposed gypsum board installations shall have a level 4 finish.
3. All exposed gypsum board installations scheduled to receive high gloss paint finishes shall have a level 5 finish.
4. All concealed gypsum board installations shall have a finish level consistent with required fire rating (if any), or finish level 1 if no level of finish is otherwise specified.

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ROBERT W. PILKINGTON
Lic. No. 013210
01/10/2025
ARCHITECT

AHCS SUBSTANCE USE EXPANSION
INTERIOR RENOVATION
OUTLINE SPECIFICATIONS

311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

DRAWN BY **MFK**
DESIGNED BY **RWP/MFK**
CHECKED BY **RWP**
DATE **01/10/2025**
SCALE **12" = 1'-0"**
REVISIONS

T2.01

PROJECT NO 03230077.00

095100 ACOUSTIC CEILING TILE

1. Acoustic ceiling tile basis-of-design shall be 24"x24"x3/4", beveled tegular edge, white color, type III with painted finish, NRC = 0.75, AC = 170, CAC = 35, light reflectance = 89%; installed in exposed tee system or equal, 15/16" wide, flat/flush face design, pre-finished white color.
2. Cleanable acoustic ceiling tile to be "clean room" or equal systems bearing matching compatible characteristics of acoustical ceiling tile used elsewhere in the project.
3. Suspension system to be intermediate or heavy-duty type as required by ceiling loads due to fixtures and air diffusers. Hang independently of walls, columns, ducts, pipes, and conduit. Non-perforated lay-in panels in high humidity areas.
4. Lay-in suspended ceiling systems shall comply with requirements of listed applicable codes.
5. No tile shall be less than six (6) inches in any direction. Rabbet cut tegular edge style tiles to match factory rabbet.
6. Cross runners and all main runners not connected to walls must be interconnected near the free end with a metal strut securely attached to prevent spreading.
7. Hanger wires shall be provided for all main runners and cross runners within 8" of ceiling perimeters.
8. Hanger wires that are more than 1 in 6 out of plumb shall have counterbraced wires.
9. Ceiling grid may be attached to 2 adjacent walls; ceiling must be at least 1/2 inch free of other walls. If walls run diagonally to ceiling grid system runners, one end of main and cross runners shall be free and a minimum of 1/2 inch clear of wall.
10. A set of four, 12-gauge splay wires shall be provided at a spacing not more than 12 feet by 12 feet on center. First set of splay wires shall be located not more than one half the above distances from the perimeter walls. Wires shall be taut without ceiling lift. The slope of these wires should not exceed 45 degrees from the plane of the ceiling. Splice wires will not be permitted unless previously approved.
11. All ceiling wires and unbraced ducts, pipes, and similar infrastructure must be separated.
12. All light fixtures shall be positively attached to the grid to resist a horizontal force equal to the weight of the fixtures.
13. Flush or recessed light fixtures and air terminals or services weighing less than 56 pounds may be supported on heavy duty grid but must have 2 #12-gauge slack safety wires from diagonal corners to the structure above.
14. Flush or recessed light fixtures and air terminals or services weighing more than 56 pounds must be independently supported by not less than 4 taut #12-gauge wires capable of supporting 4 times the load.
15. Provide trapeze or other supplementary support members at obstructions to main hanger spacing. Provide additional hangers, struts or braces as required at ceiling breaks, soffits, or discontinuous areas.
16. Surface mounted light fixtures shall be supported by at least two positive devices which surround the ceiling runner and are supported to the structure above with a #12-gauge wire. Rotational spring clips are not acceptable.
17. Pendant mounted light fixtures shall be supported directly to the structure above with hanger wires through each pendant capable of supporting 4 times the load.
18. Provide flush access panels in gypsum board ceilings as required. Paint to match ceiling. Coordinate locations & sizes with mechanical, plumbing, and electrical requirements.
19. Provide extra stock of 5% of each acoustical material installed, clearly marked to indicate contents and location used.

096500 RESILIENT FLOORING: VINYL COMPOSITE TILE (VCT)

1. Basis-of-design shall be 12"x12", 1/8" thick, class 2, smooth surface, with compatible standard VCT adhesive or equal.
2. Color selections for VCT to be chosen by Owner from manufacturer's full range.
3. Product to be resistant to impact, static, and rolling. VCT shall be manufactured in accordance with ASTM specification F1066, class 2, and shall be asbestos-free.
4. Tile to be through pattern and color construction.
5. Product shall offer a limited 5-year commercial warranty against manufacturing defects.
6. Provide extra stock of 2% in each color, clearly marked to indicate contents and location used.
7. Beginning of finish installation signifies installer's and manufacturer's acceptance of substrate conditions as required to maintain finish material warranties.

096510 RESILIENT FLOORING: LUXURY VINYL PLANK ("LVP")

1. Follow manufacturer's installation instructions. If testing of the concrete substrate indicates conditions unacceptable to those recommended by the floor covering manufacturer, provide proper vapor retarder to bring emissions to acceptable levels and underlayment to bring concrete substrate to acceptable conditions.
2. Color selections for LVP to be chosen by Owner from manufacturer's full range.
3. Submit samples for verification purposes in full-size tiles of up to five styles and colors as selected by Owner. Submit product information including warranty.
4. Provide resilient tile flooring with the following fire performance characteristics as determined by testing material in accordance with ASTM test methods indicated below by a certified testing laboratory:
   1. ASTM E 648 (NFPA 253) Critical Radiant Flux of 0.45 watts per square cm or greater, Class I
   2. ASTM E 662 (NFPA 258) (Smoke Generation) Maximum Specific Optical Density of 450 or less.
5. Basis of design is Shaw Contract "Abide" in Heirloom Oak 07150. Products from Armstrong, Mannington Commercial, and Tarkett, that match the basis of design for color and texture and that meet the performance specifications, with a minimum 10-year commercial warranty are acceptable.

096513 RESILIENT BASE AND ACCESSORIES

1. Provide and install vinyl thermoplastic wall base minimum thickness 1/8" with job-formed inside and outside corners. Base shall be 4" high minimum.
2. Straight base shall be installed in areas with carpet and/or raised access floors. Cove base shall be installed in areas with resilient floors.
3. Accessories to wall base and/or flooring shall include caps, coves, carpet bars, carpet edges, nosing for carpet, nosing for resilient floors, reducer strips, joiners for tile and carpet, and transition strips.
4. Provide and install resilient vinyl thermoplastic stair components and accessories. Treads shall have embossed surface patterns with contrasting colors. Nosing style shall be adjustable to cover angles between 60 and 90 degrees. Risers shall be separate.
5. Provide and install all required leveling, patching compounds, adhesives, fillers, or strips to provide a complete system.
6. Color selections shall be chosen by Owner from manufacturer's full range.
7. Product shall offer a limited 5-year commercial warranty against manufacturing defects.
8. Provide extra stock of 2% in each color, clearly marked to indicate contents and location used.

096800 CARPET

1. Commercial grade, accessibility compliant with materials and workmanship warranty for 10 years.
2. Carpet tiles shall be 100 percent nylon 6, cut pile, and 24 by 24 inches unless otherwise noted. Color, pattern, and tile arrangement to be selected by Architect and submitted to Owner for approval prior to construction.
3. Utilize materials containing 0% VOC's (volatile organic compounds).
4. Provide extra stock of 2% in each color, clearly marked to indicate contents and location used.
5. Beginning of finish installation signifies installer's and manufacturer's acceptance of substrate conditions as required to maintain finish material warranties.

099000 PAINTS AND COATINGS

1. Interior walls and interior face of exterior walls shall be painted, consisting of (1) coat of primer and (2) coats of interior finish latex, unless otherwise noted.
2. Paints utilized shall meet the following specifications:
   A. Exterior paint: utilizes alkyd enamel semi-gloss finish paint. Provide one coat primer and two coats finish.
   B. Interior paint: utilize paint materials containing 0% VOC's (volatile organic compounds), consisting of (1) coat interior latex primer and (2) coats of latex finish.
   C. Doors and frames: exterior paint for doors and frames: provide 1 coat all surface enamel latex primer and 2 coats all surface latex enamel high gloss. Color per elevations.
3. Provide extra stock of 2% in each color and type, clearly marked to indicate contents and location used.

101423 PANEL SIGNAGE

1. Panel signs with exposed edges shall be solid-sheet sign and returns made from fiberglass, or PVC sheet with surface-applied, raised graphics. Panel sign mounting shall be surface mounted with concealed anchors, adhesive, hook-and-loop tape, or magnetic tape.
2. Field-applied, vinyl-character signs shall be pre-spaced characters die cut from adhesive-backed, weather-resistant vinyl film; field applied to substrate.

104416 FIRE EXTINGUISHERS

1. Portable hand-carried regular dry-chemical type fire extinguishers shall comply with NFPA 10 and UL-rated 4-a:60-b:c, 10# capacity with standard mounting brackets.
2. For installations in finished spaces with framed partitions provide and install a semi-recessed cabinet full panel, clear acrylic door glazing, stainless steel with 1-1/2" square trim.

113013 RESIDENTIAL APPLIANCES

1. All new appliances shall be Energy Star certified if available.
2. Unless specified otherwise all appliances shall be provided and installed by the Contractor.
3. Panel finishes shall be consistent for all appliances, unless otherwise noted.
4. Refrigerator/freezer shall be freestanding, two-door, side-by-side with manufacturer's standard front panel finishes.
5. Dishwasher shall be built-in undercounter with manufacturer's standard front panel finishes.
6. Sink disposal unit shall be undercounter stand-alone unit connected to the right basin of a double basin sink and operated with a wall mounted switch.

122000 WINDOW TREATMENTS

1. Provide drum roller shades at locations indicated. Manual shades shall be clutch and chain. Fabric shall be 3% openess factor light-filtering PVC-coated fiberglass.

123530 CASEWORK

1. The casework subcontractor/shop shall provide a complete set of casework shop drawings to the Contractor for use and reference pertaining to the construction of the project. These shop drawings shall be considered as an integral part of the contract documents for the construction of the project.
2. All casework items shall be furnished to the jobsite in prefinished condition (i.e. stained, sealed, laminated, and similar finishes) unless specifically noted otherwise.
3. Provide submittals for color and finish samples.
4. Cabinets shall be KCMA A161.1 certified with flush overlay face style construction meeting American Woodworkers Institute (AWI) custom grade standards unless otherwise noted.
5. Exposed cabinet end finishes shall be plastic laminate.
6. Hardware shall be wire pulls unless otherwise noted.
7. Hinges shall be concealed European-style, self-closing hinges.
8. Surfacing shall be melamine surface laminated plastic. Sheet backing panels shall be of similar material and thickness, without decorative finish. Core material shall be 3/4" thick medium density particleboard; minimum weight 40 lbs per cubic foot. Countertops shall be fabricated in single lengths up to 12'-0"; countertops over 12'-0" length shall have hairline joints. All exposed edges to be smooth, sharp, clean. Provide openings (i.e. sinks, grommets, equipment, restroom accessories, and similar penetrations) in countertop as required for equipment. Consult with owner to confirm locations.

123623.13 PLASTIC-LAMINATE-CLAD COUNTERTOPS

1. Plastic-laminate countertops shall be premium grade with general-purpose, high-pressure decorative laminate.
2. Core material shall be minimum 1-1/8 inch thickness particleboard or MDF. Core material at sinks shall be particleboard made with exterior glue.
3. Provide 4-inch side splash and backsplash at all countertop in wet areas or food preparation areas, unless otherwise noted.

142000 CONVEYING EQUIPMENT: COMMERCIAL LU/LA ELEVATOR

1. Basis of Design: Savaria Orion hydraulic drive
2. Elevator shall be designed to ASME A17.1 2019 LU/LA Code Update.
3. Prior to purchasing the elevator, the Contractor shall submit specifications which include the following information for approval by the Architect and/or Owner: cab finishes (wall/ceiling/lighting), cab size, speed and capacity.
4. Security features shall be coordinated with owner.
5. Inside of car shall be 42"W X 60"L X 84" H.
6. Car enclosures shall be enameled steel with removable wall panels. Front walls (return panels) shall be stainless steel with side and rear wall panels shall be plastic laminate. Cab-side face of doors and handrails shall be stainless steel. Cab floor shall match floor finish used on ground level spaces adjacent to elevator shaft.
7. Hoistway entrances shall be 36 inches wide, 82 inches high with single-speed side sliding doors. Frames and doors shall be stainless steel with aluminum sills. Hall fixtures shall be stainless steel.

210500 – COMMON WORK RESULTS FOR FIRE SUPPRESSION
(SEE MECHANICAL AND PLUMBING SHEETS BY OTHERS FOR ADDITIONAL INFORMATION)

1. Contractor shall design and furnish a complete fire suppression system complying with all applicable laws and ordinances.
2. Nearest hydrant pressure test results are as follows:
   A. Static pressure 66 psi
   B. Pitot 20 psi
   C. Residual 36 psi
   D. Flow 590 gpm
3. Provide sprinklers in any above-ceiling areas where combustible framing exists.
4. System design shall include water line source/feed required (6").
5. Contractor shall provide a city-approved fire-service vault as part of the bid.
6. Sprinkler contractor shall determine, as part of bid, if a fire pump will be required based on project parameters and available water service. If a pump is required it shall be provided with the bid along with required electrical service change and required backup power source (generator).

220500 COMMON WORK RESULTS FOR PLUMBING
(SEE MECHANICAL AND PLUMBING SHEETS BY OTHERS FOR ADDITIONAL INFORMATION)

1. All plumbing designs, construction, materials, and workmanship shall comply with all provisions of the current governing code, as a minimum level of construction detail and quality.
2. Hot water at taps shall be maintained with a range of 105-120 degrees Fahrenheit.
3. Insulate all above grade water supply piping with 1/2" fiberglass or neoprene pipe covering.
4. Pressure test all water lines with 100 psi for leaks, and gravity test all sanitary lines with ten foot (10'-0") standing head (or as directed by the building official).
5. Vacuum breakers are required at all hose bibs and any outlet or connection subject to backflow.
6. Provide shut-off valve at each fixture and equipment connection for future service and removal. Provide access panels as required in solid walls or ceilings.
7. Hot water lines and exposed drain lines are to be insulated in accordance with governing accessibility code requirements.

224216.13 COMMERCIAL LAVATORIES

1. Provide and install vitreous-china, counter-mounted lavatories. Provide self-rimming for above-counter mounting.
2. Rectangular units shall be 21 by 19 inches unless otherwise noted in plumbing schedule. Oval units shall be 19 by 17 inches unless otherwise noted in plumbing schedule. Round units shall be 19 inches, unless otherwise noted in plumbing schedule.
3. Faucet-hole punching shall be located at the top and three holes, 2-inch centers unless otherwise noted in plumbing schedule.
4. Manually operated faucets shall be center set, commercial grade, solid brass or die-cast housing with brazed copper and brass waterway and equipped with single-control mixing valves.

224223 COMMERCIAL SHOWERS

1. Individual fabricated shower units shall be FRP or fiberglass accessible one-piece unit without top.
2. Unit shall be factory prepared to receive shower head and shower valve.
3. Shower nominal size and shape shall be 36 by 36 inches unless otherwise noted.
4. Shower units shall be factory equipped with grab bars per ASTM F446, mounted on support area back wall.
5. Shower shall be ADA transfer shower. See Restroom Accessory Schedule, Sheet A1.43.

224713 DRINKING FOUNTAINS

1. Provide and install surface rectangular wall-mounted, stainless steel with back panels.
2. Provide one push bar activated bubbler for each receptor, with adjustable stream regulator and a maximum water flow of 0.15 gpm.
3. Provide domestic water supply line with shutoff and flow-control valve assembly, and a chrome-plated brass P-trap and waste.
4. Mounting height(s) shall be high/low - standard/accessible in accordance with ICC A117.1. Provide and install cane height detection accessory at higher fountain.
5. Provide a bottle-filing station which shall be surface wall-mounted, abs/stainless steel combination, with sensor activation.

230500 COMMON WORK RESULTS FOR HEATING, VENTILATING, AND AIR CONDITIONING
(SEE MECHANICAL AND PLUMBING SHEETS BY OTHERS FOR ADDITIONAL INFORMATION)

1. All mechanical designs, construction, materials, and workmanship shall comply with all provisions of the current governing code, as a minimum level of construction detail and quality.
2. Provide ventilation fans to outside for all toilets and janitor rooms. Operation to activate when light is switched.

DIVISION 24 (NOT USED)

DIVISIONS 25 INTEGRATED AUTOMATION (NONE)

260500 COMMON WORK RESULTS FOR ELECTRICAL
(SEE ELECTRICAL SHEETS BY OTHERS FOR ADDITIONAL INFORMATION)

1. All electrical designs, construction, materials, and workmanship shall comply with all provisions of the current governing code, and the current edition of the National Electric Code (NEC), as a minimum level of construction detail and quality.
2. Do not interrupt electrical service to facilities occupied by Owner or others unless permitted under the following conditions: notify Owner and/or Tenant no fewer than seven days in advance of proposed interruption of electrical service. Arrange to provide temporary electrical service or power.
3. Subcontractor shall provide closeout submittals including: operation and maintenance data, software and firmware operational documentation, provide software and firmware operational documentation. Subcontractor shall also provide demonstration to owner's maintenance and clerical personnel and/or building occupants on how to operate the project's systems and equipment.

DIVISION 27 COMMUNICATIONS
(SEE ELECTRICAL SHEETS BY OTHERS FOR ADDITIONAL INFORMATION)

DIVISION 28 ELECTRONIC SAFETY AND SECURITY
(SEE ELECTRICAL SHEETS BY OTHERS FOR ADDITIONAL INFORMATION)

DIVISION 29 THRU 30 (NOT USED)

330500 COMMON WORK RESULTS FOR UTILITIES
(SEE CIVIL SHEETS BY OTHERS FOR ADDITIONAL INFORMATION)

1. Contractor shall work with Owner to obtain required utilities to project site (if not already present) and will notify Owner in writing within ten (10) days of required date(s) when utilities must be available for work to be completed.
2. When it is necessary to interrupt any existing utility service to make corrections and/or connection, a minimum of 48 hours or two (2) working days advance notice shall be given to the Owner. Interruptions in utility services shall be of the shortest possible duration for the work at hand and shall be approved in advance by the Owner. If required by Owner, work shall be performed after normal business hours.

BID NOTES AND BID ALTERNATES

1. SEE SHEETS T2.01 AND T2.02 FOR PRODUCT SPECIFICATIONS FOR ANY PRODUCT SPECIFICALLY SPECIFIED. PRODUCTS SPECIFIED ARE "BASIS OF DESIGN" PRODUCTS THAT ESTABLISH THE LEVEL OF QUALITY AND TYPE OF MATERIAL FOR THOSE PRODUCTS. ALTERNATE PRODUCTS THAT MEET THE SAME LEVEL OF QUALITY AND SAME SPECIFICATIONS WILL BE CONSIDERED, TO BE SUBMITTED TO ARCHITECT AND OWNER FOR REVIEW PRIOR TO AWARD OF CONTRACT.
2. CONSTRUCTION ELEMENTS NOT SPECIFICALLY SPECIFIED WITH PRODUCT SELECTIONS HAVE BEEN PROVIDED WITH PERFORMANCE SPECIFICATIONS. ALL BUILDING PRODUCTS FOR THOSE ITEMS SHALL MEET THE PERFORMANCE SPECIFICATIONS, TO BE VERIFIED BY ARCHITECT AND/OR OWNER DURING SUBMITTAL/SHOP DRAWING REVIEW.
3. THE FOLLOWING ITEMS SHALL USE THE FOLLOWING MATERIAL ALLOWANCES FOR BIDDING IN LIEU OF PROVIDING MATERIAL SPECIFICATIONS:
   CARPET: $44.00 / SQUARE YARD
   LVT/VCT: $33.00 / SQUARE YARD
   VINYL COVE BASE: $4.40 / LINEAR FOOT
   FOR ALL "ALLOWANCE" MATERIALS THE ALLOWANCE NOTED SHALL BE UTILIZED FOR MATERIAL ONLY. INSTALLATION SHALLL BE INCLUDED IN THE BASE BID. PLEASE NOTE: IF FINAL COST DURING CONSTRUCTION IS LESS THAN THE BID UNIT PRICE, THE COST SAVINGS SHALL BE PASSED ON TO THE OWNER VIA CHANGE ORDER.
4. UNIT PRICES FOR VARIOUS BUILDING/CONSTRUCTION ELEMENTS SHALL BE PROVIDED WITH BIDS OR SUBMITTED PRIOR TO CONTRACT AWARD. UNIT PRICES SHALL BE GIVEN FOR THE FOLLOWING ITEMS:
   - FOOTING/FOUNDATION EXCAVATION ($ / LINEAR FOOT)
   - CONCRETE SLAB-ON-GRADE REPAIR ($ / LINEAR FOOT)
   - CONCRETE SIDEWALK AND BASE ($ / LINEAR FOOT)
   - ROCK EXCAVATION ($ / LINEAR FOOT)
   - WALL COPING ($ / LINEAR FOOT)
   - HAULING ($ / TON / MILE)
   - ROOF DECKING REPLACEMENT ($ / SQUARE FOOT)
   - ROOF REPLACEMENT ($ / SQUARE FOOT)
5. THE FOLLOWING BID ALTERNATES ARE INCLUDED IN THESE DRAWINGS AND SHALL BE BID AS ALTERNATE PRICES AND EITHER AN "ADD" OR "DEDUCT" ON THE BID FORM. ANY ELEMENT NOT LISTED AS PART OF AN ALTERNATE SHALL BE PART OF THE BASE BID.

ALTERNATE #1: (DEDUCT ALTERNATE): OMIT NEW EIFS ON THE 2-STORY STRUCTURE AT 320 E. PINE ST. OMIT AS SHOWN ON ELEVATION SHEETS A2.01, A2.02, DETAILS ON A3.02 AND A4..01, AND EIFS SPECIFICATIONS ON SHEET T2.01. ALL EXTERIOR SURFACES SHOWN TO HAVE NEW EIFS SHALL BE PRICED TO BE PAINTED AS PART OF THIS ALTERNATE, TO INCLUDE (1) COAT PRIMER WIHT BLOCK FILLER AND (2) COATS FINISH EXTERIOR LATEX.

ALTERNATE #2: PROVIDE PACKAGE RTUS FOR HVAC FOR THE 2-STORY AREA AT 320 E. PINE ST., AS SHOWN ON ALTERNATE HVAC SHEETS M4.01 AND M4.02 (IN LIEU OF THE SPLIT SYSTEM HEAT PUMPS SHOWN IN THE HVAC BASE DESIGN ON SHEETS M3.01 AND M3.02.)

BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS
Roanoke / Richmond
Shenandoah Valley
New River Valley
www.balzer.cc
1208 Corporate Circle
Roanoke, VA 24018
540.772.9580

COMMONWEALTH OF VIRGINIA
ROBERT W. PULKINGTON
Lic. No. 013210
01/10/2025
ARCHITECT

AHCS SUBSTANCE USE EXPANSION

INTERIOR RENOVATION

OUTLINE SPECIFICATIONS & BID NOTES

311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

DRAWN BY	MFK
DESIGNED BY	RWP/MFK
CHECKED BY	RWP
DATE	01/10/2025
SCALE	12" = 1'-0"
REVISIONS	

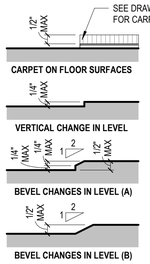
T2.02

PROJECT NO 03230077.00

Reference the edition of the **Virginia Construction Code (VCC)** and **International Code Council (ICC) A117.1** edition cited in the **Code Summary** for section numbers and as the base for notes and diagrams.

Accessibility Diagrams Disclaimer

This set of **2017 ICC A117.1** standards has been indicated here for general reference purposes only. In no way does this sheet represent all applicable components of the **"Accessible and Usable Buildings and Facilities"** National Standard. For clarifications, accompanying texts, descriptions, or interpretations, refer to the national standard code. The excerpts from the national standard code indicated here have been included for their relevance to this project and are not to be construed as a complete and exhaustive list. For any dimensional discrepancies, please consult the Architect.

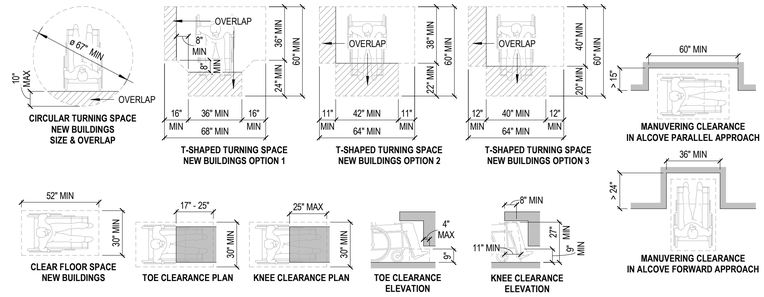


THE FLOOR(S) OR LANDING(S) SHALL BE NO MORE THAN 1/2 INCH LOWER THAN THE THRESHOLD OF THE DOORWAY CHANGE IN LEVEL BETWEEN 1/4 INCH AND 1/2 INCH SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2.

FLOOR SURFACES SHALL BE CONSTRUCTED OF SLIP-RESISTANT MATERIALS TO MEET LOCAL CODE.

FLOOR SURFACES & CHANGES IN LEVEL

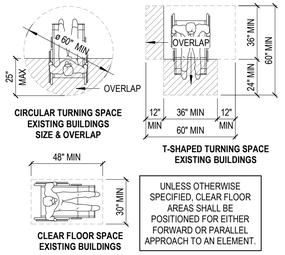
SEE 2017 ICC A117.1 SECTION 302 & 303 FOR ADDITIONAL REQUIREMENTS



UNLESS OTHERWISE SPECIFIED, CLEAR FLOOR AREAS SHALL BE POSITIONED FOR EITHER FORWARD OR PARALLEL APPROACH TO AN ELEMENT.

TURNING SPACE & FLOOR SPACE, KNEE & TOE CLEARANCE

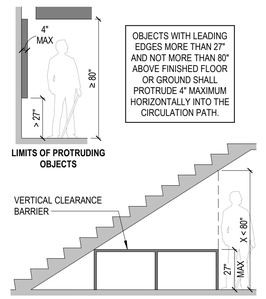
SEE 2017 ICC A117.1 SECTION 304, 305, 306 & 307 FOR ADDITIONAL REQUIREMENTS



UNLESS OTHERWISE SPECIFIED, CLEAR FLOOR AREAS SHALL BE POSITIONED FOR EITHER FORWARD OR PARALLEL APPROACH TO AN ELEMENT.

EXISTING TURNING & CLEAR FLOOR SPACE, KNEE & TOE CLEARANCE

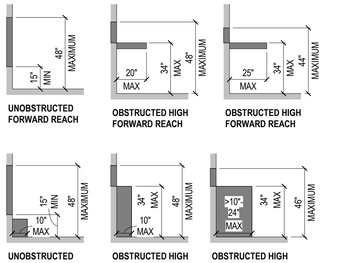
SEE 2017 ICC A117.1 SECTION 304, 305, 306 & 307 FOR ADDITIONAL REQUIREMENTS



OBJECTS WITH LEADING EDGES MORE THAN 27" AND NOT MORE THAN 80" ABOVE FINISHED FLOOR OR GROUND SHALL PROTRUDE 4" MAXIMUM HORIZONTALLY INTO THE CIRCULATION PATH.

REDUCED CLEARANCE

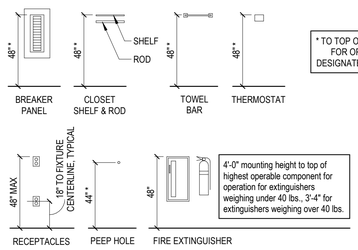
SEE 2017 ICC A117.1 SECTION 307 FOR ADDITIONAL REQUIREMENTS



OPERABLE PARTS SHALL BE PLACED WITHIN ONE OR MORE OF THE REACH RANGES AND BE PROVIDED WITH A CLEAR FLOOR SPACE COMPLYING WITH SECITON 305.

REACH RANGES

SEE 2017 ICC A117.1 SECTION 308 FOR ADDITIONAL REQUIREMENTS

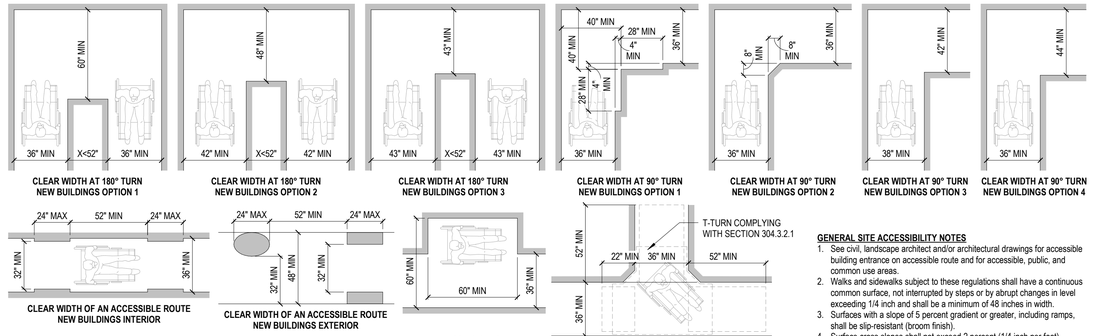


* TO TOP OF HIGHEST OPERABLE COMPONENT FOR OPERATION FOR ACCESSORIES IN DESIGNATED ACCESSIBLE RESIDENTIAL UNITS

1. The top of fire alarm initiating devices (boxes) shall be located no higher than 48 inches above the level of the floor working platform, ground surface or sidewalk.
2. Tops of light switches, environmental controls, locks, and electrical outlets shall be mounted no higher than 48 inches above finished floor. Bottoms of electrical outlets shall be mounted no lower than 15 inches above finished floor.
3. All controls in accessible spaces must meet clear floor requirements.

ADDITIONAL STANDARDS

SEE 2017 ICC A117.1 SECTION 308 FOR ADDITIONAL REACH RANGE REQUIREMENTS

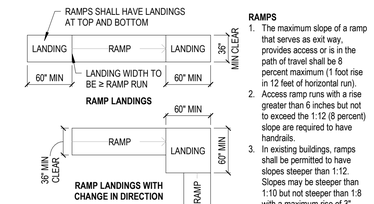


ACCESSIBLE ROUTES

SEE 2017 ICC A117.1 SECTION 403 FOR ADDITIONAL REQUIREMENTS

GENERAL SITE ACCESSIBILITY NOTES

1. See civil, landscape architect and/or architectural drawings for accessible building entrance on accessible route and for accessible, public, and common use areas.
2. Walks and sidewalks subject to these regulations shall have a continuous common surface, not interrupted by steps or by abrupt changes in level exceeding 1/4 inch and shall be a minimum of 48 inches in width.
3. Surfaces with a slope of 5 percent gradient or greater, including ramps, shall be slip-resistant (broom finish).
4. Surface cross slopes shall not exceed 2 percent (1/4 inch per foot).



RAMPS

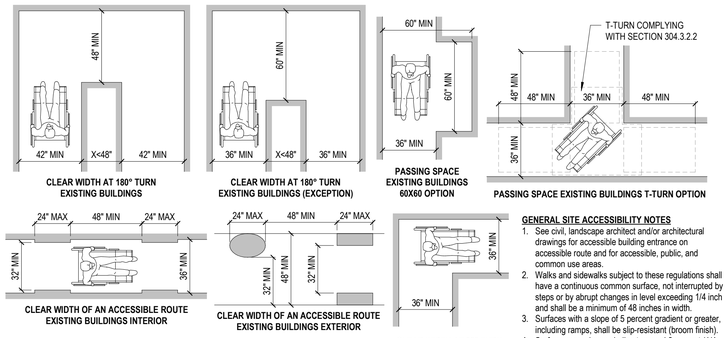
1. The maximum slope of a ramp that serves as exit way, provides access or is in the path of travel shall be 8 percent maximum (1 foot rise in 12 feet of horizontal run).
2. Access ramp runs with a rise greater than 6 inches but not to exceed the 1:12 (8 percent) slope are required to have handrails.
3. In existing buildings, ramps shall be permitted to have slopes steeper than 1:12. Slopes may be steeper than 1:10 but not steeper than 1:8 with a maximum rise of 3". Slopes may be steeper than 1:12 but not steeper than 1:10 with a maximum rise of 6".

HANDRAILS

1. Handrails shall be placed on each side of each ramp, shall be continuous the full length of the ramp, shall be 34" to 38" above the ramp surface, shall extend a minimum of 12" beyond the top and bottom of the ramp, and the ends shall be returned to a wall, guard, or floor.
2. Handrails projecting from a wall shall have a space of not less than 1-1/2" between the wall and the handrail.
3. All stairs shall have handrails. Handrails shall be 34" to 38" maximum above nosing, shall extend 12" horizontally beyond top riser and one tread beyond the bottom riser.
4. Handrail ends shall be returned to wall, guard, or the landing surface.

RAMPS & HANDRAILS

SEE 2017 ICC ANSI A117.1 SECTION 405 AND 505 FOR ADDITIONAL REQUIREMENTS



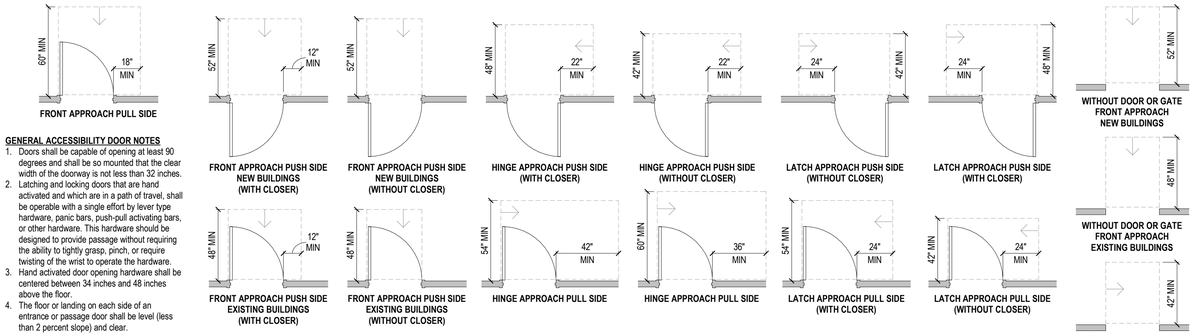
GENERAL SITE ACCESSIBILITY NOTES

1. See civil, landscape architect and/or architectural drawings for accessible building entrance on accessible route and for accessible, public, and common use areas.
2. Walks and sidewalks subject to these regulations shall have a continuous common surface, not interrupted by steps or by abrupt changes in level exceeding 1/4 inch and shall be a minimum of 48 inches in width.
3. Surfaces with a slope of 5 percent gradient or greater, including ramps, shall be slip-resistant (broom finish).
4. Surface cross slopes shall not exceed 2 percent (1/4 inch per foot).

ACCESSIBLE ROUTES

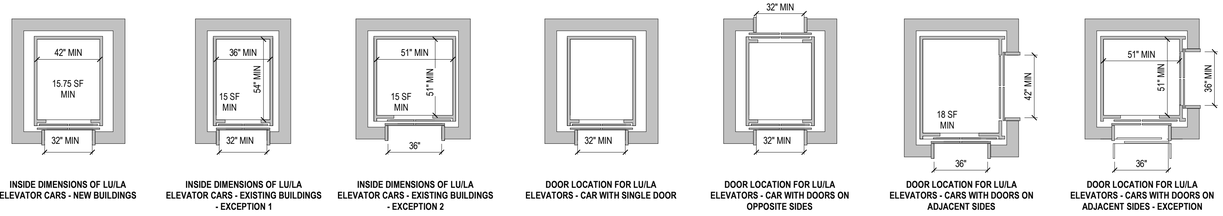
SEE 2017 ICC A117.1 SECTION 403 FOR ADDITIONAL REQUIREMENTS

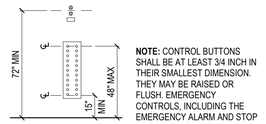
DESIGNATES APPROACH



DOORS, DOORWAYS & GATES

SEE 2017 ICC A117.1 SECTION 404 FOR ADDITIONAL REQUIREMENTS





NOTE: CONTROL BUTTONS SHALL BE AT LEAST 3/4 INCH IN THEIR SMALLEST DIMENSION. THEY MAY BE RAISED OR FLUSH. EMERGENCY CONTROLS, INCLUDING THE EMERGENCY ALARM AND STOP SHALL BE GROUPED AT THE BOTTOM OF THE PANEL.

LIMITED USE / LIMITED APPLICATION (LU/LA) ELEVATORS

SEE 2017 ICC A117.1 SECTION 408 FOR ADDITIONAL REQUIREMENTS

BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS
Roanoke / Richmond
Shenandoah Valley
New River Valley
www.balzer.cc
1208 Corporate Circle
Roanoke, VA 24018
540.772.9580

COMMONWEALTH OF VIRGINIA
ROBERT W. PULKINGTON
Lic. No. 013210
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AHCS SUBSTANCE USE EXPANSION
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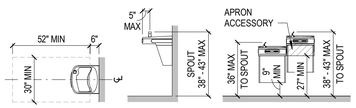
2017 ACCESSIBILITY REFERENCE DETAILS
311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

DRAWN BY	MFK
DESIGNED BY	RWP/MFK
CHECKED BY	RWP
DATE	01/10/2025
SCALE	As indicated
REVISIONS	

T3.01

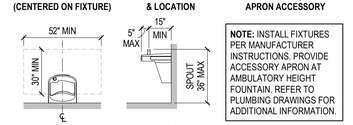
PROJECT NO 03230077.00



CLEAR FLOOR AREA AT WHEELCHAIR DRINKING FOUNTAINS (CENTERED ON FIXTURE)

STANDING USE DRINKING FOUNTAIN SPOUT HEIGHT & LOCATION

SPOUT HEIGHTS, KNEE CLEARANCE, TOE CLEARANCE, AND APRON ACCESSORY



CLEAR FLOOR AREA AT WHEELCHAIR DRINKING FOUNTAINS PARALLEL APPROACH (CENTERED ON FIXTURE)

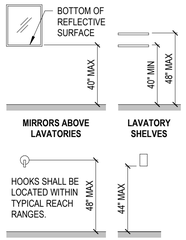
WHEELCHAIR DRINKING FOUNTAIN SPOUT HEIGHT & LOCATION

NOTE: INSTALL FIXTURES PER MANUFACTURER INSTRUCTIONS. PROVIDE ACCESSORY APRON AT AMBULATORY HEIGHT FOUNTAIN. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.

NOTE: IF BOTTLE FILLING STATIONS ARE PROVIDED, 48" TO HIGHEST PART REQUIRED FOR OPERATION

FOUNTAIN ACCESSIBILITY

SEE 2017 ICC ANSI A117.1 SECTION 602 FOR ADDITIONAL REQUIREMENTS



MIRRORS ABOVE LAVATORIES

LAVATORY SHELVES

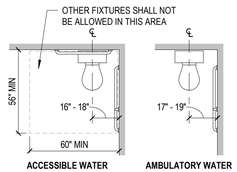
COATHOOKS

SOAP DISPENSER

NOTE: OPERABLE PARTS OF BATHING ROOM ACCESSORIES SHALL BE PLACED WITHIN ONE OR MORE OF THE TYPICAL VERTICAL REACH RANGES, WETHER THEY BE CLEAR OR OBSTRUCTED. BATHING ROOM ACCESSORIES INCLUDE SHELVING, COAT HOOKS, SOAP DISPENSERS, SOAP DISHES, AUTOMATIC HAND DRYERS, MANUAL TOWEL DISPENSERS, WASTE RECEPTACLES, SANITARY NAPKIN DISPENSERS, BABY CHANGING TABLES, TOILET SEAT COVER DISPENSERS, AND SIMILAR ACCESSORIES.

BATHING ROOM ACCESSORIES

SEE 2017 ICC ANSI A117.1 SECTION 603 FOR ADDITIONAL REQUIREMENTS



ACCESSIBLE WATER CLOSET LOCATION, CLEARANCE

AMBULATORY WATER CLOSET LOCATION, CLEARANCE

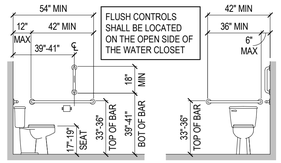
NOTE: TURNING SPACE SHALL BE PROVIDED WITHIN THE ROOM. DOORS SHALL NOT SWING INTO THE SPACE OR CLEARANCE FOR ANY FIXTURE, UNLESS THERE IS A RECTANGULAR FLOOR SPACE BEYOND THE ARC OF THE DOOR SWING.

NOTE: WATER CLOSET CLEAR FLOOR AREA PERMITTED TO OVERLAP OTHER ACCESSIBILITY CLEARANCES, BUT IS NOT PERMITTED TO OVERLAP OTHER FIXTURES OR DOOR SWING.

NOTE: FLUSH CONTROLS FOR TOILETS (AND URINALS WHEN APPLICABLE) SHALL BE MOUNTED ON THE WIDE/ACCESS SIDE OF THE TOILET, NO HIGHER THAN 44 INCHES ABOVE FINISHED FLOOR.

WATER CLOSETS

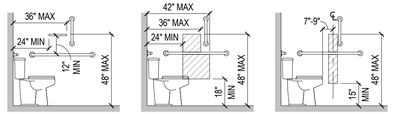
SEE 2017 ICC ANSI A117.1 SECTION 603 FOR ADDITIONAL REQUIREMENTS



WATER CLOSET SEAT HEIGHT & SIDE-WALL GRAB BARS

WATER CLOSET REAR-WALL GRAB BAR

PROTRUDING DISPENSER OUTLET BELOW GRAB BAR



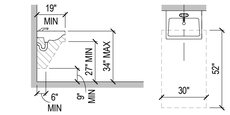
PROTRUDING DISPENSER OUTLET ABOVE GRAB BAR

RECESSED DISPENSER OUTLET LOCATION

DISPENSER OUTLET LOCATION IN FRONT OF WATER CLOSET

WATER CLOSET GRAB BARS

SEE 2017 ICC ANSI A117.1 SECTION 604 FOR ADDITIONAL REQUIREMENTS



LAVATORY & SINK HEIGHT, KNEE & TOE CLEARANCE

CLEAR FLOOR AREA

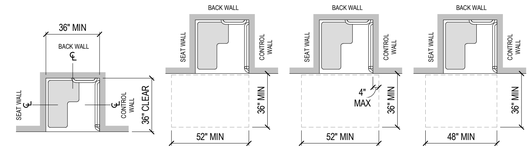
Note: Lavatory and sink clear floor area permitted to overlap other accessibility clearances, lavatory fixture and wall-mounted accessories but is not permitted to overlap other fixtures or door swing

PLUMBING

1. Water supply and drainpipes under lavatories and sinks shall be insulated or otherwise configured to protect against contact. There shall be no sharp or abrasive surfaces under lavatories and sinks.
2. The dip of the lavatory overflow shall not be considered in determining knee and toe clearances.
3. Rough-in plumbing shall be located, insulated, or guarded to provide clear open knee space.
4. Provide at least one accessible lavatory.
5. Faucet controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.
6. The force required to activate controls shall be no greater than 5 lbs. Lever operated push type and electronically controlled mechanisms are examples of acceptable designs. Self-closing valves are allowed if the faucet remains open for at least 10 seconds.

LAVATORIES & SINKS

SEE 2017 ICC ANSI A117.1 SECTION 606 FOR ADDITIONAL REQUIREMENTS

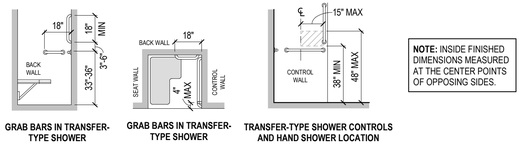


TRANSFER-TYPE SHOWER COMPARTMENT SIZE

TRANSFER-TYPE SHOWER COMPARTMENT CLEARANCE NEW BUILDINGS (OPTION 1)

TRANSFER-TYPE SHOWER COMPARTMENT CLEARANCE NEW BUILDINGS (OPTION 2)

TRANSFER-TYPE SHOWER COMPARTMENT CLEARANCE EXISTING BUILDINGS



GRAB BARS IN TRANSFER-TYPE SHOWER

GRAB BARS IN TRANSFER-TYPE SHOWER

TRANSFER-TYPE SHOWER CONTROLS AND HAND SHOWER LOCATION

NOTE: INSIDE FINISHED DIMENSIONS MEASURED AT THE CENTER POINTS OF OPPOSING SIDES.

TRANSFER SHOWER CLEARANCES

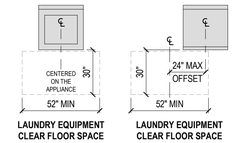
SEE 2017 ICC A117.1 SECTION 608 FOR ADDITIONAL REQUIREMENTS

Door Signage

1. Where a sign containing raised characters and braille is provided at a door, the sign shall be alongside the door at the latch side.
2. Where a sign containing raised characters and braille is provided at double doors with one active leaf, the sign shall be located on the inactive leaf.
3. Where a sign containing raised characters and braille is provided at double doors with two active leaves, the sign shall be to the right of the right-hand door.
4. Where there is no wall space on the latch side of a single door, or to the right side of double doors, signs shall be on the nearest adjacent wall.
5. Signs containing raised characters and braille shall be located so that a clear floor area 18 inches minimum by 18 inches minimum, centered on the raised characters is provided beyond the arc of any door swing between the closed position and 45-degree open position.
6. Provide stair level identification signs at each floor level landing in all enclosed stairways adjacent to the door leading from the stairwell into the corridor to identify the floor level. The exit discharge door shall have a sign with raised characters and braille stating "EXIT".

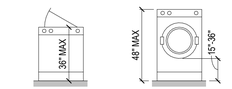
SIGNS

SEE 2017 ICC A117.1 SECTION 703 FOR ADDITIONAL REQUIREMENTS



LAUNDRY EQUIPMENT CLEAR FLOOR SPACE TOP LOADING

LAUNDRY EQUIPMENT CLEAR FLOOR SPACE FRONT LOADING



HEIGHT OF LAUNDRY EQUIPMENT TOP LOADING

HEIGHT OF LAUNDRY EQUIPMENT FRONT LOADING

LAUNDRY EQUIPMENT

SEE 2017 ICC A117.1 SECTION 611 FOR ADDITIONAL REQUIREMENTS

BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS
Roanoke / Richmond
Shenandoah Valley
New River Valley
www.balzer.cc
1208 Corporate Circle
Roanoke, VA 24018
540.772.9580

COMMONWEALTH OF VIRGINIA
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Lic. No. 013210
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ARCHITECT

AHCS SUBSTANCE USE EXPANSION
INTERIOR RENOVATION
2017 ACCESSIBILITY REFERENCE DETAILS
311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

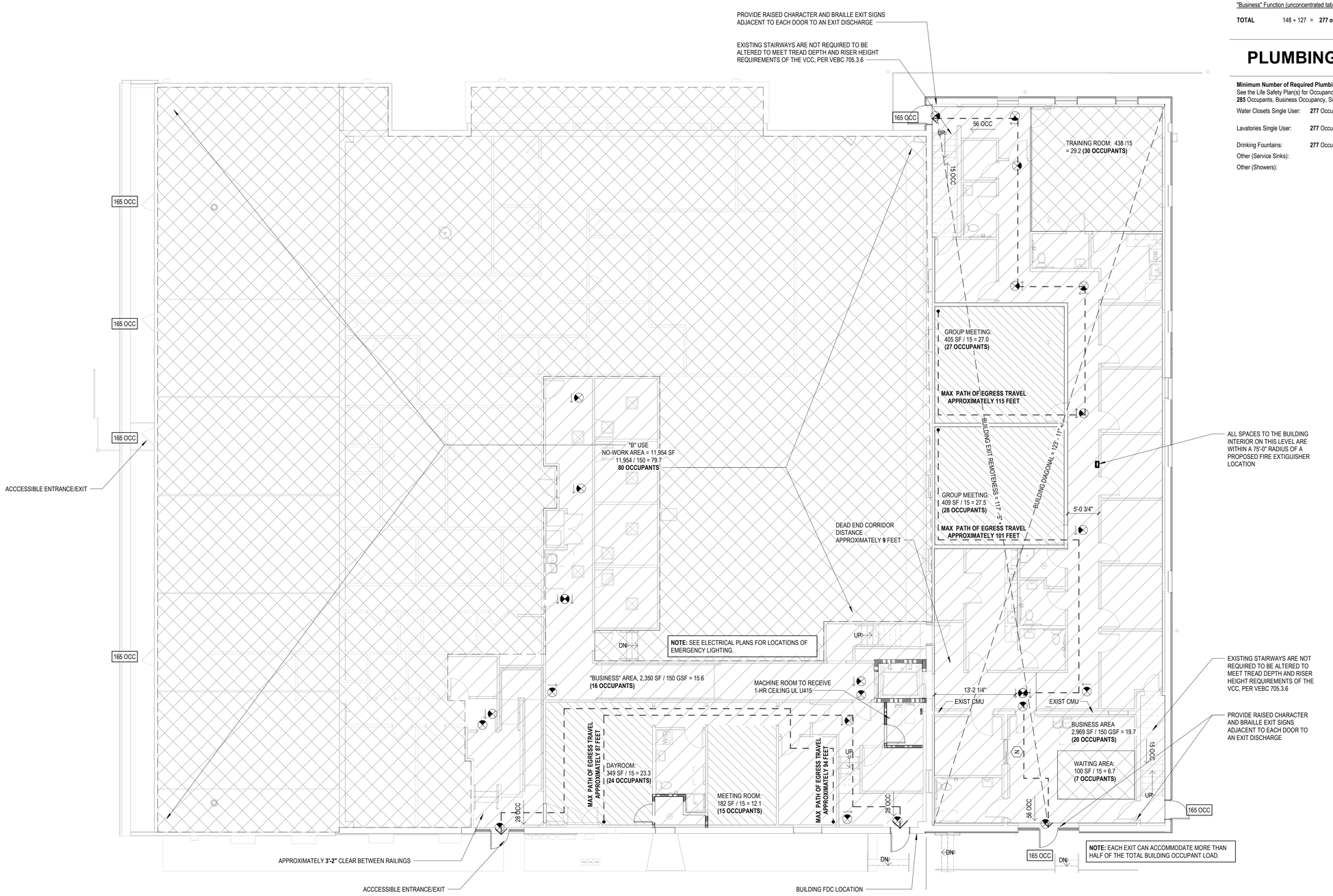
DRAWN BY	**MFK**
DESIGNED BY	**RWP/MFK**
CHECKED BY	**RWP**
DATE	**01/10/2025**
SCALE	**1/4" = 1'-0"**
REVISIONS	

T3.02

PROJECT NO 03230077.00

FIRST FLOOR "NO WORK" AREA = 11,954 GSF
FIRST FLOOR WORK AREA = 7,202 GSF
SECOND FLOOR AREA = 4,470 GSF

TOTAL FLOOR AREA = 23,626 GSF



OCCUPANCY TABULATION

The design occupant load tabulation based on Maximum Floor Area Allowances Per Occupant per Table 1004.5.

"Business" Function	146 occupants
"Business" Function (unconcentrated tables and chairs)	131 occupants
TOTAL 148 + 127 =	**277 occupants**

PLUMBING FIXTURES

Minimum Number of Required Plumbing Fixtures (Virginia Plumbing Code Table 403.1)
See the Life Safety Plan(s) for Occupancy tabulation and fixture counts.
285 Occupants, Business Occupancy, Single User per VPC 403.1.2

Water Closets Single User:	**277** Occupants @	1 per 25 for first 50 1 per 50 for remainder	= **7** required, **7** provided
Lavatories Single User:	**277** Occupants @	1 per 40 for first 80 1 per 80 for remainder	= **5** required, **7** provided
Drinking Fountains:	**277** Occupants @	1 per 100	= **2** total required, **2** provided
Other (Service Sinks):			**1** total required, **1** provided
Other (Showers):			**0** required, **1** provided

LIFE SAFETY GENERAL NOTES

1. ALL ROOMS WITH AN OCCUPANCY OF FIFTY (50) OR GREATER REQUIRE A POSTED SIGN OUTSIDE ALL DOORS OF THE ROOM STATING THE MAXIMUM OCCUPANT LOAD OF THE ROOM.

FIRE RATING GENERAL NOTES

1. ALL PIPES, DUCTS AND BUSS DUCTS, WHICH PENETRATE THE WALLS, CEILINGS, OR FLOOR CONSTRUCTION DESIGNATED AS FIRE RATED ASSEMBLIES, SHALL BE INSTALLED SO AS TO MAINTAIN THE FIRE RESISTIVE RATING AND STRUCTURAL INTEGRITY OF THE ASSEMBLY.
2. SEE ELECTRICAL DRAWINGS FOR ALL EMERGENCY LIGHTING, EXIT SIGNAGE LOCATIONS, AND SIMILAR ACCESSORIES.
3. SEE CODE ANALYSIS FOR MEANS OF EGRESS REQUIREMENTS.
4. DOORS SHALL SWING IN DIRECTION OF EGRESS FOR SPACES OR AREAS WITH MORE THAN 50 OCCUPANTS.
5. PROVIDE FLOOR IDENTIFICATION SIGNS IN EXIT ENCLOSURES.
6. PROVIDE RAISED CHARACTER AND BRAILLE EXIT SIGNS ADJACENT TO EACH DOOR TO AN EXIT STAIRWAY, AN EXIT PASSAGEWAY AND THE EXIT DISCHARGE.
7. PROVIDE AND INSTALL FIRE EXTINGUISHERS AS SHOWN ON PLANS.

1 T4.01 FIRST FLOOR LIFE SAFETY PLAN

1/8" = 1'-0"

ACTUAL NORTH PLAN NORTH

BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS
Roanoke / Richmond
Shenandoah Valley
New River Valley
www.balzer.cc
1208 Corporate Circle
Roanoke, VA 24018
540.772.9580

COMMONWEALTH OF VIRGINIA
ROBERT W. PILKINGTON
Lic. No. 013210
01/10/2025
ARCHITECT

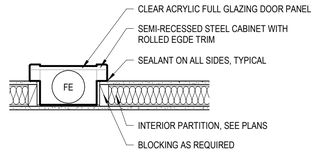
AHCS SUBSTANCE USE EXPANSION

INTERIOR RENOVATION
LIFE SAFETY PLANS

311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

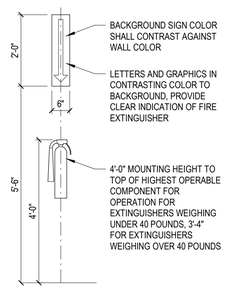
DRAWN BY	**MFK**
DESIGNED BY	**RWP/MFK**
CHECKED BY	**RWP**
DATE	**01/10/2025**
SCALE	**As indicated**
REVISIONS	

T4.01
PROJECT NO 03230077.00



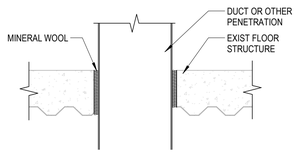
FIRE EXTINGUISHER CABINET

1 / T4.02 NOT TO SCALE



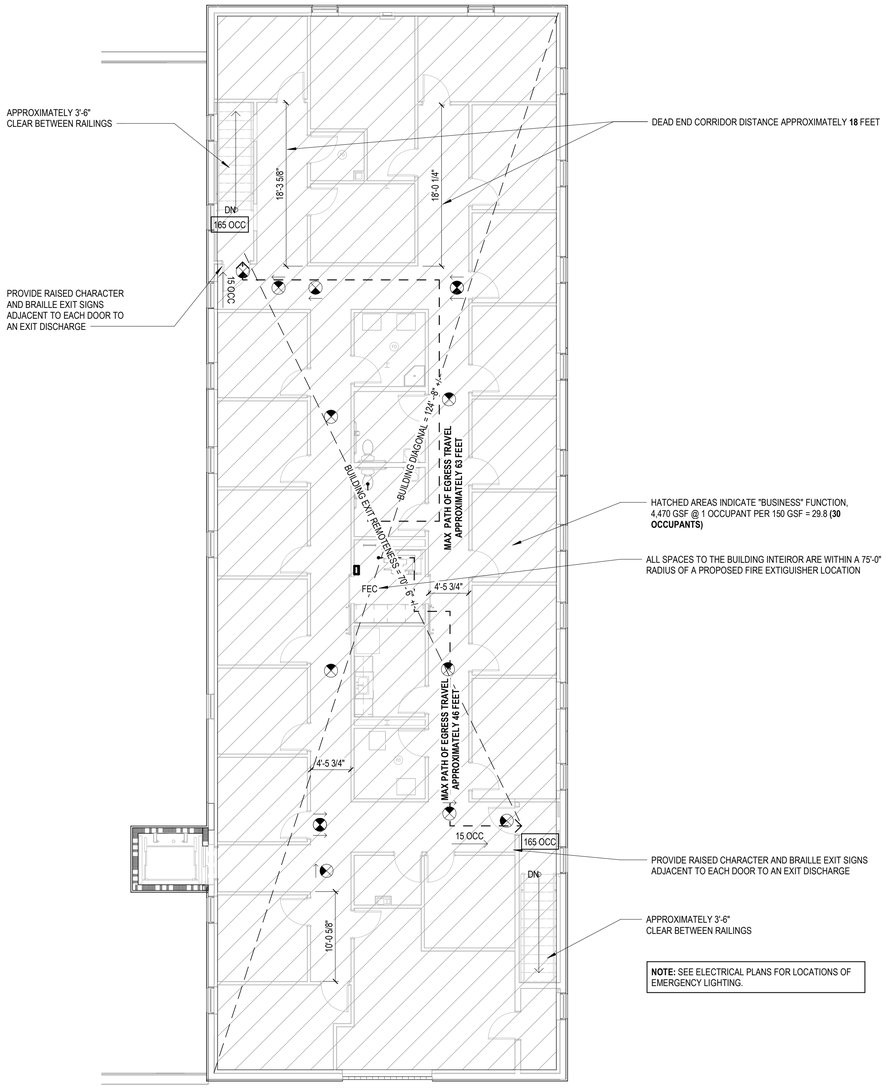
FIRE EXTINGUISHER MOUNTING

2 / T4.02 NOT TO SCALE



ANNULAR SPACE PROTECTION

3 / T4.02 **1 1/2" = 1'-0"**



SECOND FLOOR LIFE SAFETY PLAN

4 / T4.02 NOT TO SCALE

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PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS
Roanoke / Richmond
Shenandoah Valley
New River Valley
www.balzer.cc
1208 Corporate Circle
Roanoke, VA 24018
540.772.9580

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ROBERT W. PILKINGTON
Lic. No. 013210
01/10/2025
ARCHITECT

AHCS SUBSTANCE USE EXPANSION

INTERIOR RENOVATION

LIFE SAFETY PLANS

311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

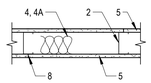
DRAWN BY	MFK
DESIGNED BY	RWP/MFK
CHECKED BY	RWP
DATE	01/10/2025
SCALE	As indicated
REVISIONS	

T4.02

PROJECT NO 03230077.00

Design No. U419

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



1. Floor and Ceiling Runners — (Not Shown) — For use with Item 2 — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth to accommodate stud size, with min 1-1/4 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max.

2. Steel Studs — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.

4. Batts and Blankets* — (Required as indicated under Item 5) — Mineral wool batts, friction fitted between studs and runners. Min nom thickness as indicated under Item 5.
See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

5. Gypsum Board* — Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) with Type ULIX need not be staggered. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows:

Gypsum Board Protection on Each Side of Wall

Rating, Hr	Min Stud Depth, in. Items 2, 2C, 2D, 2F, 2G, 2O	No. of Layers & Thkns of Panel	Min. Thkns of Insulation (Item 4)
1	3-1/2	1 layer, 5/8 in. thick	Optional

CGC INC — 1/2 in. thick Type C, IP-X2 or IPC-AR; WRC, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, WRX or WRC; 3/4 in. thick Types IP-X3 or ULTRACODE
THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — 1/2 in. thick Type C and 5/8 in. thick Type SCX
UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type SCX, SGX, SHX, ULIX, WRX, IP-X1, AR, C, WRC, FRX-G, IP-AR, IP-X2, IPC-AR; 3/4 in. thick Types IP-X3 or ULTRACODE
USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, ULTRACODE
USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX, WRC or; 3/4 in. thick Types IP-X3 or ULTRACODE

6. Fasteners — (Not Shown) — For use with Items 2 and 2F - Type S or S-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 7). Single layer systems: 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. Single layer system with Type ULIX: 1 in. long, spaced 12 in. OC in the field and perimeter, when panels are applied horizontally or vertically.Two layer systems: First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer.Three-layer systems: First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. Four-layer systems: First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 24 in. OC. Fourth layer- 2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below.

8. Joint Tape and Compound — Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints of outer layer panels. Paper tape and joint compound may be omitted when gypsum panels are supplied with a square edge.

10. Caulking and Sealants* — (Optional, Not Shown) — A bead of acoustical sealant applied around the partition perimeter for sound control.
UNITED STATES GYPSUM CO — Type AS

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.
Last Updated on 2022-09-05

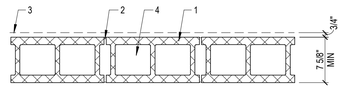
Design/System/Construction/Assembly Usage Disclaimer
- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be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

Design No. U905

June 6, 2022

Bearing Wall Rating — 2 HR.
Nonbearing Wall Rating — 2 HR
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. Concrete Blocks* — Various designs. Classification D-2 (2 hr).
See Concrete Blocks category for list of eligible manufacturers.

2. Mortar — Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.

3. Portland Cement Stucco or Gypsum Plaster — Add 1/2 hr to classification if used. Where combustible members are framed in wall, plaster or stucco must be applied on the face opposite framing to achieve a max. Classification of 1-1/2 hr. Attached to concrete blocks (Item 1).

4. Loose Masonry Fill — If all core spaces are filled with loose dry expanded slag, expanded clay or shale (Rotary Kiln Process), water repellant vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 2 hr to classification.

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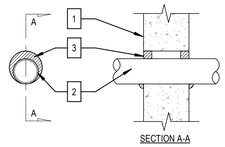
XHEZ - Through-penetration Firestop Systems

System No. W-J-1040

August 29, 2019

ANSI/UL1479 (ASTM E814)
F Ratings — 1, 2, 3 and 4 Hr (See Item 1)
T Ratings — 0 and 1/4 Hr (See Item 2)



SECTION A-A

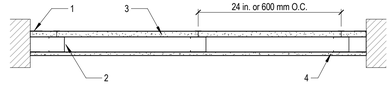
1. **Wall Assembly** — Min 4-7/8, 6-1/8, 7-3/8 and 8-5/8 in. (124, 156, 187 and 219 mm) thick normal weight or lightweight (100-150 pcf or 1600-2400 kg/m3) concrete for 1, 2, 3 and 4 hr rated assemblies, respectively. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of opening is 14-1/8 in. (359 mm). See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers. **The hourly Fand FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.**
2. **Through Penetrants** — One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min 0 in. (point contact) to max 1-3/8 in. (35 mm). 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** — The following types and sizes of steel pipes may be used:
      1. Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
      2. Nom 24 in. (610 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe. **When steel pipe is used, T & FTH Ratings are 1/4 hr for nom 4 in. (102 mm) diam (or smaller) and 0 for steel pipes greater than nom 4 in. (102 mm) diam.**
   B. **Iron Pipe** — Nom 24 in. (610 mm) diam (or smaller) cast or ductile iron pipe. **When iron pipe is used T & FTH Ratings are 1/4 hr.**
   C. **Conduit** — Nom 4 in. (102 mm)diam (or smaller) steel electrical metallic tubing (EMT) or steel conduit. **When EMT or steel conduit is used T & FTH Rating are 1/4 hr.**
   D. **Copper Tubing** — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing. **When copper tube is used T & FTH Ratings are 0 hr.**
   E. **Copper Pipe** — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe. **When copper pipe is used T & FTH Ratings are 0 hr.**
   F. **Stainless Steel Pipe** — Nom 6 in. (152 mm) diam (or smaller) Schedule 5 (or heavier) stainless steel pipe. **When stainless steel pipe is used T & FTH Ratings are 0 hr.**
3. **Fill, Void or Cavity Material* — Sealant** — Min 5/8 in. (16 mm) thickness of fill material for 1 hr rated wall assemblies, applied within the annulus, flush with both surfaces of wall. Min 1-1/4 in. (32 mm) thickness of fill material for 2, 3 and 4 hr rated wall assemblies, applied within the annulus, flush with both surfaces of wall. At point contact location between penetrant and periphery of opening, a min 1/2 in. (13 mm) diam bead of fill material shall be installed at the concrete/penetrant interface on both surfaces of wall.
PASSIVE FIRE PROTECTION PARTNERS — 3600EX, 4100NS, 4800DW

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

Design No. U415

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

SYSTEM A - 1 HR



HORIZONTAL SECTION

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

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

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

4. Gypsum Board* —

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

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

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Design/System/Construction/Assembly Usage Disclaimer
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- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
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COMMONWEALTH OF VIRGINIA
ROBERT W. PULKINGTON
Lic. No. 013210
01/10/2025
ARCHITECT

AHCS SUBSTANCE USE EXPANSION

INTERIOR RENOVATION

FIRE RATED ASSEMBLIES

311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

DRAWN BY	**MFK**
DESIGNED BY	**RWP/MFK**
CHECKED BY	**RWP**
DATE	**01/10/2025**
SCALE	**1" = 1'-0"**
REVISIONS	

T5.01

PROJECT NO 03230077.00

DIVISION 1 - GENERAL:

1. In case of conflict between the general notes, specifications, and drawings regarding structural issues, the most stringent requirements shall govern.
2. Structural drawings shall be used in conjunction with the architectural, mechanical, electrical, & plumbing drawings, as well as any additional drawings provided by material & equipment suppliers. Contractor shall be responsible for coordinating the work of all other trades with the structure.
3. This structure is considered unstable until all structural components are in place, fastened, plumbed, true and in accordance with these signed and sealed drawings. contractor shall be responsible for furnishing, erecting, and removing any temporary shoring and bracing during construction.
4. Contractor shall strictly adhere to all safety regulations. The architect/ engineer shall not be responsible for construction means, methods, or procedures for safety precautions in connection with the work.
5. Construction materials, equipment, or other heavy loads shall not be placed upon structural components in concentrated areas. construction material or equipment staging shall not impart loads to the structure greater than that shown in the design load schedule.
6. Work not indicated on a part of the drawings, but reasonably implied to be similar to that shown at corresponding pieces, shall be repeated.
7. Temporary bracing, sheeting, shoring, etc., required to ensure the structural integrity/stability of the existing buildings, sidewalks, utilities, etc. during construction is the Contractor's responsibility and shall be designed by a Professional Engineer licensed in the Commonwealth of Virginia.
8. Shop Drawings:
    - Shop drawings for materials shall be submitted to the Architect for review prior to the start of fabrication or commencement of work.
    - No portion of the contract drawings may be reproduced for submittal as shop drawings unless authorized by Balzer and Associates, Inc. in writing. Violation of this provision will result in the rejection of the shop drawings and will be returned without being reviewed by the Architect or Structural Engineer.
    - Shop drawings shall bear the General Contractor's stamp of approval, which shall constitute certification that he has verified all field measurements, construction criteria, materials, and similar data and has checked each drawing for completeness, coordination, and compliance with the contract documents. Shop drawings not reviewed by the General Contractor prior to submittal will be rejected.
    - Changes to shop drawings that are re-submitted must be clouded or otherwise clearly indicate the changes that have been made to a previously issued and reviewed drawing.
    - The Contractor shall provide the Architect or Structural Engineer with written notice of deviations of any type from the requirements of the Construction Documents. The notice must be received prior to shop drawing submittal. The Contractor remains liable for any deviation unless reviewed by the Architect or Structural Engineer and acknowledged in writing, prior to receipt of the shop drawings.
    - Shop Drawings will be returned not later than 10 working days after receipt by the Architect or Structural Engineer.
    - Architect/Engineer shall not be liable for work performed without approved shop drawings.

DIVISION 2 - FOUNDATION AND SITE PREPARATION:

1. New foundation elements including footings and slabs on grade are designed based upon an assumed 1,500 psf allowable soil bearing capacity. Existing subgrade soils shall be visually inspected and probed by a geotechnical engineer's representative upon excavation and prior to concrete placement. Unsuitable soils shall be over-excavated and replaced with stone or alternate foundation supports shall be coordinated with and designed by the structural engineer.
2. All underground utilities shall be referenced from site, mechanical, electrical, and plumbing drawings. Architect / Structural Engineer is not responsible for locating and coordinating utility interactions with building. Concrete removed for new plumbing trenches shall be replaced with a new section of slab to match the existing slab thickness, or 4" minimum. New concrete shall rest upon a compacted stone (#57 or similar) base and be doweled into adjacent sections of existing slab with #4 x12" bars at no more than 48" on center.
3. Any new or replaced roof drain pipes serving the structure shall tie into existing discharge(s). Clogged or inoperable drains shall be repaired or replaced. Contractor to coordinate with civil drawings and/or existing conditions for daylight or tie-in information.

EXISTING CONCRETE:

1. Existing concrete components are to remain in place, except as shown on demolition plans for new openings and floor alterations. Existing deteriorated concrete shall be reinforced or replaced in the field as conditions require. Contractor shall notify engineer of questionable areas not noted on plans for further direction.
2. New repair mortar mixes shall be provided as directed by the structural engineer. Refer to plans and details for specific notes.
3. Size, spacing, and depth from concrete surface of existing steel reinforcing bars embedded in concrete elements shall be verified in field as directed by structural engineer.
4. Use Hilti HIT-HY 200 epoxy where anchorage must be made into existing concrete.
5. Support free edges of elevated concrete slabs at new floor openings as directed in the structural drawings.
6. Typical repair details and notes shall be applied to the full extent of all existing concrete slabs, walls, and structural members as needed. General contractor shall coordinate with concrete subcontractor for full extent of repair work.

EXISTING MASONRY:

1. Existing masonry components are to remain in place, except as shown on demolition plans for new openings. Existing deteriorated masonry units shall be replaced, and damaged, deteriorated, or replaced mortar joints shall be repointed in the field as conditions require. Contractor shall notify engineer of questionable areas not noted on plans for further direction.
2. New masonry units and mortar mixes shall be provided with materials as close to original composition as possible. New units and mortar mixes of greater compressive strength than original materials shall not be permitted.
3. Deteriorated, out-of-plumb, cracked, or damaged brick shall be replaced/repaired as required.
4. Mason to repoint all masonry where mortar joints have deteriorated.
5. Mason to remove outer wythe of brick, and center wythe bricks as found to be cracked, broken, degraded, or necessary in order to provide shown reinforcement. Verify actual extent of brick damage in field.
6. HeliBar stainless steel reinforcing dowels as manufactured by Helifix shall be provided as shown in structural details for masonry reinforcement. Dowels to be placed within collar joint between outer two wythes of brick. Dowels shall be fully embedded within mortar joints, and shall be drilled min. 6" into remaining undamaged existing brick. Use Helibond injectable cementitious grout for all HeliBar repairs. Dowels shall be cut from stock length as required to provide stated embedment into existing masonry and extend to within 4" of the outside corner of the building.
7. Use Hilti HIT-HY 70 epoxy where anchorage must be made into existing brick masonry walls.
8. Re-use existing bricks where practical. New bricks and mortar mix shall match existing materials as close as possible. Mortar shall be air-entrained for durability and shall not contain Portland cement.
9. Repair details and notes shall be applied to the full extent of all existing masonry walls. General contractor shall coordinate with mason for full extent of repair work.
10. Mason chosen for repair and rehabilitation of existing masonry walls shall be experienced in the materials and methods of historic masonry work.

EXISTING STEEL:

1. Existing steel components are to remain in place, except as shown on demolition plans for new openings. Existing corroded, bent, or deteriorated steel members shall be reinforced or replaced in the field as conditions require. Contractor shall notify engineer of questionable members discovered not noted on plans for further direction.
2. Existing steel members shall be properly cleaned and painted for protection.
3. Existing steel materials shall be investigated for suitability for welding. Cast iron or other non-weldable metals shall be brought to the attention of the structural engineer for alternate repair or replacement details.
4. Deteriorated, out-of-plumb, cracked, or damaged columns shall be replaced/repaired as required.
5. Corroded or broken bolts and rivets shall be brought to the attention of the structural engineer where not noted on plans for connection retrofit details.
6. Sandblast or wire brush surface rust from existing steel members. Any section loss >1/8" in thickness shall be brought to the attention of the structural engineer.
7. New steel plates, angles, bars, or other reinforcing elements shall be in accordance with material specifications given above.
8. Typical repair details and notes shall be applied to the full extent of all damaged existing steel members. General contractor shall coordinate with steel erector for full extent of repair work.
9. Steel erector chosen for repair and rehabilitation of existing metal construction shall be experienced in the materials and methods of historic metal work.

DIVISION 3 - CONCRETE:

1. Materials for concrete construction shall be in accordance with the following specifications:

a. Unit weight:	Normal weight (145-150 pcf)
b. Portland cement:	ASTM C150 Type 1
c. Coarse and Fine Aggregate:	ASTM C33 max size 3/4"
d. Water:	ASTM C1602 potable
e. Cementitious Admixtures:	ASTM C618 Flyash ASTM C989 Ground granulated blast furnace slag
f. Chemical Admixtures:	ASTM C260 Air-Entrainment ASTM C494 Plasticizers, Water Reducers, High Early Strength, etc.
g. Reinforcing steel:	ASTM A615, Grade 60 deformed billet steel bars ASTM A185 Welded Wire Reinforcement using ASTM A82 wire ASTM A416 7-wire steel strand for prestressed concrete (270 ksi)
h. Embedded fiber reinforcing:	ASTM C1116 Standard spec for fiber reinforced concrete ASTM A820 Steel fibers STM C1666 Glass fibers
i. Adhesive anchoring:	Hilti HIT-HY 200 Safe Set System or approved equal Hilti HIT-Z rod (ICC ESR 3187) or approved equal
j. Concrete screws:	Hilti KWIK Con II+ or Simpson Titen or approved equal
k. Heavy duty screw anchors:	Hilti KWIK HUS-EZ or Simpson Titen HD
l. Expansion / wedge anchors:	Hilti KWIK Bolt TZ or Simpson Strong Bolt 2 or approved equal
m. Shotcrete:	ASTM C1436

2. Other agents, components, admixtures, and/or embedded items as approved by Engineer
3. All concrete materials, processes, and work shall be in accordance with ACI 318-14 "Building Code Requirements for Structural Concrete", ACI 301-10 "Specifications for Structural Concrete", and ASTM C94, unless otherwise noted or detailed on the contract drawings.
4. All exterior concrete slabs exposed to traffic shall be 4000 psi. All concrete slabs, on-grade or on suspended metal deck, shall be 3500 psi. Footings for walls and columns, and all other concrete, shall be 3000 psi. Refer to structural drawings for additional notes and use highest strength mix where discrepancies occur.
5. All concrete exposed to freezing and thawing shall have an entrained air content of 6% (±1.5%).
6. Refer to Table 19.3.2.1 "Requirements for Concrete by Exposure Class" and referenced exposure class definitions for maximum water / cementitious materials (w/c) ratio, minimum design strength, entrained air contents, and other constituent restrictions for this project.
7. Contractor shall submit a concrete mix design for each type of concrete to the project Architect for approval prior to the placement of concrete.
8. Contractor to provide a mockup sample of all exposed architectural concrete elements as directed by the Architect.
9. All reinforcing steel shall be deformed bars of new billet steel conforming to specification listed above. Rebar splices shall be as per ACI 318. All reinforcing marked continuous (cont.) on the plans and details shall be lapped 48x bar diameters at splices unless otherwise noted.
10. Welded wire fabric shall be lapped a minimum of one full wire space plus 2" when spliced.
11. Detail, fabricate and place reinforcement in accordance with ACI 318 unless otherwise shown. Concrete protection for reinforcing steel reinforcing steel shall be in accordance with ACI 318-14.
12. All reinforcing steel shall be held securely in place to prevent dislocation during the placing operation. Slab reinforcing bars shall be supported on high chairs and bar spacers of suitable design.
13. Reinforcing steel shall be clean of mud, debris, loose rust, cement grout, or any other material which may inhibit the bond between the steel and the concrete. Do not field bend reinforcement. In no case may bars be heated to facilitate bending.
14. No concrete shall be placed until all embedded items have been installed, tested and inspected.
15. Contractor shall gain approval from Structural Engineer for post-installing any column anchor rods.
16. Follow manufacturer's written installation procedures for installation of all post-installed anchors in concrete work. Control silica dust per OSHA requirements and prepare hole for receiving adhesive in accordance with manufacturer's requirements. Where required, contractor shall receive certification from manufacturer for conformance to installation procedures.
17. Concrete slabs on ground specified as fiber reinforced concrete shall be reinforced at minimum with micropolymeric fibers to control plastic shrinkage cracking. At the contractor's option, steel or macropolymeric fibers may be added to control random cracking upon the concrete reaching its hardened state. Micropolymeric fibers shall be added into the concrete mix at a minimum rate of 0.1% by volume (1.5 lbs per cubic yard of concrete), or as suggested by material supplier.
18. Sufficient time should be allowed before cutting saw joints in fiber reinforced concrete slabs to ensure that the saw blade cuts the fiber reinforcement without pulling the fibers out of the concrete.
19. Where resilient floors are to be installed on concrete slab-on-grade, a vapor retarder (per ASTM E1745) with a maximum permeance of 0.3 perms (per ASTM E96), shall be installed over a minimum of 4" of compacted porous fill. Seal all penetrations of vapor retarder to maintain continuity. Moisture, alkali, and bond testing must be conducted prior to installation of finished flooring, in accordance with manufacturer's written Guaranteed Installation Guide.
20. Floor depressions and openings to be provided where equipment or floor finishes require them, whether or not indicated on structural drawings. It shall be the contractor's responsibility to coordinate his work with architectural and mechanical drawings and specifications and provide depressions and openings as required.
21. Concrete for all floor slabs shall be wet-cured with wet burlap, plastic film, waterproof paper or misting.
22. Concrete slab surfaces shall conform to ASTM E1155 F-number system for flatness and levelness or as required by owner.
23. Refer to structural plans for additional notes regarding concrete slabs and walls.
24. Unless otherwise shown, provide #5 bar at each face around all sides of openings in concrete walls. Bars shall extend a minimum of 24" beyond the edge of the opening.
25. Construction and control joints shall be located where indicated on the drawings. See typical details for additional reinforcing at construction joints.
26. Where column and wall footings coincide, provide full reinforcement for both footings, with wall footing reinforcement continuous through column footing. Joints between wall footings and column footings not permitted.
27. Unless otherwise required, provide 3/4" chamfer on all concrete corners exposed to view.
28. Unless noted otherwise, all concrete column vertical reinforcing to be doweled into footings with dowels same size as verticals, lap 48x bar diameters.
29. Top of plumbing pipes must be at least 12" below bottom of wall footings or above. Otherwise footings must be lowered below pipe invert. Pipes shall not pass through footings. See mechanical drawings for location of pipe sleeves and openings. Prior approval required for cutting and bending of reinforcing to accommodate sleeving and in no case shall major reinforcing be cut or bent.
30. All structural members shall be poured for their full depth in one operation. Construction joints, such as day's pour joints, shall not be located in the middle third of any span or over intermediate supports of continuous multi-span members. The reinforcement shall extend through the joint in both faces. Where, in either face, no reinforcement is called for, provide #4 dowels at 12" on center. Joint shall be roughened by use of an approved surface retarder in accordance with manufacturer's directions, to expose aggregate. Depth of etch shall be 1/8" minimum. Apply a chemical bonding agent per manufacturer's specifications prior to finishing the concrete placement.
31. The concrete contractor shall cooperate with other contractors and, where required, install all built-in work, sleeves, inserts, brick ties, etc., including framework for chases, reglets and other provisions for built-in work to complete the job (see specifications).
32. At steel deck slabs, concrete contractor shall include in his bid additional quantity of concrete that may be required to provide a level slab at the prescribed elevation and compensate for steel deck and steel beam deflections.
33. Electrical contractor shall confer with architect and structural engineer before placing any conduits in concrete construction in order to agree on permissible arrangements of conduits.
34. Electrical contractor shall prevent placing conduits in concrete that will impair concrete strengths.
35. Only conduits having outside diameters no larger than one-third of the slab thickness may be installed. For slabs on steel deck, slab thickness shall be considered as thickness of concrete above upper deck flutes.
36. Conduits are to be spaced so as to provide no less than three (3) conduit diameters, center-to-center. Wherever possible, larger spacings are preferred.
37. Continuous rows of conduits are not to be placed immediately along bearing ends of slabs.
38. Aluminum conduits are not allowed.
39. Conduits are not allowed in concrete slabs less than 4" thick.
40. Crossover of conduit shall not be allowed in steel deck slabs.

DIVISION 4 - MASONRY:

1. Materials for concrete masonry walls shall be in accordance with the following specifications:

a. Hollow load bearing units:	ASTM C90 Type 1, Grade N,
f'm	1,350 psi on the net area.
maximum weight	32 lbs per 8" x 8" x 16" unit, 47 lbs per 12" x 8" x 16" unit
b. Grout:	ASTM C476, f'c = 2000 psi
c. Mortar:	ASTM C270, Type M (below grade), S (structural), or N (veneer, non-structural).
d. Reinforcing steel:	ASTM A615, Grade 60
e. Wire ties and reinforcing:	ASTM A1064 or ASTM A153 (galvanized) or ASTM A580 (stainless)
f. Adhesive anchoring:	Hilti HIT-HY 270 or Simpson AT-XP or SET-XP or approved equal HAS-E threaded rod or F1554 or A615 deformed bar or approved equal
g. Masonry screws:	Hilti KWIK Con II+ or Simpson Titen or approved equal
h. Heavy duty screw anchors:	Hilti KWIK HUS-EZ or Simpson Titen HD
i. Expansion / wedge anchors:	Hilti KWIK Bolt 3 or Simpson Wedge All or approved equal

2. All concrete masonry work shall be in accordance with TMS 402, ACI 530 and TMS 403.
3. All engineered concrete masonry shown on the contract drawings has been designed based on full allowable stresses. Special inspection by a qualified inspector shall be required.
4. All masonry shall be laid in running bond unless otherwise noted on the architectural drawings. Build all masonry level, square, plumb and true. Provide standard 9 ga. galvanized steel truss type horizontal joint reinforcing for masonry walls greater than 4" thick, see drawings for vertical reinforcement.
5. Provide vertical control joints at a maximum of 25' o.c. spacing in all masonry walls unless noted. See architectural elevations for control joint locations.
6. Veneer masonry shall be anchored to studs with 3/16" diameter hot-dipped, galvanized steel adjustable wire anchors at 24" o.c. horizontal and 16" o.c. vertical. Anchors shall be X-Seal Anchor (for continuous perimeter insulation) or DW-10 (direct to sheathing) by Hohmann & Barnard or approved equivalent. Provide mortar net above all flashing points. Install per manufacturer's written instructions using specified fasteners, tape, and other accessories as necessary. Maintain minimum airspace between veneer masonry and wall sheathing/insulation as required per architectural drawings.
7. Face Brick: See architectural drawings for all notes, specifications, and details regarding face brick and/or other veneer masonry.
8. See architectural drawings for all notes, specifications, and details regarding flashing and weeps.
9. Provide rebar dowels of the same size and spacing as vertical reinforcing from wall and spread footings. Dowels shall have standard ACI hooks and shall lap, unless noted otherwise, 48x bar diameter with first lift of vertical reinforcing.
10. Vertical bars denoted each face (EF) in masonry walls shall be placed 1/2" clear from face or cell wall, or as noted in structural details.
11. All poured or pumped grout shall be fine grout, with slump 8"-10". Grouting to be placed in lifts not to exceed the limitations stated in ACI 530. Grouting processes to be fully monitored and inspected by special inspections engineer. Provide inspection ports at bottom of each grout lift over 5'-4" in height as required on the outside face of the CMU. Stop grout for each lift 1" below top of last CMU course, with the exception of the top course of the CMU wall. Each grouted cell shall be mechanically consolidated, either by using a mechanical "pencil" vibrator for a maximum of two seconds or by rodding with a separate piece of reinforcing steel bar of length sufficient to reach to the bottom of the grout lift. Grout shall be re-consolidated upon water loss by similar means.
12. All hollow masonry walls that change in thickness or number of wythes shall have a course of solid or grout filled units at the transition.
13. Walls shall be grouted as soon as possible to prevent shrinkage cracking. Masonry shall be allowed to cure a minimum of 24 hours prior to grout placement.
14. The top of unfinished masonry work and all stored masonry materials shall be covered to protect the masonry material from the weather.
15. Masonry shall not be supported on wood girders or other form of wood construction. Provide steel lintels bearing on solid masonry above all openings.
16. Completed masonry work to be brushed and washed with warm clean water, and free of excess mortar. Clean all other work affected by mortar spills and washing.
17. Loose steel angle lintels shall conform to ASTM A36 for steel. All lintels to have 8" minimum bearing on one course of solid or grouted masonry units, unless noted otherwise. All loose lintels to be provided by structural steel contractor.
18. Provide angle L5x31/2"x5/16" for each 4" of masonry wall thickness over grilles, louvers, panel boxes, ducts and other miscellaneous openings not listed in schedule.
19. Use two courses of solid grouted CMU under all joists bearing into masonry walls.
20. Follow manufacturer's written installation procedures for installation of all post-installed anchors in masonry walls. For adhesive anchoring into hollow walls use appropriately sized screen tube in oversized hole. Control silica dust per OSHA requirements and prepare hole for receiving adhesive in accordance with manufacturer's requirements. Where required, contractor shall receive certification from manufacturer for conformance to installation procedures.

DIVISION 5 - STRUCTURAL STEEL:

1. Structural steel shall be in accordance with the following specifications:

a. Wide flange shapes:	ASTM A992 (fy = 50 ksi)
b. Angles, channels, plates, bars, misc. shapes:	ASTM A36 (fy = 36 ksi)
c. Pipes columns:	ASTM A500, Grade C (fy = 50 ksi)
d. Square and rectangular tubing:	ASTM A1085 (fy = 50 ksi)
e. High strength bolts:	ASTM A325 or A490 as specified ASTM A563 nuts ASTM F436 hardened washers or ASTM F959 tension-indicating washers
f. Common (non-high strength) bolts:	ASTM A307 Grade A
g. Threaded rod:	ASTM A36 (or proprietary rods as specified)
h. Shear headed studs:	ASTM A108
i. Anchor rods:	ASTM F1554 Grade 36 or Grade 55 weldable
j. Welding electrodes:	Fexx = 70 ksi
k. Power driven fasteners:	Hilti X-U, 0.157"∅ or equal
l. Self driving screws:	Hilti S-MD, Simpson Strong Drive XM, or Teks

2. Structural steel work and erection shall be in accordance with the 2018 International Building Code, 14th Edition AISC 360 "Manual of Steel Construction", and AISC "Code of Standard Practice", including the "Commentary" and supplements.
3. Shop drawings are required for structural steel and steel joists and decking. Shop drawings shall be furnished by the Fabricator to the General Contractor. Contractor shall review and approved shop drawings prior to submitting to Architect/Engineer. All structural steel shop drawings shall be prepared under the direct supervision of professional engineer registered in the Commonwealth of Virginia.
4. Structural steel shall be new, clean and straight.
5. Cuts, holes, copings, etc. in structural steel members required by work of other trades shall be made in the shop and shall be shown on the shop drawings. Burning of holes or cuts in structural steel members in the field will not be permitted without specific approval of the engineer.
6. All structural steel exposed to elements shall be galvanized or receive one shop coat of an approved rust-inhibitive primer. Reference architectural drawings for additional paint and finish requirements on exposed steel members.
7. Refer to architectural drawings for intumescent paint, spray-on fireproofing, or other special coatings.
8. Existing steel members shall be properly cleaned and painted for protection.
9. Preparation of steel and application of coatings shall be in accordance with the specifications of the Society for Protective Coatings (SSPC).
10. All shop connections shall be welded and all field connections shall be bolted using high strength bolts unless otherwise noted. All high strength bolt diameters shall be as called out on plans. All bolted connections designed to be installed to a snug-tight condition in standard holes unless otherwise noted.
11. Provide hardened washers shall be provided under turning element at all high strength bolted connections.
12. All steel in contact with pressure treated lumber or exposed to weather shall be at minimum galvanized with a G185 coating. When galvanized steel is welded provide appropriate ventilation measures. Welded surfaces shall be ground smooth and coated with galvanizing repair paint.
13. Stainless steel shall be used for all exposed steel in coastal areas and other locations subject to salt water, including atmospheric water vapor and spray from de-icing salts.
14. All welding shall be in accordance with AWS D1.1 2010, Structural Welding Code. Welds to be approved by a welding inspection agency. All shop and field welding shall be performed by qualified welders in accordance with AWS D1.1.
15. Field welded surfaces shall be cleaned, ground smooth, and coated with appropriate primer/paint as specified.
16. Beams supporting columns or struts and beams bearing on columns shall be provided with stiffener angles, tees or plates on webs.
17. Connections for hung lintels and other members requiring adjustment shall be provided with shims or slotted holes, as required for proper final installation.
18. Unless otherwise noted, all bolted connections shall be bearing type, non slip-critical, tightened to a "snug-tight condition" as defined by AISC.
19. All truss connections shall be shop welded and shall be designed for the factored/unfactored forces shown on the contract drawings, but not less than 50% of the effective strength of the member. Shop drawings shall clearly show weld sizes and lengths for all connections. Provide gusset plates as required to obtain sufficient weld length. Gusset plate thickness shall match web thickness of chord.
20. Bolting in combination with welds shall not be considered as sharing the stress. Welds shall be provided to carry the entire stress for which the connection is designed.
21. The frame of the steel skeleton shall be carried up true and plumb and temporary bolting and bracing shall be introduced to safely carry all loads to which the structure may be subjected, including equipment and operation of same. Individual columns must be braced before beam connections are made and bracing shall be left in place as long as may be required for safety. No bolting or welding shall be done until as much of the structure as will be stiffened thereby has been properly aligned.
22. The owner shall retain the services of a qualified inspector to inspect erected steel and connections.
23. All powder actuated fasteners to be used in structural steel shall be as listed with a minimum length sufficient to fully penetrate base member thickness (not less than 5/8").
24. Provide 12 gauge galvanized gripstay masonry anchoring system by Hohmann & Barnard, inc., or equal, vertically on all steel column flanges and webs and horizontally on all beam webs, abutted with or encased in masonry. See "Typical Masonry Anchoring System Details".
25. See architectural drawings for steel plate and grate flooring specifications and details. Steel grating shall be manufactured in accordance with the Metal Bar Grating Manual, as published by the National Association of Architectural Metals Manufacturers and shall conform to Federal Specification RR-G-661E, Type I, Class I. Steel for grating shall conform to ASTM A569. Perpendicular welded cross bars to be spaced 4" on center. Stair tread grating shall be same type. Band exposed edges, unless noted otherwise. Grating and fasteners shall be hot dipped galvanized, unless noted otherwise.

COLD FORMED LIGHT STEEL FRAMING:

1. Light steel framing members, materials, and accessories have been designed based upon the following:

a) Stud, joist, and track sections:	ASTM A1008, fy = 50 ksi (16 gage or heavier) fy = 33 ksi (18 gage or lighter)

Member sizes as shown on plans using standard Steel Stud Manufacturer's Association (SSMA) nomenclature.

b) Deflection track, misc. channels, angles:	ASTM A1008, fy = 33 ksi (U.N.O.)
c) Headers:	HDS Heavy Duty Stud System (Clark Dietrich, CD) Red Header Pro (CD) Built-up Box header, (2) C-stud sections top & bottom track section
d) Bypass deflection angle:	FCSC Fast Clip (CD) Verticlip (The Steel Network, TSN) VLB Master Clip (TSN) Slide Clip (Simpson Strong Tie, SST)
e) Wall head deflection clip:	FTC Fast Top Clip (CD) SL Verticlip (TSN) SCW Slide Clip (SST)
f) Rigid connection angle:	UCEC Uni Clip (CD) L-Series Swift Clip (CD) Stiff Clip (TSN) VLB Master Clip (TSN) RCA Rigid Connector Angle (SST) FCB Fixed Clip (SST)
g) Joist hangers:	UJH Universal Joist Hanger (CD) JC Stiff Clip (TSN) SJC Steel Joist Connector (SST)
h) Header hangers:	H-Series Universal Header Hanger (CD) HE Stiff Clip (TSN) SHH Steel Header Hanger (SST)
i) Knee wall anchors:	MC Moment Clip (CD) Midwall (TSN) RCKW Kneewall Connector (SST)
j) Bridging:	U-Channel w/ Fastbridge Clips (CD) Spazzer 5400 Bar (Load-bearing) (CD) Bridge Bar w/ Bridge Clip (TSN) BuckleBridge (Load-bearing) (TSN) DBR Spacer (SST) SBR Spacer (Load-bearing) (SST)
k) Self Drilling Screws: (Use pan-head screws for finish planes)	#10-16, #12-14, 1/4-14 (fastening to CFS) 1/4-20 (fastening to HRS)
l) Powder Actuated Fasteners:	0.157"∅ Hilti X-U, Simpson PDPA 5/8" length for steel <1/4"t 7/8" length for steel <1/2"t 1" length for steel >1/2"t 1-1/4" length for anchoring to concrete

m) Other accessories, clips, fasteners, etc. as applicable, to be provided on shop drawings.

1. All galvanized studs, joists and accessories shall be formed from steel that conforms to the requirements of ASTM A653 as set forth in the AISI "Specification for the Design of Cold-Formed Steel Structural Members", 2012 edition.
2. All structural properties shall be computed in accordance with the AISI "Specifications for the Design of Cold-Formed Steel Structural Members".
3. All light gage steel studs and joists, including accessories, shall be galvanized with a minimum G60 (ASTM C955) or G40 (all others) coating.
4. Studs, runners, bracing and bridging shall be manufactured per ASTM C955.
5. Provide solid bridging at 4'-0" o.c. max spacing, or as noted on structural plans and details. Bridging shall be installed in load-bearing walls prior to applying any axial load to the studs, including the temporary storage of building materials on the supported floor. Bridging accessories to be as provided by stud manufacturer.
6. Light steel members specified on plans shall be considered minimum requirements. Thicker members, wider flanges, and lesser member spacings may be substituted as conditions warrant. Wider studs or deeper floor joists shall be approved by the engineer.
7. Before fabrication verify all dimensions with architectural drawings. For non-load bearing studs see architectural drawings.
8. Steel framing bracing masonry walls shall be designed so that deflections caused by wind and seismic loads are limited to 1/600 of the span.
9. Provide shop drawings for all connections and prefabricated frames, including trusses.
10. Metal stud bearing wall installer shall provide all steel tracks, blocking, lintels, clip angles, shoes, stiffeners, fasteners, and accessories as indicated or as recommended by the material manufacturer to provide a complete metal framing system.
11. Provide double studs or proprietary jamb studs each end of all window and door openings. Reference architectural drawings for opening sizes and locations.
12. Provide a minimum of three (3) studs at all corners in exterior walls.
13. Load bearing studs shall not be spliced unless designed and detailed on structural drawings.
14. Provide deflection track at all top-of-wall conditions framing into the underside of structural members or slabs above. Studs are not to be attached to track. A line of continuous bridging shall be provided within 12" of track.
15. Provide built-up box shape or rough opening open-section headers over all openings in load-bearing walls. Unless noted otherwise, box headers shall consist of two (2) stud sections oriented face-to- face with track section top and bottom. Fasten with minimum #10 screws per schedule or manufacturer's specifications.
16. Base and top tracks shall be fastened to supporting slab or structure as noted. For non-load bearing walls provide 0.157"-diameter power driven fasteners (pdf's) at a maximum spacing of 16" o.c. Use Hilti X-U (or equivalent) fasteners of appropriate length to penetrate full thickness of supporting steel member or to provide a minimum 1-1/4" embedment into concrete. For interior load bearing walls, fasten base track to supporting concrete with Hilti KWIK HUS (or equivalent) screw anchors at 24" o.c. maximum spacing (16" o.c. at exterior walls).
17. Powder actuated fasteners shall not be located less than 3" from a free edge of concrete nor spaced closer than 4" on center when shot into concrete bases.
18. Screws for use with light steel framing shall be self-drilling metal construction screws of length sufficient for three (3) threads to fully penetrate the thickness of the base metal. Use a higher thread pitch in thicker steel. Screw sizes to be #10, #12, or 1/4" as specified in details. Coating for fasteners shall be appropriate for use.
19. Screws shall be placed no closer than 3/4" from ends of members and shall not be spaced closer than 3/4".
20. Stripped screws shall be considered ineffective for resistance to pull-out. Stripped screws subject to tension shall be removed and replaced. A maximum of 25% of screws in a shear-only connection may be considered effective when stripped.
21. Provide minimum 2" 20 gage flat strap diagonal X-bracing at all load-bearing walls. X-bracing to be full height of wall applied to each face of stud at an angle between 45 and 60 degrees. Straps to be fastened to double studs at ends only. Provide one X-brace per 60 linear feet of bearing wall or as shown on plan. Provide base track fastener within 6" of base of diagonal strap.
22. Provide web stiffener at all floor joists 16 gage or lighter bearing on top of supporting structure. Web stiffener may consist of proprietary stiffening accessory from stud manufacturer or cut section of floor joist of length equal to bearing width.
23. Provide continuous edge track section capping ends of all floor joists. Track to be fastened to top and bottom flange of joist section with (1) #10 screw. Track thickness to be the lesser of the joist gage or 16 gage.
24. All light steel materials shall be stored covered on a flat plane. Corroded, dented, bent, or twisted members shall not be installed.
25. Axially loaded (load-bearing) studs shall be seated fully and squarely within top and bottom tracks.
26. Cutting of light steel framing members shall be by saw or shear only.
27. Provide temporary bracing and/or shoring as required. Bracing and shoring is the sole responsibility of the contractor.

OPEN WEB STEEL BAR JOISTS:

1. Steel joist design, fabrication, and erection shall comply with the Steel Joist Institute (SJI), "Standard Specifications, Load Tables and Weight Tables for Steel Joists and Joist Girders" (43rd edition).
2. Spacing shown for open web and longspan steel joists is the maximum permissible. Exact number and location shall be coordinated with total job requirements.
3. All steel joists shall be welded wherever they bear on structural steel members or bearing plates unless otherwise noted. No welding shall be done until as much of the structure as will be stiffened thereby has been properly aligned. Joists shall be bolted at column lines to provide lateral stability during construction per OSHA guidelines.
4. All steel joists to bear a minimum of 21/2" on structural steel support members and 4" on masonry or concrete support members. See structural details for additional information.
5. All steel joists with the same span and joist designation shall have matching web configurations to facilitate the installation of mechanical and electrical work passing through the web perpendicular to the joist span.
6. Steel joists are not designed for concentrated loads except at panel points. When hanging or setting concentrated loads exceeding 100 lbs., either place the load at a panel point or field weld an angle 2x2x3/16" from the point of load to the nearest panel point on the opposite chord.
7. Bridging shall be by steel angles with L/r ratio not to exceed 300. All joist bridging shall be in accordance with the SJI specifications unless otherwise noted. All joist bridging and bridging anchors shall be completely installed before construction loads are placed on the joists. Exact size and location of steel joist bridging by joist manufacturer.
8. Provide one (1) line of continuous bridging at first bottom chord panel point for uplift resistance at all roof joist bays.
9. Top and bottom chord bridging may be substituted for X-bridging where mechanical ducts occur between LH and K joists.

DESIGN LOAD SCHEDULE (2018 IBC)

DESIGN ALLOWABLE SOIL BEARING CAPACITY:	1500 psf (ASSUMED)
DEAD LOADS:	
FLOOR DEAD LOAD (WOOD):	20 psf
ROOF DEAD LOAD:	20 psf
UNREDUCED LIVE LOADS:	
FLOOR LIVE LOAD (OFFICE):	50 psf
ROOF LIVE LOAD:	20 psf
SNOW LOADS:	
GROUND SNOW LOAD:	30 psf
FLAT ROOF SNOW LOAD:	21 psf
SNOW EXPOSURE FACTOR:	1.0
IMPORTANCE FACTOR:	1.0
THERMAL FACTOR:	1.0
MAXIMUM DRIFT SURCHARGE:	REFER TO ROOF FRAMING PLAN
WIND LOAD DESIGN CRITERIA:	
ANALYSIS PROCEDURE:	ASCE 7-16 CHAPTER 27
BUILDING TYPE:	ENCLOSED
ULTIMATE DESIGN WIND SPEED:	115 mph
NOMINAL DESIGN WIND SPEED:	89 mph
RISK CATEGORY:	II
EXPOSURE:	B
INTERNAL PRESSURE COEFFICIENT:	±0.18
EFFECTIVE WIND PRESSURES:	
COMPONENTS & CLADDING:	
ROOF:	
CORNER ZONE 3:	+16.0 / -41.7 psf
EDGE ZONE 2:	+16.0 / -35.0 psf
INTERIOR ZONE 1:	+16.0 / -26.3 psf
OVERHANG:	
CORNER ZONE 3:	-35.2 psf
EDGE ZONE 2:	-28.6 psf
WALL:	
CORNER ZONE 5:	+18.0 / -22.0 psf
INTERIOR ZONE 4:	+18.0 / -19.8 psf
SEISMIC LOADS:	
RISK CATEGORY:	II
IMPORTANCE FACTOR:	1.0
MAPPED SPECTRAL ACCELERATION:	$S_S=0.17$ $S_1=0.06$
SITE CLASS:	D
SITE CLASS COEFFICIENTS:	$F_a=1.60$ $F_v=2.40$
SPECTRAL RESPONSE COEFFICIENT:	$S_{DS}=0.18$ $S_{D1}=0.10$
SEISMIC DESIGN CATEGORY:	B
FORCE RESISTING SYSTEM:	ORDINARY REINFORCED MASONRY SHEAR WALLS
RESPONSE MODIFICATION COEFFICIENT:	R=2.00
SEISMIC RESPONSE COEFFICIENT:	$C_S=0.092$
EFFECTIVE SEISMIC WEIGHT:	W=669,000 lbs
DESIGN BASE SHEAR:	V=61,600 lbs
ANALYSIS PROCEDURE:	EQUIV. LATERAL FORCE

DIVISION 6 - WOOD CONSTRUCTION:

1. Wood materials for use in construction shall be in accordance with the following specifications:

a. Dimensional lumber:	2x8 or larger:	Southern Yellow Pine (SYP) #2 or greater
	2x6 or smaller:	Spruce Pine Fir (SPF) #2 or greater
b. Engineered lumber:	I-joists:	As specified on plans
	Beams and girders:	2.0E, min. f/b = 2,600 psi
	Columns and posts:	1.8E, min. f/b = 2,400 psi
c. Glue-laminated lumber:	Beams and girders:	1.8E, min. f/b = 2,400 psi
	Columns and posts:	1.8E, min. f/b = 2,400 psi
d. Nails specified on structural drawings to be common wire nails unless noted otherwise (refer to NDS for sizes other than listed)		8d: 0.131Ø x2-1/2" 10d: 0.148"Ø x3" 16d: 0.162"Ø x3-1/2" 30d: 0.207"Ø x4-1/2"
e. Wood screw manufacturers: (various types and applications, others available subject to approval of engineer)		Simpson, Fastenmaster LOK, USP
f. Lag screws:		Manufactured to ANSI B18.2.1
g. Bolts:		ASTM A307 with common or plate washer under nut and head
h. Proprietary metal clips:		Simpson Strong-Tie or USP
i. Power driven fasteners for sill plates:		min. 0.145"Ø x2-7/8" max. length w/ washer

2. Wood construction shall conform to the requirements of the American Institute of Timber Construction and the 2015 "National Design Specification for Wood Construction" from the National Forest Products Association.
3. Unless otherwise noted, all connections shall conform to the "Fastening Schedule", Table 2304.9.1 of the International Building Code (IBC 2018).
4. Contractor shall install permanent bridging or solid blocking spaced at 8'-0" o.c. maximum between wood joists unless noted otherwise.
5. Sheathing: shall conform to APA specifications. End joints shall occur over supports. Panels shall be staggered on half panel length from adjacent panels. Provide 1/8" space at panel ends. Wall sheathing shall be minimum 7/16", and roof sheathing shall be minimum 19/32", "APA rated sheathing", 24/16 panel span rating, exposure 1. All panels shall be nailed as indicated on structural drawings.
6. All dimensions are to outside face of sheathing unless otherwise noted. See architectural drawings for dimensions not shown on structural drawings.
7. Provide double joists under all partitions which run parallel with joists.
8. All dimensional lumber to be surfaced dry and used at 19% maximum moisture content or equal.
9. All members exposed to the weather, or in contact with masonry or concrete, shall be pressure- treated. See structural drawings for additional notes and requirements.
10. See architectural drawings for all fire blocking, draft stopping, and other miscellaneous blocking requirements.
11. Bolts connecting wood members shall be ASTM A307 common steel bolts of a diameter shown on the structural drawings. Common washers shall be used under each bolt head and nut. Bolt holes shall be carefully centered and drilled not more than 1/16" larger than the bolt diameters.
12. All wood framing shall be continuous unless otherwise indicated. All splices shall be only as shown on plans.
13. Connection details shown are typical unless otherwise noted or submitted.
14. Wood bearing under wood beams shall be solid and bearing parallel to grain, continuous through floors from beam bearing to concrete slab.
15. Interior stud walls bearing on concrete slabs may be anchored by powder actuated fasteners at 24" on center (max).
16. Fasteners for preservative treated and fire retardant-treated wood shall be hot-dipped zinc coated galvanized steel, stainless steel, silicon bronze, or copper per IBC 2304.10.5.

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Shenandoah Valley
www.balzer.cc
1208 Corporate Circle
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Michael J Fitzgerald
MICHAEL J. FITZGERALD
Lic. No. 051534
01-10-2025

AHCS SUBSTANCE USE EXPANSION
INTERIOR RENOVATION
GENERAL STRUCTURAL NOTES

311 SOUTH MONROE AVENUE
320 EAST PINE STREET
COVINGTON, VIRGINIA 24426

DRAWN BY	WCH
DESIGNED BY	WCH
CHECKED BY	MJF
DATE	01-10-2025
SCALE	As indicated
REVISIONS	

S0.01

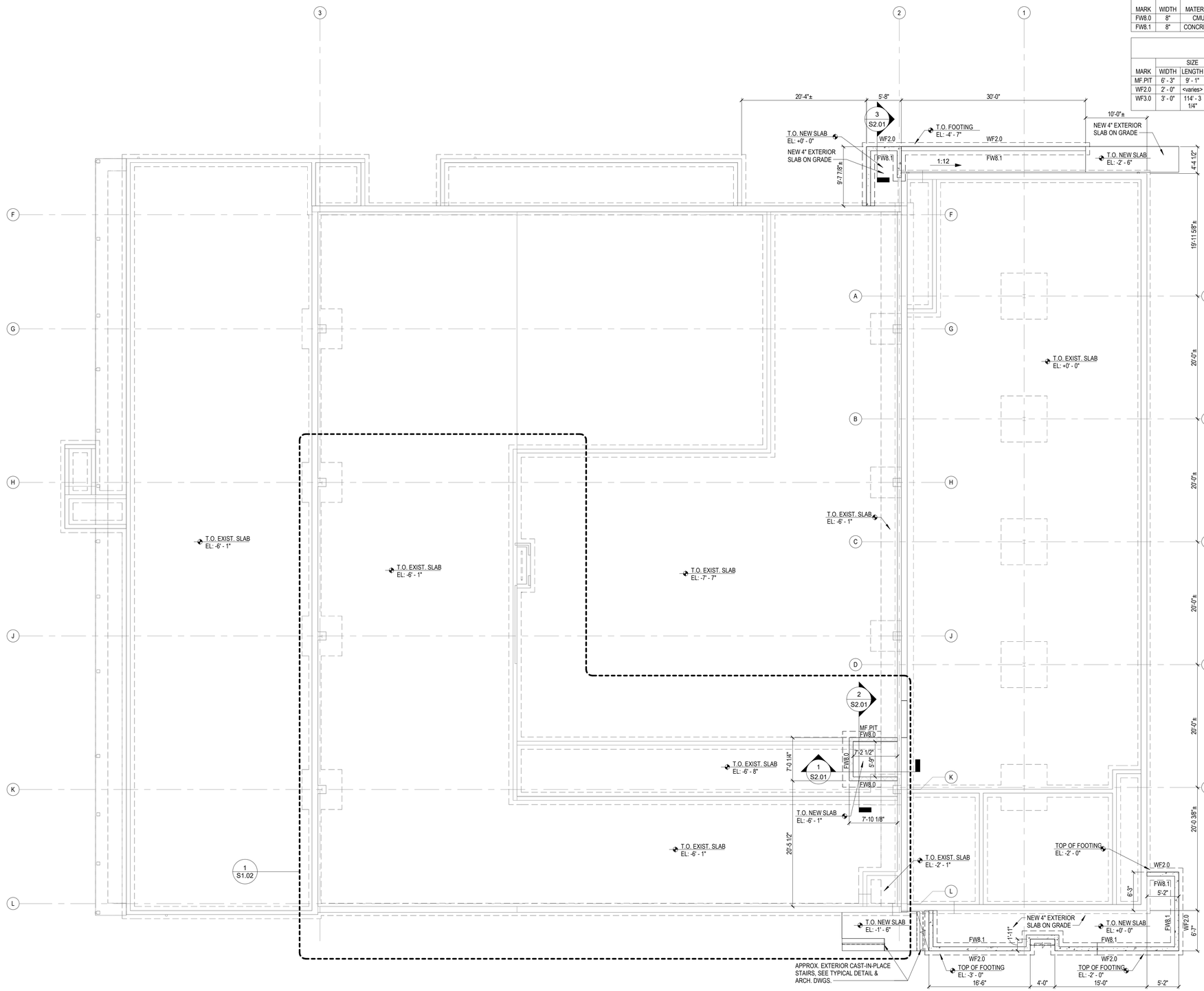
PROJECT NO 03230077.00

FOUNDATION WALL SCHEDULE

MARK	WIDTH	MATERIAL	f'c (psi)	VERTICAL REINFORCEMENT	VERTICAL DOWELS	HORIZONTAL REINFORCEMENT	REMARKS
FW8.0	8"	CMU	1500	#5 @ 48" O.C.	#5 @ 48" O.C.	9ga LADDER @ 16" O.C.	TYP. @ NEW SHAFT WALLS
FW8.1	8"	CONCRETE	3000	#5 @ 18" O.C.	#5 @ 18" O.C.	#5 @ 18" O.C.	TYP. @ NEW EXTERIOR SLABS

FOOTING SCHEDULE

MARK	SIZE WIDTH	SIZE LENGTH	SIZE DEPTH	LONGITUDINAL REINFORCEMENT	TRANSVERSE REINFORCEMENT	REMARKS
MF.PIT	6' - 3"	9' - 1"	0' - 7"	#5's @ 12" O.C. TOP & BOTTOM	#5's @ 12" O.C. TOP & BOTTOM	ELEVATOR PIT SLAB
WF2.0	2' - 0"	<varies>	1' - 0"	(2) #5 CONTINUOUS	#4 @ 24" O.C.	CONTINUOUS WALL FOOTING
WF3.0	3' - 0"	1'4" - 3 1/4"	1' - 0"	(3) #5 CONTINUOUS	#4 @ 24" O.C.	WALL FOOTING



1 S1.01 FOUNDATION PLAN

1/8" = 1'-0"

GENERAL FOUNDATION NOTES:

1. FOOTING SIZES BASED ON AN ASSUMED 1500 psf BEARING CAPACITY.
2. FOOTING ELEVATIONS SHOWN ARE APPROXIMATE ONLY. ACTUAL FOOTING STEP LOCATIONS SHALL BE AS REQUIRED IN FIELD TO MAINTAIN DEPTH BELOW FINISH GRADE. ADDITIONAL STEPS MAY BE REQUIRED TO OBTAIN SUITABLE BEARING.
3. BELOW GRADE CONCRETE FOUNDATION WALLS SHALL BE FW8.1 UNLESS NOTED OTHERWISE. SEE THE FOUNDATION SCHEDULE FOR SIZE AND REINFORCEMENT REQUIREMENTS.
4. BACKFILL SHALL NOT BE PLACED AGAINST WALL BEYOND THE LIMITS SHOWN ON THE DETAILS. IF BACKFILLING MUST BE EXPEDITED ABOVE THE MAXIMUM HEIGHT SHOWN PRIOR TO THE INSTALLATION OF THE ELEVATED FLOOR SLAB AND THE GROUND FLOOR SLAB, TEMPORARY SHORING SHALL BE PROVIDED. CONCRETE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AN ENGINEERED SHORING DESIGN.
5. ALL EARTHWORK CUT AND FILL OPERATIONS SHALL BE OBSERVED BY A LICENSED GEOTECHNICAL ENGINEER AS STIPULATED IN THE PROJECT STATEMENT OF SPECIAL INSPECTIONS. NOTIFY ENGINEER OF RECORD OF ANY ADVERSE SOIL CONDITIONS DISCOVERED THAT MAY AFFECT THE DESIGN OF ANY FOUNDATION ELEMENTS.
6. ONSITE SOILS MAY BE USED FOR STRUCTURAL BACKFILLING OPERATIONS WHEN STATED IN THE PROJECT GEOTECHNICAL ENGINEER'S REPORT. SUITABLE SOILS MUST BE CLASSIFIED AS CL, ML, SC, SM, SP, SW, GC, GM, GP, OR GW PER ASTM D2487. BACKFILL MUST BE PLACED AT OPTIMUM MOISTURE CONTENT AND IN 8" MAXIMUM LIFT INCREMENTS AND COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY PER ASTM D698. ALL BACKFILLING OPERATIONS AND FOUNDATION TRENCHES ARE TO BE OBSERVED BY AND PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.

CONCRETE SLAB NOTES:

1. SUB-BASE GRADE FOR GROUND FLOOR SLAB SHALL BE PROOF-ROLLED IN CONSULTATION WITH THE GEOTECH ENGINEER. EXTERIOR SLABS ON GRADE SHALL BE PROVIDED WITH A MINIMUM 8" LAYER OF POROUS COMPACTED FILL AND INTERIOR SLABS SHALL OVERLAY A MINIMUM 4" SUCH LAYER. FILL MAY CONSIST OF VDOT #57, #21A, STONE SCREENINGS, RECYCLED CONCRETE, OR OTHER SUITABLE MATERIAL SUBJECT TO APPROVAL OF GEOTECH ENGINEER.
2. CONCRETE FLOOR SLABS SHALL BE OF A MINIMUM THICKNESS AS CALLED OUT ON FOUNDATION PLAN. CONCRETE FOR SLABS ON GRADE SHALL BE REINFORCED WITH EMBEDDED FIBER REINFORCEMENT FOR SHRINKAGE CRACK CONTROL AND RESIDUAL STRENGTH. SLABS SHALL BE PROPERLY CURED TO PREVENT EXCESSIVE SHRINKAGE AS WELL AS EDGE CURLING AND OTHER FIELD ISSUES. A 7-DAY WET CURE IS RECOMMENDED. SLABS SHALL BE SUITABLY FLAT AND LEVEL FOR THE INTENDED USE AS ACCEPTABLE TO THE OWNER.
3. SAW CUT CONTROL JOINTS SHALL BE PROVIDED IN THE SLAB PRIOR TO CURING IN A REGULAR RECTANGULAR GRID, AS BEST AS POSSIBLE. JOINTS SHALL BEGIN AT COLUMN ISOLATION JOINTS AND/OR RE-ENTRANT CORNERS AND SHALL PANELIZE THE SLAB IN RECTANGULAR SEGMENTS APPROXIMATELY 2:1 OR SQUARER IN LENGTH/WIDTH RATIO. JOINTS SHALL BE SPACED NO FURTHER THAN 60X SLAB THICKNESS IN A "STRUCTURALLY REINFORCED" SLAB OR 36X SLAB THICKNESS FOR A MINIMALLY- REINFORCED SLAB. ADJUST ACTUAL SPACING OF JOINTS AS NECESSARY BASED UPON SELECTED PERFORMANCE CRITERIA AND FIBER REINFORCEMENT DOSAGE RATE.
4. FIBER REINFORCEMENT FOR CONCRETE SLABS SHALL BE EUCLID TUF-STRAND SF MACRO FIBERS OR APPROVED EQUIVALENT. PROVIDE MINIMUM FIBER REINFORCEMENT DOSAGE RATE OF 3 LB/CYD (POUNDS PER CUBIC YARD). MACRO FIBERS SHALL COMPLY WITH ASTM C1116 TYPE III AND ASTM D7508 AND SHALL HAVE A MINIMUM TENSILE STRENGTH OF 70 ksi. SYNTHETIC MACRO FIBERS FOR CONCRETE SHALL EXHIBIT A POST-CRACK RESIDUAL STRENGTH AND TOUGHNESS VALUE (Re3) OF 18% IN ACCORDANCE WITH ASTM C1609.
5. SEE PLAN FOR GROUND FLOOR SLAB ELEVATIONS AND STEPS. COORDINATE WITH ARCHITECTURAL AND MEP DRAWINGS FOR SLAB CUTOUTS, DEPRESSIONS, AND PENETRATIONS NOT SHOWN ON FOUNDATION PLAN. STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR COORDINATION OF OTHER TRADES WITH THE CONCRETE.
6. SEE ARCHITECTURAL DRAWINGS FOR SLAB FINISHES, COVERINGS, AND/OR TOPPINGS. FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS FOR COVERINGS AND TOPPINGS WITH REGARDS TO SLAB THICKNESS, SLOPE, FLATNESS/LEVELNESS, MOISTURE, PERMEABILITY, HARDNESS, JOINT SPACING, AND ANY OTHER COMPATIBILITY ISSUE. STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR COORDINATION OF FINISH REQUIREMENTS.

GENERAL MASONRY NOTES:

1. NEW CONCRETE MASONRY WALLS ABOVE GRADE SHALL BE 8" CMU U.N.O. PROVIDE #5 VERTICAL BARS AT 48" O.C. AND 9GA. LADDER TYPE HORIZONTAL JOINT REINFORCEMENT AT 16" O.C. GROUT SOLID AT ALL REINFORCED CELLS.
2. PROVIDE (1) #5'S VERT. EA. CELL FOR (1) CELLS EA. SIDE OF EA. OPENING & AT ALL CORNERS (3 TOTAL BARS AT CORNERS).
3. PROVIDE (1) #5 VERT. FOR EACH CELL AT ELEVATOR RAIL SUPPORT ATTACHMENT LOCATIONS. REFER TO ELEVATOR MANUFACTURER SPECIFICATION FOR EXACT RAIL SUPPORT ATTACHMENT LOCATIONS.
4. PROVIDE (2) CONTINUOUS KNOCK-OUT COURSES WITH CONTINUOUS #5 BAR AT EACH FLOOR LEVEL AND SOLID GROUTING AT ANY AND ALL OTHER BEARINGS/LEDGERS.
5. PROVIDE (1) REINFORCE & SOLID CELL BENEATH ALL BEARING POINTS FOR JOISTS OR BEAMS. SEE STEEL NOTES AND DETAILS FOR BEARING PLATE REQUIREMENTS.
6. TOP OF CMU WALLS TO BE UNDERSIDE OF ROOF DECK OR AS SHOWN ON STRUCTURAL DETAILS. PROVIDE KNOCK-OUT COURSE AT UPPERMOST FULL BLOCK COURSING, REINFORCED WITH CONT. #5 BAR. GROUT WALL SOLID CONT. FROM KNOCKOUT COURSE TO TOP OF WALL.
7. ALL LINTELS SHALL CONFORM TO ARCHITECTURAL HEAD DETAILS. REFER TO ARCH. DWGS. FOR ALL FELT WRAP, FLASHING, WEEP, AND SEALANT REQUIREMENTS.

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MICHAEL J. FITZGERALD
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AHCS SUBSTANCE USE EXPANSION

INTERIOR RENOVATION

FOUNDATION PLAN

311 SOUTH MONROE AVENUE
320 EAST PINE STREET
COVINGTON, VIRGINIA 24426

DRAWN BY	WCH
DESIGNED BY	WCH
CHECKED BY	MJF
DATE	01-10-2025
SCALE	1/8" = 1'-0"
REVISIONS	

S1.01

PROJECT NO 03230077.00

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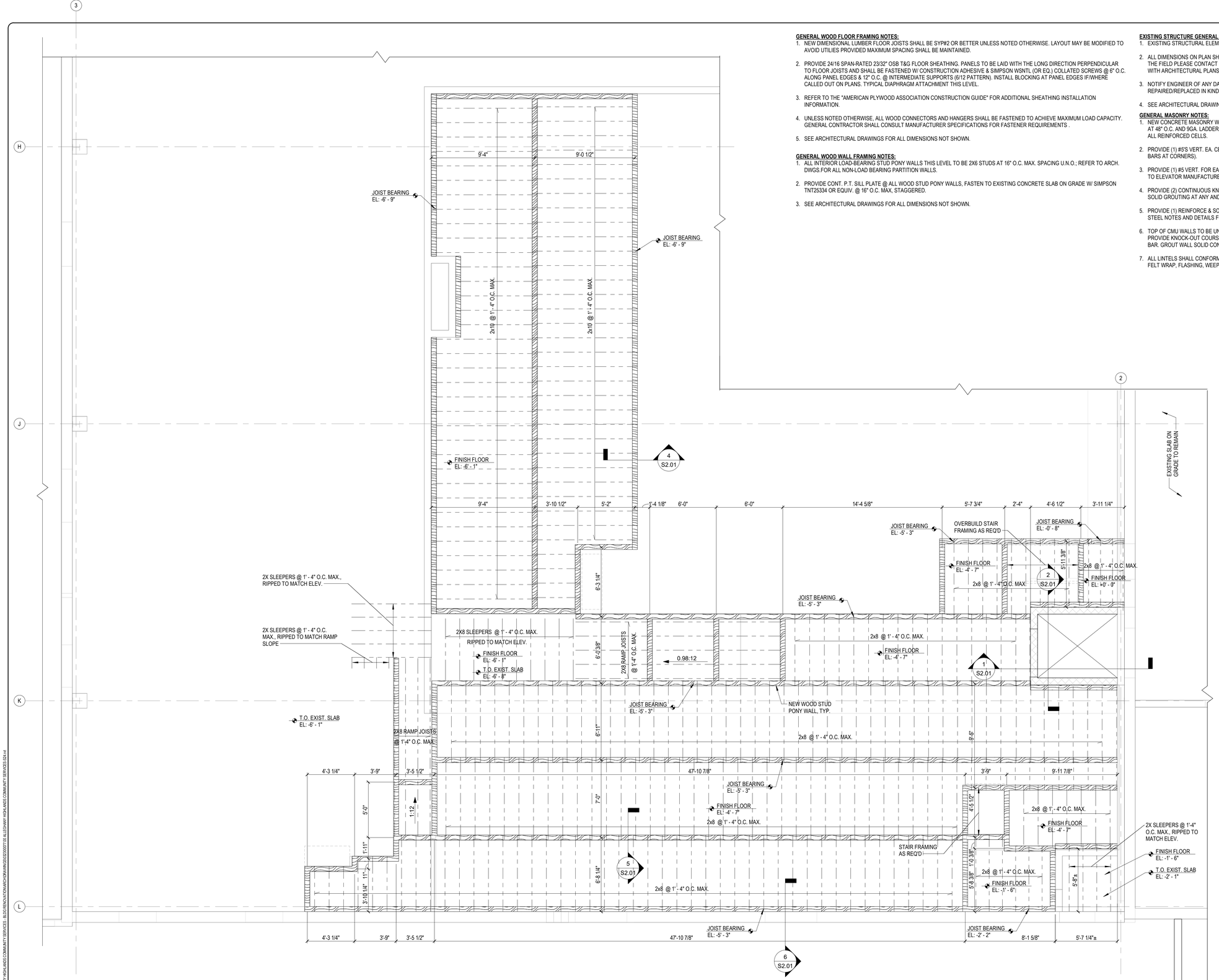

FIRST FLOOR FRAMING - AREA A

1 / S1.02 **1/4" = 1'-0"**

GENERAL WOOD FLOOR FRAMING NOTES:

1. NEW DIMENSIONAL LUMBER FLOOR JOISTS SHALL BE SYP#2 OR BETTER UNLESS NOTED OTHERWISE. LAYOUT MAY BE MODIFIED TO AVOID UTILIES PROVIDED MAXIMUM SPACING SHALL BE MAINTAINED.
2. PROVIDE 24/16 SPAN-RATED 23/32" OSB T&G FLOOR SHEATHING. PANELS TO BE LAID WITH THE LONG DIRECTION PERPENDICULAR TO FLOOR JOISTS AND SHALL BE FASTENED W/ CONSTRUCTION ADHESIVE & SIMPSON WSNTL (OR EQ.) COLLATED SCREWS @ 6" O.C. ALONG PANEL EDGES & 12" O.C. @ INTERMEDIATE SUPPORTS (6/12 PATTERN). INSTALL BLOCKING AT PANEL EDGES IF/WHERE CALLED OUT ON PLANS. TYPICAL DIAPHRAGM ATTACHMENT THIS LEVEL.
3. REFER TO THE "AMERICAN PLYWOOD ASSOCIATION CONSTRUCTION GUIDE" FOR ADDITIONAL SHEATHING INSTALLATION INFORMATION.
4. UNLESS NOTED OTHERWISE, ALL WOOD CONNECTORS AND HANGERS SHALL BE FASTENED TO ACHIEVE MAXIMUM LOAD CAPACITY. GENERAL CONTRACTOR SHALL CONSULT MANUFACTURER SPECIFICATIONS FOR FASTENER REQUIREMENTS .
5. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN.

GENERAL WOOD WALL FRAMING NOTES:

1. ALL INTERIOR LOAD-BEARING STUD PONY WALLS THIS LEVEL TO BE 2X6 STUDS AT 16" O.C. MAX. SPACING U.N.O.; REFER TO ARCH. DWGS.FOR ALL NON-LOAD BEARING PARTITION WALLS.
2. PROVIDE CONT. P.T. SILL PLATE @ ALL WOOD STUD PONY WALLS, FASTEN TO EXISTING CONCRETE SLAB ON GRADE W/ SIMPSON TNT25334 OR EQUIV. @ 16" O.C. MAX, STAGGERED.
3. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN.

EXISTING STRUCTURE GENERAL NOTES:

1. EXISTING STRUCTURAL ELEMENTS AND LOAD-BEARING WALLS TO REMAIN UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS ON PLAN SHALL BE VERIFIED IN THE FIELD, SHOULD DIMENSIONS DIFFER GREATLY IN THE FIELD PLEASE CONTACT THE STRUCTURAL ENGINEER. COORDINATE ANY DIMENSIONS NOT SHOWN WITH ARCHITECTURAL PLANS.
3. NOTIFY ENGINEER OF ANY DAMAGED STRUCTURAL ELEMENTS. EXISTING DAMAGED ELEMENTS SHALL BE REPAIRED/REPLACED IN KIND.
4. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN.

GENERAL MASONRY NOTES:

1. NEW CONCRETE MASONRY WALLS ABOVE GRADE SHALL BE 8" CMU U.N.O. PROVIDE #5 VERTICAL BARS AT 48" O.C. AND 9GA. LADDER TYPE HORIZONTAL JOINT REINFORCEMENT AT 16" O.C. GROUT SOLID AT ALL REINFORCED CELLS.
2. PROVIDE (1) #5'S VERT. EA. CELL FOR (1) CELLS EA. SIDE OF EA. OPENING & AT ALL CORNERS (3 TOTAL BARS AT CORNERS).
3. PROVIDE (1) #5 VERT. FOR EACH CELL AT ELEVATOR RAIL SUPPORT ATTACHMENT LOCATIONS. REFER TO ELEVATOR MANUFACTURER SPECIFICATION FOR EXACT RAIL SUPPORT ATTACHMENT LOCATIONS.
4. PROVIDE (2) CONTINUOUS KNOCK-OUT COURSES WITH CONTINUOUS #5 BAR AT EACH FLOOR LEVEL AND SOLID GROUTING AT ANY AND ALL OTHER BEARINGS/LEDGERS.
5. PROVIDE (1) REINFORCE & SOLID CELL BENEATH ALL BEARING POINTS FOR JOISTS OR BEAMS. SEE STEEL NOTES AND DETAILS FOR BEARING PLATE REQUIREMENTS.
6. TOP OF CMU WALLS TO BE UNDERSIDE OF ROOF DECK OR AS SHOWN ON STRUCTURAL DETAILS. PROVIDE KNOCK-OUT COURSE AT UPPERMOST FULL BLOCK COURSING, REINFORCED WITH CONT. #5 BAR. GROUT WALL SOLID CONT. FROM KNOCKOUT COURSE TO TOP OF WALL.
7. ALL LINTELS SHALL CONFORM TO ARCHITECTURAL HEAD DETAILS. REFER TO ARCH. DWGS. FOR ALL FELT WRAP, FLASHING, WEEP, AND SEALANT REQUIREMENTS.

KEY PLAN

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New River Valley
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www.balzer.cc
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540.772.9580

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MICHAEL J. FITZGERALD
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PROFESSIONAL ENGINEER

AHCS SUBSTANCE USE EXPANSION

INTERIOR RENOVATION

FIRST FLOOR FRAMING PLAN

311 SOUTH MONROE AVENUE
320 EAST PINE STREET
COVINGTON, VIRGINIA 24426

DRAWN BY	WCH
DESIGNED BY	WCH
CHECKED BY	MJF
DATE	01-10-2025
SCALE	As indicated
REVISIONS	

S1.02

PROJECT NO 03230077.00

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LINTEL SCHEDULE

MARK	SIZE	REINFORCEMENT	BEARING	REMARKS
L1	8x16 CMU U-LINTEL	(1) #5 CONT. @ BOTTOM GROUT SOLID	8" EACH END	BOND BLOCK W/ (1) KNOCK OUT COURSE ABV
L3	L5X3-1/2X5/16	---	8" EACH END	PAINTED OR GALVANIZED A36, (1) ANGLE PER 4" OF MASONRY THICKNESS

EXISTING STRUCTURE GENERAL NOTES:

1. EXISTING STRUCTURAL ELEMENTS AND LOAD-BEARING WALLS TO REMAIN UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS ON PLAN SHALL BE VERIFIED IN THE FIELD, SHOULD DIMENSIONS DIFFER GREATLY IN THE FIELD PLEASE CONTACT THE STRUCTURAL ENGINEER. COORDINATE ANY DIMENSIONS NOT SHOWN WITH ARCHITECTURAL PLANS.
3. NOTIFY ENGINEER OF ANY DAMAGED STRUCTURAL ELEMENTS. EXISTING DAMAGED ELEMENTS SHALL BE REPAIRED/REPLACED IN KIND.
4. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN.

GENERAL MASONRY NOTES:

1. NEW CONCRETE MASONRY WALLS ABOVE GRADE SHALL BE 8" CMU U.N.O. PROVIDE #5 VERTICAL BARS AT 48" O.C. AND 9GA. LADDER TYPE HORIZONTAL JOINT REINFORCEMENT AT 16" O.C. GROUT SOLID AT ALL REINFORCED CELLS.
2. PROVIDE (1) #5'S VERT. EA. CELL FOR (1) CELLS EA. SIDE OF EA. OPENING & AT ALL CORNERS (3 TOTAL BARS AT CORNERS).
3. PROVIDE (1) #5 VERT. FOR EACH CELL AT ELEVATOR RAIL SUPPORT ATTACHMENT LOCATIONS. REFER TO ELEVATOR MANUFACTURER SPECIFICATION FOR EXACT RAIL SUPPORT ATTACHMENT LOCATIONS.
4. PROVIDE (2) CONTINUOUS KNOCK-OUT COURSES WITH CONTINUOUS #5 BAR AT EACH FLOOR LEVEL AND SOLID GROUTING AT ANY AND ALL OTHER BEARINGS/LEDGERS.
5. PROVIDE (1) REINFORCE & SOLID CELL BENEATH ALL BEARING POINTS FOR JOISTS OR BEAMS. SEE STEEL NOTES AND DETAILS FOR BEARING PLATE REQUIREMENTS.
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7. ALL LINTELS SHALL CONFORM TO ARCHITECTURAL HEAD DETAILS. REFER TO ARCH. DWGS. FOR ALL FELT WRAP, FLASHING, WEEP, AND SEALANT REQUIREMENTS.

SECOND FLOOR / LOW ROOF FRAMING

1 / S1.03 — 1/8" = 1'-0"

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S1.03

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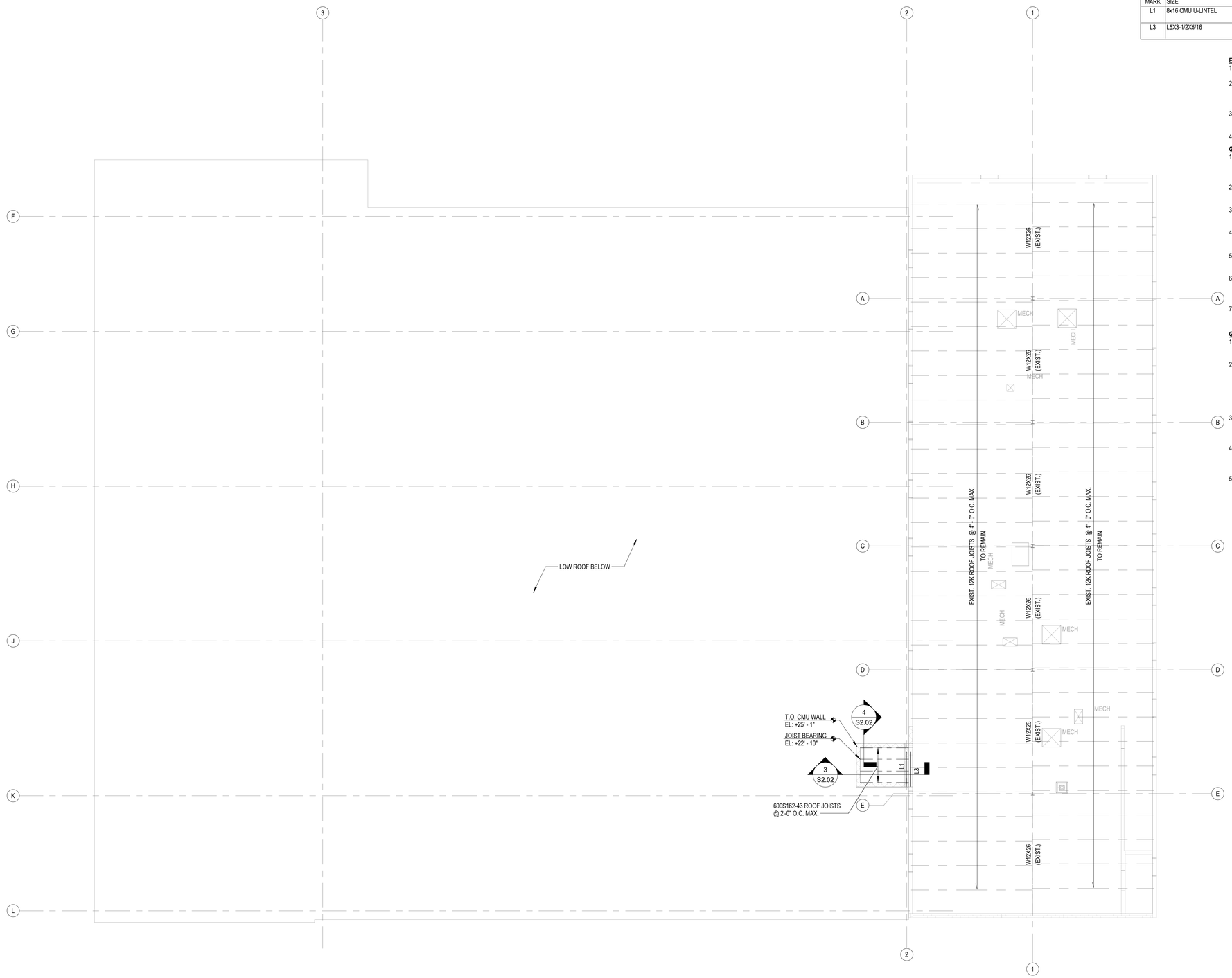
LINTEL SCHEDULE

MARK	SIZE	REINFORCEMENT	BEARING	REMARKS
L1	8x16 CMU U-LINTEL	(1) #5 CONT. @ BOTTOM GROUT SOLID	8" EACH END	BOND BLOCK W/ (1) KNOCK OUT COURSE ABV
L3	L5X3-1/2X5/16	---	8" EACH END	PAINTED OR GALVANIZED A36, (1) ANGLE PER 4" OF MASONRY THICKNESS



1 HIGH ROOF FRAMING PLAN
S1.04 — 1/8" = 1'-0"

EXISTING STRUCTURE GENERAL NOTES:

1. EXISTING STRUCTURAL ELEMENTS AND LOAD-BEARING WALLS TO REMAIN UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS ON PLAN SHALL BE VERIFIED IN THE FIELD. SHOULD DIMENSIONS DIFFER GREATLY IN THE FIELD PLEASE CONTACT THE STRUCTURAL ENGINEER. COORDINATE ANY DIMENSIONS NOT SHOWN WITH ARCHITECTURAL PLANS.
3. NOTIFY ENGINEER OF ANY DAMAGED STRUCTURAL ELEMENTS. EXISTING DAMAGED ELEMENTS SHALL BE REPAIRED/REPLACED IN KIND.
4. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN.

GENERAL MASONRY NOTES:

1. NEW CONCRETE MASONRY WALLS ABOVE GRADE SHALL BE 8" CMU U.N.O. PROVIDE #5 VERTICAL BARS AT 48" O.C. AND 9GA. LADDER TYPE HORIZONTAL JOINT REINFORCEMENT AT 16" O.C. GROUT SOLID AT ALL REINFORCED CELLS.
2. PROVIDE (1) #5'S VERT. EA. CELL FOR (1) CELLS EA. SIDE OF EA. OPENING & AT ALL CORNERS (3 TOTAL BARS AT CORNERS).
3. PROVIDE (1) #5 VERT. FOR EACH CELL AT ELEVATOR RAIL SUPPORT ATTACHMENT LOCATIONS. REFER TO ELEVATOR MANUFACTURER SPECIFICATION FOR EXACT RAIL SUPPORT ATTACHMENT LOCATIONS.
4. PROVIDE (2) CONTINUOUS KNOCK-OUT COURSES WITH CONTINUOUS #5 BAR AT EACH FLOOR LEVEL AND SOLID GROUTING AT ANY AND ALL OTHER BEARINGS/LEDGERS.
5. PROVIDE (1) REINFORCE & SOLID CELL BENEATH ALL BEARING POINTS FOR JOISTS OR BEAMS. SEE STEEL NOTES AND DETAILS FOR BEARING PLATE REQUIREMENTS.
6. TOP OF CMU WALLS TO BE UNDERSIDE OF ROOF DECK OR AS SHOWN ON STRUCTURAL DETAILS. PROVIDE KNOCK-OUT COURSE AT UPPERMOST FULL BLOCK COURSING, REINFORCED WITH CONT. #5 BAR. GROUT WALL SOLID CONT. FROM KNOCKOUT COURSE TO TOP OF WALL.
7. ALL LINTELS SHALL CONFORM TO ARCHITECTURAL HEAD DETAILS. REFER TO ARCH. DWGS. FOR ALL FELT WRAP, FLASHING, WEEP, AND SEALANT REQUIREMENTS.

GENERAL STEEL ROOF FRAMING NOTES:

1. ROOF SYSTEM SHALL BE EXISTING OPEN WEB STEEL BAR JOISTS. SIZES SHOWN ACCOUNT FOR ALL LOADING CONDITIONS.
2. METAL ROOF DECK SHALL BE 1-1/2" 22 GA. TYPE 1.5B, AND INSTALLED IN A MINIMUM (3) SPAN CONDITION. DECK SHALL BE PROVIDED PAINTED OR GALVANIZED. DECK SHALL BE ATTACHED TO THE SUPPORTING JOISTS W/ 5/8" PUDDLE WELDS @ 6" O.C. (36/7 PATTERN) ALONG SUPPORT CONDITIONS AT BUILDING EDGES, AND 12" O.C. (36/4) ALONG INTERMEDIATE FRAMING LINES. PROVIDE (2) #10 TEK SCREWS AT EACH SIDELAP PER SPAN. REFER TO STEEL DECK INSTITUTE SPECIFICATIONS, SECTION 4, FOR FURTHER INFORMATION.
3. ROOF DECK EDGE SHALL EXTEND AS NOTED ON PLANS. PERIMETER OF ROOF SHALL BE PROVIDED WITH L4X4X1/4 DECK EDGE ANGLE. WHERE ROOF DECK BEARS AT A CONCRETE OR MASONRY WALL L4X4X1/4 LEDGER SHALL BE PROVIDED WITH 1/2" TITEN HD ANCHORS @ 24" ON CENTER INTO SOLID WALL.
4. HOIST BEAM(S) SHALL BE MINIMUM W8X18 WITH MINIMUM 3/8" 4" X 6" BEARING PLATE WITH 1/2" HEADED STUD. COORDINATE LOCATION AND TOP OF STEEL ELEVATION FOR ELEVATOR HOIST BEAM(S) WITH ELEVATOR SUPPLIER.
5. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN.

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New River Valley
Shenandoah Valley
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1208 Corporate Circle
Roanoke, VA 24018
540.772.9580

COMMONWEALTH OF VIRGINIA
MICHAEL J. FITZGERALD
Lic. No. 051534
01-10-2025
PROFESSIONAL ENGINEER

AHCS SUBSTANCE USE EXPANSION

INTERIOR RENOVATION

ROOF FRAMING PLAN

311 SOUTH MONROE AVENUE
320 EAST PINE STREET
COVINGTON, VIRGINIA 24426

DRAWN BY	WCH
DESIGNED BY	WCH
CHECKED BY	MJF
DATE	01-10-2025
SCALE	1/8" = 1'-0"
REVISIONS	

S1.04

PROJECT NO 03230077.00

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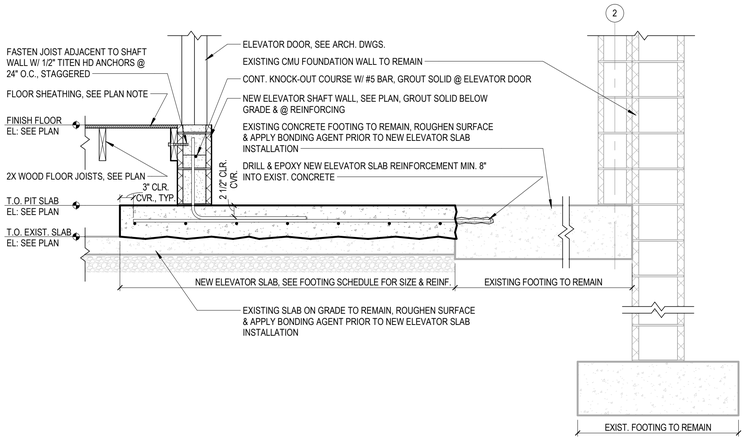
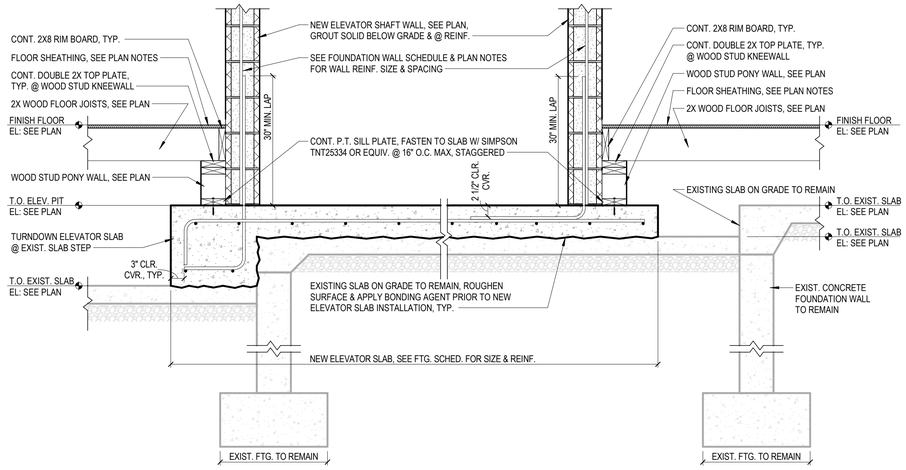


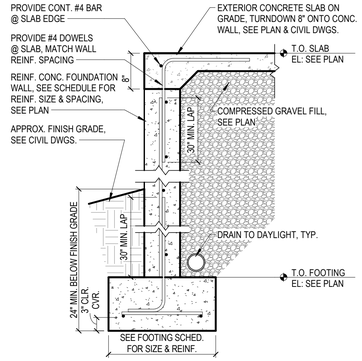
NEW ELEVATOR PIT FOUNDATION DETAIL 1

1 S2.01 **3/4" = 1'-0"**



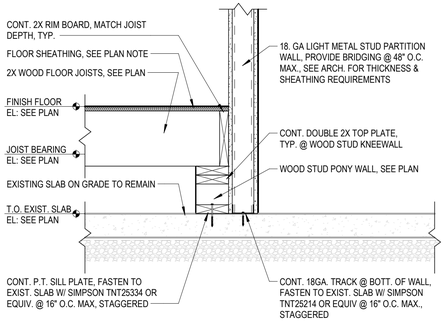
NEW ELEVATOR PIT FOUNDATION DETAIL 2

2 S2.01 **3/4" = 1'-0"**



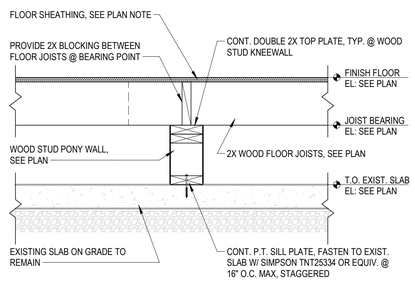
EXTERIOR SLAB FOUNDATION WALL

3 S2.01 **3/4" = 1'-0"**



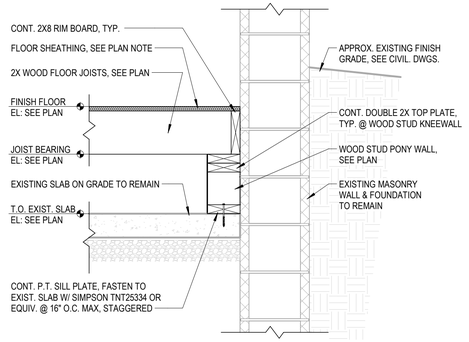
NEW FLOOR INTERIOR KNEEWALL @ FLOOR EDGE

4 S2.01 **1" = 1'-0"**



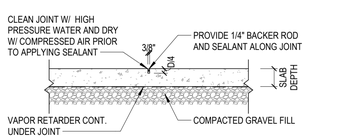
NEW FLOOR INTERIOR KNEEWALL

5 S2.01 **1" = 1'-0"**



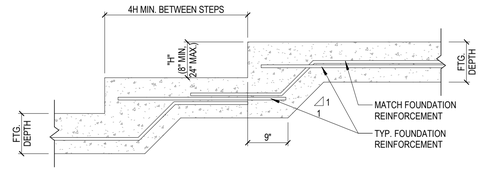
NEW FLOOR KNEEWALL @ EXTERIOR WALL

6 S2.01 **1" = 1'-0"**



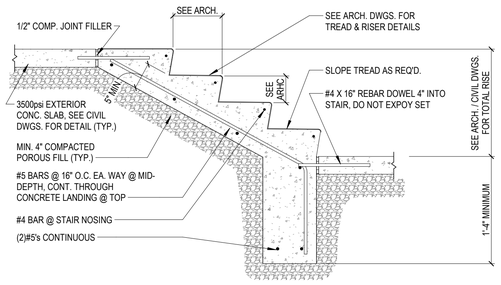
SAW CUT CONTROL JOINT

3/4" = 1'-0"



TYPICAL FOUNDATION STEP

3/4" = 1'-0"



TYPICAL STAIR ON GRADE SECTION

3/4" = 1'-0"

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Shenandoah Valley
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Roanoke, VA 24018
540.772.9580

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MICHAEL J. FITZGERALD
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01-10-2025
PROFESSIONAL ENGINEER

AHCS SUBSTANCE USE EXPANSION

INTERIOR RENOVATION

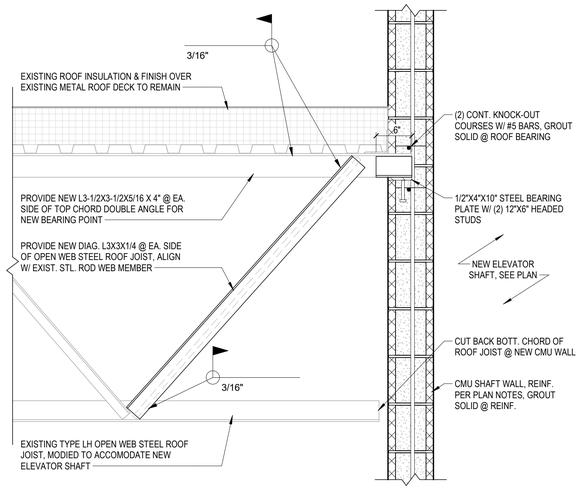
STRUCTURAL DETAILS

311 SOUTH MONROE AVENUE
320 EAST PINE STREET
COVINGTON, VIRGINIA 24426

DRAWN BY	WCH
DESIGNED BY	WCH
CHECKED BY	MJF
DATE	01-10-2025
SCALE	As indicated
REVISIONS	

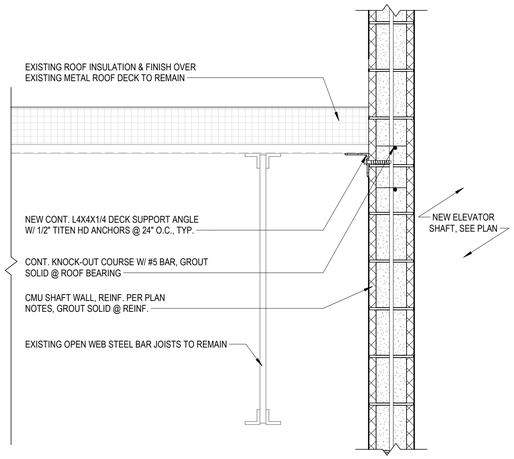
S2.01

PROJECT NO 03230077.00



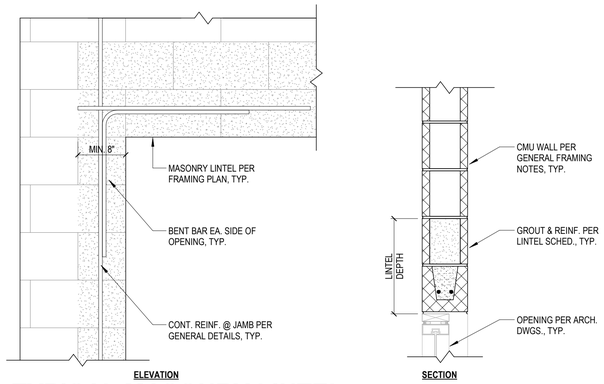
MODIFIED JOIST BEARING @ NEW CMU SHAFT

1 S2.02 **1" = 1'-0"**



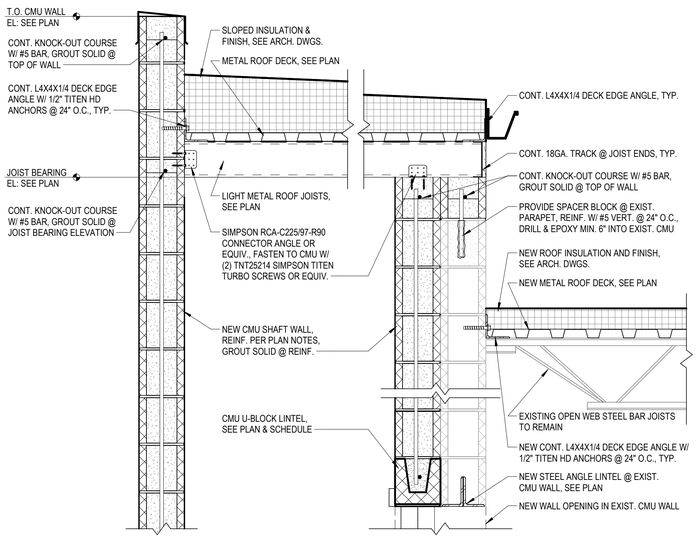
EXISTING ROOF BEARING @ NEW CMU SHAFT

2 S2.02 **1" = 1'-0"**



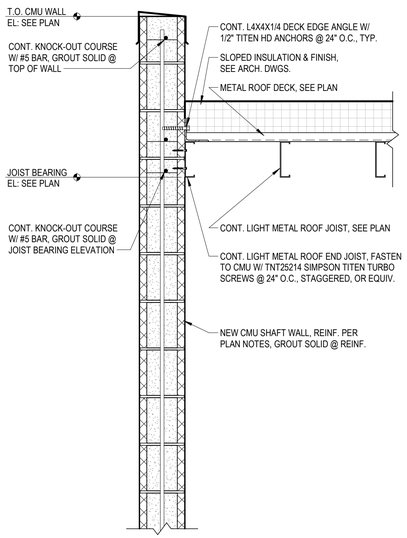
TYPICAL MASONRY LINTEL ANCHORAGE

1" = 1'-0"



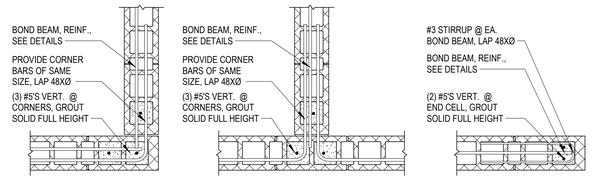
ELEVATOR SHAFT ROOF JOIST BEARING

3 S2.02 **1" = 1'-0"**



ELEVATOR SHAFT ROOF BEARING

4 S2.02 **1" = 1'-0"**



NOTES:

1. AT CORNERS AND INTERSECTIONS, EVERY OTHER COURSE SHALL BE IN DIRECT MASONRY BOND WITH BLOCKS OF ALTERNATE WALL, WITH MINIMUM 4" BEARING.

2. VERTICAL BARS SHALL BE SPLICED WITH BARS BELOW AND DOWELS FROM CONCRETE FOOTING. SPLICES SHALL BE LAPPED 48X BAR DIAMETER, UNLESS NOTED OTHERWISE.

TYPICAL CMU WALL DETAILS

3/4" = 1'-0"

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New River Valley
Shenandoah Valley
www.balzer.cc
1208 Corporate Circle
Roanoke, VA 24018
540.772.9580

COMMONWEALTH OF VIRGINIA
MICHAEL J. FITZGERALD
Lic. No. 051534
01-10-2025
PROFESSIONAL ENGINEER

AHCS SUBSTANCE USE EXPANSION

INTERIOR RENOVATION

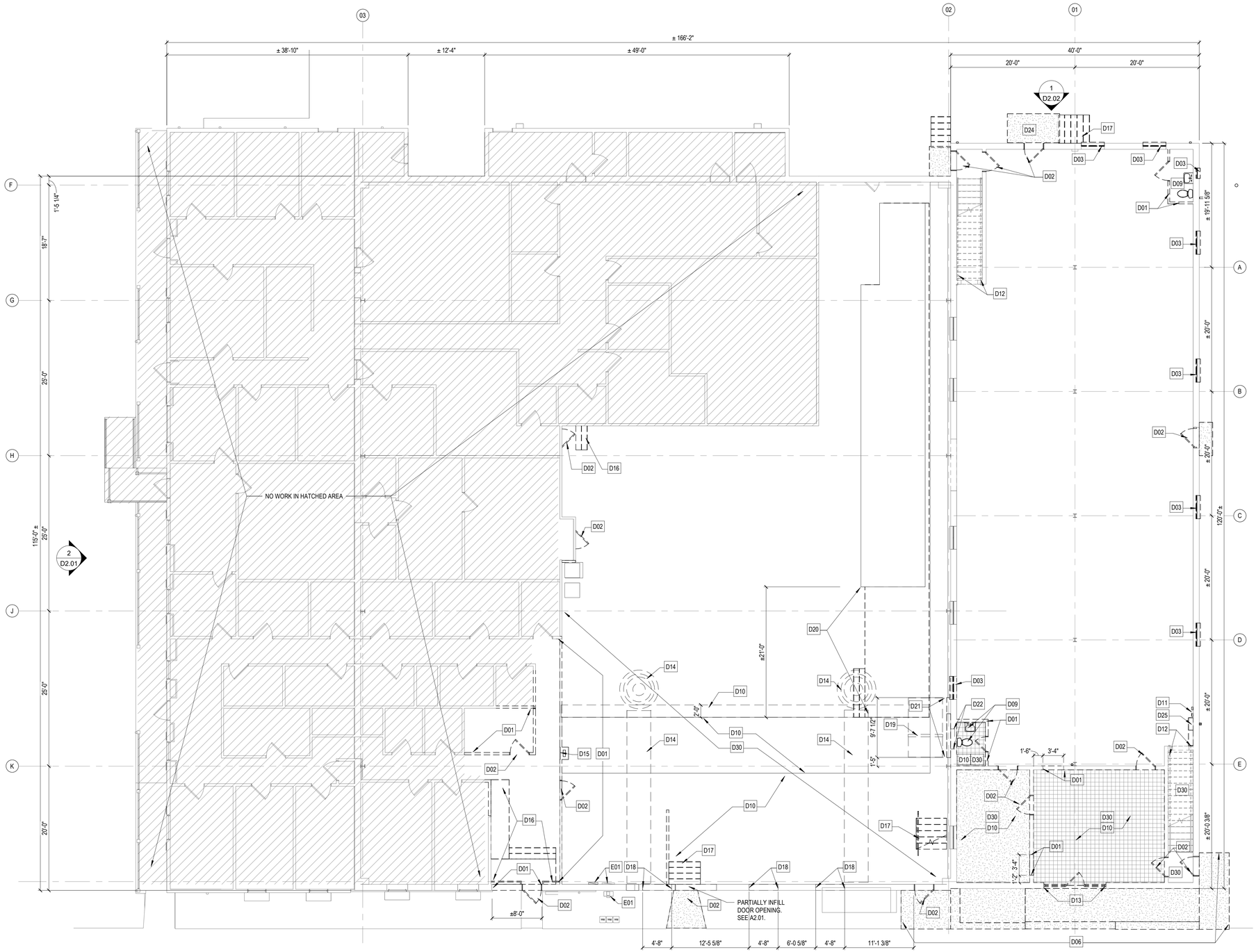
STRUCTURAL DETAILS

311 SOUTH MONROE AVENUE
320 EAST PINE STREET
COVINGTON, VIRGINIA 24426

DRAWN BY	**WCH**
DESIGNED BY	**WCH**
CHECKED BY	**MJF**
DATE	**01-10-2025**
SCALE	**As indicated**
REVISIONS	

S2.02

PROJECT NO 03230077.00



DEMOLITION NOTES

D01	REMOVE PORTION OF WALL
D02	REMOVE DOOR. IF EXTERIOR, PROTECT OPENING.
D03	REMOVE WINDOW, PROTECT OPENING
D04	REMOVE GUTTER AND DOWNSPOUT
D05	REMOVE BUILT-UP ROOF
D06	REMOVE EXISTING CONCRETE STOOP AND SIDEWALK
D07	REMOVE CANOPY FROM EXISTING STRUCTURAL STEEL SUPPORTS. EXISTING STEEL SUPPORTS TO REMAIN.
D08	REMOVE ROOFTOP MECHANICAL VENT AND PITCH PAN
D09	REMOVE EXISTING PLUMBING FIXTURES AND CAP PIPES
D10	REMOVE EXISTING FINISH FLOORING
D11	REMOVE ELECTRICAL PANEL BOX
D12	REMOVE EXISTING HANDRAILS
D13	REMOVE EXISTING STOREFRONT, PROTECT OPENING
D14	REMOVE EXISTING HVAC DUCTS , DIFFUSERS, AND EQUIPMENT TO UNDERSIDE OF DECK
D15	REMOVE UNUSED MASONRY FLUE
D16	REMOVE WOOD STAIRS AND RAMP
D17	REMOVE EXISTING CONCRETE STAIRS
D18	CUT HOLE IN MASONRY WALL FOR OPENING. SEE EXTERIOR ELEVATIONS.SEE STRUCT DWGS FOR HEADER/LINTEL. SEE DOOR AND/OR WINDOW SCHEDULE.
D19	REMOVE PORTION OF EXIST ROOF JOIST FOR ELEVATOR SHAFT. SUPPORT STRUCTURE DURING DEMO. SEE STRUCTURAL DWGS.
D20	REMOVE EXIST RAISED WOODEN FLOOR AS REQ'D FOR NEW ELEVATOR AND MECH ROOM
D21	REMOVE EXIST CMU AS REQ'D FOR ELEVATOR SHAFT
D22	CUT HOLE IN MASONRY WALL FOR ELEVATOR OPENING. PROTECT OPENING.
D23	REMOVE EXISTING LIGHTING FIXTURE
D24	REMOVE EXISTING CONCRETE AND MASONRY STOOP
D25	REMOVE MISC ELECTRICAL EQUIPMENT
D26	CUT HOLE IN ROOF FOR ELEVATOR SHAFT. PROTECT OPENING. SEE STRUCTURAL DRAWINGS FOR ROOF FRAMING CHANGES.
D27	REMOVE ROOF ACCESS HATCH. PROTECT OPENING.
D28	REMOVE EXISTING PIPE AND BOLLARD
D30	REMOVE EXISTING ACT CEILING AND GRID

EXISTING MATERIALS NOTES

E01	EXISTING ELECTRICAL EQUIPMENT TO REMAIN
E02	EXISTING MECHANICAL EQUIPMENT TO REMAIN
E03	EXISTING TO REMAIN
E04	EXISTING COPING TO REMAIN
E05	EXISTING GLASS BLOCK TO REMAIN
E06	EXISTING CMU FEATURE TO REMAIN

1 D1.01 FIRST FLOOR DEMOLITION PLAN

1/8" = 1'-0"

ACTUAL NORTH

PLAN NORTH

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Roanoke / Richmond
Shenandoah Valley
New River Valley
www.balzer.cc
1208 Corporate Circle
Roanoke, VA 24018
540.772.9580

COMMONWEALTH OF VIRGINIA
ROBERT W. PILKINGTON
Lic. No. 013210
01/10/2025
ARCHITECT

AHCS SUBSTANCE USE EXPANSION

INTERIOR RENOVATION

FIRST FLOOR DEMOLITION PLAN & NOTES

311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

DRAWN BY	MFK
DESIGNED BY	RWP/MFK
CHECKED BY	RWP
DATE	01/10/2025
SCALE	1/8" = 1'-0"
REVISIONS	

D1.01

PROJECT NO 03230077.00

HAZARDOUS MATERIALS NOTES

1. ANY HAZARDOUS MATERIALS REMOVED (ASBESTOS, OIL, GAS, LEAD-BASE PAINT, OR SIMILAR HAZARDS) SHALL BE COMPLETELY REMOVED FROM WORK AREAS AND DISPOSED OF OFFSITE. DISPOSAL SHALL BE DONE IN A MANNER COMPLIANT WITH ALL LOCAL, STATE AND FEDERAL LAWS AND ALL GOVERNING BODIES HAVING JURISDICTION.
2. THE OWNER SHALL PROVIDE AN ASBESTOS INSPECTION REPORT.
3. CORES OF THE EXISTING CMU AT THE LOCATION OF THE NEW ELEVATOR SHOULD BE TAKEN. IF THERE IS FILL IN THE CELLS OF THE EXISTING CMU, IT SHOULD BE TESTED FOR ASBESTOS-CONTAINING MATERIALS.
4. SEE SURVEY FOR ASBESTOS-CONTAINING MATERIALS FOR LOCATIONS OF ANY MATERIALS THAT WILL BE DISTURBED AS PART OF DEMOLITION WORK. ANY MATERIALS THAT ARE DISTURBED OR REMOVED DURING DEMOLITION PROCESSES SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A MANNER THAT MEETS ALL FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS.
5. THE OWNER SHALL PROVIDE A LEAD-BASED PAINT INSPECTION REPORT.

GENERAL REPAIR NOTES

1. REPAIR DAMAGES CAUSED TO ADJACENT FACILITIES BY DEMOLITION WORK.
2. REPAIR DRYWALL WHERE CASEWORK AND TRIM ARE REMOVED.
3. MAINTAIN CONTINUITY OF FINISHED SURFACE WITH LIKE QUALITIES AND CONSTRUCTION AND WITH LIKE FINISHES.
4. RESTORE EXPOSED FINISHES OF PATCHED AREAS AND WHERE NECESSARY EXTEND FINISH RESTORATION INTO RETAINED ADJOINING WORK IN A MANNER WHICH WILL ELIMINATE EVIDENCE OF PATCHING AND REFINISHING.
5. DO NOT CUT AND PATCH WORK IN A MANNER THAT WOULD RESULT IN SUBSTANTIAL VISUAL EVIDENCE OF CUT AND PATCH WORK.
6. USE MATERIALS FOR CUTTING AND PATCHING THAT ARE IDENTICAL TO EXISTING MATERIALS.
7. COORDINATE ALL DEMOLITION AND RESTORATION WORK WITH OWNERS. USE MATERIALS FOR PATCHING THAT ARE IDENTICAL TO EXISTING MATERIALS.

GENERAL DEMOLITION FINISH NOTES

1. PATCH AND REPAIR TO MATCH EXISTING CEILINGS, FLOORS, OR WALL FINISHES AFFECTED BY DEMOLITION WORK UNLESS OTHERWISE NOTED ON THE PLANS. NEW WORK TO HAVE SMOOTH AND LEVEL TRANSITION WITH THE EXISTING CONSTRUCTION.
2. ALL ABANDONED FLOOR PENETRATIONS SHALL BE PATCHED WITH LIKE MATERIALS AND REPAIRED TO MATCH EXISTING CONSTRUCTION AND TO MAINTAIN FLOOR INTEGRITY.
3. ANY ITEMS REMOVED BY CONTRACTOR FROM WALLS TO HAVE THE REMAINING HOLE PATCHED TO MATCH THE EXISTING CONSTRUCTION.
4. PROVIDE SMOOTH WALL SURFACES BEFORE INSTALLING NEW WALL BASE OR PAINTING AN EXISTING WALL.
5. REPLACE DAMAGED CEILING TILE AND CEILING GRIDS WITH NEW TILE AND GRID TO MATCH EXISTING. PATCH AND REPAIR GYPSUM BOARD CEILINGS AS REQUIRED FOR NEW WORK.

GENERAL SALVAGE NOTES

1. SALVAGE AND REUSE AND/OR RECYCLE MATERIALS AS NOTED IN CONSTRUCTION DRAWINGS AND CONTRACTS.
2. COORDINATE WITH THE OWNER'S REPRESENTATIVE THE SALVAGE OF LIGHT FIXTURES, FURNISHINGS, DOORS, AND MISCELLANEOUS EQUIPMENT.
3. CARE SHALL BE TAKEN IN REMOVAL OF REUSED ITEMS THAT CAN BE RELOCATED. RETURN TO OWNER ALL OTHER ITEMS.
4. ALL ITEMS WHICH ARE HUNG ON WALLS TO BE DEMOLISHED (BULLETIN BOARDS, ILLUMINATORS, FIRE EXTINGUISHERS, ETC.) SHALL BE OFFERED TO THE OWNER. ITEMS NOT DESIRED BY THE OWNER SHALL BE REMOVED BY THE CONTRACTOR.
5. CONTRACTOR SHALL COORDINATE WITH OWNER FOR ANY MATERIAL BEING REMOVED THAT ARE TO BE STORED FOR REUSE IN CONSTRUCTION OR FUTURE USE BY OWNER.

GENERAL TEMPORARY WORK NOTES

1. LOCATE TEMPORARY WALLS WITH EXIT SIGNS WHERE REQUIRED. DO NOT BLOCK EXISTING FIRE EXITS. THE CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE BEFORE ERECTING TEMPORARY PARTITIONS. FOR COORDINATION OF THESE WALLS – REFER TO THE PLANS FOR LOCATIONS OF TEMPORARY WALLS.

GENERAL CONTINUOUS OPERATION NOTES

1. ENSURE THAT DEMOLITION WORK DOES NOT INTERFERE WITH OR PROHIBIT THE CONTINUING OCCUPATION OF ADJACENT OPERATIONS WITHIN THE STRUCTURE. THIS INCLUDES BUT IS NOT LIMITED TO THE SELECTIVE DEMOLITION OF PARTITIONS, ELECTRICAL AND MECHANICAL SYSTEMS. INFORM THE OWNER A MINIMUM OF 72 HOURS OF DEMOLITION ACTIVITIES THAT WILL AFFECT NORMAL OPERATION OF THE BUILDING.
2. ALL WORK SHALL BE SCHEDULED IN A MANNER TO MAINTAIN THE OWNERS CONTINUOUS USE OF THE BUILDING.

GENERAL FIRE RATING DEMOLITION NOTES

1. OPENINGS TO BE CLOSED IN EXISTING FIRE OR SMOKE WALLS SHALL BE PATCHED TO MATCH EXISTING CONSTRUCTION AND TO MAINTAIN THE INTEGRITY OF THE WALL. TYPICAL FOR ALL WORK DONE IN AREAS WHERE NEW WORK IS BEING DONE.

GENERAL STRUCTURAL DEMOLITION NOTES

1. THESE DEMOLITION PLAN DRAWINGS ARE INTENDED TO SHOW THE GENERAL CONDITIONS WHICH ARE EXPECTED TO OCCUR. VERIFY ALL CONDITIONS BEFORE PROCEEDING WITH THE DEMOLITION WORK. WHERE DISCREPANCIES INVOLVE STRUCTURAL ITEMS, REPORT SUCH DIFFERENCES AND SECURE INSTRUCTIONS BEFORE PROCEEDING IN THE AFFECTED AREA.
2. DEMOLITION ITEMS SHOWN ARE INTENDED TO BE NON- STRUCTURAL ITEMS ONLY. THE CONTRACTOR SHALL INSPECT ALL ITEMS TO BE DEMOLISHED PRIOR TO DEMO TO ENSURE ITEMS ARE NOT STRUCTURAL ELEMENTS. NOTIFY ARCHITECT/ENGINEER IMMEDIATELY AND PRIOR TO DEMOLITION FOR ANY ITEMS THAT APPEAR TO BE STRUCTURAL/ LOAD-BEARING.
3. A PROFESSIONAL ENGINEER SHALL BE CONSULTED IN ALL CASES WHERE CUTTING INTO AN EXISTING STRUCTURAL PORTION OF ANY BUILDING IS EITHER EXPEDIENT OR NECESSARY, PRIOR TO PROCEEDING WITH WORK. PRIOR TO CUTTING INTO STRUCTURAL PORTIONS OF ANY BUILDING SHALL PROVIDE REINFORCEMENT AND/OR SUPPORT SATISFACTORY TO THE PROFESSIONAL ENGINEER.

GENERAL MECHANICAL, ELECTRICAL AND PLUMBING DEMOLITION NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ARCHITECT AND COORDINATE INSPECTIONS (IF REQUIRED) BY STATE AGENCIES AND MEET ANY APPLICABLE CODE FOR REUSE OF EXISTING PLUMBING FIXTURES, DIFFUSERS AND DUCTWORK.
2. REMOVE ALL EXISTING NON-COMPLIANT GROUND-FAULT CIRCUIT INTERRUPTED OUTLETS.
3. REMOVE ALL EXISTING BROKEN OR PAINTED OUTLET COVER PLATES.
4. AFTER REMOVAL OF PLUMBING FIXTURES, CAP WASTE LINES BELOW FLOOR SLAB AND SUPPLY LINES ABOVE CEILING.
5. AT ALL AREAS WHERE MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT IS REMOVED, PROPERLY CAP AND TERMINATE ALL UTILITIES AS REQUIRED BY ALL PREVAILING NATIONAL AND LOCAL CODES.

GENERAL DEMOLITION NOTES

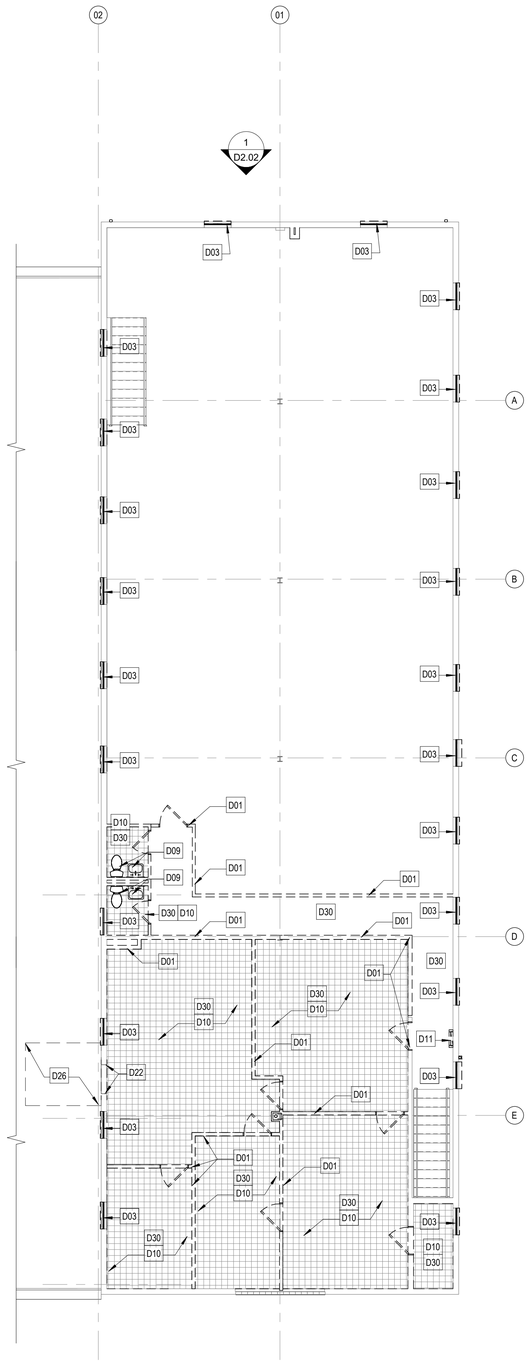
1. DRAWINGS OF EXISTING CONDITIONS HAVE BEEN COMPILED FROM EXISTING DATA SUPPLIED BY THE OWNER AND BASED ON FIELD INVESTIGATIONS. THE ARCHITECT MAKES NO WARRANTY EITHER EXPRESSED OR IMPLIED, FOR THE ACCURACY OR COMPLETENESS OF THE EXISTING INFORMATION RECORDED. VERIFY ALL EXISTING CONDITIONS. NOTIFY ARCHITECT OF ANY DISCREPANCIES FOR CLARIFICATION PRIOR TO PROCEEDING WITH WORK.
2. MOST DEMO ITEMS HAVE BEEN NOTED ON PLAN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DEMOLISH ANY ITEMS NOT NECESSARILY NOTED BUT INTENDED TO BE REMOVED, AND PREPARE EXISTING ITEMS TO REMAIN FOR NEW WORK.PROVIDE ALL NECESSARY BARRICADES AND OTHER FORMS OF PROTECTION AS REQUIRED TO PROTECT THE GENERAL PUBLIC FROM INJURY DUE TO DEMO WORK.
3. WHERE ITEMS ARE TO BE REMOVED THE CONTRACTOR SHALL BE CAUTIONED NOT TO DAMAGE ITEMS THAT ARE TO BE RETAINED BY OWNER OR RELOCATED. ALL EXPOSED OR DAMAGED AREAS, AFTER REMOVAL OF ITEMS, SHALL BE REPAIRED.
4. DEMOLITION WORK WILL BE GOVERNED BY THE EXTENT OF NEW CONSTRUCTION INVOLVED. CONTRACTOR WILL VERIFY AND COORDINATE DEMOLITION WORK WITH RESPECT TO THE NEW CONSTRUCTION. CONTRACTOR TO VERIFY EXISTING CONDITIONS BEFORE START OF WORK.
5. REMOVAL OF EXISTING EQUIPMENT, PIPING, DUCTS, AND SIMILAR UTILITIES SHALL INCLUDE ALL ANCHORS, HANGERS, AND OTHER ACCESSORIES. AFTER REMOVAL, FLOORS, WALLS AND CEILINGS SHALL BE FINISHED TO MATCH ADJOINING SURFACES OR SHALL BE PREPARED TO RECEIVE NEW FINISHES AS INDICATED IN THE NEW FINISH SCHEDULE. MAINTAIN EXISTING FINISHES AS NOTED ON THE NEW FINISH SCHEDULE.
6. MATCH THICKNESS OF EXISTING WALL AND CEILING FINISH MATERIAL WHERE PATCHING AND REPAIRING IS REQUIRED.
7. COORDINATE DEMOLITION PLANS WITH PLANS FOR NEW CONSTRUCTION FOR EXTENT OF REMOVAL. REMOVE ONLY THOSE PORTIONS OF WALLS AND FLOORS NECESSARY TO ACCOMMODATE NEW CONSTRUCTION. TAKE REASONABLE CARE IN REMOVAL OF ITEMS TO BE RELOCATED AND REUSED.
8. CONTRACTOR SHALL CHECK ALL EXISTING CORRIDOR WALLS IN THOSE AREAS OF RENOVATION FOR OPENINGS. ANY OPENINGS SHALL BE CLOSED TIGHT AS REQUIRED. TO MATCH EXISTING CONSTRUCTION AND TO MAINTAIN NEW OR EXISTING WALL RATING. THIS IS TYPICAL FOR ALL WORK DONE IN AREAS WHERE RENOVATION IS BEING DONE.
9. ALL WALLS SHOWN BY DASHED LINES ARE TO BE REMOVED COMPLETELY, ALONG WITH DOORS AND FRAMES. ELECTRICAL ITEMS, PLUMBING FIXTURES, CASEWORK, AND SIMILAR INFRASTRUCTURE.
10. CONCRETE FLOORS SHALL BE REMOVED FOR INSTALLATION AND CONNECTION OF NEW PLUMBING. PATCH WITH 3,000 PSI CONCRETE.
11. SEE LIMITS OF CONSTRUCTION ON NEW FLOOR PLANS. GENERALLY, ROOMS OUTSIDE OF LIMITS OF CONSTRUCTION ARE NOT TO HAVE ANY WORK DONE IN THEM WITH THE EXCEPTION OF FLOOR OR CEILING TO BE PATCHED OR REPAIRED FOR INSTALLATION OF NEW WORK. CONTRACTOR SHALL USE EXISTING FLOOR OR CEILING MATERIAL FOR REPAIR; SALVAGED FROM AREAS WHERE EXISTING MATERIALS ARE REMOVED OR ALL NEW MATERIAL IN A ROOM IF NECESSARY THAT MATCH EXISTING FINISHES.
12. ALL EXISTING DIMENSION NOTES ON THIS PLAN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO NEW WORK. IF THE CONTRACTOR FINDS ANY DISCREPANCY BETWEEN EXISTING CONDITION AND DRAWING, CONTRACTOR MUST NOTIFY THE ARCHITECT IMMEDIATELY AND REQUEST CLARIFICATION.
13. CONTRACTOR MUST REMOVE EXISTING FINISHES AS NECESSARY PRIOR TO INSTALLATION OF NEW FINISHES.
14. ALL FLOORS AND WALLS OF EXISTING AREAS THAT WILL BE AFFECTED BY CONSTRUCTION PROCEDURES INCLUDING DEBRIS REMOVAL MUST RECEIVE PROTECTION. DUST BARRIERS MUST BE INSTALLED BETWEEN WORK AREAS, UNDISTURBED AREAS AND OCCUPIED SPACES.
15. PROVIDE TEMPORARY SHORING OF EXISTING STRUCTURE ABOVE AS REQUIRED WHERE ANY EXISTING LOAD BEARING ELEMENTS (OR PORTION OF) ARE TO BE REMOVED AS REQUIRED BY FLOOR PLAN; PROVIDE NEW HEADER/STRUCTURE/INFILL PER NEW FLOOR PLAN; REPAIR/PATCH WALLS/FLOOR/CEILING AS REQUIRED.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES; INCLUDING BUT NOT LIMITED TO: TEMPORARY/PERMANENT BEAMS AND LINTELS; SHORING OF EXISTING CONSTRUCTION; AND FOR SAFETY PRECAUTIONS AND PROGRAMS AS THEY RELATE TO THE WORK OF THIS PROJECT.
17. ALL DEMOLISHED MATERIAL SHALL BE REMOVED FROM SITE UNLESS NOTED OTHERWISE.

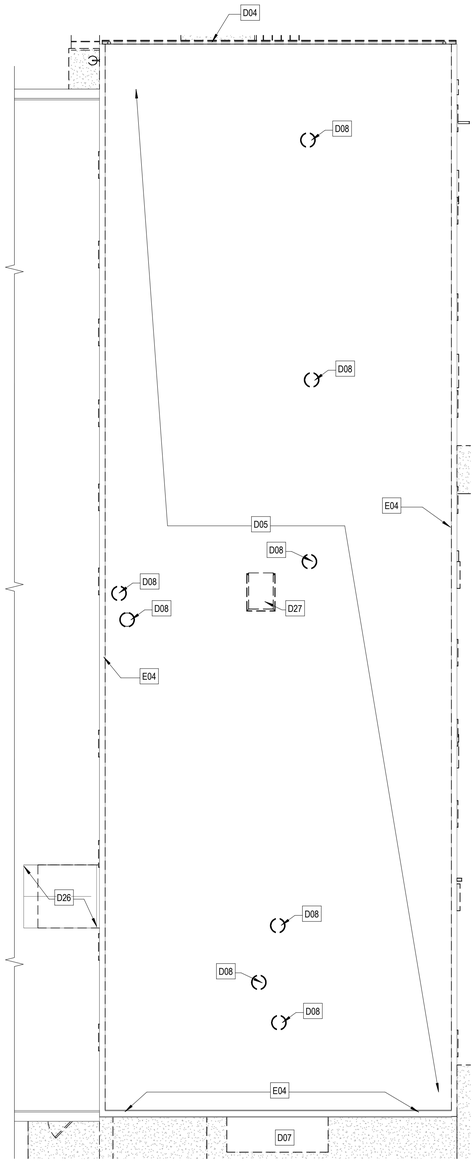
DEMOLITION NOTES

D01	REMOVE PORTION OF WALL
D02	REMOVE DOOR. IF EXTERIOR, PROTECT OPENING.
D03	REMOVE WINDOW, PROTECT OPENING
D04	REMOVE GUTTER AND DOWNSPOUT
D05	REMOVE BUILT-UP ROOF
D06	REMOVE EXISTING CONCRETE STOOP AND SIDEWALK
D07	REMOVE CANOPY FROM EXISTING STRUCTURAL STEEL SUPPORTS. EXISTING STEEL SUPPORTS TO REMAIN.
D08	REMOVE ROOFTOP MECHANICAL VENT AND PITCH PAN
D09	REMOVE EXISTING PLUMBING FIXTURES AND CAP PIPES
D10	REMOVE EXISTING FINISH FLOORING
D11	REMOVE ELECTRICAL PANEL BOX
D12	REMOVE EXISTING HANDRAILS
D13	REMOVE EXISTING STOREFRONT, PROTECT OPENING
D14	REMOVE EXISTING HVAC DUCTS , DIFFUSERS, AND EQUIPMENT TO UNDERSIDE OF DECK
D15	REMOVE UNUSED MASONRY FLUE
D16	REMOVE WOOD STAIRS AND RAMP
D17	REMOVE EXISTING CONCRETE STAIRS
D18	CUT HOLE IN MASONRY WALL FOR OPENING. SEE EXTERIOR ELEVATIONS.SEE STRUCT DWGS FOR HEADER/LINTEL. SEE DOOR AND/OR WINDOW SCHEDULE.
D19	REMOVE PORTION OF EXIST ROOF JOIST FOR ELEVATOR SHAFT. SUPPORT STRUCTURE DURING DEMO. SEE STRUCTURAL DWGS.
D20	REMOVE EXIST RAISED WOODEN FLOOR AS REQ'D FOR NEW ELEVATOR AND MECH ROOM
D21	REMOVE EXIST CMU AS REQ'D FOR ELEVATOR SHAFT
D22	CUT HOLE IN MASONRY WALL FOR ELEVATOR OPENING. PROTECT OPENING.
D23	REMOVE EXISTING LIGHTING FIXTURE
D24	REMOVE EXISTING CONCRETE AND MASONRY STOOP
D25	REMOVE MISC ELECTRICAL EQUIPMENT
D26	CUT HOLE IN ROOF FOR ELEVATOR SHAFT. PROTECT OPENING. SEE STRUCTURAL DRAWINGS FOR ROOF FRAMING CHANGES.
D27	REMOVE ROOF ACCESS HATCH. PROTECT OPENING.
D28	REMOVE EXISTING PIPE AND BOLLARD
D30	REMOVE EXISTING ACT CEILING AND GRID

EXISTING MATERIALS NOTES

E01	EXISTING ELECTRICAL EQUIPMENT TO REMAIN
E02	EXISTING MECHANICAL EQUIPMENT TO REMAIN
E03	EXISTING TO REMAIN
E04	EXISTING COPING TO REMAIN
E05	EXISTING GLASS BLOCK TO REMAIN
E06	EXISTING CMU FEATURE TO REMAIN





1 D1.02 SECOND FLOOR DEMOLITION PLAN

1/8" = 1'-0"

ACTUAL NORTH

PLAN NORTH

2 D1.02 ROOF DEMOLITION PLAN

1/8" = 1'-0"

ACTUAL NORTH

PLAN NORTH

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AHCS SUBSTANCE USE EXPANSION

INTERIOR RENOVATION

SECOND FLOOR AND ROOF DEMOLITION PLAN

311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

DRAWN BY	MFK
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CHECKED BY	RWP
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SCALE	As indicated
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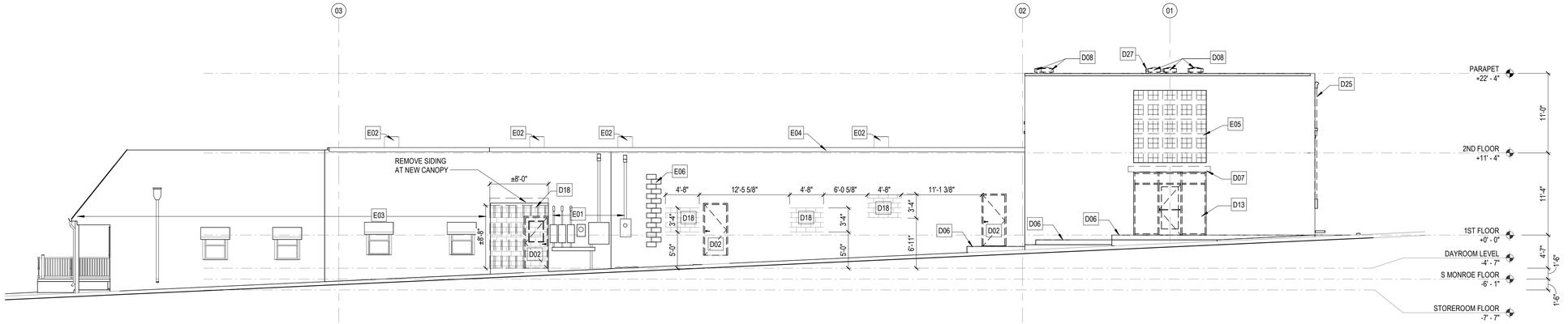
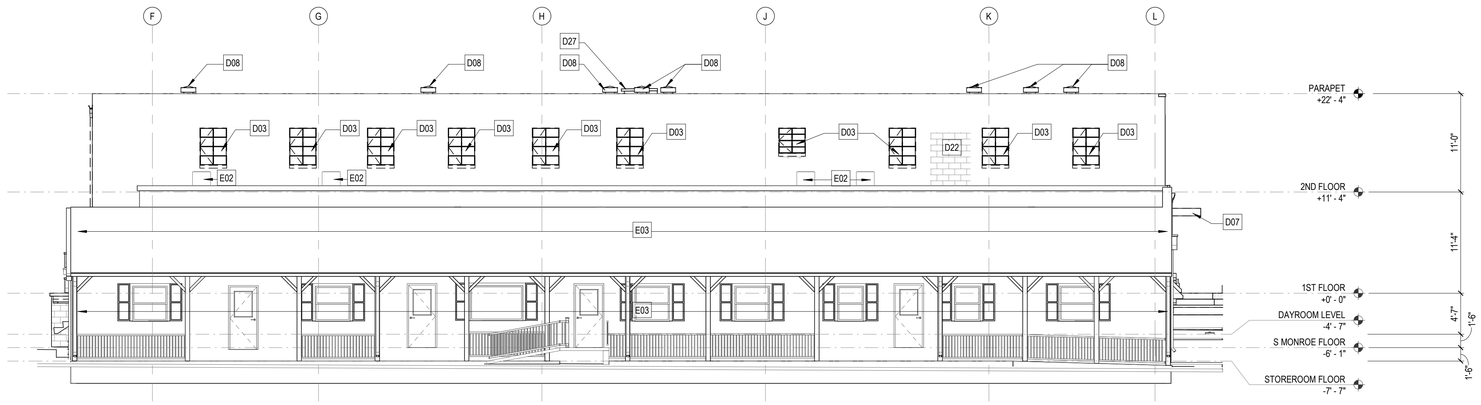
D1.02

PROJECT NO 03230077.00



1 / D2.01 EXTERIOR DEMOLITION ELEVATION

1/8" = 1'-0"



2 / D2.01 EXTERIOR DEMOLITION ELEVATION

1/8" = 1'-0"

EXISTING MATERIALS NOTES	
E01	EXISTING ELECTRICAL EQUIPMENT TO REMAIN
E02	EXISTING MECHANICAL EQUIPMENT TO REMAIN
E03	EXISTING TO REMAIN
E04	EXISTING COPING TO REMAIN
E05	EXISTING GLASS BLOCK TO REMAIN
E06	EXISTING CMU FEATURE TO REMAIN

DEMOLITION NOTES	
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AHCS SUBSTANCE USE EXPANSION

INTERIOR RENOVATION

EXTERIOR ELEVATIONS DEMOLITION

311 S MONROE AVE & 320 E PINE ST
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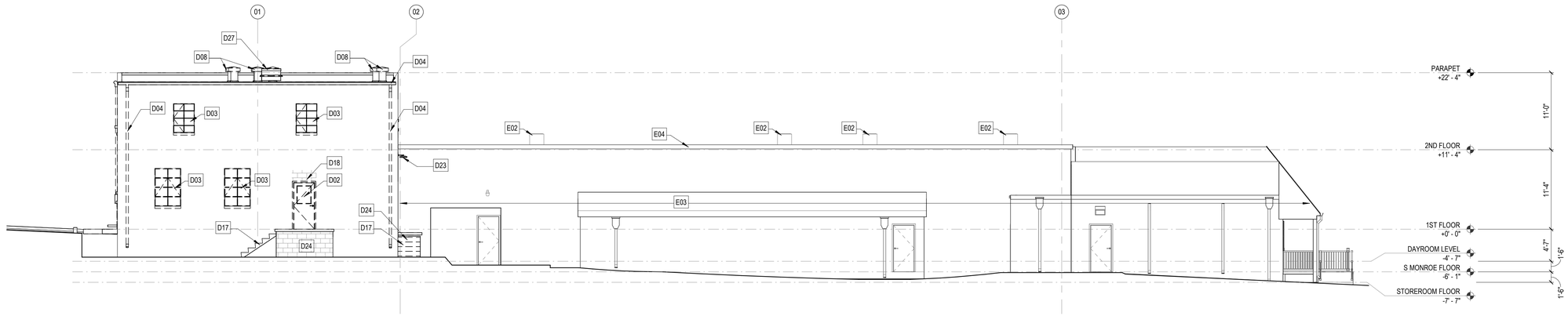
DRAWN BY	MFK
DESIGNED BY	RWP/MFK
CHECKED BY	RWP
DATE	01/10/2025
SCALE	1/8" = 1'-0"
REVISIONS	

D2.01

PROJECT NO 03230077.00



1 D2.02 EXTERIOR DEMOLITION ELEVATION

1/8" = 1'-0"

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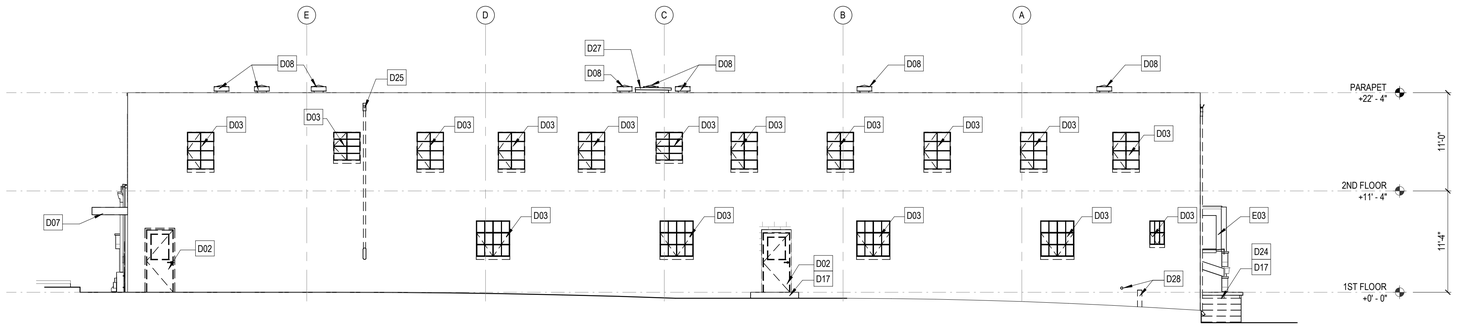

2 D2.02 EXTERIOR DEMOLITION ELEVATION

1/8" = 1'-0"

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AHCS SUBSTANCE USE EXPANSION

INTERIOR RENOVATION

EXTERIOR ELEVATIONS DEMOLITION

311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

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CHECKED BY	RWP
DATE	01/10/2025
SCALE	1/8" = 1'-0"
REVISIONS	

D2.02

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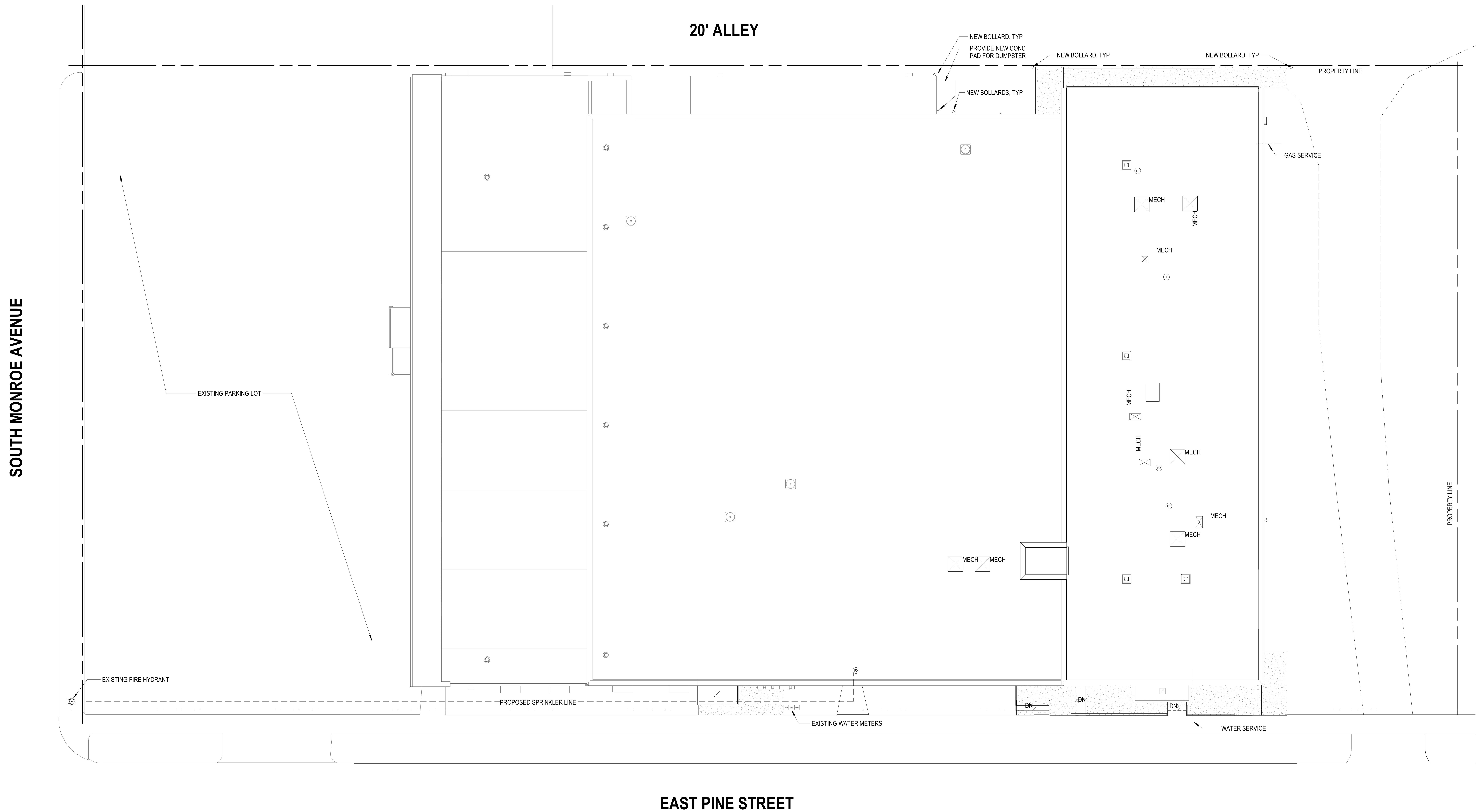
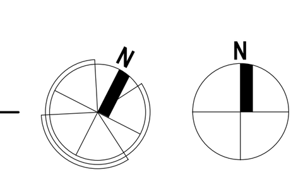


1
A1.00
ARCHITECTURAL SITE PLAN
1" = 10'-0"



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AHCS SUBSTANCE USE EXPANSION
INTERIOR RENOVATION
ARCHITECTURAL SITE PLAN
311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

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REVISIONS	

A1.00
PROJECT NO 03230077.00

NO WORK IN HATCHED AREA

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

ACTUAL NORTH | PLAN NORTH

KEY PLAN

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AHCS SUBSTANCE USE EXPANSION
INTERIOR RENOVATION
FIRST FLOOR PLAN

311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

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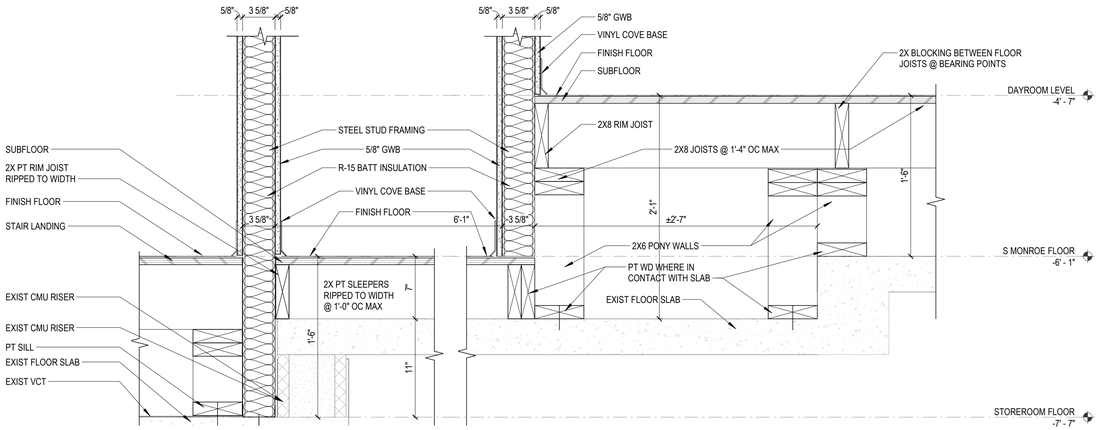
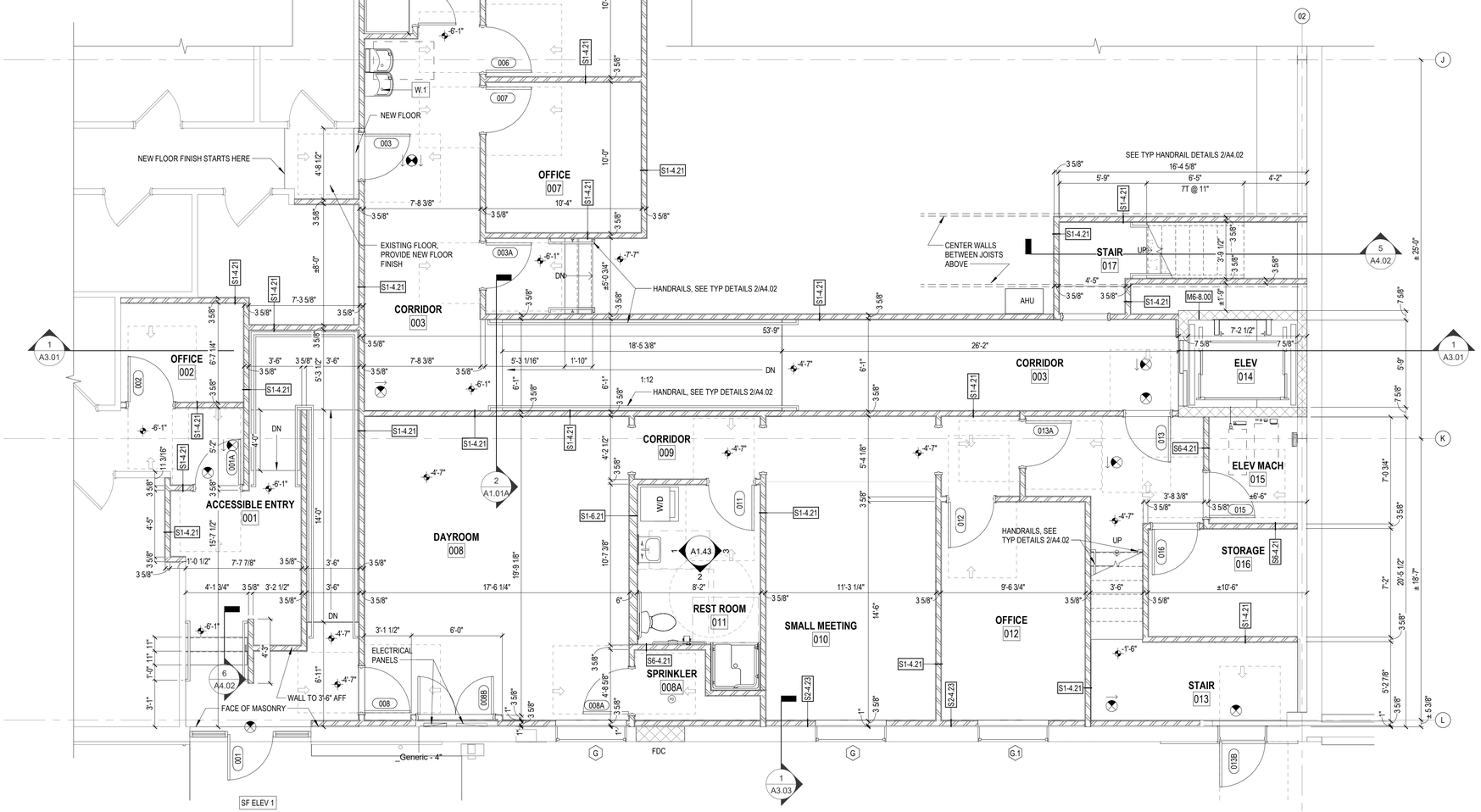
REVISIONS	

A1.01

PROJECT NO 03230077.00



2 FLOOR FRAMING @ EXISTING RISERS
A1.01A **1 1/2" = 1'-0"**



1 FIRST FLOOR PLAN-AREA A
A1.01A **1/4" = 1'-0"**

ACTUAL NORTH · PLAN NORTH

KEY PLAN

GENERAL FLOOR PLAN NOTES

1. REFER TO ADA ACCESSIBLE CLEARANCE INFORMATION FOR DOORS, CASEWORK, SITE WORK AND PLUMBING FIXTURES.
2. SEE PARTITION SCHEDULE FOR WALLS THAT REQUIRE SOUND ATTENUATION BLANKETS AND/OR SPECIFIC SOUND WALL CONSTRUCTIONS.
3. SEE FINISH DRAWINGS AND/OR SCHEDULE FOR SPECIFIC FINISH AND SURFACE PREPARATION REQUIREMENTS.
4. SEE REFLECTED CEILING PLANS FOR SPECIFIC CEILING TYPES, HEIGHTS, DETAILS, LIGHTS, DIFFUSERS, AND SIMILAR CONSTRUCTION.
5. SEE STRUCTURAL DRAWINGS FOR ANY MISCELLANEOUS FRAMING MEMBERS THAT ARE WITH WALL CONSTRUCTION ABOVE FINISH CEILINGS. INDICATE REINFORCEMENT REQUIREMENTS FOR CONCRETE BLOCK WALLS, AND SIMILAR STRUCTURAL ELEMENTS.
6. REFER TO PLUMBING DRAWINGS FOR FLOOR DRAIN LOCATIONS. ENSURE CONCRETE SLAB AND APPLIED FINISHES ARE SLOPED TO DRAIN AS REQUIRED. ENSURE SMOOTH TRANSITIONS.
7. FIRE EXTINGUISHERS (FE) SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. SEMI-RECESSED CABINET FULL PANEL, CLEAR ACRYLIC DOOR GLAZING, STAINLESS STEEL WITH 1-1/2" SQUARE TRIM. COORDINATE WITH LIFE SAFETY PLANS FOR PROPOSED LOCATIONS.
8. PROVIDE BLOCKING FOR WALL MOUNTED ACCESSORIES AND EQUIPMENT AS REQUIRED.
9. PROVIDE 6" STUDS AT WATER CLOSET WET WALLS UNLESS NOTED OTHERWISE.
10. FRAME ROUGH OPENING SIZE ACCORDINGLY FOR DOORS/OPENINGS NOTED AS FUTURE

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AHCS SUBSTANCE USE EXPANSION
INTERIOR RENOVATION
ENLARGED FLOOR PLAN, AREA A

311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

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SCALE	As indicated
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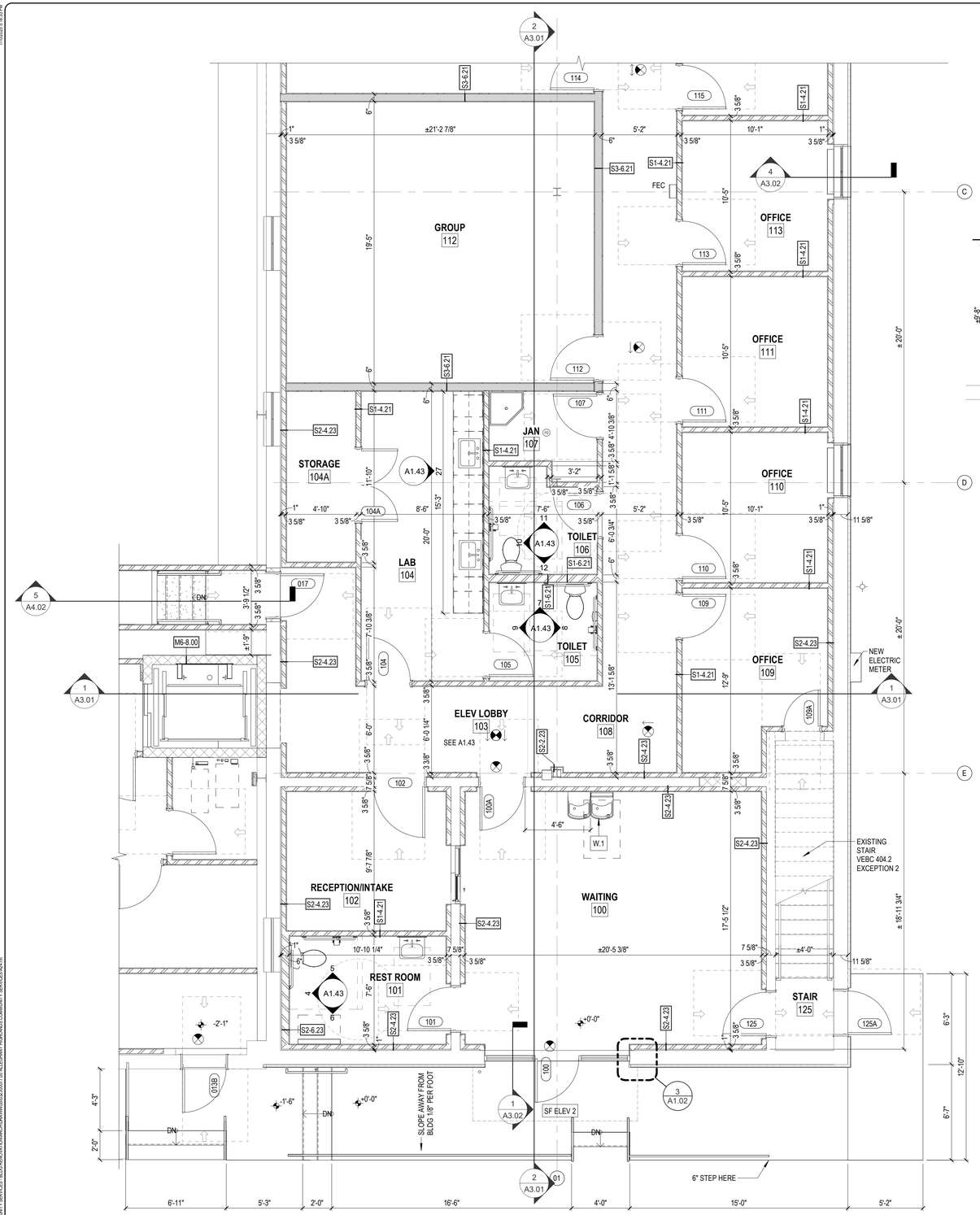
A1.01A
PROJECT NO 03230077.00

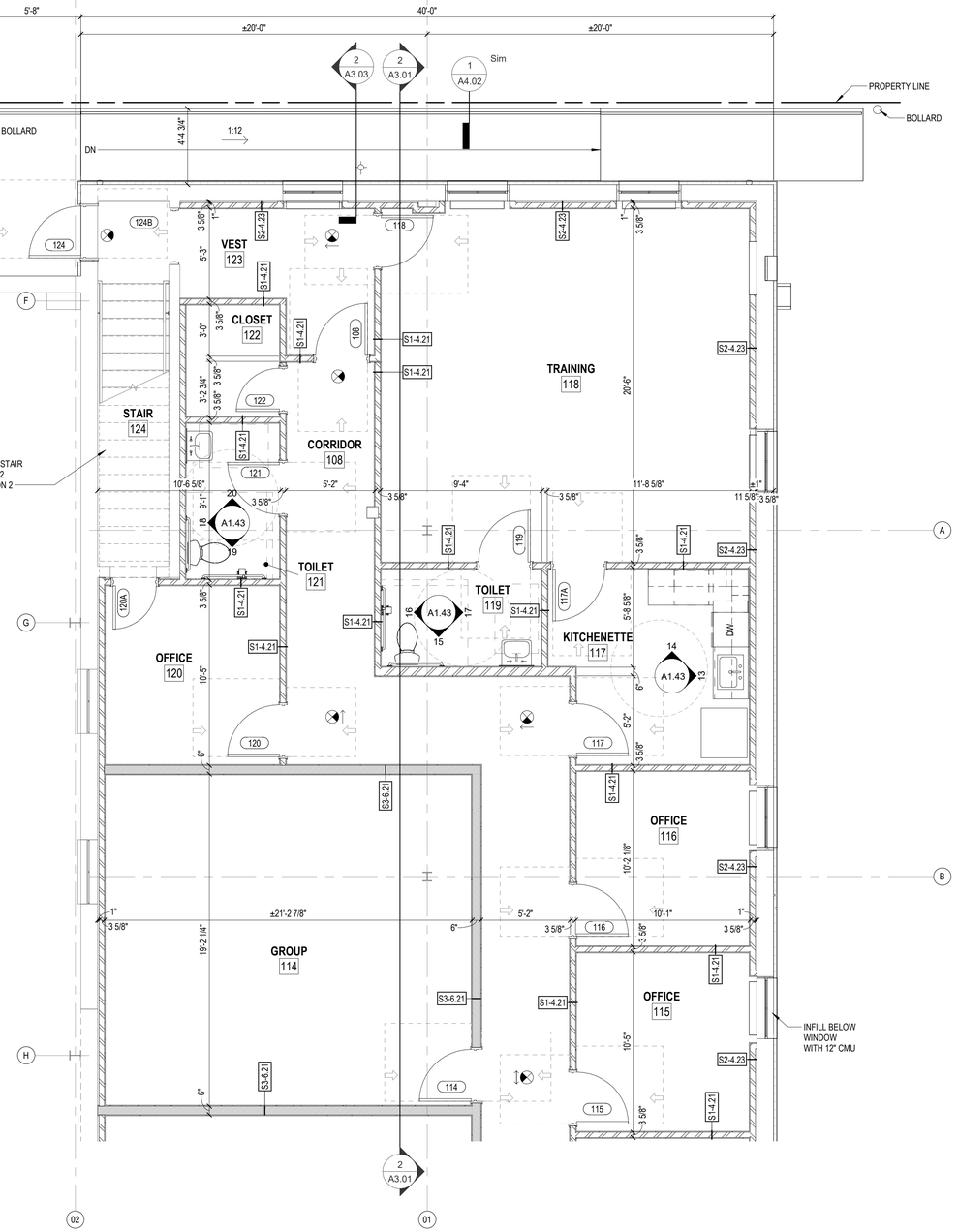


1 A1.01B **FIRST FLOOR PLAN-AREA B**
1/4" = 1'-0"

ACTUAL NORTH

PLAN NORTH

KEY PLAN



2 A1.01B **FIRST FLOOR PLAN-AREA C**
1/4" = 1'-0"

ACTUAL NORTH

PLAN NORTH

KEY PLAN

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AHCS SUBSTANCE USE EXPANSION

INTERIOR RENOVATION

ENLARGED FLOOR PLAN, AREAS B AND C

311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

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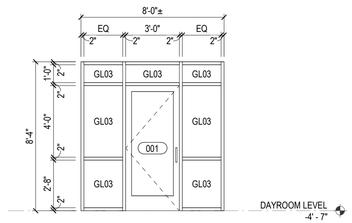
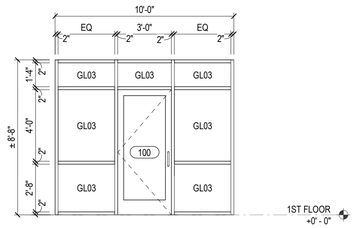
A1.01B

PROJECT NO 03230077.00

SF GLAZING

MARK	DESCRIPTION
GL03	1" THICK INSULATED TEMPERED



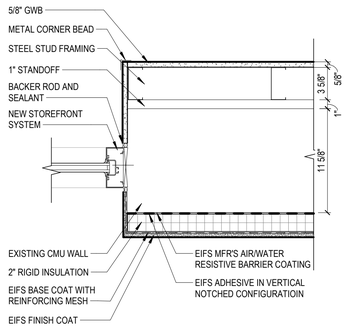


1 A1.02 SF ELEV 1

1/4" = 1'-0"

2 A1.02 SF ELEV 2

1/4" = 1'-0"



3 A1.02 STOREFRONT JAMB

1 1/2" = 1'-0"

GENERAL STOREFRONT NOTES

1. STANDARD PROFILE STOREFRONT SYSTEMS SHALL BE **ANODIZED CLEAR,** FINISH, TYPICAL.
2. REFER TO DOOR SCHEDULE FOR GLAZING TYPES USED IN DOORS.

GENERAL WINDOW NOTES

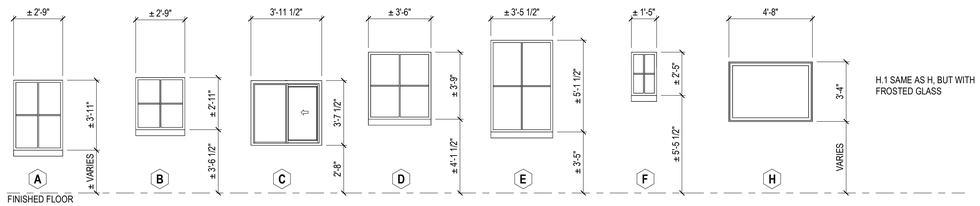
1. REFER TO OUTLINE SPECIFICATIONS FOR ADDITIONAL NOTES.
2. COORDINATE LOCATION AND DIMENSIONS WITH INFORMATION FOUND ON FLOOR PLANS AND ELEVATIONS.
3. ALL DIMENSIONS ARE SCHEMATIC NOMINAL SIZES ONLY. CONSULT WITH MANUFACTURER FOR EXACT WINDOW SELECTION AND ROUGH OPENING INFORMATION.
4. TEMPERED UNITS AS REQUIRED FOR HAZARDOUS LOCATIONS.
5. ALL GLAZING IN WINDOW UNITS WITHIN A 24" ARC OF THE SIDES OF EGRESS DOORS AND ALONG SIDEWALKS OR WALKING SURFACES SHALL BE OF AN APPROVED SAFETY TYPE.

WINDOWS A, B, D, E, F, G: BASIS OF DESIGN IS KAWNEER TRIFAB 451, CLEAR ANODIZED.

APPLIED ARCHITECTURAL MUNTINS APPLIED INSIDE AND OUTSIDE. BASIS OF DESIGN BOYD APPLIED ARCHITECTURAL MUNTINS.

WINDOW C: BASIS OF DESIGN IS READY ACCESS SINGLE PANEL SLIDING SERVICE WINDOW, CLEAR FINISH, 1/4" TEMPERED GLASS, RIGHT-HAND SLIDER, MANUAL OPEN, SELF CLOSE

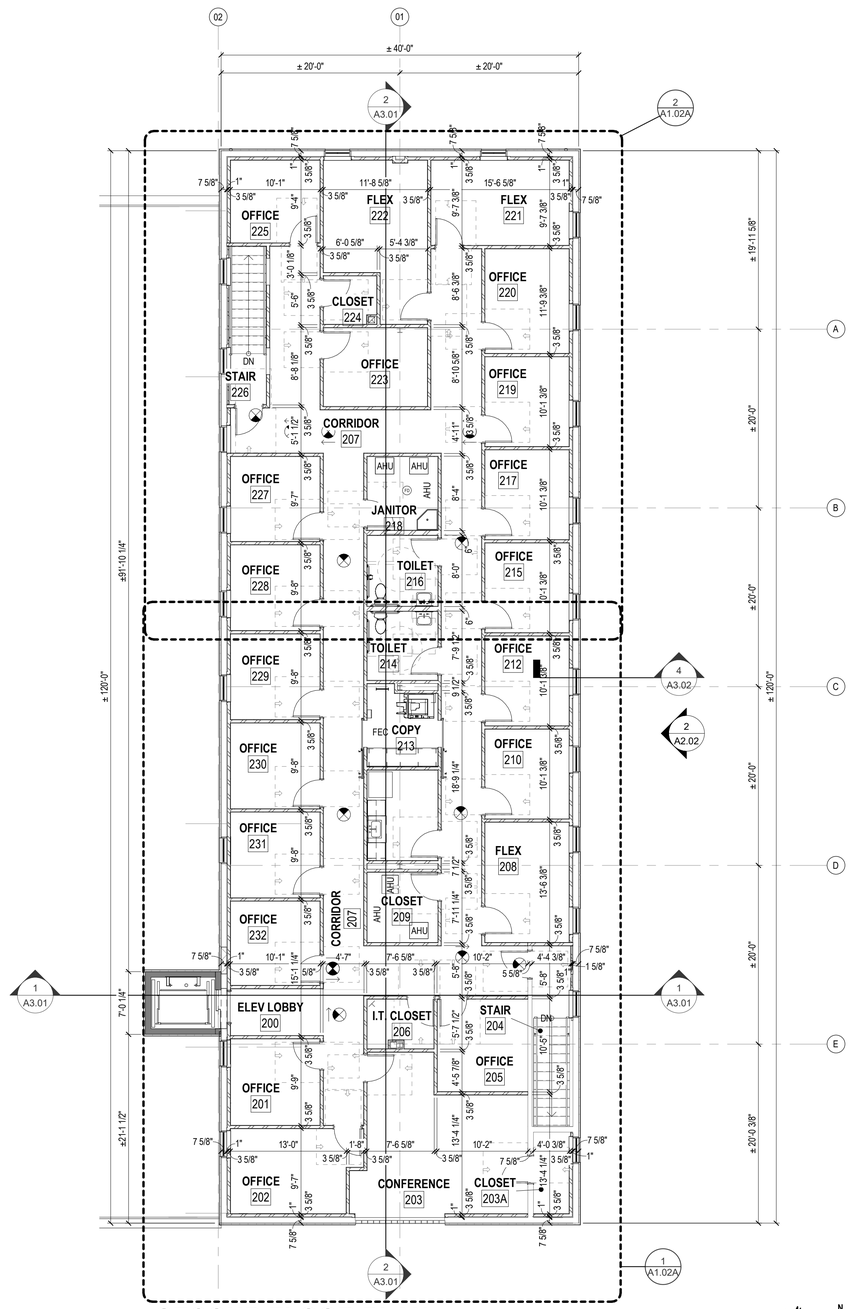
WINDOW H: BASIS OF DESIGN IS QUAKER H450 ALUMINUM FIXED.



H.1 SAME AS H, BUT WITH FROSTED GLASS

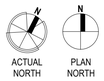
WINDOW TYPES

1/4" = 1'-0"



4 A1.02 SECOND FLOOR PLAN

1/8" = 1'-0"



KEY PLAN

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Roanoke / Richmond
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1208 Corporate Circle
Roanoke, VA 24018
540.772.9580

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ROBERT W. PILKINGTON
Lic. No. 013210
01/10/2025
ARCHITECT

AHCS SUBSTANCE USE EXPANSION

INTERIOR RENOVATION

SECOND FLOOR PLAN, WINDOW TYPES, STOREFRONT ELEVATIONS

311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

DRAWN BY	MFK
DESIGNED BY	RWP/MFK
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SCALE	As indicated
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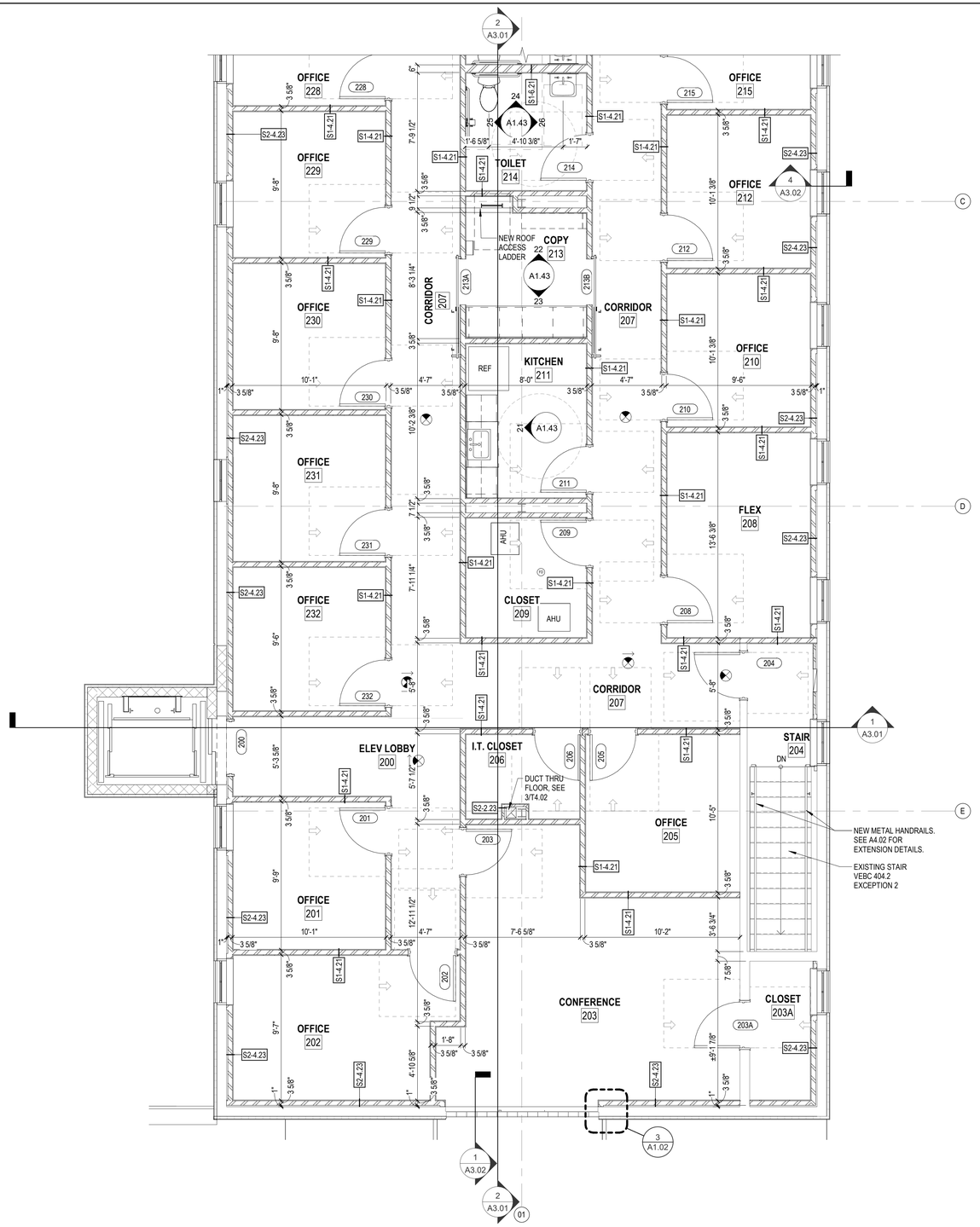
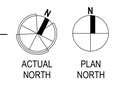
A1.02

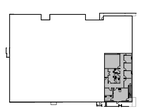
PROJECT NO 03230077.00



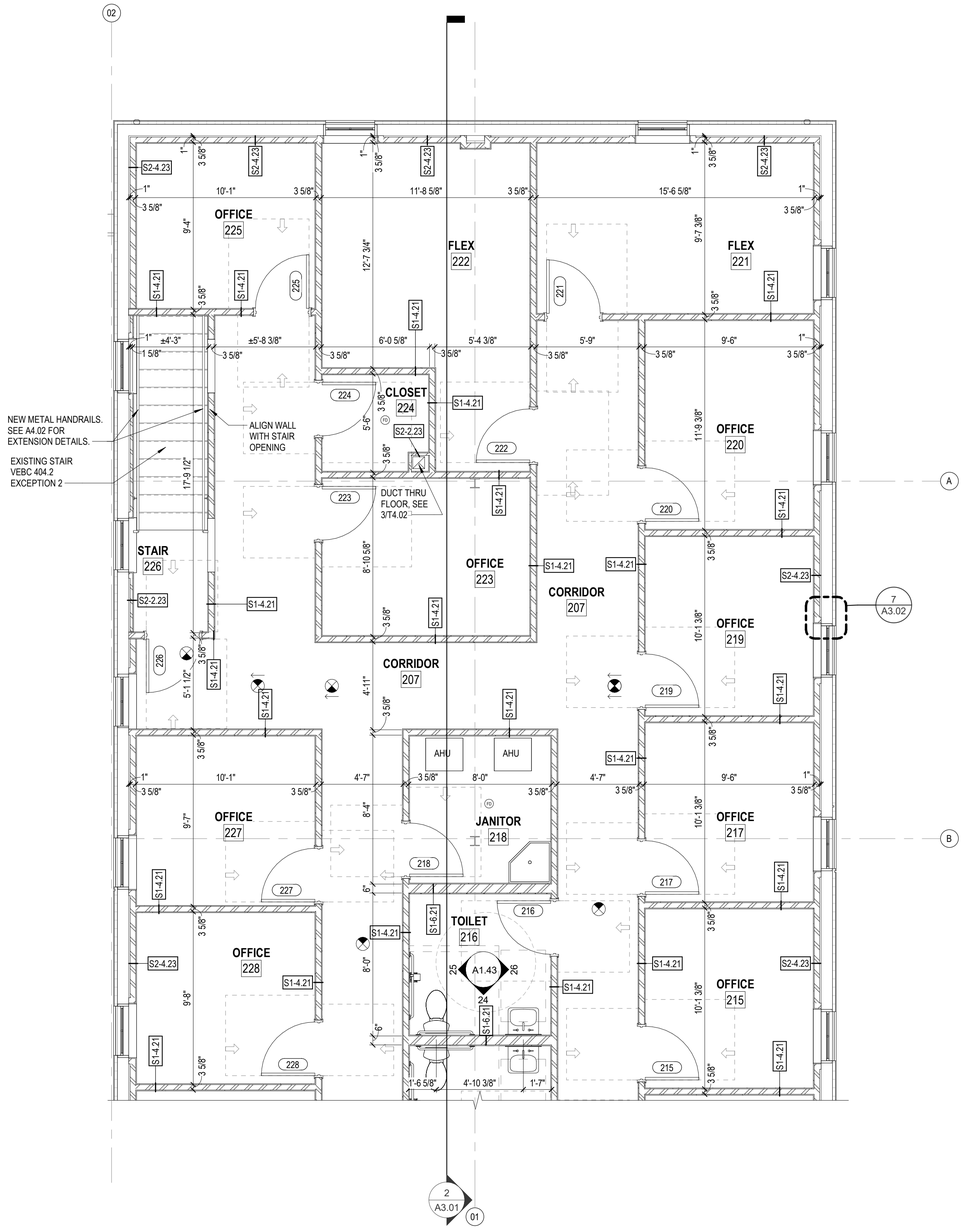
1 SECOND FLOOR PLAN-AREA B

1/A1.02A **1/4" = 1'-0"**



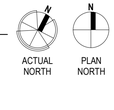


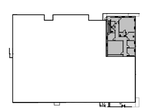
KEY PLAN



2 SECOND FLOOR PLAN-AREA C

2/A1.02A **1/4" = 1'-0"**





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AHCS SUBSTANCE USE EXPANSION

INTERIOR RENOVATION

ENLARGED SECOND FLOOR PLANS

311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

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A1.02A

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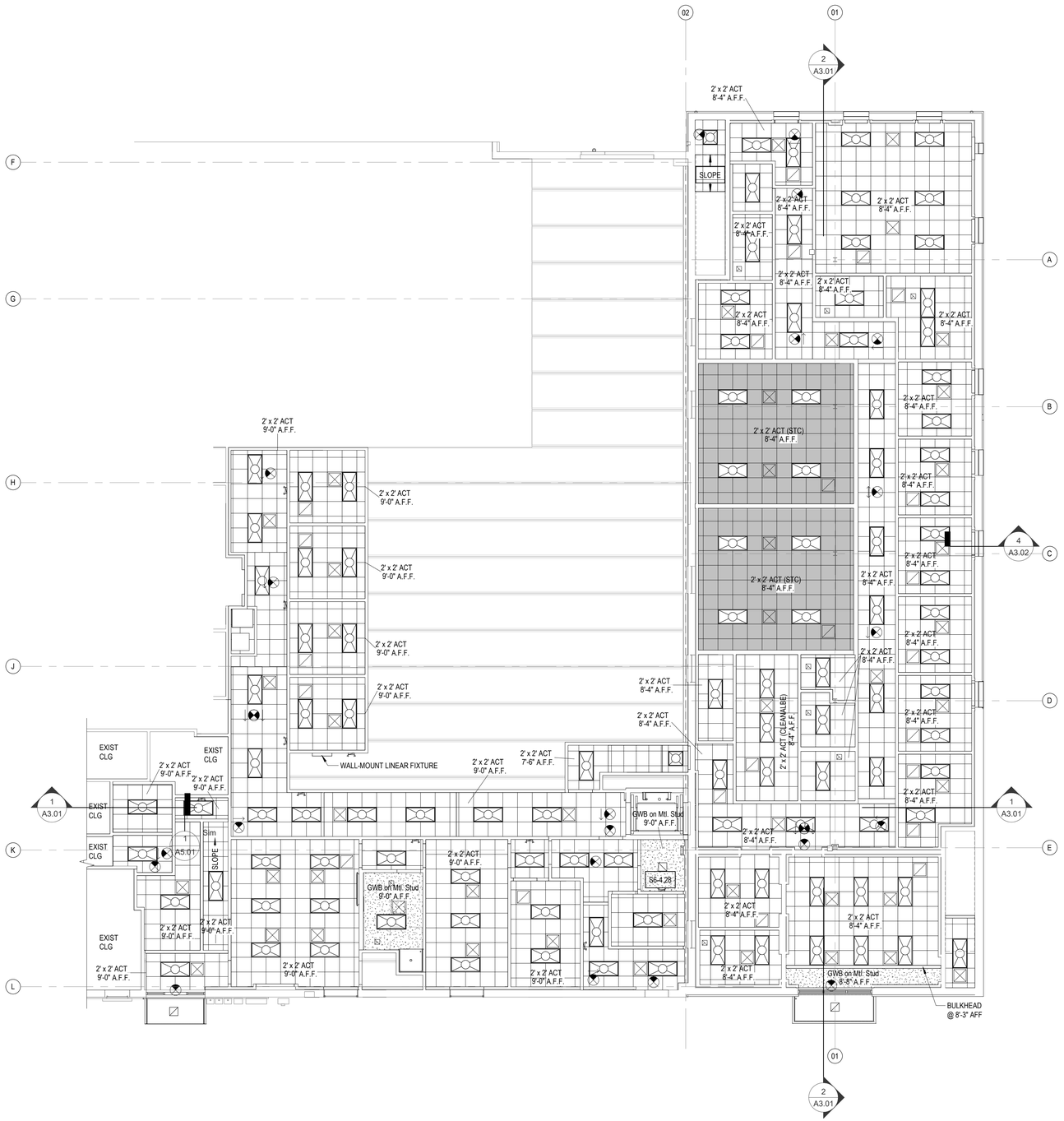
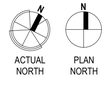
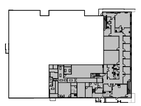


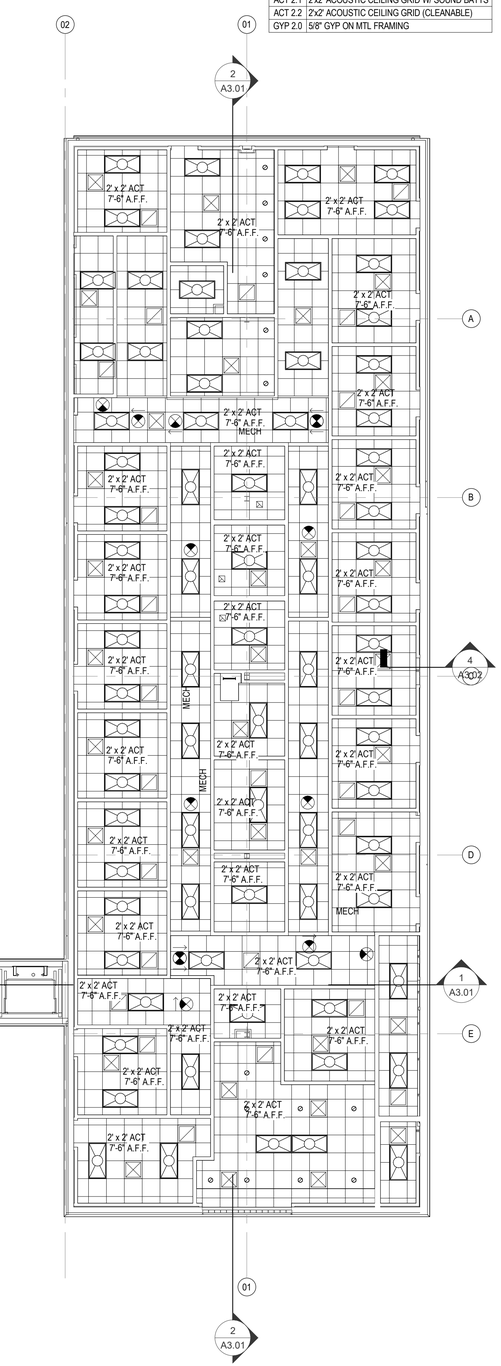
FIRST FLOOR REFLECTED CEILING PLAN

1 A1.21 — 1/8" = 1'-0"



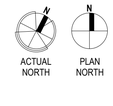


KEY PLAN



SECOND FLOOR REFLECTED CEILING PLAN

2 A1.21 — 1/8" = 1'-0"



KEY PLAN

CEILING TYPES

MARK	DESCRIPTION
ACT 2.0	2'x2' ACOUSTIC CEILING GRID
ACT 2.1	2'x2' ACOUSTIC CEILING GRID W/ SOUND BATTS
ACT 2.2	2'x2' ACOUSTIC CEILING GRID (CLEANABLE)
GYP 2.0	5/8" GYP ON MTL FRAMING

GENERAL REFLECTED CEILING PLAN NOTES

1. CEILING PLAN LAYOUTS SHALL BE COORDINATED WITH MECHANICAL, ELECTRICAL, AND OWNER'S REQUIREMENTS. IN THE EVENT OF CONFLICT, MECHANICAL, ELECTRICAL, PLUMBING OR FIRE PROTECTION DRAWINGS WILL GOVERN FOR THEIR SPECIFIC COMPONENT.
2. SEE ELECTRICAL DRAWINGS BY OTHERS FOR ALL LIGHTING AND ELECTRICAL LAYOUTS AND FIXTURE SPECIFICATIONS.
3. PROVIDE EXIT SIGNS AND/OR LIGHTS. SEE LIFE SAFETY PLANS AND/OR ELECTRICAL DRAWINGS FOR EMERGENCY EGRESS LIGHTING.
4. CONTRACTOR SHALL COORDINATE WITH MECHANICAL, ELECTRICAL, AND PLUMBING CONTRACTOR(S) FOR SCHEDULING AND COORDINATION FOR INSTALLATION OF ALL LIGHTING AND ELECTRICAL COMPONENTS.
5. CEILING HEIGHTS SHOWN ARE APPROXIMATE/ NOMINAL DIMENSIONS. CONTRACTOR SHALL VERIFY EXACT HEIGHT IN FIELD.
6. CONTRACTOR SHALL COORDINATE ACCESS PANEL LOCATIONS AND SIZES REQUIRED IN ANY HARD CEILINGS BASED ON ANY MECHANICAL OR ELECTRICAL EQUIPMENT LOCATED ABOVE "HARD" CEILINGS.
7. REFER TO GENERAL FINISH NOTES AND FINISH SCHEDULES FOR ADDITIONAL INFORMATION.
8. OWNER PROVIDED SECURITY SYSTEM NOT SHOWN.
9. UNLESS OTHERWISE NOTED, GWB SHALL BE FASTENED TO THE UNDERSIDE OF THE FLOOR/ROOF STRUCTURE ABOVE AREAS INDICATING A DROP ACT OR GWB CEILING. SEE ARCHITECTURAL SECTIONS AND DETAILS FOR ADDITIONAL INFORMATION.
10. PROVIDE 5/8" GYPSUM BOARD ABOVE ALL DROP CEILINGS ASSEMBLIES UNLESS OTHERWISE NOTED.
11. SOFFITS SHALL BE 1 INCH BELOW ADJACENT LOWEST CEILING HEIGHT, UNLESS OTHERWISE NOTED ON PLAN.

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INTERIOR RENOVATION

REFLECTED CEILING PLANS

311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

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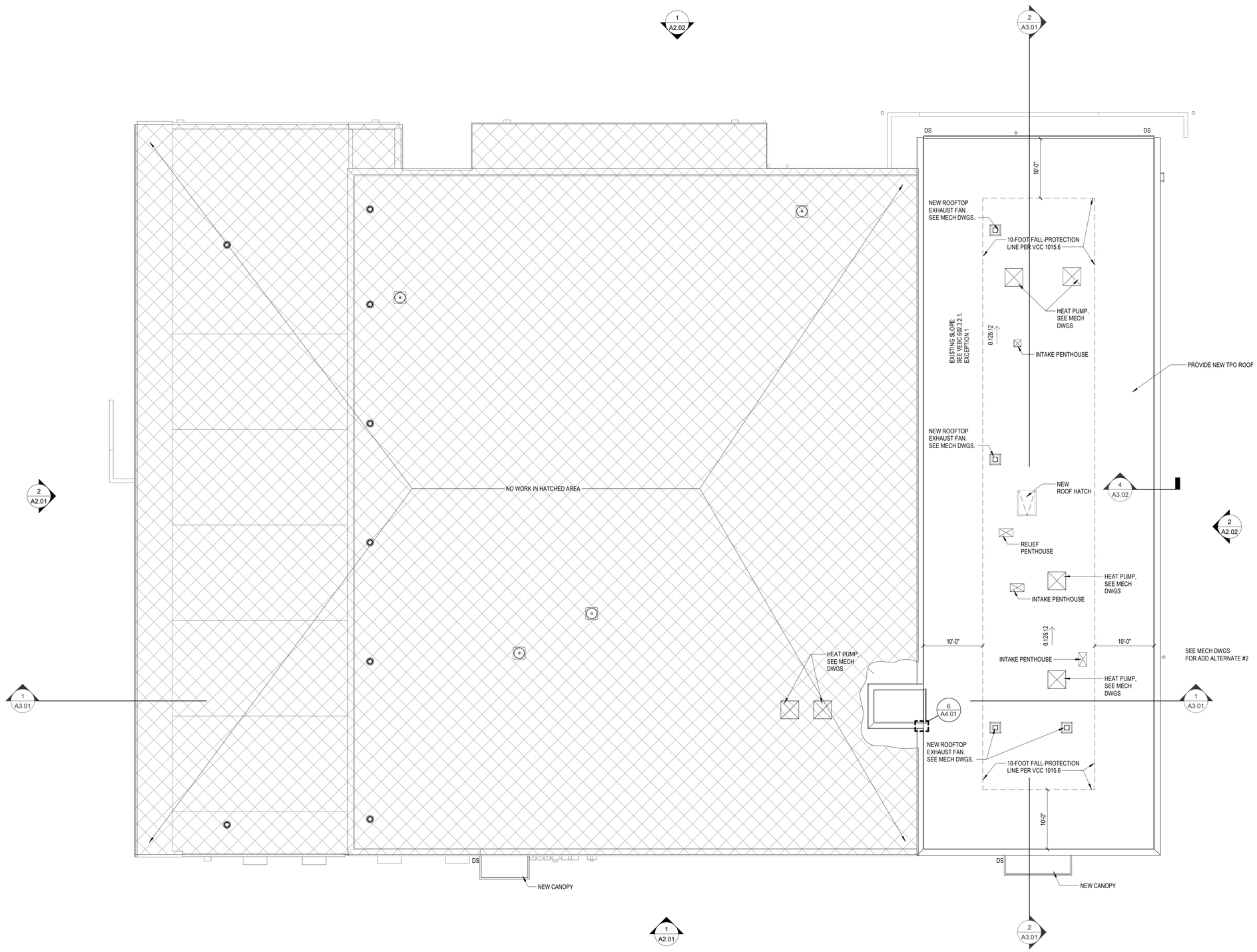
REVISIONS	

A1.21

PROJECT NO 03230077.00



ROOF PLAN

1 / A1.31 — 1/8" = 1'-0"

ACTUAL NORTH

PLAN NORTH

CAPACITY OF VERTICAL RAINFALL CONDUCTORS AND LEADERS
REFERENCED VPC SECTION/TABLE 1106.2(2)

(**2**) **3 1/2" x 4"** LEADERS PROPOSED WITH AN EFFECTIVE CAPACITY OF **5,300** SF EACH. **10,600 SF** IS GREATER THAN **5,040** SF (EFFECTIVE TOTAL ROOF AREA).

MIN RECTANGULAR GUTTER SIZE 7" WIDE X 5 1/2" DEEP, PER SMACNA CALCULATOR APP.

GENERAL ROOF NOTES

1. ALL ROOFING, UNDERLAYMENT, AND SIMILAR MATERIALS SHALL CURRENT GOVERNING CODE. MATERIAL INSTALLATIONS SHALL BE PER MANUFACTURER INSTRUCTIONS.
2. PROVIDE "CRICKETS" AROUND ALL MECHANICAL EQUIPMENT, AND SIMILAR CONDITIONS AS REQUIRED TO PREVENT FLOW STOPPAGE OR PONDING. CONTRACTOR SHALL COORDINATE WITH ROOFING MANUFACTURER.
3. ALL DIMENSIONS SHOWN TO ROOF-TOP EQUIPMENT ARE APPROXIMATE, MEASURED TO BACK OF PARAPET. CONTRACTOR SHALL COORDINATE EXACT DIMENSIONS REQUIRED WITH MECHANICAL AND FRAMING CONTRACTORS.
4. PROVIDE AND INSTALL PROTECTION MATS INDICATED AND FROM ALL ACCESS POINTS TO AND AROUND ALL EQUIPMENT REQUIRING SERVICING.
5. ARROWS ON THE ROOF PLAN INDICATE WATER DRAINAGE DIRECTION.

GENERAL ROOF FLASHING NOTES

1. ALL METAL FLASHING WORK SHALL CONFORM TO LATEST EDITION OF "SHEET METAL & AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION" (SMACNA) STANDARD DETAILS.
2. INSTALL CONTINUOUS ICE AND WATER SHIELD/DAM; EXTEND FROM EAVE FACE TO AT LEAST 24 INCHES INSIDE EXTERIOR WALL LINE AND AT ALL RIDGES AND VALLEYS 36" WIDE. ICE DAM AS MANUFACTURER BY "W.R. GRACE, INC" OR EQUAL.
3. PROVIDE FLASHING AT ALL VALLEYS AND DRIP EDGE AT ALL EAVES. PROVIDE ALUMINUM DRIP EDGE (2" X 1-1/2"X 0.032") AT ALL ROOF EDGES.
4. ROOFING CONTRACTOR IS TO INSTALL FLASHING AT ALL ROOF PENETRATIONS AS PER MANUFACTURER'S STANDARD DETAILS.
5. ALL ROOF EDGE CONDITIONS ARE TO BE CONSIDERED PARAPET WALLS UNLESS OTHERWISE NOTED.

GENERAL ROOF PENETRATION NOTES

1. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ROOF PENETRATIONS WITH ELECTRICAL, MECHANICAL AND PLUMBING DRAWINGS, INCLUDING ROOF-MOUNTED EQUIPMENT, EXHAUST FANS, VENT PIPES, LIGHTNING PROTECTION AND SIMILAR SYSTEMS PRIOR TO CONSTRUCTION. REPORT ANY INCONSISTENCIES IMMEDIATELY TO THE ARCHITECT.
2. PROVIDE INSULATED ROOF BOOTS AND CURBS.
3. ALL PLUMBING VENTS SHALL BE HELD A MINIMUM OF 10'-0" FROM ANY AIR INTAKE.
4. PLUMBING PENETRATIONS NOT SHOWN.
5. ALL NEW ROOF PENETRATIONS SHALL BE PERFORMED BY A QUALIFIED ROOFING CONTRACTOR. ALL WORK SHALL BE IN FULL COMPLIANCE ROOF MANUFACTURERS STANDARD DETAILS, SPECIFICATIONS AND RECOMMENDATIONS, SUCH THAT ALL WARRANTIES REMAIN IN FULL EFFECT.
6. ALL EXPOSED MECHANICAL EQUIPMENT SHALL BE PAINTED TO MATCH THE ARCHITECT'S SELECTION

GENERAL ROOF INSULATION NOTES

1. INSULATION TO MEET MINIMUM R VALUES INDICATED IN CODE SUMMARY, THICKNESS TO BE AS REQUIRED. ROOF SLOPE SHALL BE 1/4" PER 1'-0" MINIMUM FOR ALL CRICKETS. PROVIDE TOP LAYER PROTECTION MATERIAL PER MANUFACTURERS RECOMMENDATIONS.
2. RIGID INSULATION BOARD CRICKETS DIRECTING WATER TO ROOF DRAINS SHALL BE SLOPED TO DIRECT POSITIVE DRAINAGE TO THE ROOF DRAINS AT A MINIMUM OF 1/4" PER FOOT OR AS PER MANUFACTURER'S RECOMMENDATIONS.
3. THICKNESS INDICATED ON THE ROOF PLAN IS MINIMUM ALLOWED. THIS IS MEASURED FROM THE TOP OF SUBSTRATE TO THE TOP OF ROOF CONSTRUCTION PER THE ASSEMBLY NOTED ON THE ROOF PLAN.

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www.balzer.cc
1208 Corporate Circle
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540.772.9580

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ROBERT W. PULKINGTON
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ARCHITECT

AHCS SUBSTANCE USE EXPANSION

INTERIOR RENOVATION

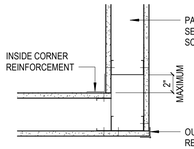
ROOF PLAN

311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

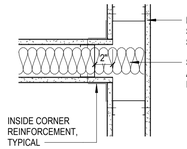
DRAWN BY	**MFK**
DESIGNED BY	**RWP/MFK**
CHECKED BY	**RWP**
DATE	**01/10/2025**
SCALE	**As indicated**
REVISIONS	

A1.31

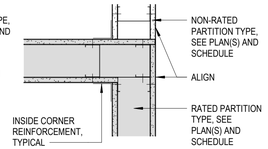
PROJECT NO 03230077.00



TYPICAL PARTITION CORNER

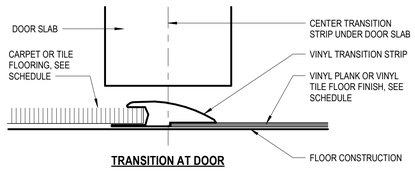


TYPICAL SOUND-RATED (STC) PARTITION INTERSECTION

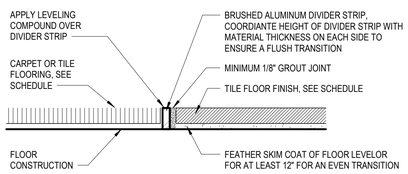


TYPICAL FIRE-RATED AND DISSIMILAR PARTITION INTERSECTION

1 PARTITION DETAILS
A1.41 NOT TO SCALE



TRANSITION AT DOOR



CARPET-TO-TILE TRANSITION

2 FLOORING TRANSITIONS
A1.41 NOT TO SCALE

3 WALL BASE
A1.41 NOT TO SCALE

4 CORNER GUARD DETAIL
A1.41 NOT TO SCALE

GENERAL FINISH NOTES

1. CONSULT WITH OWNER FOR ALL REQUIRED FINISH COLORS/TEXTURES. OWNER SHALL HAVE CHOICE OF COLOR FROM MANUFACTURER. FULL RANGE OF COLORS FOR ALL FINISHES SPECIFIED.
2. ALL CLOSETS AND AUXILIARY SPACES SHALL HAVE SAME FLOOR AND WALL FINISHES AS ROOMS THEY ARE LOCATED IN, UNLESS NOTED OTHERWISE.
3. IN ROOMS NOTED IN SCHEDULE PROVIDE BASE AROUND ROOM PERIMETER, UNLESS NOTED OTHERWISE.
4. INTERIOR WALLS AND INTERIOR FACE OF EXTERIOR WALLS SHALL BE PAINTED, CONSISTING OF (1) COAT OF PRIMER AND (2) COATS OF INTERIOR FINISH LATEX, UNLESS OTHERWISE NOTED.
5. SUBSTITUTIONS FOR SPECIFIED PRODUCTS SHALL BE EQUAL TO THOSE SPECIFIED IN COMPOSITION, PHYSICAL PROPERTIES, COLOR AND TEXTURE AND APPEARANCE, AND ENVIRONMENTAL QUALITIES. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ARCHITECT AND/OR OWNER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

PARTITION SCHEDULE

TAG	RATING	WALL FIRE TYPE	UL DESIGN	STC RATING	DESCRIPTION
M6-8.00	2	PARTITION	U905	-	INTERIOR 7-5/8" REINFORCED AND GROUTED CONCRETE MASONRY, 2-HOUR FIRE-RATED PARTITION, UNFINISHED ON BOTH SIDES. CONCRETE MASONRY UNITS TO BE D-2 CLASSIFICATION, LAID IN FULL BED OF 3/8" THICK MORTAR WITH VERTICAL JOINTS STAGGERED. CONTINUE FIRE-RATED ASSEMBLY PER FIRE PARTITION REQUIREMENTS. REFER TO UL ASSEMBLY FOR ADDITIONAL INFORMATION. REFER TO SPECIFICATIONS AND STRUCTURAL NOTES (IF PROVIDED) FOR ADDITIONAL INFORMATION.
S1-4.21	-	-	-	-	INTERIOR 3-5/8" STEEL STUD WALL, PAINTED 5/8" GWB ON BOTH SIDES. STUDS TO BE 20 GAUGE GALVANIZED STEEL, SPACED @ 16" O.C., WITH 20 GAUGE GALVANIZED STEEL TOP AND BOTTOM TRACKS. SECURE BOTTOM TRACK TO FLOOR SLAB WITH RAMSET FASTENERS @ 24" O.C. SECURE GWB TO STUDS WITH NO. 6 SCREWS @ 12" O.C. MAX. TAPE AND FINISH ALL JOINTS. PROVIDE INTERMEDIATE WALL BLOCKING FOR PARTITIONS RECEIVING MOUNTED ACCESSORIES. SEE GENERAL NOTES AND SCHEDULES FOR FINISH REQUIREMENTS. REFER TO SPECIFICATIONS AND STRUCTURAL NOTES (IF PROVIDED) FOR ADDITIONAL INFORMATION.
S1-6.21	-	-	-	-	INTERIOR 6" STEEL STUD WALL, PAINTED 5/8" GWB ON BOTH SIDES. STUDS TO BE 20 GAUGE GALVANIZED STEEL, SPACED @ 16" O.C., WITH 20 GAUGE GALVANIZED STEEL TOP AND BOTTOM TRACKS. SECURE BOTTOM TRACK TO FLOOR SLAB WITH RAMSET FASTENERS @ 24" O.C. SECURE GWB TO STUDS WITH NO. 6 SCREWS @ 12" O.C. MAX. TAPE AND FINISH ALL JOINTS. PROVIDE INTERMEDIATE WALL BLOCKING FOR PARTITIONS RECEIVING MOUNTED ACCESSORIES. SEE GENERAL NOTES AND SCHEDULES FOR FINISH REQUIREMENTS. REFER TO SPECIFICATIONS AND STRUCTURAL NOTES (IF PROVIDED) FOR ADDITIONAL INFORMATION.
S2-2.23	-	-	-	-	INTERIOR 1-5/8" STEEL STUD FURRING/CHASE WALL, PAINTED 5/8" GWB ON ONE SIDE. STUDS TO BE 20 GAUGE GALVANIZED STEEL, SPACED @ 16" O.C., WITH 20 GAUGE GALVANIZED STEEL TOP AND BOTTOM TRACKS. SECURE BOTTOM TRACK TO FLOOR SLAB WITH RAMSET FASTENERS @ 24" O.C. SECURE GWB TO STUDS WITH NO. 6 SCREWS @ 12" O.C. MAX. TAPE AND FINISH ALL JOINTS. PROVIDE INTERMEDIATE WALL BLOCKING FOR PARTITIONS RECEIVING MOUNTED ACCESSORIES. SEE GENERAL NOTES AND SCHEDULES FOR FINISH REQUIREMENTS. REFER TO SPECIFICATIONS AND STRUCTURAL NOTES (IF PROVIDED) FOR ADDITIONAL INFORMATION.
S2-4.23	-	-	-	-	INTERIOR 3-5/8" STEEL STUD FURRING/CHASE WALL, PAINTED 5/8" GWB ON ONE SIDE. STUDS TO BE 20 GAUGE GALVANIZED STEEL, SPACED @ 16" O.C., WITH 20 GAUGE GALVANIZED STEEL TOP AND BOTTOM TRACKS. SECURE BOTTOM TRACK TO FLOOR SLAB WITH RAMSET FASTENERS @ 24" O.C. SECURE GWB TO STUDS WITH NO. 6 SCREWS @ 12" O.C. MAX. TAPE AND FINISH ALL JOINTS. PROVIDE INTERMEDIATE WALL BLOCKING FOR PARTITIONS RECEIVING MOUNTED ACCESSORIES. SEE GENERAL NOTES AND SCHEDULES FOR FINISH REQUIREMENTS. REFER TO SPECIFICATIONS AND STRUCTURAL NOTES (IF PROVIDED) FOR ADDITIONAL INFORMATION.
S2-6.23	-	-	-	-	INTERIOR 6" STEEL STUD FURRING/CHASE WALL, PAINTED 5/8" GWB ON ONE SIDE. STUDS TO BE 20 GAUGE GALVANIZED STEEL, SPACED @ 16" O.C., WITH 20 GAUGE GALVANIZED STEEL TOP AND BOTTOM TRACKS. SECURE BOTTOM TRACK TO FLOOR SLAB WITH RAMSET FASTENERS @ 24" O.C. SECURE GWB TO STUDS WITH NO. 6 SCREWS @ 12" O.C. MAX. TAPE AND FINISH ALL JOINTS. PROVIDE INTERMEDIATE WALL BLOCKING FOR PARTITIONS RECEIVING MOUNTED ACCESSORIES. SEE GENERAL NOTES AND SCHEDULES FOR FINISH REQUIREMENTS. REFER TO SPECIFICATIONS AND STRUCTURAL NOTES (IF PROVIDED) FOR ADDITIONAL INFORMATION.
S3-6.21	-	-	-	50	INTERIOR 6" STEEL STUD STC-RATED WALL, PAINTED 5/8" GWB ON BOTH SIDES. STUDS TO BE 20 GAUGE GALVANIZED STEEL, SPACED @ 16" O.C., WITH 20 GAUGE GALVANIZED STEEL TOP AND BOTTOM TRACKS. SECURE BOTTOM TRACK TO FLOOR SLAB WITH RAMSET FASTENERS @ 24" O.C. 3-1/2" MIN. SOUND BATT INSULATION, CONTINUOUS FROM FLOOR TO CEILING. SECURE GWB TO STUDS WITH NO. 6 SCREWS @ 12" O.C. MAX. TAPE AND FINISH ALL JOINTS. PROVIDE INTERMEDIATE WALL BLOCKING FOR PARTITIONS RECEIVING MOUNTED ACCESSORIES. SEE GENERAL NOTES AND SCHEDULES FOR FINISH REQUIREMENTS. REFER TO SPECIFICATIONS AND STRUCTURAL NOTES (IF PROVIDED) FOR ADDITIONAL INFORMATION.
S6-4.21	1	PARTITION	U419	-	INTERIOR 3-5/8" STEEL STUD, 1-HOUR FIRE-RATED PARTITION, PAINTED 5/8" GWB ON BOTH SIDES. STUDS TO BE 20 GAUGE GALVANIZED STEEL, SPACED @ 16" O.C., WITH 20 GAUGE GALVANIZED STEEL TOP AND BOTTOM TRACKS. SECURE BOTTOM TRACK TO FLOOR SLAB WITH RAMSET FASTENERS @ 24" O.C. 3-1/2" MIN. SOUND BATT INSULATION, CONTINUOUS FROM FLOOR TO CEILING. SECURE GWB TO STUDS WITH 1" TYPE S SCREWS @ 8" O.C. MAX. TAPE AND FINISH ALL JOINTS. PROVIDE INTERMEDIATE WALL BLOCKING FOR PARTITIONS RECEIVING MOUNTED ACCESSORIES. CONTINUE FIRE-RATED ASSEMBLY PER FIRE PARTITION REQUIREMENTS. REFER TO UL ASSEMBLY FOR ADDITIONAL INFORMATION. SEE GENERAL NOTES AND SCHEDULES FOR FINISH REQUIREMENTS. REFER TO SPECIFICATIONS AND STRUCTURAL NOTES (IF PROVIDED) FOR ADDITIONAL INFORMATION.
S6-4.28 CEILING IN ELEV MECH ROOM 015	1	PARTITION	U415	-	INTERIOR 2-1/2" C-H STEEL STUD, 1-HOUR FIRE-RATED PARTITION, PAINTED (1) 5/8" GWB ON ONE SIDE, 1" SHAFTLINER ON THE OTHER.. STUDS TO BE 20 GAUGE GALVANIZED STEEL, SPACED @ 24" O.C., WITH 20 GAUGE GALVANIZED STEEL TOP AND BOTTOM TRACKS. SECURE BOTTOM TRACK TO FLOOR SLAB WITH RAMSET FASTENERS @ 24" O.C. 3-1/2" MIN. SOUND BATT INSULATION, CONTINUOUS FROM FLOOR TO CEILING. SECURE FIRST LAYER GWB TO STUDS WITH 1" TYPE S SCREWS @ 16" O.C. MAX. SECURE SECOND LAYER GWB WITH 1-5/8" TYPE S SCREWS @ 16" O.C. MAX. WITH SCREWS OFFSET 8" FROM FIRST LAYER. TAPE AND FINISH ALL JOINTS. PROVIDE INTERMEDIATE WALL BLOCKING FOR PARTITIONS RECEIVING MOUNTED ACCESSORIES. CONTINUE FIRE-RATED ASSEMBLY PER FIRE PARTITION REQUIREMENTS. REFER TO UL ASSEMBLY FOR ADDITIONAL INFORMATION. SEE GENERAL NOTES AND SCHEDULES FOR FINISH REQUIREMENTS. REFER TO SPECIFICATIONS AND STRUCTURAL NOTES (IF PROVIDED) FOR ADDITIONAL INFORMATION.

ROOM FINISH SCHEDULE

NO.	ROOM NAME	FLOOR	BASE	WALL		CEILING		REMARKS
				MTL.	FINISH	MTL.	FINISH	
001	ACCESSIBLE ENTRY	LVP	VCB	GWB	PT	ACT	--	MATCH EXIST ADJACENT
002	OFFICE	CPT	VCB	GWB	PT	ACT	--	MATCH EXIST ADJACENT
003	CORRIDOR	CPT	VCB	GWB	PT	ACT	--	MATCH EXIST ADJACENT
004	OFFICE	CPT	VCB	GWB	PT	ACT	--	
005	OFFICE	CPT	VCB	GWB	PT	ACT	--	
006	OFFICE	CPT	VCB	GWB	PT	ACT	--	
007	OFFICE	CPT	VCB	GWB	PT	ACT	--	
008	DAYROOM	CPT	VCB	GWB	PT	ACT	--	
008A	SPRINKLER	--	VCB	GWB	PT	--		
009	CORRIDOR	CPT	VCB	GWB	PT	ACT		
010	SMALL MEETING	CPT	VCB	GWB	PT	ACT		
011	REST ROOM	LVP	VCB	GWB	PT	ACT	--	
012	OFFICE	CPT	VCB	GWB	PT	ACT	--	
013	STAIR	LVP	VCB	GWB	PT	ACT	--	
014	ELEV							FINISHES BY ELEV MFR
015	ELEV MACH	CONC	VCB	GWB	PT	GWB	PT	
016	STORAGE	LVP	VCB	GWB	PT	ACT	--	
017	STAIR	LVP	VCB	GWB	PT	ACT	--	
100	WAITING	CPT	VCB	GWB	PT	ACT	--	
101	REST ROOM	CPT	VCB	GWB	PT	ACT	--	
102	RECEPTION/INTAKE	CPT	VCB	GWB	PT	ACT	--	
103	ELEV LOBBY	CPT	VCB	GWB	PT	ACT	--	
104	LAB	LVP	VCB	GWB	PT	ACT	--	CLEANABLE ACT
104A	STORAGE	LVP	VCB	GWB	PT	ACT	--	
105	TOILET	LVP	VCB	GWB	PT	ACT	--	
106	TOILET	LVP	VCB	GWB	PT	ACT	--	
107	JAN	LVP	VCB	GWB	PT	ACT	--	
108	CORRIDOR	CPT	VCB	GWB	PT	ACT	--	
109	OFFICE	CPT	VCB	GWB	PT	ACT	--	
110	OFFICE	CPT	VCB	GWB	PT	ACT	--	
111	OFFICE	CPT	VCB	GWB	PT	ACT	--	
112	GROUP	CPT	VCB	GWB	PT	ACT	--	
113	OFFICE	CPT	VCB	GWB	PT	ACT	--	
114	GROUP	CPT	VCB	GWB	PT	ACT	--	
115	OFFICE	CPT	VCB	GWB	PT	ACT	--	
116	OFFICE	CPT	VCB	GWB	PT	ACT	--	
117	KITCHENETTE	LVP	VCB	GWB	PT	ACT	--	
118	TRAINING	CPT	VCB	GWB	PT	ACT	--	
119	TOILET	LVP	VCB	GWB	PT	ACT	--	
120	OFFICE	CPT	VCB	GWB	PT	ACT	--	
121	TOILET	LVP	VCB	GWB	PT	ACT	--	
122	CLOSET	CPT	VCB	GWB	PT	ACT	--	
123	VEST	CPT	VCB	GWB	PT	ACT	--	
124	STAIR	--	VCB	GWB/CMU	PT	ACT	--	1
125	STAIR	--	VCB	GWB/CMU	PT	ACT	--	1
139	STAIR	--	VCB	GWB/CMU	PT	GWB	--	1
200	ELEV LOBBY	CPT	VCB	GWB	PT	ACT	--	
201	OFFICE	CPT	VCB	GWB	PT	ACT	--	
202	OFFICE	CPT	VCB	GWB	PT	ACT	--	
203	CONFERENCE	CPT	VCB	GWB	PT	ACT	--	
203A	CLOSET	CPT	VCB	GWB	PT	ACT	--	
204	STAIR	--	VCB	GWB/CMU	PT	ACT	--	1
205	OFFICE	CPT	VCB	GWB	PT	ACT	--	
206	I.T. CLOSET	CPT	VCB	GWB	PT	ACT	--	
207	CORRIDOR	CPT	VCB	GWB	PT	ACT	--	
208	FLEX	CPT	VCB	GWB	PT	ACT	--	
209	CLOSET	CPT	VCB	GWB	PT	ACT	--	
210	OFFICE	CPT	VCB	GWB	PT	ACT	--	
211	KITCHEN	LVP	VCB	GWB	PT	ACT	--	
212	OFFICE	CPT	VCB	GWB	PT	ACT	--	
213	COPY	CPT	VCB	GWB	PT	ACT	--	
214	TOILET	LVP	VCB	GWB	PT	ACT	--	
215	OFFICE	CPT	VCB	GWB	PT	ACT	--	
216	TOILET	LVP	VCB	GWB	PT	ACT	--	
217	OFFICE	CPT	VCB	GWB	PT	ACT	--	
218	JANITOR	LVP	VCB	GWB	PT	ACT	--	
219	OFFICE	CPT	VCB	GWB	PT	ACT	--	
220	OFFICE	CPT	VCB	GWB	PT	ACT	--	
221	FLEX	CPT	VCB	GWB	PT	ACT	--	
222	FLEX	CPT	VCB	GWB	PT	ACT	--	
223	OFFICE	CPT	VCB	GWB	PT	ACT	--	
224	CLOSET	CPT	VCB	GWB	PT	ACT	--	
225	OFFICE	CPT	VCB	GWB	PT	ACT	--	
226	STAIR	--	VCB	GWB/CMU	PT	ACT	--	1
227	OFFICE	CPT	VCB	GWB	PT	ACT	--	
228	OFFICE	CPT	VCB	GWB	PT	ACT	--	
229	OFFICE	CPT	VCB	GWB	PT	ACT	--	
230	OFFICE	CPT	VCB	GWB	PT	ACT	--	
231	OFFICE	CPT	VCB	GWB	PT	ACT	--	
232	OFFICE	CPT	VCB	GWB	PT	ACT	--	

1. EXISTING STAIRS: SAND AND PAINT EXISTING METAL STAIR PANS AND HANDRAILS, COLOR PER OWNER.
2. SEE REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
3. SEE BID NOTES ON T2.02 FOR UNIT PRICES TO BE USED FOR FINISHES.

GENERAL PARTITION NOTES

1. INSTALL CONTINUOUS BLOCKING/FRAMING AT ALL DROP FRAMED CEILING LEVEL(S) AS REQUIRED.
2. INSTALL CONTINUOUS BLOCKING/FRAMING AT MID-HEIGHT OF ALL STUD WALLS GREATER THAN 10'-0" HIGH AS REQUIRED BASED ON MANUFACTURER SPECIFICATIONS.
3. ALL PARTITIONS SHALL BE FINISHED PER FINISH SCHEDULE.
4. ALL STUD WALLS NOT EXTENDED TO UNDERSIDE OF ROOF DECK AND TALLER THAN 8'-0" ABOVE FINISHED FLOOR SHALL BE BRACED AT TOP AT ±6'-0" ON CENTER WITH EITHER STUD "KICKERS" OR STUDS EXTENDED UP TO ROOF STRUCTURE FOR ANY WALL GREATER THAN 10'-0" IN LENGTH.
5. ALL GYPSUM WALL BOARD WALL INTERSECTING EXTERIOR WALLS SHALL BE GLUED TO END STUDS AND SEALED AT WALL JOINT CONTINUOUS WITH ACOUSTICAL SEALANT.
6. PRESSURE-TREATED BOTTOM PLATE REQUIRED AT ALL WOOD FRAMED WALLS RESTING ON SLAB-ON-GRADE OR CONCRETE AND/OR MASONRY THAT IS IN DIRECT CONTACT WITH GROUND.
7. INFORMATION ON THIS SCHEDULE IS TO BE USED IN CONJUNCTION WITH FLOOR PLANS, REFLECTED CEILING PLANS, INTERIOR ELEVATIONS AND SECTIONS.
8. EXTERIOR ENVELOPE IS NOT SCHEDULED. REFER TO SECTIONS AND DETAILS FOR TYPICAL BUILDING EXTERIOR WALL DESCRIPTION.
9. ALL SINGLE-LAYER GYPSUM BOARD WALLS CONTINUOUS AND CONTIGUOUS WITH MULTI-LAYER GYPSUM BOARD WALLS SHALL MAINTAIN ONE CONTIGUOUS OUTER LAYER OF GYPSUM BOARD AT THE SAME FACE OF FINISH. STUDS AND FURRING CHANNELS SHALL BE OFFSET ACCORDINGLY.
10. PARTITION TYPES ARE CONTINUOUS ACROSS DOOR AND WINDOW OPENINGS AND AROUND CORNERS UNLESS OTHERWISE NOTED.

GENERAL PARTITION DEFLECTION NOTES

1. ALL STUD WALLS EXTENDED TO UNDERSIDE OF ROOF STRUCTURE (DECK OR JOISTS) SHALL UTILIZE A DEFLECTION-TYPE TOP CONNECTION WHICH ALLOWS ROOF DEFLECTION.
2. LIMITING HEIGHTS OF GYPSUM BOARD PARTITIONS ARE AS PUBLISHED FOR THE U.S. GYPSUM BOARD PRODUCTS FOR MAXIMUM L/240 DEFLECTION AT 5 PSF LATERAL LOAD. VERIFY ACTUAL LIMITING HEIGHT FOR APPROVED MANUFACTURER'S PRODUCTS. WHERE SCHEDULED PARTITION EXCEEDS LIMITING HEIGHT, INSTALLERS SHALL ADD BRACING ELEMENTS (ABOVE CEILING), OR DECREASE STUD SPACING, AND/OR GAUGE AS REQUIRED TO MAINTAIN L/240 DEFLECTION CRITERIA.
3. INSTALLERS SHALL CONFIRM ALLOWABLE DEFLECTIONS FOR FINISH MATERIALS APPLIED TO STUD PARTITIONS. WHERE ALLOWABLE DEFLECTION OF FINISH MATERIALS IS LESS THAN DEFLECTION OF SCHEDULED PARTITION, STUD SPACING AND/OR GAUGE SHALL BE ADJUSTED TO CONFORM TO FINISH MATERIAL DEFLECTION REQUIREMENTS.
4. ALLOWABLE DEFLECTION FOR ALL PARTITIONS SCHEDULED TO RECEIVE CERAMIC TILE IS L/360 MAXIMUM.

GENERAL FIRE RATED PARTITION NOTES

1. REFER TO UL RATINGS FOR ADDITIONAL NOTES AND/OR REQUIREMENTS.
2. ALL PIPES, DUCTS, AND/OR EQUIPMENT WHICH PENETRATE FLOOR OR PARTITION CONSTRUCTION, SHALL BE INSTALLED SO AS TO MAINTAIN THE FIRE RESISTIVE RATING AND STRUCTURAL INTEGRITY OF THE BUILDING.

GENERAL MOISTURE RESISTANT PARTITION NOTES

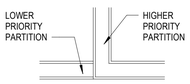
1. PROVIDE MOISTURE RESISTANT GYPSUM BOARD IN ALL WET OR DAMP SPACES.
2. MOISTURE RESISTANT GYPSUM BOARD SHALL BE USED AT ALL GYPSUM WALLBOARD PARTITIONS SCHEDULED TO RECEIVE CERAMIC TILE, PARTITIONS IN KITCHEN AREAS, AND AT ALL TOILET ROOM PARTITIONS.
3. PROVIDE TILE BACKER BOARD IN LIEU OF GYPSUM WALL BOARD BEHIND ALL WALL TILE, SEE INTERIOR DETAILS FOR TILE LOCATIONS.

GENERAL SOUND TRANSMISSION (STC) NOTES

1. ALL GYPSUM WALL BOARD CORNER JOINTS SHALL BE SEALED.
2. WHERE SOUND TRANSMISSION CLASS (STC) RATINGS ARE INDICATED, PROVIDE MATERIALS AND INSTALLATION IDENTICAL IN EVERY RESPECT TO MANUFACTURERS TESTED SYSTEM OF INDICATED RATING.
3. FOR WALLS EXTENDING TO UNDERSIDE OF STRUCTURE ABOVE, SOUND-RATED INSULATION BLANKETS SHALL BE FULL HEIGHT OF PARTITION. FOR WALLS EXTENDING 6" ABOVE FINISH CEILING, LAY SOUND-RATED BLANKETS 24" FROM EACH SIDE OF PARTITION.
4. ELECTRICAL OUTLET BOXES IN OPPOSITE FACES OF SOUND-RATED WALLS SHALL BE SEPARATED HORIZONTALLY BY A MINIMUM 24". BACKS AND SIDES OF BOXES TO BE SEALED WITH 1/8" RESILIENT SEALANT AND BACKED WITH 2" MINERAL FIBER INSULATION.
5. APPROVED PERMANENT AND RESILIENT ACOUSTICAL SEALANT SHALL BE PROVIDED IN SOUND-RATED PARTITIONS ALONG THE JOINT BETWEEN THE FLOOR AND ALL SEPARATE WALLS.

WALL PRIORITY LEGEND

(HIGHEST PRIORITY)
1 - 2 HOUR FIRE AND SMOKE WALL
2 - 2 HOUR FIRE AND 2 HOUR SHAFT WALL
3 - 1 HOUR FIRE AND SMOKE WALL
4 - 1 HOUR FIRE WALL
5 - NON-RATED
(LOWEST PRIORITY)



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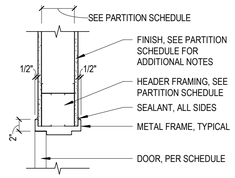
Lic. No. 013210
01/10/2025
ARCHITECT

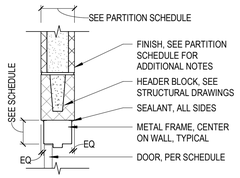
AHCS SUBSTANCE USE EXPANSION
INTERIOR RENOVATION
FINISH & PARTITION SCHEDULES
311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

DRAWN BY	MFK
DESIGNED BY	RWP/MFK
CHECKED BY	RWP
DATE	01/10/2025
SCALE	As indicated
REVISIONS	

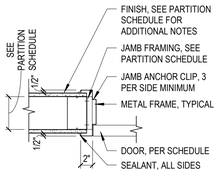
A1.41
PROJECT NO 03230077.00



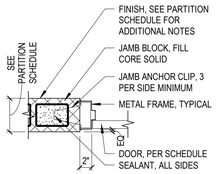
TYPICAL DOOR HEAD DETAIL (STEEL FRAMED PARTITION)



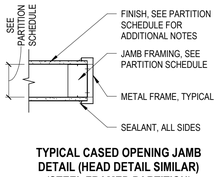
TYPICAL DOOR HEAD DETAIL (BLOCK PARTITION)



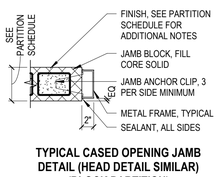
TYPICAL DOOR JAMB DETAIL (STEEL FRAMED PARTITION)



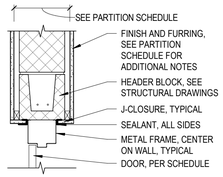
TYPICAL DOOR JAMB DETAIL (BLOCK PARTITION)



TYPICAL CASED OPENING JAMB DETAIL (HEAD DETAIL SIMILAR) (STEEL FRAMED PARTITION)



TYPICAL CASED OPENING JAMB DETAIL (HEAD DETAIL SIMILAR) (BLOCK PARTITION)

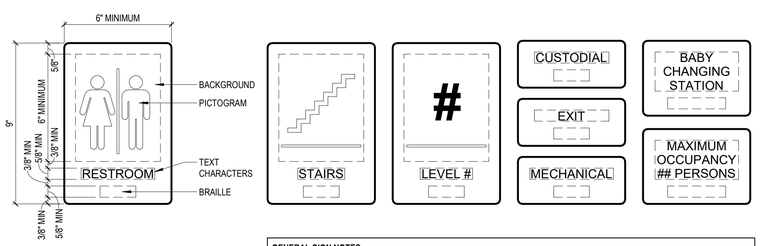


TYPICAL DOOR HEAD DETAIL (BLOCK PARTITION)

NOTE: DETAILS ONLY DEPICT GENERAL CONDITIONS FOR TYPICAL HOLLOW METAL FRAMED DOORS AND OPENINGS. FOR DOORS IN RATED ASSEMBLIES COORDINATE PARTITION DESCRIPTION WITH PARTITION SCHEDULE AND WALL RATING DETAILS, TYPICAL.

1 TYPICAL DOOR DETAILS

A1.42 NOT TO SCALE



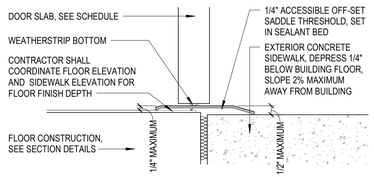
MOUNT SIGN ON WALL ADJACENT TO ASSOCIATED DOOR OR OPENING AND 2" CLEAR FROM EDGE OF DOOR FRAME. THE BASELINE OF THE LOWEST TACTILE CHARACTERS (BRAILLE) SHALL BE NO LOWER THAN 48"AFF AND THE BASELINE OF THE HIGHEST TACTILE CHARACTERS TO BE NO HIGHER THAN 60"AFF.

GENERAL SIGN NOTES

1. SIGN SHALL BE FREE FROM SHARP EDGES
2. RAISED PICTOGRAM SHALL BE FROM CONTRASTING COLORS AND WITH A NON-GLARE FINISH.
3. TEXT CHARACTERS SHALL BE RAISED SANS-SERIF UPPERCASE TEXT CHARACTERS INDICATING ROOM TYPE, CHARACTERS SHALL NOT BE ITALIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE, OR OF ANY OTHER UNUSUAL FORMS.
4. BRAILLE SHALL BE DOMED OR ROUNDED CONTRACTED DOTS.

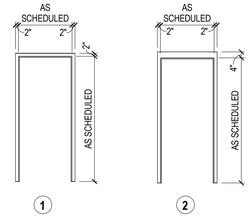
2 REGULATORY SIGNS

A1.42 NOT TO SCALE



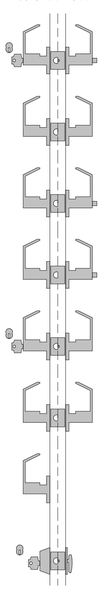
3 EXTERIOR THRESHOLD

A1.42 NOT TO SCALE



DOOR FRAME TYPES

NOT TO SCALE



FUNCTIONS WITH ANSI CODES AND GENERAL DESCRIPTION

ENTRANCE/OFFICE (ANSI F82)
PUSHING BUTTON INSIDE LEVER LOCKS OUTSIDE LEVER. TURNING INSIDE LEVER OR OPERATING KEY IN OUTSIDE LEVER RELEASE BUTTON AUTOMATICALLY. CLOSING DOOR DOES NOT RELEASE BUTTON. INSIDE LEVER ALWAYS UNLOCKED.

PASSAGE (ANSI F75)
LATCH BOLT OPERATED BY LEVER OR KNOB FROM EITHER SIDE AT ALL TIMES.

PRIVACY (ANSI F76)
LATCH BOLT OPERATED BY LEVER FROM EITHER SIDE. OUTSIDE LEVER IS LOCKED BY PUSH BUTTON INSIDE AND UNLOCKED BY EMERGENCY RELEASE, ROTATING LEVER, OR CLOSING DOOR. INSIDE ALWAYS UNLOCKED.

PRIVACY (ANSI F76A)
LATCH BOLT OPERATED BY LEVER FROM EITHER SIDE. OUTSIDE LEVER IS LOCKED BY PUSH BUTTON INSIDE AND UNLOCKED BY EMERGENCY RELEASE, ROTATING LEVER, OR CLOSING DOOR. INSIDE ALWAYS UNLOCKED. PUSH BUTTON INSIDE CHANGES INDICATOR DISPLAY STATUS OUTSIDE.

STOREROOM (ANSI F86)
DEADLOCKING LATCH BOLT OPERATED BY KEY IN OUTSIDE LEVER OR ROTATING INSIDE LEVER. OUTSIDE LEVER IS ALWAYS LOCKED. INSIDE LEVER ALWAYS UNLOCKED.

EXIT LOCK (ANSI F89)
OUTSIDE LEVER ALWAYS FIXED. INSIDE LEVER ALWAYS UNLOCKED.

SINGLE DUMMY
DECORATIVE FIXED TRIM THAT IS NON-FUNCTIONAL. USED FOR DOOR PULL OR AS MATCHING INACTIVE TRIM.

SINGLE CYLINDER (ANSI E2151, E0152)
DEADBOLT THROWN OR RETRACTED BY KEY ON THE OUTSIDE OR BY INSIDE TURN UNIT. BOLT AUTOMATICALLY DEADLOCKS WHEN FULLY THROWN.

HARDWARE SETS

REFER TO DOOR SCHEDULE FOR SIGNAGE REQUIREMENTS

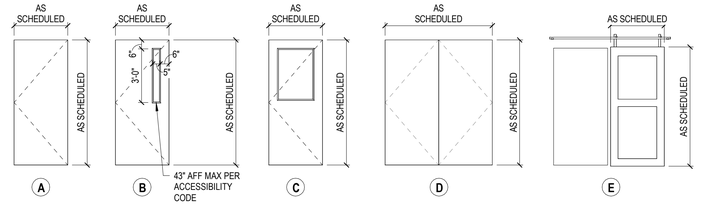
1. STOREFRONT ENTRY SINGLE DOOR
   A. HINGES BY MANUFACTURER
   B. PUSH BAR BY MANUFACTURER
   C. PULL HANDLE BY MANUFACTURER
   D. (1) ACCESSIBLE THRESHOLD
   E. (1) SURFACE CLOSER
   F. (1) WEATHERSTRIPPING
   G. SINGLE CYLINDER DEADBOLT (ANSI E2151)*
   H. PRE-WIRE FOR ELECTRONIC CONTROLS
2. CONFERENCE ROOM
   A. (1-1/2) PAIR HINGES
   B. LEVER HANDLE PRIVACY SET (ANSI F76)
3. RESTROOM (SINGLE OCCUPANT)
   A. (1-1/2) PAIR HINGES
   B. LEVER HANDLE PRIVACY SET (ANSI F76A)
   C. (1) SURFACE CLOSER
4. MANAGER'S OFFICE, ADMIN OFFICE
   A. (1-1/2) PAIR HINGES
   B. LEVER HANDLE OFFICE SET (ANSI F82)
5. STANDARD OFFICE
   A. (1-1/2) PAIR HINGES
   B. LEVER HANDLE PASSAGE SET (ANSI 75)*
6. UTILITY CLOSET
   A. (1-1/2) PAIR HINGES
   B. LEVER HANDLE PASSAGE SET (ANSI F75)
7. INTERIOR EGRESS
   A. (1-1/2) PAIR HINGES
   B. LEVER HANDLE PASSAGE SET (ANSI F75)
   C. (1) SURFACE CLOSER
   D. (2) KICKPLATE
8. EXTERIOR EGRESS
   A. (1-1/2) PAIR HINGES
   B. LEVER HANDLE EXIT LOCK SET (ANSI F89)
   C. (1) ACCESSIBLE THRESHOLD
   D. (1) SURFACE CLOSER
   E. (1) WEATHERSTRIPPING
   F. (1) KICKPLATE (INTERIOR)
9. STORAGE/JANITOR CLOSET SINGLE DOOR
   A. (1-1/2) PAIR HINGES
   B. LEVER HANDLE STOREROOM SET (ANSI F86)
10. STORAGE/JANITOR CLOSET DOUBLE DOOR
    A. (3) PAIR HINGES
    B. FLUSH BOLT FOR INACTIVE LEAF
    C. DUMMY LEVER FOR INACTIVE LEAF
    D. LEVER HANDLE PASSAGE SET (ANSI F75)
11. INTERIOR SECURITY
    A. (1-1/2) PAIR HINGES
    B. LEVER HANDLE LOCKSET
    C. (1) SURFACE CLOSER
    D. (2) KICKPLATE
    E. (2) ACCESS CARD READER

* VERIFY WITH OWNER

DOOR SCHEDULE

DOOR NO.	SIZE WIDTH	SIZE HEIGHT	SIZE THICKNESS	MATERIAL	LABEL (MIN)	TRHD	DOOR TYPE	FRAME TYPE	HDWR SET #	ENERGY STAR	REMARKS
001	3'-0"	7'-0"	0'-1 3/4"	ALUM		Yes	1/A1.02		1	Yes	EXTERIOR DOOR
001A	3'-0"	7'-0"	0'-1 3/4"	SCW	-		A	1	11		SECURITY DOOR
002	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
003	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	11		
003A	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	6		
003B	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	7		
003C	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	7		
003D	5'-0"	7'-0"	0'-1 3/4"	SCW			D	1	10		
004	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
005	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
006	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
007	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
008	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	7		
008A	3'-0"	7'-0"	0'-1 3/4"	SCW	45 MINUTE		A	1	9		
008B	5'-0"	7'-0"	0'-1 3/4"	SCW			D	1	10		
011	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	3		
012	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
013	3'-0"	7'-0"	0'-1 3/4"	SCW	-		A	1	7		SECURITY DOOR
013A	3'-0"	7'-0"	0'-1 3/4"	SCW	-		A	1	7		
013B	3'-0"	7'-0"	0'-1 3/4"	HM		Yes	A	2	8	Yes	EXTERIOR DOOR
015	3'-0"	7'-0"	0'-1 3/4"	HM	45 MINUTE		A	1	9		
016	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	9		
017	3'-0"	7'-0"	0'-1 3/4"	SCW	-		B	2	7		
100	3'-0"	7'-0"	0'-1 3/4"	ALUM		Yes	2/A1.02	--	1	Yes	EXTERIOR DOOR
100A	3'-0"	7'-0"	0'-1 3/4"	SCW			B	1	11		SECURITY DOOR
101	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	3		
102	3'-6"	7'-0"	0'-1 3/4"	SCW			A	1	4		
104	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
104A	5'-0"	7'-0"	0'-1 3/4"	SCW			A	1	10		
105	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	3		
106	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	3		
107	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	9		
108	3'-0"	7'-0"	0'-1 3/4"	SCW	-		B	1	8		SECURITY DOOR
109	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
109A	2'-8"	6'-8"	0'-1 3/4"	SCW			A	1	6		CLOSET DOOR
110	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
111	3'-0"	7'-0"	0'-1 3/4"	SCW		No	A	1	4		
112	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
113	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
114	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
115	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
116	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
117	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	11		SECURITY DOOR
117A	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
118	3'-0"	7'-0"	0'-1 3/4"	SCW	-		A	1	2		
119	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	3		
120	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
120A	2'-6"	6'-8"	0'-1 3/4"	SCW			A	1	6		CLOSET DOOR
121	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	3		
122	2'-6"	7'-0"	0'-1 3/4"	SCW			A	1	6		
124	3'-0"	7'-0"	0'-1 3/4"	HM		Yes	A	2	8	Yes	EXTERIOR DOOR
125	3'-0"	7'-0"	0'-1 3/4"	SCW	-		B	2	7		SECURITY DOOR
125A	3'-0"	7'-0"	0'-1 3/4"	HM		Yes	A	2	8	Yes	EXTERIOR DOOR
201	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
202	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
203	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	2		
203A	3'-0"	7'-0"	0'-1 3/4"	SCW			A	2	6		
204	3'-0"	7'-0"	0'-1 3/4"	SCW	-		B	2	7		
205	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
206	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	6		UNDERCUT DOOR 1 INCH
208	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	5		
209	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	6		
210	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
211	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
212	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
213A	3'-0"	6'-8"	0'-1 3/8"	SCW			E				SLIDING BARN DOOR
213B	3'-0"	6'-8"	0'-1 3/8"	SCW			E				SLIDING BARN DOOR
214	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	3		
215	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
216	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	3		
217	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
218	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	9		
219	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	5		
220	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
221	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	5		
222	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	5		
223	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
224	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	6		
225	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
226	3'-0"	7'-0"	0'-1 3/4"	SCW	-		B	1	7		SECURITY DOOR
227	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
228	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
229	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
230	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
231	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		
232	3'-0"	7'-0"	0'-1 3/4"	SCW			A	1	4		

DOOR SCHEDULE NOTES:
1. NOTE 1 (EXTERIOR DOOR)
2. NOTE 2 (OVEHEAD COILING FIRE SHUTTER)



DOOR TYPES

NOT TO SCALE

ACCESSIBLE DOOR CLEARANCE NOTES

1. UNLESS SPECIFICALLY NOTED OR DIMENSIONED OTHERWISE ALL NEW DOORS SHALL BE LOCATED WITH THE DOOR OPENING 4" FROM A PARTITION CORNER (I.E. 2" OF FRAMING AND A 2" DOOR FRAME).
2. ALL NEW AND SPECIFICALLY DESIGNATED DOORS SHALL MAINTAIN CLEAR AREAS BASED ON THE APPROACH DIRECTION AND THEIR OPERATIONAL SIDE. REQUIRED CLEAR AREAS MUST BE FREE OF "PROJECTIONS" AS DESCRIBED BY THE GOVERNING ADA CODE (THIS INCLUDES WALL MOUNTED ACCESSORIES, PLUMBING FIXTURES, ADJACENT PARTITIONS, CURBS, AND SIMILAR SYSTEMS).
3. DIAGRAMS OF RELEVANT REQUIRED CLEARANCES ARE PROVIDED ON THE ADA REFERENCE PAGE IN THIS DRAWING SET. THIS SET OF ICC ANSI A117.1-2009 STANDARDS HAS BEEN INDICATED HERE FOR GENERAL REFERENCE PURPOSES ONLY. IN NO WAY DOES THIS SHEET REPRESENT ALL APPLICABLE COMPONENTS OF THE "ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES" NATIONAL STANDARD.

GENERAL DOOR NOTES

1. PROVIDE WEATHERSTRIPPING AND DOOR SWEEPS AT ALL EXTERIOR DOORS.
2. FINAL DOOR STYLE SELECTIONS, COLOR, AND HARDWARE ARE TO BE DETERMINED. CONTRACTOR SHALL VERIFY AND COORDINATE IN THE FIELD.
3. PROVIDE DOOR FRAMES WITH 4" HEADS AT ALL DOORS WITHIN MASONRY WALLS AS REQUIRED TO MAINTAIN COURSING.
4. ALL GLAZING IN DOORS AND WITHIN A 24" ARC OF THE SIDES OF EGRESS DOORS SHALL BE OF AN APPROVED SAFETY TYPE. (VERIFY IN FIELD).
5. PAINT HOLLOW METAL FRAMES AND DOORS WHERE SCHEDULED WITH 2 FINISH COATS OF HIGH-GLOSS ACRYLIC ENAMEL. REFER TO ELEVATIONS AND FINISH SCHEDULE.
6. ALL THRESHOLDS SHALL BE 1/4" MAXIMUM OFFSET, ADA ACCESSIBLE.
7. DOOR DETAILS DO NOT DEPICT ALL INTERIOR FINISHES. REFER TO INTERIOR ELEVATIONS AND FINISH MATERIAL SCHEDULE FOR REQUIRED FINISHES.

GENERAL HARDWARE NOTES

1. ALL HARDWARE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS NOTED OTHERWISE.
2. SEE OUTLINE SPECIFICATIONS FOR REQUIRED FINISHES.
3. ALL LOCKS TO BE MASTER KEYED TO SELECTED SYSTEM. COORDINATE WITH OWNER FOR MASTER/SUB-MASTER KEYING.
4. ALL DOORS SHALL HAVE ADA APPROVED TYPE HARDWARE (VERIFY IN FIELD).
5. PROVIDE FRAME SILENCERS AND DOOR STOPS FOR ALL DOORS. STOPS MAY BE FLOOR MOUNTED OR WALL MOUNTED.
6. PROVIDE 1 1/2 PAIR HINGES PER LEAF UP TO 7'-0" TALL DOORS. PROVIDE 2 PAIR HINGES PER LEAF FOR DOORS EXCEEDING 7'-0" TALL, UNLESS NOTED OTHERWISE.
7. EXIT HARDWARE SHALL COMPLY WITH ALL APPLICABLE CODES. NO PANIC HARDWARE REQUIRED PER VCC 1010.2.9. NOT REQUIRED IN "B" OCCUPANCY, NO REFRIGERATION ROOM, NO TRANSFORMER VAULT.
8. THE MAXIMUM DIMENSION FROM THE TOP OF THE THRESHOLD TO THE EXTERIOR LANDING AT EXTERIOR DOORS SHALL NOT EXCEED 1/2". (VERIFY IN FIELD).
9. ADJUST CLOSERS SUCH THAT SWEEP PERIOD FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO AN OPEN POSITION OF 12 DEGREES SHALL BE 5 SECONDS MINIMUM. MAXIMUM OPENING FORCE OF DOORS SHALL BE 5 LBF FOR INTERIOR DOORS, AND 15 LBF FOR EXTERIOR DOORS.
10. HARDWARE PROVIDER TO REVIEW HARDWARE SETS, DOOR LOCKING ARRANGEMENTS, OVERALL FUNCTIONALITY ASPECTS & KEYING WITH OWNER AND CONTRACTOR TO COMPLETE HARDWARE ORDER. PROVIDE SAMPLES AS REQUIRED.

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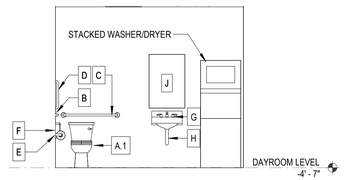
ROBERT W. PULKINGTON
Lic. No. 013210
01/10/2025
ARCHITECT

AHCS SUBSTANCE USE EXPANSION
INTERIOR RENOVATION
DOOR SCHEDULE, NOTES, AND DETAILS
311 S MONROE AVE & 320 E PINE ST
COVINGTON, VIRGINIA 24426

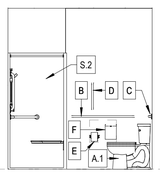
DRAWN BY	MFK
DESIGNED BY	RWP/MFK
CHECKED BY	RWP
DATE	01/10/2025
SCALE	As indicated
REVISIONS	

A1.42

PROJECT NO 03230077.00



DAYROOM LEVEL -4' - 7"



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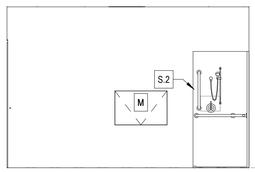
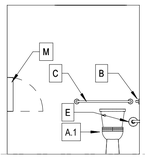
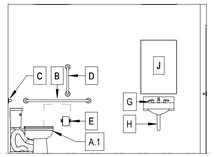


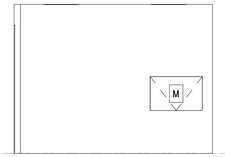
DAYROOM LEVEL -4' - 7"



1ST FLOOR +0' - 0"

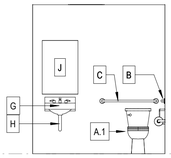


1ST FLOOR +0' - 0"



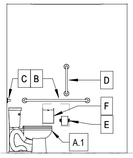
1ST FLOOR +0' - 0"

1 A1.43 006 ELEV - a
1/4" = 1'-0"



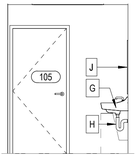
1ST FLOOR +0' - 0"

2 A1.43 006 ELEV - b
1/4" = 1'-0"



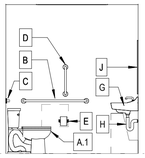
1ST FLOOR +0' - 0"

3 A1.43 006 ELEV - c
1/4" = 1'-0"



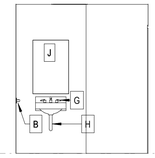
1ST FLOOR +0' - 0"

4 A1.43 101 ELEV - a
1/4" = 1'-0"



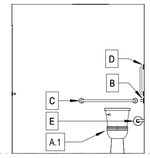
1ST FLOOR +0' - 0"

5 A1.43 101 ELEV - b
1/4" = 1'-0"



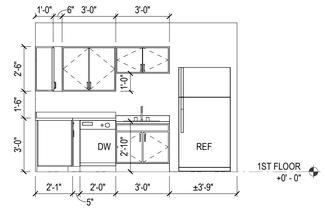
1ST FLOOR +0' - 0"

6 A1.43 101 ELEV - c
1/4" = 1'-0"



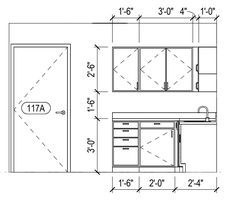
1ST FLOOR +0' - 0"

7 A1.43 105 ELEV - a
1/4" = 1'-0"



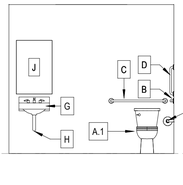
1ST FLOOR +0' - 0"

8 A1.43 105 ELEV - b
1/4" = 1'-0"



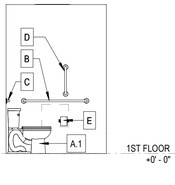
1ST FLOOR +0' - 0"

9 A1.43 105 ELEV - c
1/4" = 1'-0"



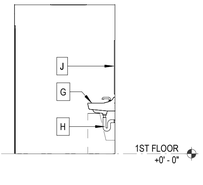
1ST FLOOR +0' - 0"

10 A1.43 106 ELEV - a
1/4" = 1'-0"



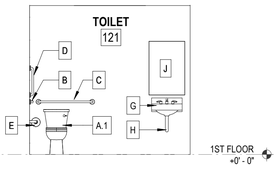
1ST FLOOR +0' - 0"

11 A1.43 106 ELEV - b
1/4" = 1'-0"

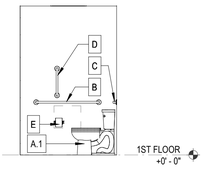


1ST FLOOR +0' - 0"

12 A1.43 106 ELEV - c
1/4" = 1'-0"

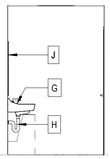


1ST FLOOR +0' - 0"



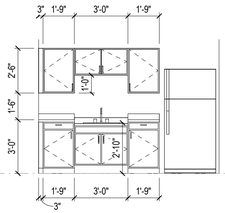
1ST FLOOR +0' - 0"

13 A1.43 117 ELEV - a
1/4" = 1'-0"



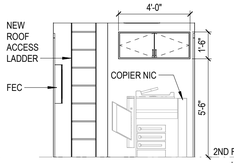
1ST FLOOR +0' - 0"

14 A1.43 117 ELEV - b
1/4" = 1'-0"



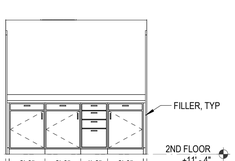
2ND FLOOR +11' - 4"

15 A1.43 119 ELEV - a
1/4" = 1'-0"



2ND FLOOR +11' - 4"

16 A1.43 119 ELEV - b
1/4" = 1'-0"



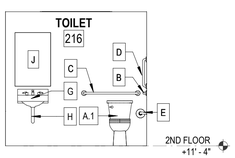
2ND FLOOR +11' - 4"

17 A1.43 119 ELEV - c
1/4" = 1'-0"

18 A1.43 121 ELEV -a
1/4" = 1'-0"

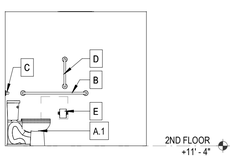
19 A1.43 121 ELEV - b
1/4" = 1'-0"

20 A1.43 121 ELEV - c
1/4" = 1'-0"



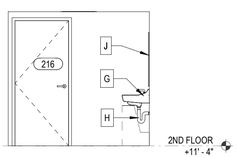
2ND FLOOR +11' - 4"

21 A1.43 211 ELEV - a
1/4" = 1'-0"



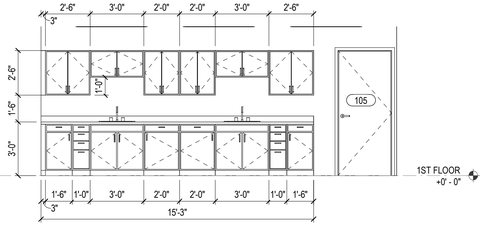
2ND FLOOR +11' - 4"

22 A1.43 213 ELEV - a
1/4" = 1'-0"



2ND FLOOR +11' - 4"

23 A1.43 213 ELEV - b
1/4" = 1'-0"



1ST FLOOR +0' - 0"

24 A1.43 216 ELEV - a
1/4" = 1'-0"

25 A1.43 216 ELEV - b
1/4" = 1'-0"

26 A1.43 216 ELEV - c
1/4" = 1'-0"

27 A1.43 LAB ELEVATION
1/4" = 1'-0"

TOILET ACCESSORIES NOTES

1. CONTRACTOR TO SUPPLY AND INSTALL SCHEDULED TOILET ACCESSORIES IN RESTROOMS. VERIFY IF OWNER OR OWNER'S VENDOR IS SUPPLYING SCHEDULED ACCESSORIES.
2. PROVIDE WOOD BLOCKING AT ALL WALL-HUNG ITEMS IN FRAMED PARTITIONS.
3. ALL ACCESSORIES MUST BE ACCESSIBILITY (ADA) COMPLIANT, SEE ADA REFERENCE DETAILS SHEET.
4. VERIFY MOUNTING HEIGHT OF TOILET TISSUE HOLDER PRIOR TO MOUNTING. HEIGHT MAY VARY DEPENDING ON UNIT FURNISHED BY OWNER.
5. CONTRACTOR TO INSTALL BABY CHANGING STATION.
6. INSULATE ALL EXPOSED HOT WATER SUPPLY AND DRAIN PIPES.
7. TOILET LEVER SHALL BE TO THE WIDE SIDE OF ROOM OR STALL.
8. PROVIDE VENTILATION FAN TO OUTSIDE FOR ALL TOILETS. OPERATION TO ACTIVATE WHEN LIGHT IS SWITCHED.
9. CONTRACTOR SHALL VERIFY FINAL FIXTURE SELECTIONS WITH OWNER PRIOR TO PURCHASING.

GENERAL CASEWORK/MILLWORK NOTES

1. THESE ARE SCHEMATIC CASEWORK DRAWINGS. BALZER AND ASSOCIATES IS NOT RESPONSIBLE FOR DIMENSIONING, FABRICATION DETAILS (INCLUDING BRACING, FASTENING, AND CONCEALED BLOCKING, AND SIMILAR FRAMING) NORMALLY ASSOCIATED WITH SHOP DRAWINGS.
2. ALLOW A MINIMUM OF 1 INCH CLEARANCE FROM THE EDGE OF ALL WALLS AND THE OUTSIDE FACE OF CASEWORK, TYPICAL
3. PROVIDE 1-1/2" HOLE FOR ELECTRICAL, TELEPHONE, AND COMPUTER OUTLET ACCESS IN COUNTERS WHERE CABLE OPENINGS/GROMMETS OCCUR AND WHERE NOTED. VERIFY LOCATION WITH OWNER, COORDINATE POWER AND TELEPHONE PLAN WITH CABINET ELEVATION.
4. FILLER STRIPS ARE TO BE PROVIDED AT ALL WALLS.

INTERIOR SIGNAGE NOTES

1. PROVIDE ACCESSIBILITY COMPLIANT SIGNAGE TO ALL PUBLICLY ACCESSED AREAS WITHIN THE BUILDING. THIS INCLUDES BUT IS NOT LIMITED TO RESTROOMS, LOBBY AREAS, AND MECHANICAL ROOMS.
2. VERIFY ADDITIONAL SIGNAGE REQUIREMENTS WITH THE OWNER.
3. REFER TO CODE SUMMARY FOR ADDITIONAL NOTES.

RESTROOM ACCESSORY SCHEDULE

MARK	DESCRIPTION	BASIS-OF-DESIGN	MODEL	DESCRIPTION	MOUNTING HEIGHT	COMMENTS
A.1	TANK WATER CLOSET (ADA)	AMERICAN STANDARD	3378.128	CADET 3 ELONGATED 16-1/2" RIGHT HEIGHT LOW CONSUMPTION TANK TOILET, FLOOR MOUNTED, VITREOUS CHINA	SEAT 17"-19" ABOVE FINISHED FLOOR	
B	SIDE WALL GRAB BAR	BOBRICK	B-5806.99x42	STRAIGHT PEENED GRAB BAR	33"-36" ABOVE FINISHED FLOOR TO TOP OF BAR	REINFORCED WALL
C	REAR WALL GRAB BAR	BOBRICK	B-5806.99x36	STRAIGHT PEENED GRAB BAR	33"-36" ABOVE FINISHED FLOOR TO TOP OF BAR	REINFORCED WALL
D	VERTICAL GRAB BAR	BOBRICK	B-5806.99x18	STRAIGHT PEENED GRAB BAR	39"-41" ABOVE FINISHED FLOOR TO BOTTOM OF BAR	REINFORCED WALL
E	TOILET PAPER DISPENSER	BOBRICK	B-2730	SINGLE-ROLL TOILET TISSUE DISPENSER	24" ABOVE FINISHED FLOOR TO TOP	
F	SANITARY NAPKIN DISPOSAL	BOBRICK	B-270	SURFACE MOUNTED SANITARY NAPKIN DISPOSAL	SEE ADA REFERENCE DETAILS	
G	WALL MOUNTED LAVATORY	AMERICAN STANDARD	LUCERNE 0355.012	WHITE WITH ADA FAUCET	34" ABOVE FINISHED FLOOR TO TOP OF SINK RIM	
H	DRAIN INSULATION	TRUBRO	102 E-Z	MOUNTED TO SINK DRAIN LINE	SEE ADA REFERENCE DETAILS	
J	2-0" WIDE X 3'-0" TALL MIRROR	BOBRICK	B-165-2436	STAINLESS STEEL FRAME	40" ABOVE FINISHED FLOOR TO BOTTOM OF REFLECTIVE SURFACE	
M	BABY CHANGING STATION	BOBRICK	KB200-00	SURFACE WALL MOUNTED HORIZONTAL BABY CHANGING STATION	48" ABOVE FINISHED FLOOR TO HIGHEST OPERABLE COMPONENT	
S.2	PREFABRICATED SHOWER UNIT	FREEDOM SHOWERS	APRQ3838BF1 PRRFL	36" X 36" ADA TRANSFER SHOWER	SEAT 17"-19" ABOVE BATHROOM FLOOR	PROVIDE SEAT, GRAB BARS, HAND SHOWER. SEE T3.02.
W.1	HIGH/LOW WATER FOUNTAIN WITH BOTTLE FILLER	ELKAY	EZH20	BI-LEVEL ADA COOLER, NON-FILTERED, WITH BOTTLE FILLING STATION	34" ABOVE FINISHED FLOOR TO ACCESSIBLE SPOUT	PROVIDE CANE DETECTION SHROUD AT HIGH FOUNTAIN

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540.772.9580

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ROBERT W. PILKINGTON
Lic. No. 013210
01/10/2025
ARCHITECT

AHCS SUBSTANCE USE EXPANSION
INTERIOR RENOVATION
INTERIOR ELEVATIONS

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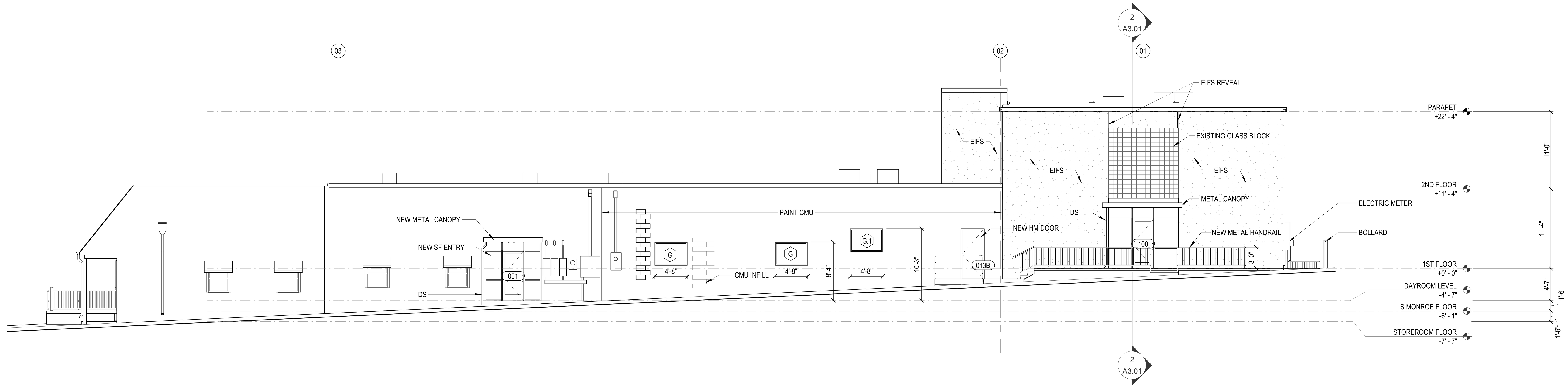
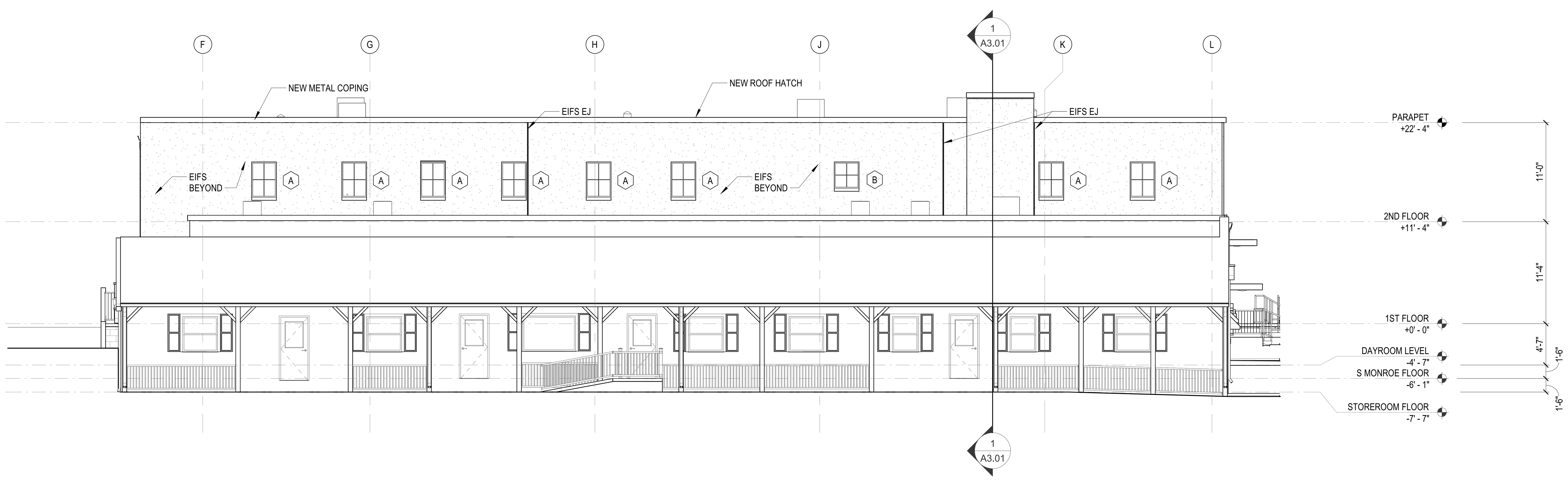


1 A2.01 **EXTERIOR ELEVATION**

1/8" = 1'-0"



2 A2.01 **EXTERIOR ELEVATION**

1/8" = 1'-0"

GENERAL EXTERIOR ELEVATION NOTES

1. COORDINATE ALL EXTERIOR WALL PENETRATIONS WITH OTHER TRADES.
2. GRADING CONDITIONS AT THE BUILDING FACE MAY VARY AS SITE CONDITIONS AND BUILDING TECHNIQUES MAY DICTATE.
3. EXTERIOR WALL PLUMBING AND VENTILATION PENETRATIONS ARE NOT SHOWN. COORDINATE PROPOSED LOCATIONS WITH OWNER PRIOR TO INSTALLATION.
4. ALL EXTERIOR FINISHES/COLORS/TEXTURES AND/OR MANUFACTURERS SHOWN HEREIN SHALL BE VERIFIED WITH OWNER PRIOR TO CONSTRUCTION.

GENERAL EXTERIOR EIFS NOTES

1. ALL EXTERIOR FINISHES/COLORS/TEXTURES AND/OR MANUFACTURERS SHOWN HEREIN SHALL BE VERIFIED WITH OWNER PRIOR TO CONSTRUCTION.
2. PROVIDE VERTICAL AND HORIZONTAL CONTROL JOINTS IN EIFS AT LOCATIONS SHOWN AND/OR AT MANUFACTURER RECOMMENDED SPACING. SEALANTS USED IN CONTROL JOINTS SHALL MATCH EIFS COLOR(S).
3. TRIM WORK (WINDOW/DOOR CASING) SHALL BE EPS BOARD WITH EIFS FINISH, DESIGN AND STYLE PER EXTERIOR ELEVATIONS; CONTRACTOR SHALL COORDINATE WITH OWNER FOR APPROVAL.

GENERAL EXTERIOR PAINT NOTES

1. ALL EXTERIOR FINISHES/COLORS/TEXTURES AND/OR MANUFACTURERS SHOWN HEREIN SHALL BE VERIFIED WITH OWNER PRIOR TO CONSTRUCTION.
2. PAINTING SHALL BE LABELED FOR EXTERIOR APPLICATIONS. USE ONLY PAINT LISTED BY MANUFACTURER FOR INTENDED SUBSTRATES.
3. PAINT ALL EXTERIOR SIDING, TRIM AND SOFFITS. CONSULT OWNER FOR ALL REQUIRED PAINT AND MATERIAL COLORS IF NOT SPECIFICALLY SHOWN HEREIN.
4. MASK ANY EXTERIOR ELEMENTS (LIGHTS, WINDOWS, DOORS, AND SIMILAR OBJECTS) WHICH ARE NOT TO BE PAINTED PRIOR TO PAINTING. REMOVE ANY SPILLS OR EXCESS PAINT BEFORE PAINT DRIES.
5. PAINT ALL EXPOSED UTILITY JUNCTION BOXES/METERS AND ASSOCIATED CONDUIT SHALL BE PAINTED TO MATCH IMMEDIATELY ADJACENT BUILDING COLOR.

GENERAL ROOFING & GUTTERING NOTES

1. ALL EXTERIOR FINISHES/COLORS/TEXTURES AND/OR MANUFACTURERS SHOWN HEREIN SHALL BE VERIFIED WITH OWNER PRIOR TO CONSTRUCTION.
2. CONNECT TO BELOW GRADE PIPING. SEE SCHEMATIC ROOF PLAN FOR DOWNSPOUT LOCATIONS. COLOR TO BE SELECTED BY OWNER, TYPICAL.

GENERAL EXTERIOR BUILDING SIGNAGE NOTES

1. ALL EXTERIOR BUILDING SIGNAGE SHALL BE UNDER A SEPARATE LOCALITY PERMIT. COORDINATE/VERIFY LOCATIONS WITH OWNER SPECIFICATIONS.
2. PROVIDE ELECTRICITY TO ALL EXTERIOR SIGNAGE AS REQUESTED BY OWNER.

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ROBERT W. PILKINGTON
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01/10/2025
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INTERIOR RENOVATION

EXTERIOR ELEVATIONS

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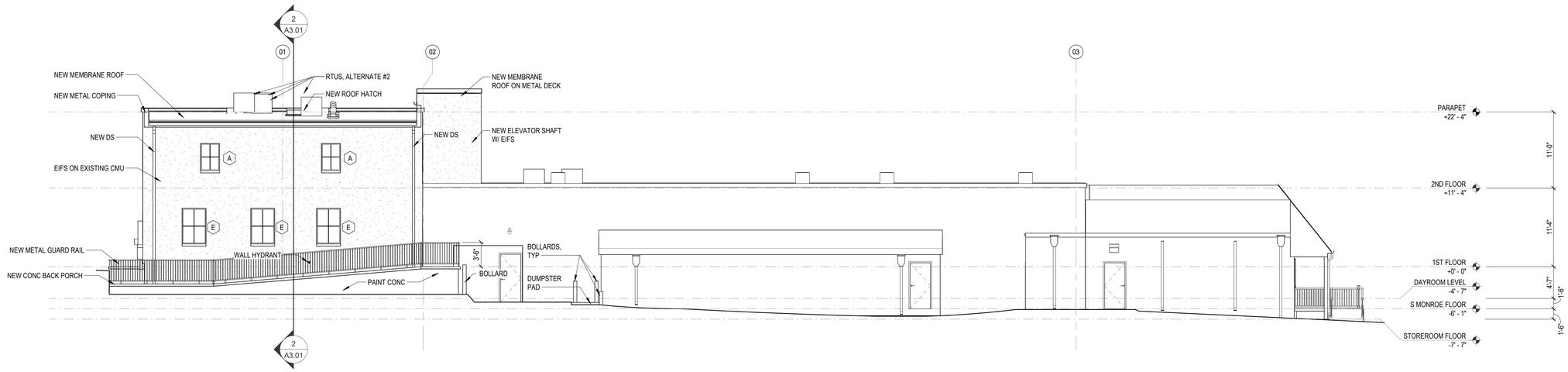
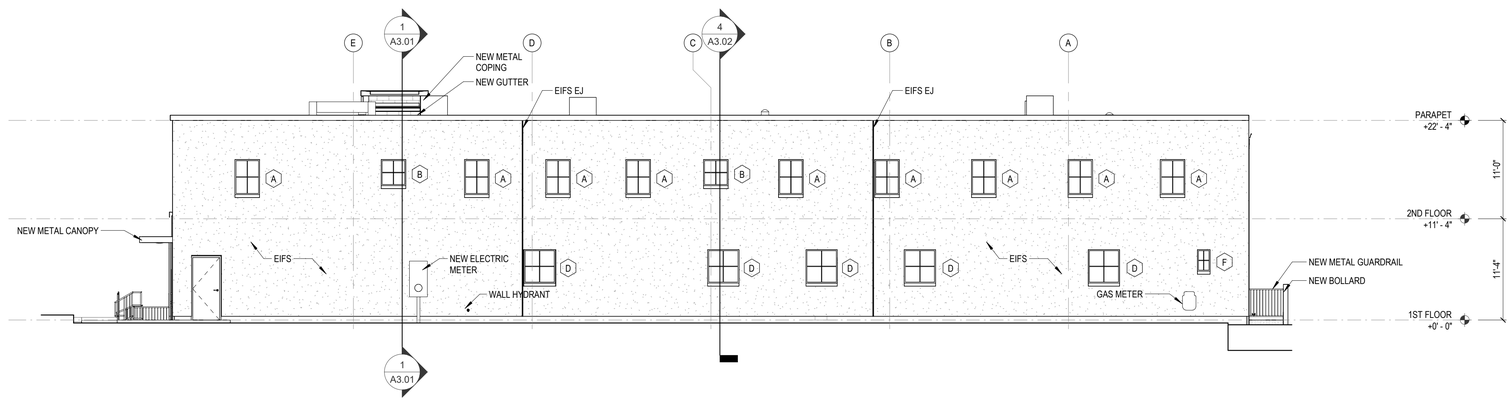
A2.01

PROJECT NO 03230077.00



1 A2.02 EXTERIOR ELEVATION

1/8" = 1'-0"



2 A2.02 EXTERIOR ELEVATION

1/8" = 1'-0"

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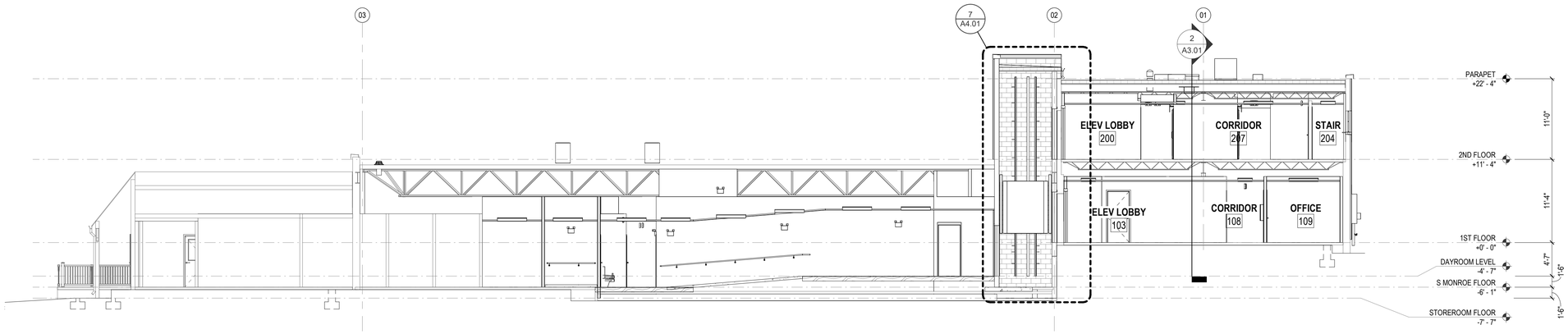
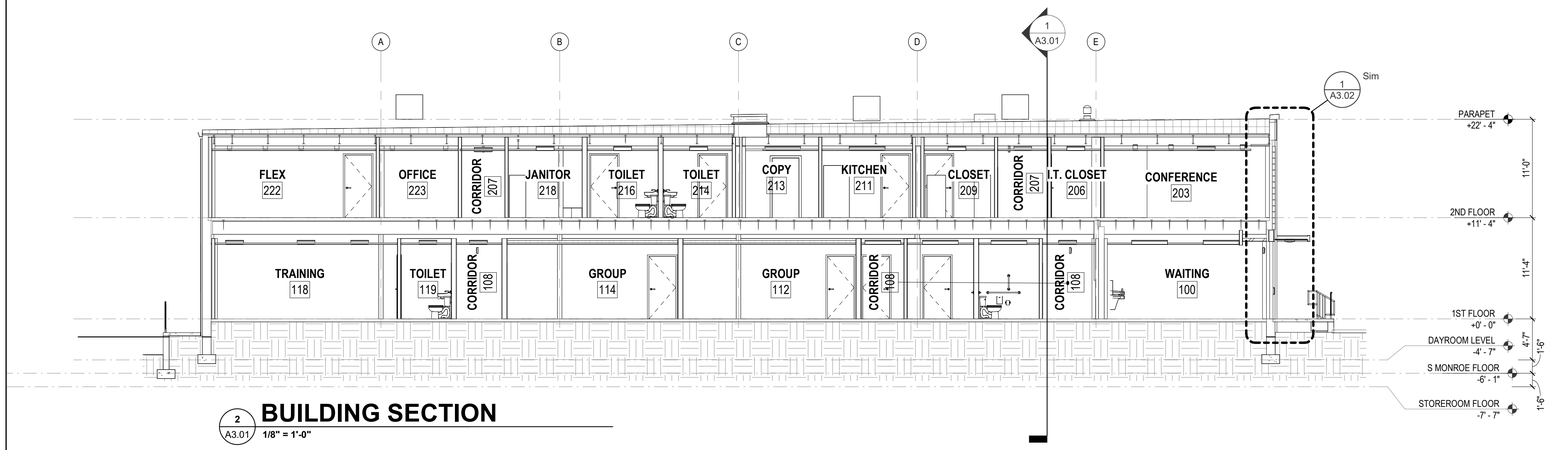


1 A3.01 BUILDING SECTION

1/8" = 1'-0"



2 A3.01 BUILDING SECTION

1/8" = 1'-0"

GENERAL BUILDING SECTION NOTES

1. ALL DATUM ELEVATIONS ARE INDICATED RELATIVE TO HEIGHT ABOVE BUILDING SLAB OR FRAMED FLOOR SYSTEMS. REFER TO CIVIL DRAWINGS FOR TOP OF SLAB ELEVATION.
2. REFER TO STRUCTURAL SHEETS FOR ALL SLAB AND FOUNDATION DESIGN FACTORS, DIMENSIONS, NOTES, REINFORCING, AND DEFLECTION CRITERIA.
3. COORDINATE ALL MATERIALS/SYSTEMS WITH THOSE NOTED ON FLOOR PLANS, EXTERIOR ELEVATIONS, WALL SECTIONS, AND SCHEDULES.
4. COORDINATE ALL EXTERIOR WALL PENETRATIONS WITH OTHER TRADES.
5. GRADING CONDITIONS AT THE BUILDING FACE MAY VARY AS SITE CONDITIONS AND BUILDING TECHNIQUES MAY DICTATE.
6. REFER TO CODE REVIEW DATA FOR REQUIRED INSULATION MINIMUM VALUES (UNDER-SLAB, WALLS, AND ROOF).

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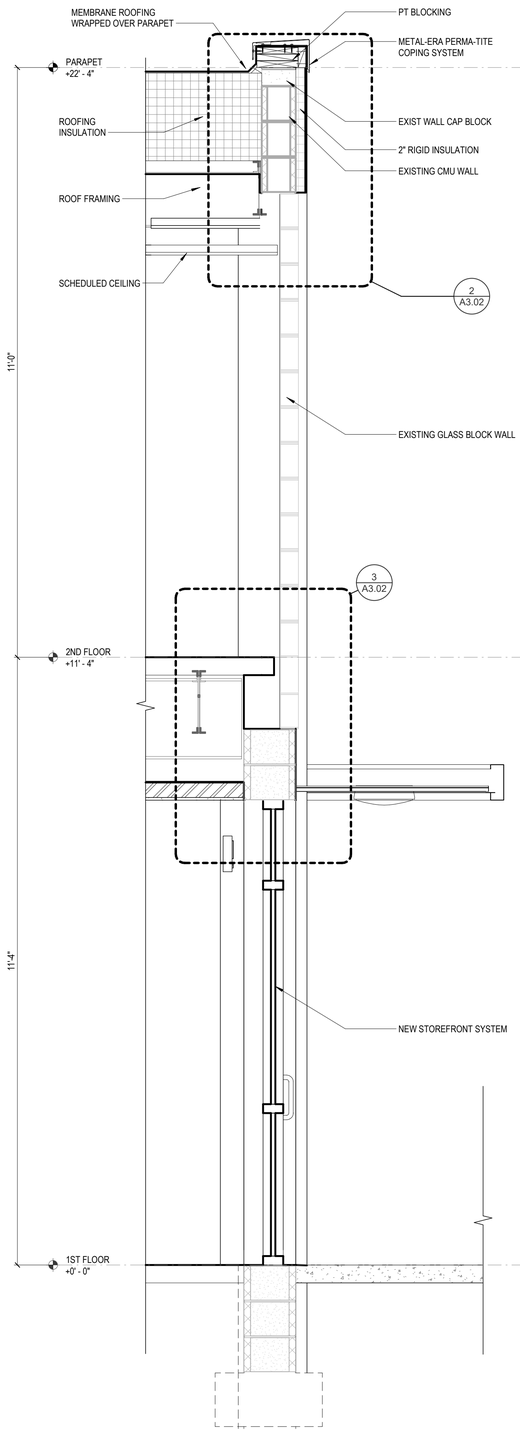
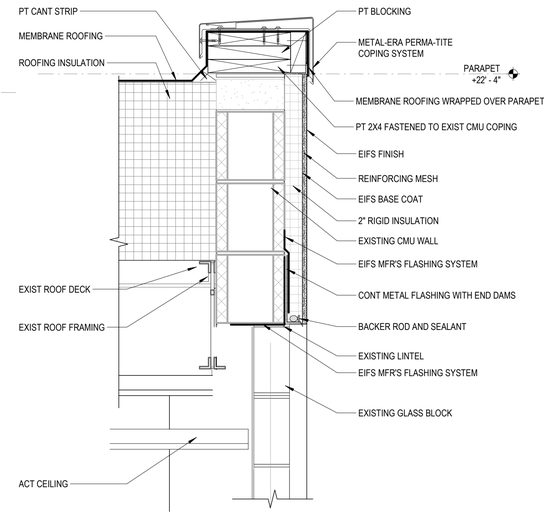
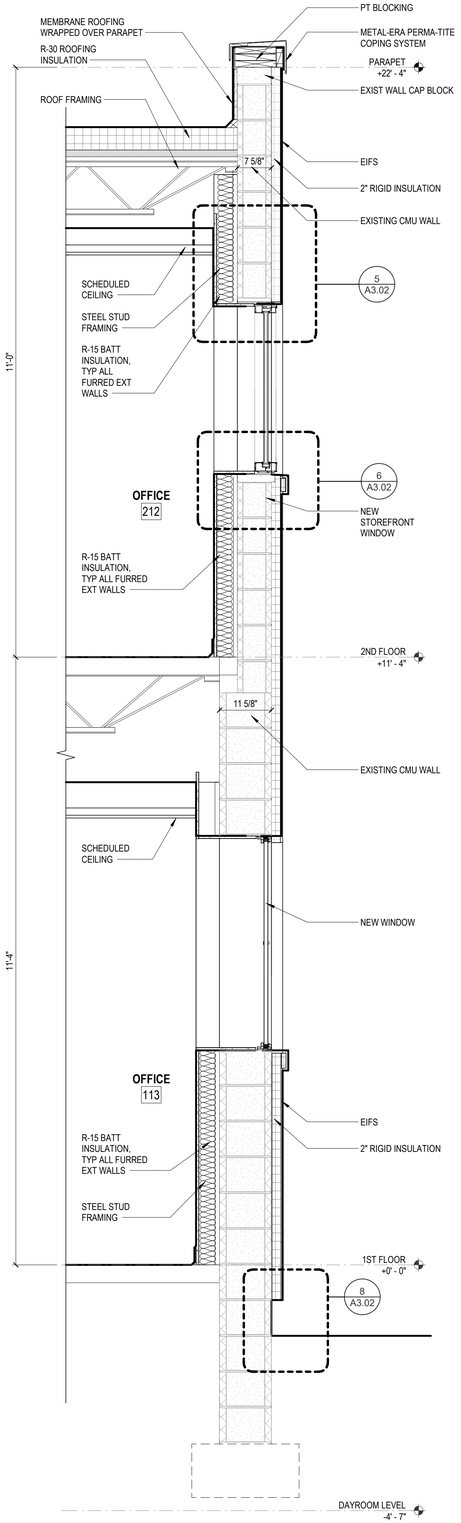
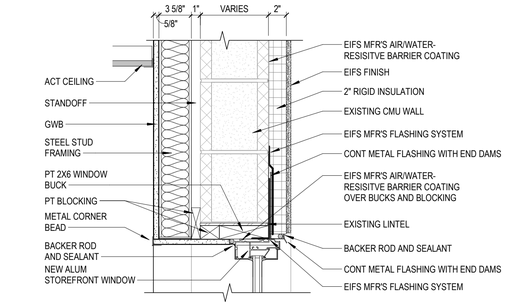




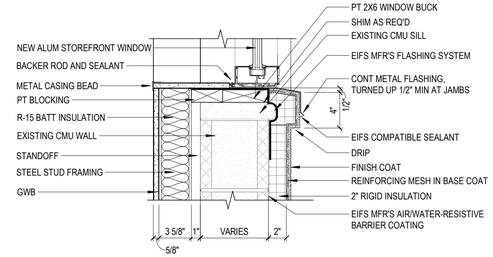
2 PARAPET DETAIL
2 A3.02 — 1 1/2" = 1'-0"



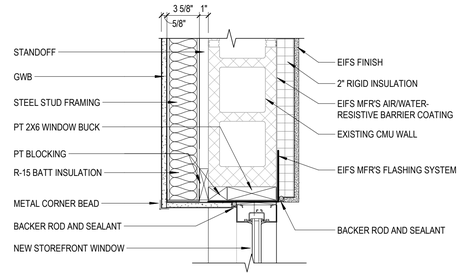
4 WALL SECTION
4 A3.02 — 3/4" = 1'-0"



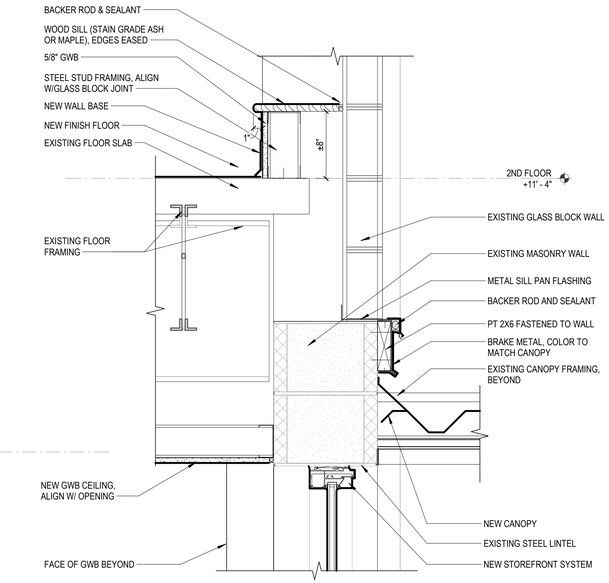
5 TYP WINDOW HEAD
5 A3.02 — 1 1/2" = 1'-0"



6 TYP WINDOW SILL DETAIL
6 A3.02 — 1 1/2" = 1'-0"

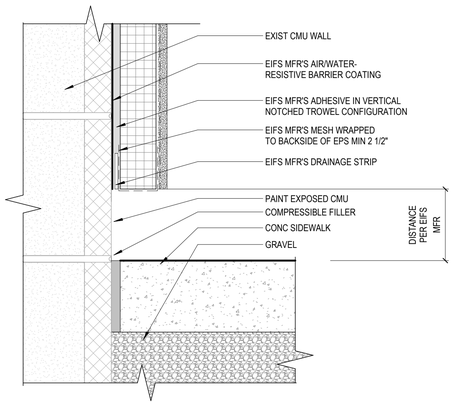


7 TYP WINDOW JAMB
7 A3.02 — 1 1/2" = 1'-0"



1 WALL SECTION
1 A3.02 — 3/4" = 1'-0"

3 DETAIL @ CANOPY
3 A3.02 — 1 1/2" = 1'-0"



EIFS TERMINATION @ SIDEWALK
8 A3.02 — 3" = 1'-0"

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A3.02

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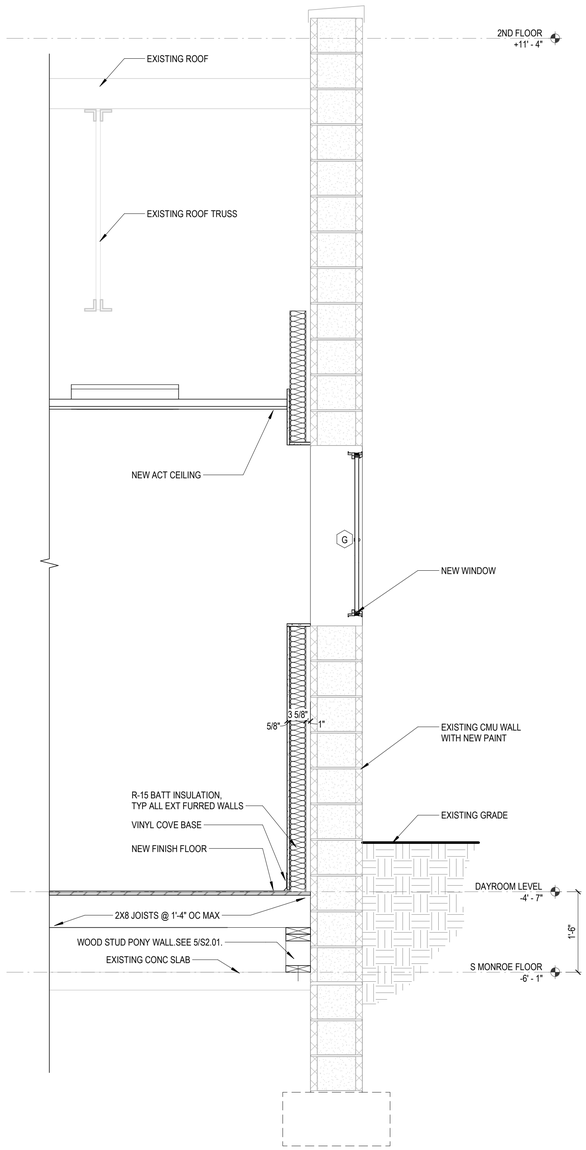
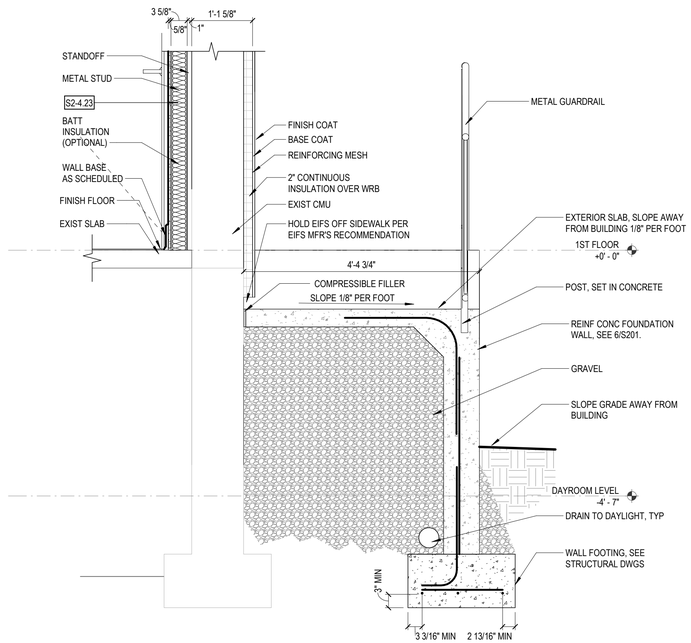


1 A3.03 **WALL SECTION**

3/4" = 1'-0"



2 A3.03 **STOOP SECTION**

3/4" = 1'-0"

GENERAL WALL SECTION NOTES

1. ALL DATUM ELEVATIONS ARE INDICATED RELATIVE TO HEIGHT ABOVE MAIN BUILDING SLAB OR FRAMED FLOOR SYSTEMS. REFER TO CIVIL DRAWINGS FOR TOP OF SLAB ELEVATION.
2. REFER TO STRUCTURAL SHEETS FOR ALL SLAB AND FOUNDATION DESIGN FACTORS, DIMENSIONS, NOTES, REINFORCING, AND DEFLECTION CRITERIA.
3. COORDINATE EXTERIOR FINISHES AND DESCRIPTIONS WITH ADDITIONAL NOTES ON EXTERIOR ELEVATIONS.
4. ALL INTERIOR FINISH SURFACES (FLOORS, WALLS, AND CEILINGS) SHALL BE COORDINATED WITH FINISH SCHEDULES, FLOOR FINISH PLANS, AND REFLECTED CEILING PLANS.
5. ALL TRANSITIONAL FLASHING REQUIRED AT ROOF EAVE/PARAPET TRANSITIONS SHALL BE INSTALLED AS RECOMMENDED BY MANUFACTURERS OF ADJACENT MATERIALS WITH APPROVED AND CHEMICALLY COMPATIBLE SEALANTS.
6. REFER TO ROOF PLAN FOR ALL SLOPES.
7. REFER TO CODE REVIEW DATA FOR REQUIRED INSULATION MINIMUM VALUES (UNDER-SLAB, WALLS, AND ROOF).
8. PROVIDE AND INSTALL SEALANTS AND/OR EXPANSION FILLER AT ALL DISSIMILAR MATERIALS. INSTALL WITH BACKER RODS PER MANUFACTURER RECOMMENDATIONS.

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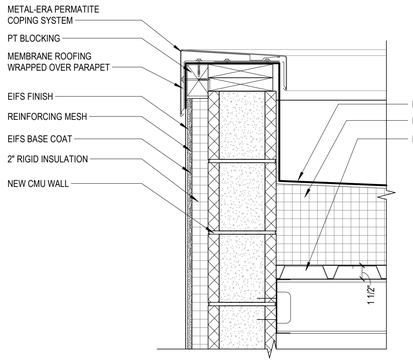
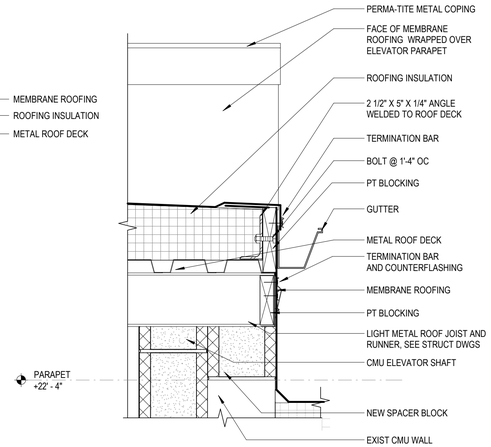
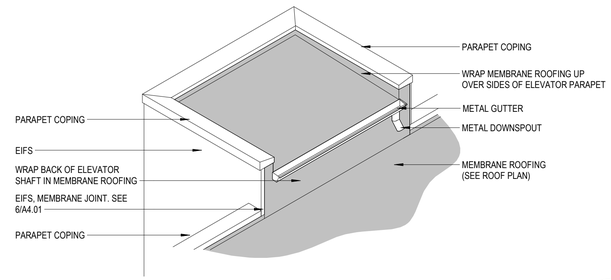
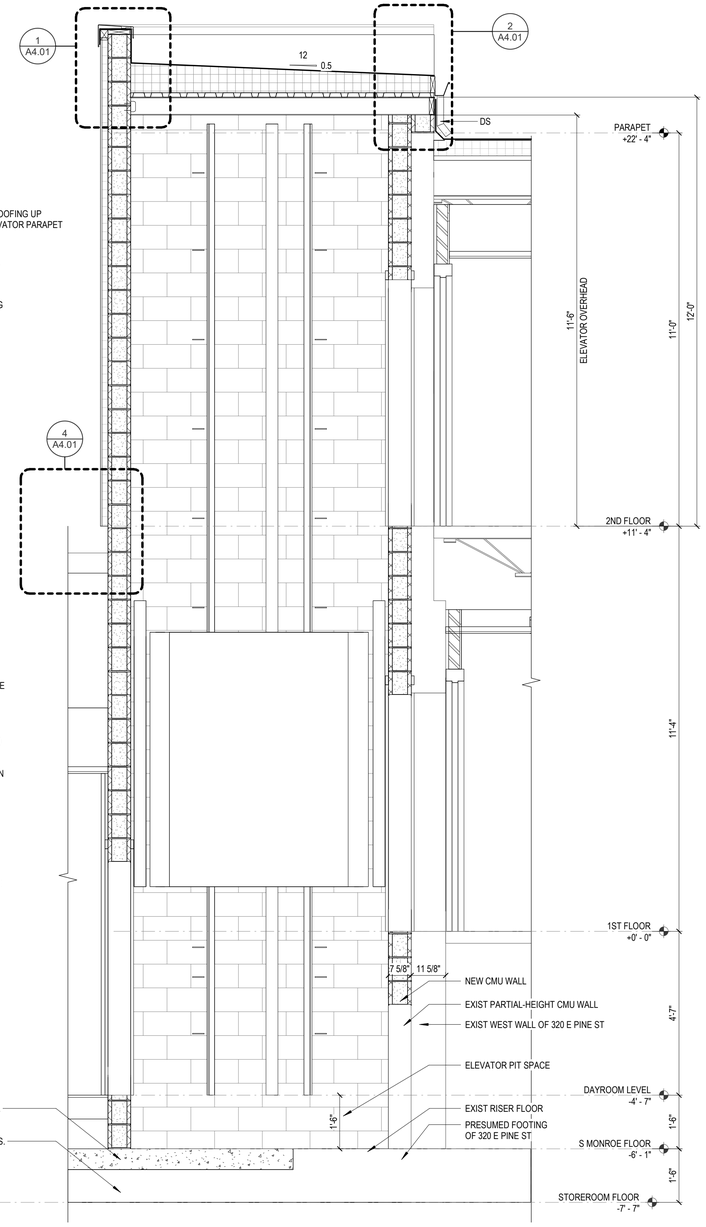








1 A4.01 ELEVATOR SHAFT COPING

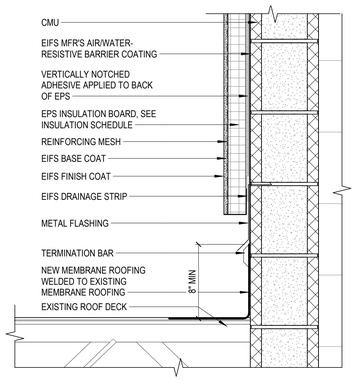
1 1/2" = 1'-0"

2 A4.01 ELEVATOR SHAFT GUTTER

1 1/2" = 1'-0"

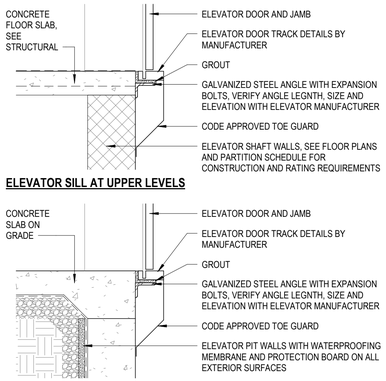
3 A4.01 ELEVATOR ROOF 3D VIEW

NOT TO SCALE



EIFS TERMINATION @ ROOF

4 A4.01 1 1/2" = 1'-0"

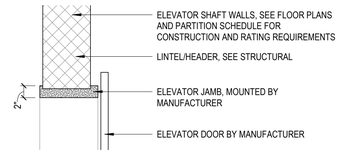


ELEVATOR SILL AT UPPER LEVELS

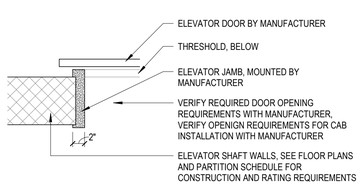
ELEVATOR SILL AT PIT

5 A4.01 ELEVATOR DETAILS

1" = 1'-0"



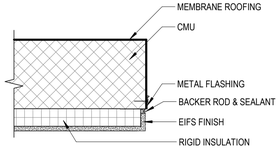
ELEVATOR DOOR HEAD



ELEVATOR DOOR JAMB

GENERAL ELEVATOR NOTES

1. CONTRACTOR TO COORDINATE THE STOP HEIGHT OF ELEVATOR IS EVEN WITH FINISHED FLOOR AT EACH LEVEL.
2. PRIOR TO PURCHASING THE ELEVATOR, THE CONTRACTOR SHALL SUBMIT SPECIFICATIONS WHICH INCLUDE THE FOLLOWING INFORMATION FOR APPROVAL BY THE ARCHITECT AND/OR OWNER:
   A. CAB FINISHES (WALL/CEILING/LIGHTING)
   B. CAB SIZE, SPEED AND CAPACITY
3. IN THE EVENT OF A POWER LOSS, ELEVATORS MUST AUTOMATICALLY RETURN TO THE LOWEST LEVEL AND ALLOW PASSENGERS TO SAFELY EXIT.
4. PROVIDE LIGHTING AND CONVENIENCE OUTLETS IN SHAFT PER MANUFACTURER RECOMMENDATIONS.
5. PROVIDE TWO-WAY COMMUNICATION.
6. ELEVATOR SHAFT DIMENSION: WIDTH AND HEIGHT HAVE BEEN ADJUSTED TO ACCOMMODATE MULTIPLE ELEVATOR BRANDS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM FINAL DIMENSIONS WITH THE SELECTED MANUFACTURER.



6 A4.01 EXT ELEV WALL DETAIL

1 1/2" = 1'-0"

7 A4.01 ELEVATOR SECTION

1/2" = 1'-0"

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540.772.9580

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ROBERT W. PILKINGTON
Lic. No. 013210
01/10/2025
ARCHITECT

AHCS SUBSTANCE USE EXPANSION

INTERIOR RENOVATION

VERTICAL CIRCULATION DETAILS

311 S MONROE AVE & 320 E PINE ST
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A4.01

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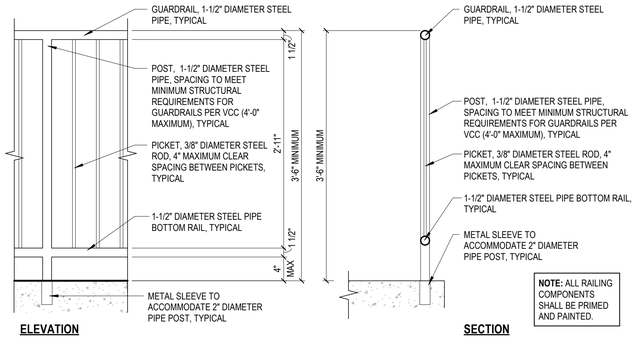
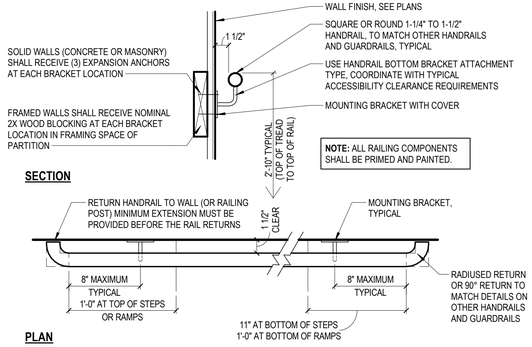


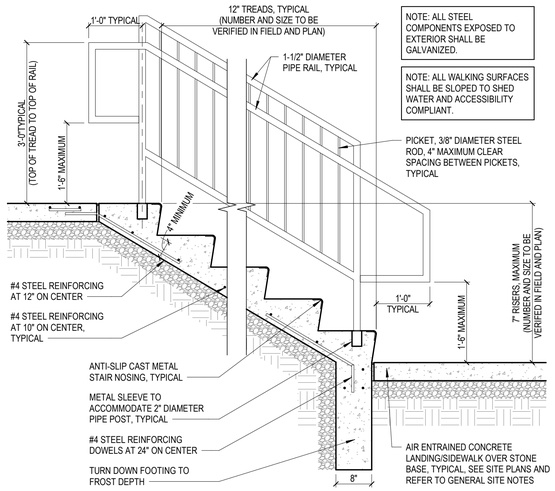


1 A4.02 GUARDRAIL AND HANDRAIL DETAILS

1" = 1'-0"

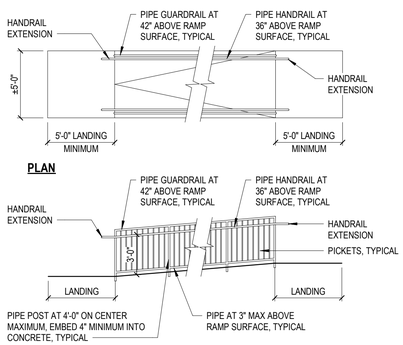
2 A4.02 WALL MOUNTED HANDRAIL

1 1/2" = 1'-0"



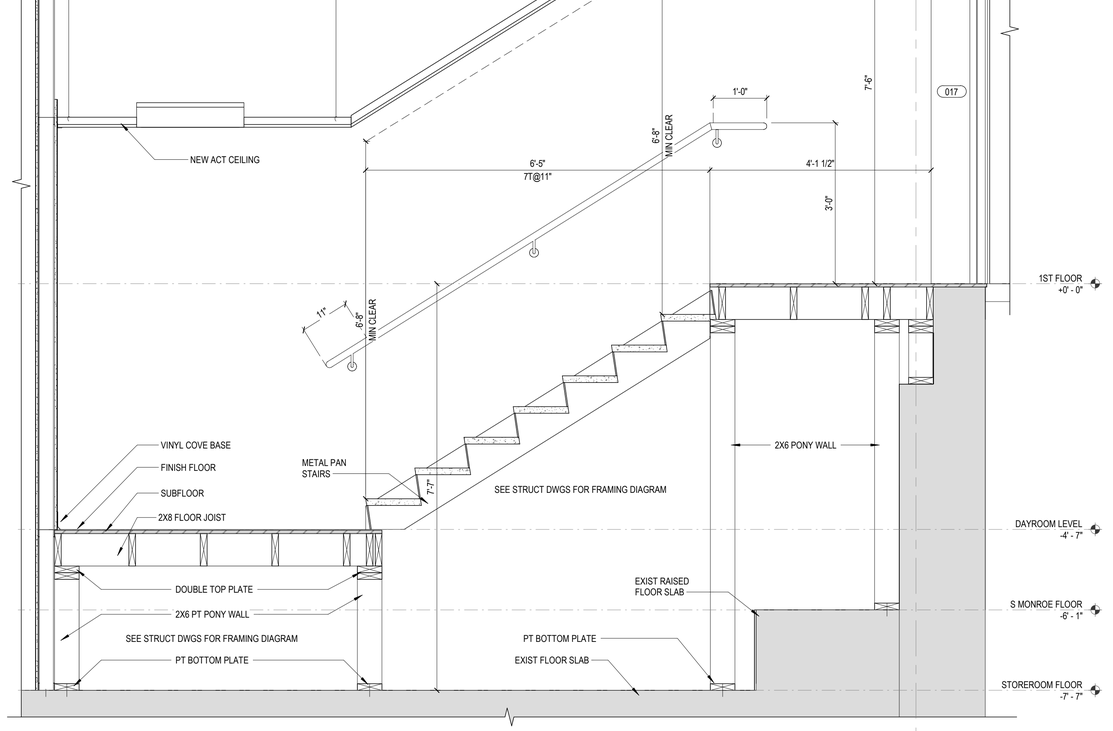
3 A4.02 CONCRETE EXTERIOR STEPS

3/4" = 1'-0"



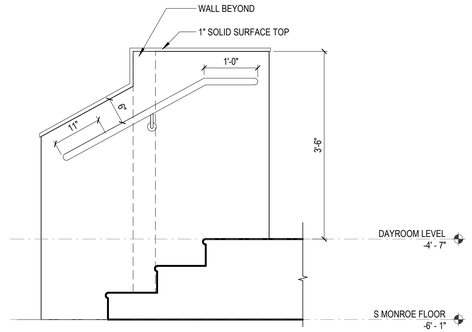
4 A4.02 EXTERIOR RAMP HANDRAIL DETAILS

3/16" = 1'-0"



5 A4.02 STAIR 017

3/4" = 1'-0"



6 A4.02 ENTRY STAIR SECTION

3/4" = 1'-0"

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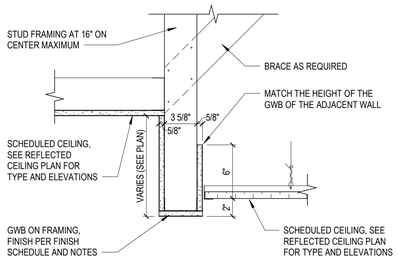
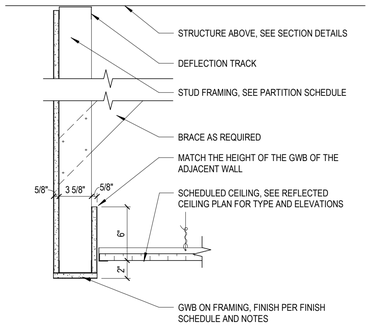
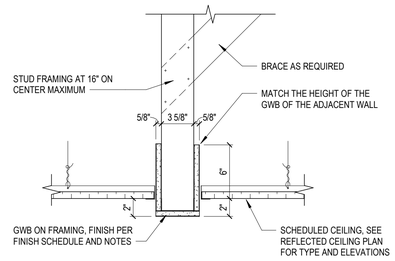


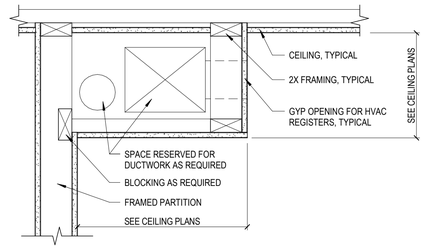
1 CEILING LEVEL CHANGE
A5.01 **1 1/2" = 1'-0"**



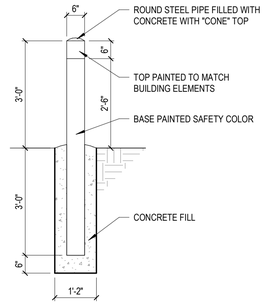
2 FULL HEIGHT BULKHEAD
A5.01 **1 1/2" = 1'-0"**



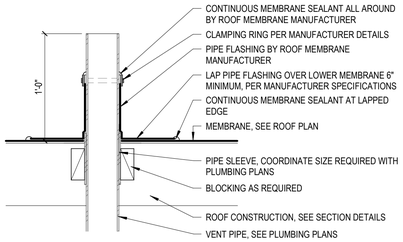
3 BULKHEAD DETAIL
A5.01 **1 1/2" = 1'-0"**



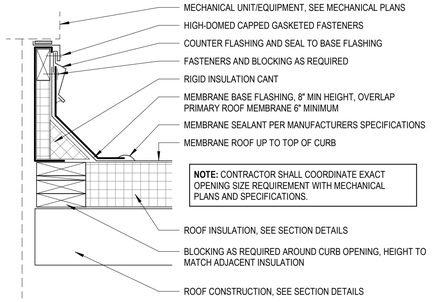
4 MECHANICAL BULKHEAD
A5.01 **1 1/2" = 1'-0"**



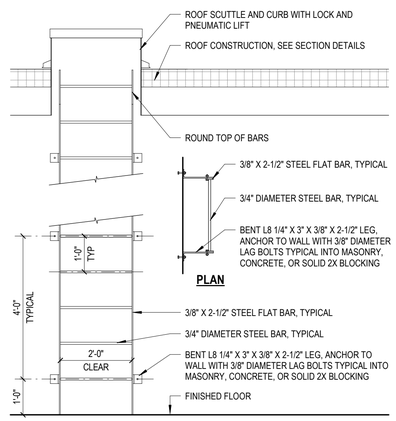
5 BOLLARD DETAIL
A5.01 **1/2" = 1'-0"**



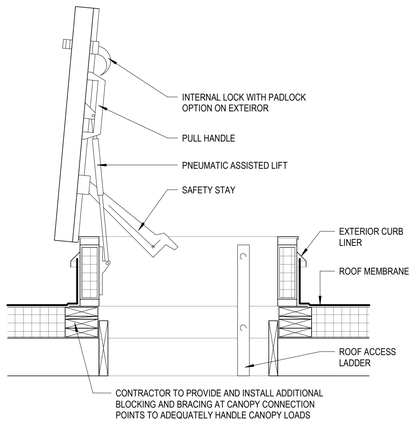
6 VENT PENETRATION
A5.01 **1 1/2" = 1'-0"**



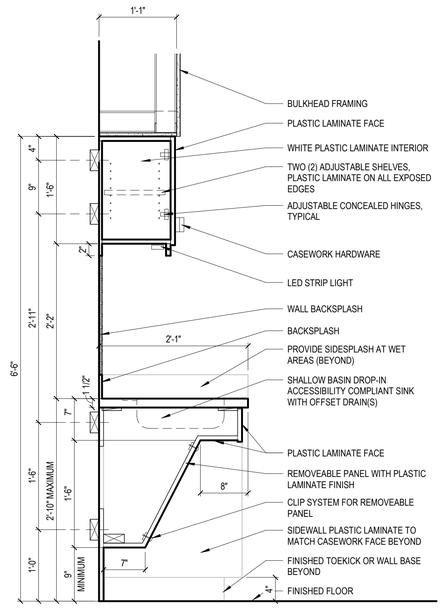
7 MECHANICAL CURB
A5.01 **1 1/2" = 1'-0"**



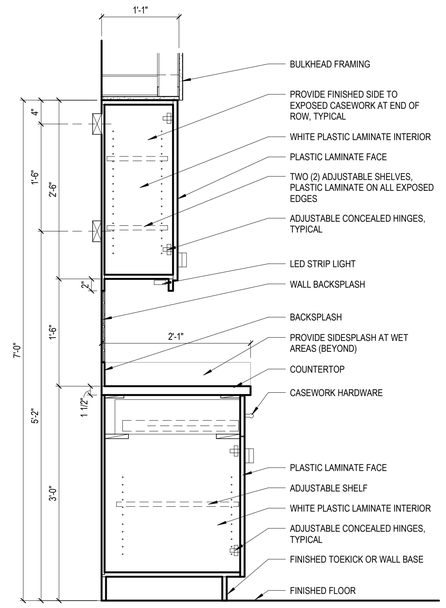
9 ROOF ACCESS LADDER
A5.01 **1/2" = 1'-0"**



10 ROOF SCUTTLE DETAIL
A5.01 **1" = 1'-0"**



CASEWORK SECTION AT SINK (ACCESSIBLE)
11 A5.01 **1" = 1'-0"**



12 CASEWORK SECTION
A5.01 **1" = 1'-0"**

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1208 Corporate Circle
Roanoke, VA 24018
540.772.9580

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AHCS SUBSTANCE USE EXPANSION
INTERIOR RENOVATION
DETAILS

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A5.01

PROJECT NO 03230077.00

AIR DEVICE SCHEDULE

MARK	SERVICE	MOUNTING	FINISH	BASIS OF DESIGN
A	SUPPLY	SURFACE / LAY-IN	WHITE	PRICE, SCD - SQUARE CODE DIFFUSER
B	RETURN	LAY-IN	WHITE	PRICE, 80 - EGG CRATE GRILLE
C	EXHAUST	SURFACE / LAY-IN	WHITE	PRICE, RCG

NOTES:
1. PROVIDE THIN LINE RETURN DISSIPATER WITH EACH RETURN GRILLE NOT DIRECTLY CONNECTED TO A RETURN DUCT.

FAN SCHEDULE

MARK	AIR FLOW (CFM)	ESP	NOM HP	DRIVE TYPE	V/FREQ./PH	WEIGHT (LBS)	BASIS OF DESIGN (MANUFACTURER,MODEL#)
EF-1	275	0.5	1/10	DIRECT	115/60/1	35	GREENHECK G-080-VG
EF-2	200	0.5	1/10	DIRECT	115/60/1	35	GREENHECK G-080-VG
EF-3	275	0.5	1/10	DIRECT	115/60/1	35	GREENHECK G-080-VG
EF-4	125	0.3	1/15	DIRECT	115/60/1	25	GREENHECK G-060-VG
EF-5	125	0.3	1/15	DIRECT	115/60/1	25	GREENHECK G-060-VG
EF-6	125	0.3	1/15	DIRECT	115/60/1	25	GREENHECK G-060-VG

NOTES:
1. MANUFACTURER TO PROVIDE GRAVITY BACKDRAFT DAMPER.
2. MANUFACTURER TO PROVIDE INSULATED ROOF CURB AND ECM MOTOR WITH DIAL ON MOTOR.
3. FANS 1-4 SHALL RUN CONTINUOUSLY WHILE BUILDING IS OCCUPIED. PROVIDE TIME CLOCK FOR EACH FAN OR INTERLOCK WITH AIR HANDLER/ RTU OCCUPANCY SCHEDULE VIA EQUIPMENT CONTROLLER.
4. EF-5 AND EF-6SHALL BE PROVIDED WITH A LINE VOLTAGE THERMOSTAT. FAN SHALL OPERATE WHEN T-STAT REACHES 75°F.

AIR HANDLER UNIT SCHEDULE

MARK	SUPPLY AIR FLOW (CFM)	OUTSIDE AIR FLOW (CFM)	SUPPLY FAN PERFORMANCE		ELECTRIC HEATING PERFORMANCE			AHU ELECTRICAL		BASIS OF DESIGN (MANUFACTURER,MODEL#)	WEIGHT (LBS.)
			MIN. ESP IN. WC	FAN HP	KW PER CIRCUIT	V / PH	MCA/MOCP (AMP.)	V / PH	MCA/MOCP (AMP.)		
AHU-1	1515	245	0.75"	1/2	11.3	208 / 1	54.2/60	208-230 / 1	5.4/15	CARRIER, FE4ANB005	220
AHU-2	1850	300	0.75"	3/4	7.5	208 / 1	36.2/40	208-230 / 1	8.5/15	CARRIER, FE4ANB006	220
AHU-3	1475	230	0.75"	1/2	7.5	208 / 1	36.2/40	208-230 / 1	5.4/15	CARRIER, FE4ANB005	220
AHU-4	1685	270	0.75"	3/4	7.5	208 / 1	36.2/40	208-230 / 1	8.5/15	CARRIER, FE4ANB006	220
AHU-5	525	75	0.75"	1/2	3.8	208 / 1	18.1/20	208-230 / 1	5.4/15	CARRIER, FE4ANB002	170
AHU-6	1525	225	0.75"	1/2	7.5	208 / 1	36.2/40	208-230 / 1	5.4/15	CARRIER, FE4ANB005	220

NOTES:
1. PROVIDE COMPLETE HEATING/COOLING SYSTEM INCLUDING ELECTRIC HEATER INTERLOCKED WITH INDOOR HEAT PUMP COIL AND ASSOCIATED OUTDOOR HEAT PUMP UNIT.
2. PROVIDE 3/4" CONDENSATE WITH P-TRAP ROUTED TO FLOOR DRAIN. PROVIDE 2" AIR GAP AT DISCHARGE. SEE PIPING PLANS FOR EXACT LOCATIONS & DETAILS.
3. PROVIDE REFRIGERANT LINES TO/FROM OUTDOOR HEAT PUMP UNIT SIZED AND ROUTED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
4. ELECTRIC HEATERS TO HAVE DEDICATED ELECTRICAL CIRCUIT
5. PROVIDE FIELD MOUNTED DISCONNECT SWITCH - TO BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.
6. PROVIDE FLEXIBLE DUCT CONNECTION TO UNITS.
7. PROVIDE MERV 8 FILTER AT UNIT INLET WITH FILTER RACK/ACCESS AS NEEDED.

OUTDOOR HEAT PUMP SCHEDULE

MARK	INDOOR UNIT MARK	NET COOLING CAPACITY (MBH)	HEATING OUTPUT @ 47°F/7°F (MBH)	ELECTRICAL		WEIGHT (LBS.)	BASIS OF DESIGN (MANUFACTURER,MODEL#)
				V / PH	MCA/MOCP (AMP.)		
HP-1	AHU-1	46.0	50.5/17.2	208-230 / 1	31.4/50	220	CARRIER, 25VNA848
HP-2	AHU-2	57.0	60.0/20.5	208-230 / 1	40.8/60	250	CARRIER, 25VNA860
HP-3	AHU-3	46.0	50.5/17.2	208-230 / 1	31.4/50	220	CARRIER, 25VNA848
HP-4	AHU-4	57.0	60.0/20.5	208-230 / 1	40.8/60	250	CARRIER, 25VNA860
HP-5	AHU-5	24.0	24.4/9.3	208-230 / 1	23.6/40	170	CARRIER, 25VNA824A
HP-6	AHU-6	46.0	50.5/17.2	208-230 / 1	31.4/50	220	CARRIER, 25VNA848

NOTES:
1. REFRIGERANT PIPING TO BE SIZED PER THE TOTAL INSTALLED EQUIVALENT LENGTH. PROVIDE LONG LINE REFRIGERANT PIPING KIT (INCLUDING LIQUID LINE SOLENOID VALVES, ACCUMULATOR, ETC.) WHENEVER MANUFACTURER'S RECOMMENDED LENGTHS ARE EXCEEDED. SEE INSTALLATION INSTRUCTIONS FOR MANUFACTURER'S RECOMMENDED EQUIVALENT REFRIGERANT PIPING LENGTHS PRIOR TO PERFORMING ANY WORK.
2. PROVIDE FIELD MOUNTED DISCONNECT SWITCH - TO BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.
3. PROVIDE WITH ANTI-SHORT CYCLE TIMER, RUBBER ISOLATORS, AND HARD START KIT.

GENERAL MECHANICAL NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE CURRENT 2018 UNIFIED VIRGINIA BUILDING CODE, ALL FEDERAL, STATE, AND CITY CODES, ORDINANCES, AND STANDARDS.
2. IT IS THE INTENT OF THESE DOCUMENTS THAT THE CONTRACTOR PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND TOOLS FOR THE COMPLETE INSTALLATION OF ALL WORK SHOWN ON THE PLANS AND/OR DESCRIBED HEREIN, INCLUDING ALL DEVISES AND CONTROLS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONING SYSTEM.
3. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE. NOT ALL FITTINGS, OFFSETS, VENTS, OR DRAINS ARE SHOWN. THE CONTRACTOR SHALL INCLUDE ALL OFFSETS, VENTS, AND DRAINS AS REQUIRED FOR A FULLY FUNCTIONING SYSTEM.
4. IN AREAS WITH UNFINISHED CEILINGS, DUCTWORK AND PIPING SHALL BE ROUTED AS TIGHT TO THE STRUCTURE AS POSSIBLE.
5. ENSURE MECHANICAL EQUIPMENT IS INSTALLED TO PROVIDE SUFFICIENT CLEARANCE FOR COIL PULL, AND MINIMUM MANUFACTURER RECOMMENDED MAINTENANCE ACCESS TO EQUIPMENT.
6. ALL SUPPLY AIR DIFFUSERS, RETURN, AND EXHAUST GRILLES SHALL BE INSTALLED WITH BALANCING DAMPER LOCATED IN DUCT RUN OUT. DIFFUSERS AND GRILLES SHALL HAVE AN OPPOSED BLADE DAMPER ONLY WHEN DUCT DAMPERS ARE INACCESSIBLE.
7. PROVIDE ALL SUPPLY AIR SYSTEMS WITH A MINIMUM MERV 8 FILTER, UNLESS NOTED OTHERWISE. PROVIDE TEMPORARY AIR FILTERS IN AIR HANDLER UNITS AND RETURN AIR INLETS AND GRILLES DURING CONSTRUCTION AND REPLACE AT COMPLETION. FILTERS SHALL BE INSTALLED SUCH THAT THEY ARE ACCESSIBLE FOR REPLACEMENT AND LOCATED PRIOR TO ANY HEATING OR COOLING COILS.
8. FOR ALTERNATE #2, REFER TO DRAWINGS M4.01 AND M4.02. PROVIDE PRICING OPTION TO OWNER AT BID TO PROVIDE THE FOUR ROOFTOP UNITS INSTEAD OF THE FOUR SPLIT SYSTEM HEAT PUMPS AND AIR HANDLER UNITS SERVING THE TWO STORY RENOVATION AREA.

HVAC LEGEND

- SUPPLY AIR DUCT, (RECTANGULAR)
- RETURN AIR DUCT, (RECTANGULAR)
- EXHAUST DUCT, (RECTANGULAR)
- T — TEMPERATURE SENSOR
- 12x6 — RECTANGULAR DUCTWORK (1ST FIG. SIDE SHOWN, 2ND SIDE NOT SHOWN)
- 12"Ø — ROUND DUCTWORK
- FLEXIBLE DUCT, (ROUND)
- SUPPLY DIFFUSER
- RETURN GRILLE
- EXHAUST GRILLE
- AIR DEVICE TAG: 100 / 12 - A - 3 — AIRFLOW (CFM); INLET SIZE - TAG - # OF THROW DIRECTIONS
- DUCT TRANSITION, RECTANGULAR OR ROUND
- EQUIPMENT TAG: AHU / 1 — EQUIPMENT TYPE ABREVIATION; UNIT MARK #
- MVD, MANUAL VOLUME DAMPER
- M — MOTORIZED CONTROL DAMPER
- CONNECT TO EXISTING
- LIMITS OF DEMOLITION
- (E) — EXISTING (EQUIPMENT OR DUCTWORK/PIPING)
- DEMOLITION (EQUIPMENT, PIPING, DUCTWORK, ETC.)

ELECTRIC HEATER SCHEDULE

MARK	HEATING CAPACITY		ELECTRICAL		BASIS OF DESIGN
	KW	MBH	V / PH	AMPS	
WH-1	3.0	10.2	208 / 3	8.3	MARKEL MODEL J3325TD-RP, WALL HEATER
UH-1	3.3	11.2	208 / 3	9.2	MARKEL MODEL F2F5103N, UNIT HEATER

NOTES:
1. PROVIDE FIELD MOUNTED DISCONNECT SWITCH - TO BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.
2. WALL HEATERS SHALL BE RECESSED IN WALL.

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www.stottsbergeng.com

PROJECT #24024

COMMONWEALTH OF VIRGINIA
JOHN N. BERG, JR
Lic. No. 051165
1/10/2025
PROFESSIONAL ENGINEER

project
AHCS SUBSTANCE USE EXPANSION

address
311 SOUTH MONROE AVENUE
COVINGTON, VA 24426

sheet name
MECHANICAL LEGEND, NOTES, & SCHEDULES

revisions

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PACKAGED ROOFTOP UNIT SCHEDULE

			SUPPLY FAN		COOLING PERFORMANCE					NATURAL GAS HEATING		ELECTRICAL			
MARK	SUPPLY AIR FLOW (CFM)	OUTDOOR AIR FLOW (CFM)	ESP (IN H20)	FAN HP	EAT DB/WB (°F)	LAT DB/WB (°F)	EER @ ARI	UNIT NOMINAL COOLING (TONS)	UNIT GROSS SENSIBLE COOLING (MBH)	HEATING INPUT (MBH)	HEATING OUTPUT HIGH/LOW (MBH)	V / PH	MCA/MOCP (AMP.)	BASIS OF DESIGN (MANUFACTURER,MODEL#)	OPERATING WEIGHT (LBS.)
RTU-1	1,515	245	1.0"	2.75	79.4/63.8	56.5/54.3	11.6	4.0	26.6	67	54	208-230 / 3	33/45	CARRIER WEATHER MAKER, 48FCDN05B2M5-0F2A0	500
RTU-2	1,850	300	1.0"	2.75	79.0/63.4	56.5/54.3	11.0	5.0	36.8	110	88	208-230 / 3	36/50	CARRIER WEATHER MAKER, 48FCEN06B2M5-0F2A0	600
RTU-3	1,475	230	1.0"	2.75	77.4/64.4	56.5/54.3	11.0	4.0	26.6	67	54	208-230 / 3	33/45	CARRIER WEATHER MAKER, 48FCDN05B2M5-0F2A0	500
RTU-4	1,685	270	1.0"	2.75	77.7/64.3	56.5/54.3	11.6	5.0	36.8	67	54	208-230 / 3	36/50	CARRIER WEATHER MAKER, 48FCDN06B2M5-0F2A0	600

NOTES:
1. PROVIDE WITH HAIL GUARDS.
2. PROVIDE WITH DUAL ENTHALPY CONTROLLED ECONOMIZER WITH POWERED EXHAUST.
3. POWERED UNITS WITH POWERED RELIEF FAN.
4. PROVIDE WITH 2" PLEATED MERV 8 FILTERS. PROVIDE EACH UNIT WITH 2 FILTER CHANGES.
5. PROVIDE WITH DEHUMIDIFICATION VIA HOT GAS REHEAT SYSTEM.
6. PROVIDE EACH UNIT WITH 14" INSULATED ROOF CURB.

ZONE DAMPER SCHEDULE

MARK	SERVICE	DUCT INLET/OUTLET SIZE (IN.)	DAMPER SIZE (IN.)	MAX. AIRFLOW (CFM)	MIN. AIRFLOW (CFM)	BASIS OF DESIGN (MANUFACTURER,MODEL#)
ZD-1-1	ZONE DAMPER	10x10	8"Ø	430	280	CARRIER, 7C-DA-C50X-X
ZD-1-2	ZONE DAMPER	10x10	8"Ø	460	280	CARRIER, 7C-DA-C50X-X
ZD-1-3	ZONE DAMPER	10x10	8"Ø	330	130	CARRIER, 7C-DA-C50X-X
ZD-1-4	ZONE DAMPER	10x10	6"Ø	285	85	CARRIER, 7C-DA-C54X-X
ZD-1-5	BYPASS DAMPER	18x8	18x8	1030	-	CARRIER, OPND8X18ZC
ZD-2-1	ZONE DAMPER	10x10	8"Ø	360	110	CARRIER, 7C-DA-C50X-X
ZD-2-2	ZONE DAMPER	10x10	8"Ø	320	110	CARRIER, 7C-DA-C50X-X
ZD-2-3	ZONE DAMPER	10x10	6"Ø	285	85	CARRIER, 7C-DA-C54X-X
ZD-2-4	ZONE DAMPER	16x12	18x8	940	350	CARRIER, OPND8X18ZC
ZD-2-5	BYPASS DAMPER	18x8	18x8	1160	-	CARRIER, OPND8X18ZC
ZD-3-1	ZONE DAMPER	10x10	8"Ø	300	110	CARRIER, 7C-DA-C50X-X
ZD-3-2	ZONE DAMPER	10x10	8"Ø	315	110	CARRIER, 7C-DA-C50X-X
ZD-3-3	ZONE DAMPER	10x10	8"Ø	340	110	CARRIER, 7C-DA-C50X-X
ZD-3-4	ZONE DAMPER	12x10	10"Ø	520	250	CARRIER, 7C-DA-C51X-X
ZD-3-5	BYPASS DAMPER	18x8	18x8	1100	-	CARRIER, OPND8X18ZC
ZD-4-1	ZONE DAMPER	10x10	8"Ø	290	110	CARRIER, 7C-DA-C50X-X
ZD-4-2	ZONE DAMPER	10x10	8"Ø	300	110	CARRIER, 7C-DA-C50X-X
ZD-4-3	ZONE DAMPER	14x12	14x8	795	390	CARRIER, OPND8X14ZC
ZD-4-4	ZONE DAMPER	10x10	8"Ø	340	110	CARRIER, 7C-DA-C50X-X
ZD-4-5	BYPASS DAMPER	24x8	24x8	1920	-	CARRIER, OPND8X24ZC

NOTES:
1. PROVIDE DUCT TRANSITIONS AS REQUIRED FROM DUCT SIZE TO DAMPERS INLET AND OUTLET.
2. FOR EACH ZONE DAMPER, PROVIDE A HARD WIRED DIGITAL DISPLAY ZONE SENSOR WITH ADJUSTABLE SPACE TEMPERATURE SETTINGS AND NIGHT SETBACK.

ROOF INTAKE/ RELIEF HOOD SCHEDULE

MARK	TYPE	THROAT WIDTH x LENGTH (IN. x IN.)	LOUVERS HIGH	AIRFLOW	MAX. STATIC PRESSURE	BASIS OF DESIGN
IH-1	INTAKE PENTHOUSE	12x12	3	475	0.08 IN. WG	GREENHECK WIH
IH-2	INTAKE PENTHOUSE	24x16	3	1850	0.08 IN. WG	GREENHECK WIH
IH-3	INTAKE PENTHOUSE	24x16	3	1685	0.08 IN. WG	GREENHECK WIH
RH-1	RELIEF PENTHOUSE	28x16	3	2800	0.12 IN. WG	GREENHECK WRH

NOTES:
1. MANUFACTURER TO PROVIDE 12" INSULATED ROOF CURB.
2. PROVIDE WITH INSECT SCREEN.
3. PROVIDE RH-1 WITH 120V MOTOR OPERATED DAMPER. DAMPER SHALL OPEN WHEN ECONOMIZER MODE FOR AHU'S IS ACTIVATED.

STOTTSBERG ENGINEERING

www.stottsbergeng.com
PROJECT #24024

COMMONWEALTH OF VIRGINIA
JOHN N. BERG, JR.
Lic. No. 051165
1/10/2025
PROFESSIONAL ENGINEER

project
AHCS SUBSTANCE USE EXPANSION

address
311 SOUTH MONROE AVENUE
COVINGTON, VA 24426

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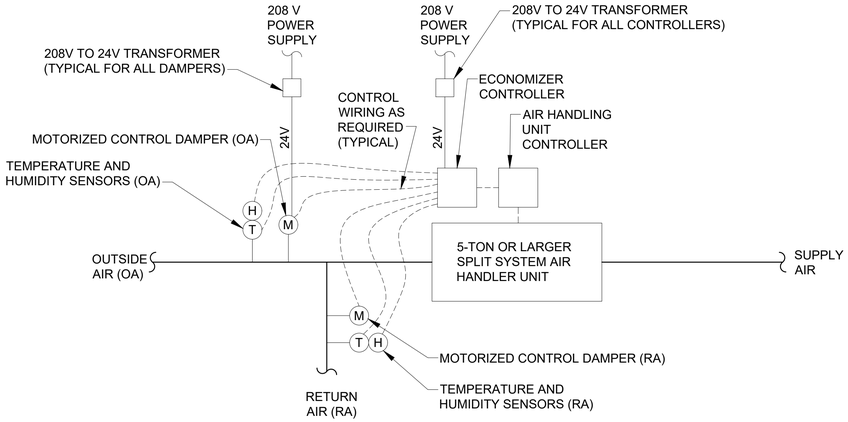


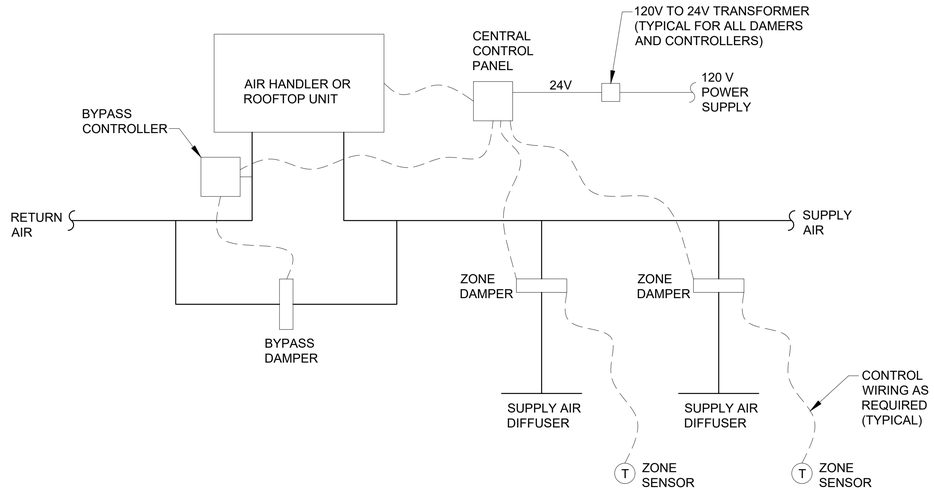
PROVIDE AIR HANDLER WITH AIR SIDE COMPARATIVE ENTHALPY ECONOMIZER CONTROLS. SYSTEM SHALL INCLUDE ALL NECESSARY SENSORS, DAMPERS, AND CONTROLS. WHENEVER THE OUTDOOR AIR ENTHALPY IS LESS THAN THE RETURN AIR ENTHALPY, THE OUTSIDE AIR DAMPER SHALL BE FULLY OPEN AND THE RETURN AIR DAMPER SHALL BE CLOSED. WHEN NOT IN ECONOMIZER MODE, THE RETURN AIR DAMPER SHALL BE OPEN AND THE OUTSIDE AIR DAMPER SHALL BE OPEN TO ITS MINIMUM POSITION.

PROVIDE INTERLOCK TO OPEN RELIEF HOOD CONTROL DAMPER WHEN ECONOMIZER MODE IS ACTIVATED.

MOTORIZED CONTROL DAMPERS SHALL BE 2-POSITION TYPE WITH CONTROL ACTUATORS. PROVIDE TRANSFORMERS AND POWER SUPPLY AS NEEDED TO OPERATE CONNECTED EQUIPMENT.

1 M1.03 ECONOMIZER CONTROLS

SCALE = N/A



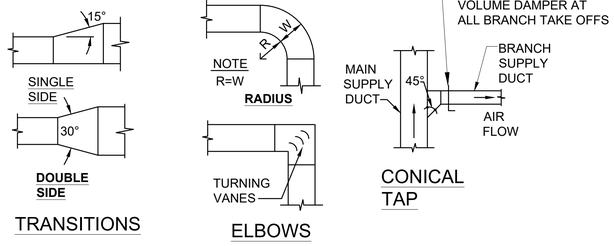
2 M1.03 CONTROLS

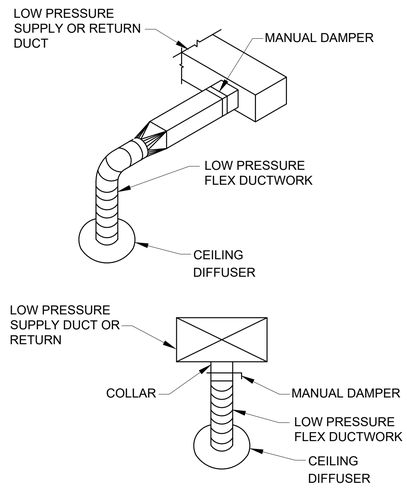
SCALE = N/A

CHANGEOVER-BYPASS VAV CONTROLS:

FOR EACH UNIT, PROVIDE CARRIER VVT ZONING CONTROLS SYSTEM. THE CONTROLS SYSTEM SHALL DETERMINE HEATING OR COOLING MODE BASED ON INDIVIDUAL ZONE SETTINGS AND REQUIREMENTS. AIR HANDLING SYSTEM SHALL BE CONSTANT VOLUME FROM THE RTU WITH VARIABLE AIR FLOW AT EACH ZONE DAMPER. THE BYPASS DAMPER SHALL MODULATE TO MAINTAIN A CONSTANT DUCT STATIC PRESSURE IN THE SYSTEM. THE BYPASS CONTROLLER SHALL BE PROVIDED WITH A DUCT STATIC PRESSURE SENSOR LOCATED IN THE SUPPLY DUCT SYSTEM, UPSTREAM OF THE CONNECTION TO DAMPERS. THE SPACE MOUNTED ZONE SENSORS SHALL COMMUNICATE INFORMATION TO THE VAV ZONE DAMPER CONTROLLER TO MODULATE ZONE DAMPER POSSITION, SUPPLYING HEATING OR COOLING TO THE ZONE. THE ZONE DAMPER CONTROLLER SHALL COMMUNICATE INFORMATION TO THE CENTRAL CONTROL PANEL (CCP) AND THE CCP SHALL DETERMINE IF THE SYSTEM IS IN HEATING OR COOLING MODE. THE CCP SHALL ALSO COLLECT DUCT STATIC PRESSURE INFO FROM THE BYPASS CONTROLLER AS WELL AS SUPPLY AIR TEMPERATURE.

CONTROLS CONTRACTOR SHALL PROVIDE A FULLY OPERATIONAL AND FUNCTIONAL CONTROLS SYSTEM INCLUDING ALL REQUIRED CONTROLLERS, CONNECTING CONTROL WIRING, POWER SUPPLIES, STEP DOWN POWER TRANSFORMERS, AND GROUNDING AS REQUIRED.





3 M1.03 DUCTWORK DETAILS

SCALE = N/A

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GENERAL MECHANICAL SPECIFICATIONS

1. SCOPE:

PROVIDE ALL MATERIALS, LABOR, TOOLS AND INCIDENTALS NECESSARY TO INSTALL AND MAKE READY FOR OWNER'S USE COMPLETE SYSTEMS OF HEATING, VENTILATION, AIR CONDITIONING (HVAC), PLUMBING, FOR THE PROPOSED WORK AND BUILDING RENOVATIONS AS SHOWN ON THE DRAWINGS AND CALLED FOR IN THESE SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION WITH OTHER DIVISIONS OF WORK FOR THE FULL EXTENT OF THE SCOPE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL ASPECTS, COMPONENTS, SYSTEMS, ETC. AND ACCOMMODATE THE PERFORMANCE INTENT OF THE CONSTRUCTION DOCUMENTS THROUGHOUT THE PROJECT SCOPE.

2. BIDDERS RESPONSIBILITY:

EXAMINE THE DRAWINGS AND SPECIFICATIONS AND VISIT THE WORK SITE. BECOME FAMILIAR WITH THE CHARACTER OF THE WORK, THE COORDINATION WITH OTHER TRADES REQUIRED, AND ANY OTHER CONDITIONS THAT AFFECT THE COMPLETION OF THIS WORK. GENERAL CONTRACTOR SHALL BE REQUIRED TO COORDINATE WORK WITH TENANT FINISH CONTRACTOR IN A SIDE BY SIDE SCENARIO.

3. PERMITS, CODES AND LAWS:

APPLY FOR ALL PERMITS AND PAY ALL FEES.

ALL WORK SHALL BE IN ACCORDANCE WITH LATEST EDITIONS OF THE FOLLOWING RULES AND REGULATIONS, HEREIN REFERRED TO AS “CODES”:

THE LATEST OR ADOPTED EDITION OF THE APPLICABLE LOCAL, STATE, AND FEDERAL BUILDING, MECHANICAL, SANITATION, PLUMBING, ETC. CODES.

UNDERWRITER'S LABORATORIES, INC. (U.L) NATIONAL FIRE PROTECTION ASSOCIATION (N.F.P.A.)

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (O.S.H.A)

WHERE ANY OF THESE CODES ARE AT VARIANCE WITH THE DRAWINGS AND SPECIFICATIONS, THEIR REQUIREMENTS SHALL TAKE PRECEDENCE, UNLESS THE DRAWINGS AND SPECIFICATIONS REQUIREMENTS EXCEED THESE CODES. INCLUDE ANY COST NECESSARY TO MEET THESE CODES IN THE BID PRICE.

4. MECHANICAL PLANS:

THE MECHANICAL PLANS ARE DIAGRAMMATIC AND BASED ON ONE MANUFACTURER'S EQUIPMENT.

THEY ARE NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION, THE EXACT DIMENSIONS, OR ALL THE DETAILS OF THE EQUIPMENT. VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO BE USED. INSTALLATION SHALL BE WITHIN THE LIMITATIONS IMPOSED BY THE ARCHITECTURAL, STRUCTURAL, HVAC, ELECTRICAL, AND PLUMBING REQUIREMENTS WITH ADEQUATE SPACE FOR MAINTENANCE.

5. QUESTIONS AND CLARIFICATIONS OF BID DOCUMENTS:

BIDDERS SHALL NOT RELY ON ANY ORAL CLARIFICATION OF THE DRAWINGS OR SPECIFICATIONS. ANY QUESTIONS OR CLARIFICATIONS SHALL BE REFERRED IN WRITING TO THE ARCHITECT.

6. GUARANTEES:

ALL EQUIPMENT, MATERIALS, AND WORKMANSHIP SHALL BE GUARANTEED IN WRITING FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE. WARRANTIES SHALL BE IN WRITING AND SHALL INCLUDE FACTORY WARRANTIES FOR EACH PIECE OF EQUIPMENT. PROVIDE A CERTIFICATE FOR EACH PIECE OF EQUIPMENT. CLEARLY INDICATE ON EACH WARRANTY CERTIFICATE THE MODEL NO., SERIAL NO., LOCATION, AND OWNER'S NAME.

7. COMPLETE SYSTEM:

ALL PRODUCTS, MATERIALS AND ACCESSORIES SHALL BE FURNISHED AND INSTALLED AS REQUIRED FOR A COMPLETE SYSTEM READY FOR OWNER'S BENEFICIAL USE.

8. WORKMANSHIP:

ALL WORK SHALL BE PERFORMED BY COMPETENT MECHANICS USING PROPER TOOLS AND EQUIPMENT TO PRODUCE FIRST QUALITY WORK. ALL WORK SHALL BE NEATLY INSTALLED, ACCESSIBLE FOR MAINTENANCE, AND COMPLETE WITH ALL ACCESSORIES REQUIRED.

9. ACCESSIBILITY:

INSTALL ALL EQUIPMENT AND THEIR APPURTENANCES SUCH AS, BUT NOT LIMITED TO, VALVES, COILS, DRAIN PANS, DRAINS, DAMPERS, CONTROLS, MOTORS, CONTROLLERS, ETC., SO THAT THEY CAN BE SERVICED, RESET, REPLACED OR RECALIBRATED, ETC. INSTALL ALL NECESSARY ACCESS PANELS AND BUILDING ACCESS DOORS, AS BELOW, WHERE REQUIRED TO ACCOMPLISH THIS. IF ANY EQUIPMENT OR COMPONENTS DO NOT FIT WHERE INTENDED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING, REQUESTING FURTHER GUIDANCE.

PROVIDE BUILDING ACCESS DOORS FOR ALL MECHANICAL EQUIPMENT REQUIRING SERVICE, INCLUDING BUT NOT LIMITED TO, AHU'S, FANS, DAMPERS, DUCT ACCESS PANELS, CONTROLS, PIPING, VALVES, REGULATORS, TRAPS, ETC., INSTALLED ABOVE HARD CEILINGS, BEHIND WALLS, AND BELOW FLOORS, FOR INSTALLATION BY OTHER DIVISIONS OF THE WORK. BUILDING ACCESS DOORS ARE NOT REQUIRED WHERE THE MECHANICAL EQUIPMENT IS INSTALLED ABOVE LAY-IN AND ACCESSIBLE SPLINE CEILINGS. OTHER TYPES OF SPLINE CEILINGS REQUIRE BUILDING ACCESS DOORS. SIZE THE BUILDING ACCESS DOORS FOR THE USE INTENDED, BUT NOT LESS THAN 12 INCHES BY 12 INCHES. WHERE HUMAN ACCESS IS REQUIRED, PROVIDE 24 INCHES BY 24 INCHES, OR LARGER. WHERE BUILDING ACCESS DOORS CANNOT BE INSTALLED FOR STRUCTURAL OR ARCHITECTURAL REASONS, NOTIFY THE ARCHITECT. PRIME COAT BUILDING ACCESS DOORS IN PAINTED AREAS WITH FINISH PAINTING AS SPECIFIED IN OTHER DIVISIONS. IN WET AREAS, TOILET ROOMS, OR AREAS WITH CERAMIC TILE FLOORS OR WALLS, PROVIDE STAINLESS STEEL BUILDING ACCESS DOORS. PROVIDE BUILDING ACCESS DOORS WITH A CONCEALED KEY OPERATED LOCK AND CONCEALED HINGES. ALL LOCKS SHALL BE KEYED ALIKE. PROVIDE BUILDING ACCESS DOORS AS SPECIFIED IN OTHER DIVISIONS OF THE WORK OR PROVIDE MILCOR DOORS, OR EQUIVALENT, SUITABLE FOR THE INSTALLATION INTENDED. PROVIDE FIRE RATED DOORS FOR ALL FIRE RATED WALLS, PARTITIONS, AND CEILINGS.

10. WORK BY OTHER TRADES:

FURNISH ALL SLEEVE FRAMES, BUILDING ACCESS DOORS, PREFABRICATED EQUIPMENT CURBS, ROOF CURBS, ETC. FOR INSTALLATION BY OTHER TRADES.

INSTALL ALL MOTORS AND FURNISH THE STARTING EQUIPMENT AND DISCONNECTS TO THE DIVISION 26000 SUBCONTRACTOR FOR INSTALLATION. CONTROL WIRING, INCLUDING SWITCHES, THERMOSTATS, INTERLOCKS, ETC. SHALL BE FURNISHED BY DIVISION 23000. ENSURE THAT THE ELECTRICAL EQUIPMENT MOUNTED NEAR THE MECHANICAL EQUIPMENT DOES NOT BLOCK ACCESS TO SERVICE AREAS OF THE MECHANICAL EQUIPMENT. DO NOT ALLOW ANY EQUIPMENT TO BE INSTALLED ON THE HVAC EQUIPMENT ENCLOSURES.

11. FIRE STOPPING:

ALL PENETRATIONS OF FLOORS AND OTHER FIRE-RATED ASSEMBLIES SHALL BE FIRE AND SMOKE-STOPPED IN STRICT ACCORDANCE WITH THE APPLICABLE CODES.

12. FOUNDATIONS AND SPECIAL SUPPORTS:

FURNISH AND INSTALL ALL SPECIAL FOUNDATIONS AND SUPPORTS REQUIRED FOR EQUIPMENT INSTALLED UNDER THIS SECTION, UNLESS THEY ARE A PART OF THE BUILDING STRUCTURE AND ARE SHOWN IN OTHER SECTIONS.

13. CLEANING AND PAINTING:

THOROUGHLY CLEAN ALL EQUIPMENT AND REMOVE ALL TRASH, CARTONS, ETC. MAKE ANY NECESSARY CORRECTIONS OR REPAIR/REPLACE ANY DAMAGED MATERIALS OR EQUIPMENT. LEAVE THE ENTIRE SYSTEM IN A THOROUGHLY CLEAN AND ORDERLY MANNER.

ANY FINISHED SURFACES THAT HAVE BEEN SCRATCHED OR DISCOLORED SHALL BE TOUCHED-UP OR REPAINTED BREAK TO BREAK WITH PAINT TO MATCH THE ORIGINAL COLOR. TOUCH UP PAINTED SURFACES OR REPAINT THE ENTIRE PAINTED SURFACE IF TOUCH UP IS UNACCEPTABLE. SEE ARCHITECTURAL PAINTING SPECIFICATIONS.

ALL METAL ITEMS SUBJECT TO RUSTING, INSIDE OR EXPOSED TO WEATHER SHALL BE GIVEN ONE COAT OF PROPER TYPE RUST PREVENTATIVE PRIMER AS SOON AS INSTALLED. APPLY TWO FINISH COATS WITH COLOR TO BE SELECTED BY THE ARCHITECT.

FOR ALL INTERIOR OR EXTERIOR STRUCTURAL GALVANIZED STEEL, COLD GALVANIZE ALL EXPOSED METAL CUT ENDS, HOLES, WELDS, SCRATCHES, ETC., OR HOT DIP GALVANIZE THE ENTIRE STRUCTURE OR FRAME AFTER FABRICATION AND MOUNTING HOLES ARE CUT.

UPON COMPLETION OF THE INSTALLATION, BUT NOT BEFORE, AND BEFORE ACCEPTANCE, THOROUGHLY CLEAN ALL EXPOSED EQUIPMENT, PIPING, DUCTWORK, INSULATION JACKETS, ETC., REMOVING ALL STICKERS, LABELS, MARKING, WRITING, FABRICATION MARKINGS, IDENTIFICATION, ADHESIVE, SEALER, GLUE, RUST, CORROSION, ETC., FROM THEIR EXTERIOR SURFACES.

THE CLEANLINESS AND PAINTING ACCEPTABILITY IS AT THE SOLE DISCRETION OF THE ARCHITECT AND MAY REQUIRE ADDITIONAL CLEANING AND COATS OF PAINT BEFORE ANY SURFACE IS ACCEPTED.

14. SUBMITTAL AND SHOP DRAWINGS:

SUBMIT MANUFACTURER'S CERTIFIED DATA RELATIVE TO ALL EQUIPMENT, PIPING, CONTROLS, ETC. REQUIRED FOR THE INSTALLATION OF THE HVAC, PLUMBING AND FIRE PROTECTION SYSTEMS. SUBMIT FOR REVIEW ALL NECESSARY ENGINEERING, PRODUCT AND INSTALLATION DATA, SHOP DRAWINGS, SAMPLES ETC. FOR ALL EQUIPMENT, MATERIAL, AND SYSTEMS TO ASCERTAIN COMPLIANCE WITH THE TECHNICAL REQUIREMENTS OF THE CONTRACT DOCUMENTS. SUBMIT SIX (6) COPIES OF ALL NECESSARY DATA, CUTS, MANUFACTURER'S SELECTIONS, CATALOGS, BULLETINS, INSTALLATION INSTRUCTIONS, DRAWINGS, DIAGRAMS, CURVES, ETC. CLEARLY INDICATE ON THE SUBMITTED DATA, THE MANUFACTURER'S NAME, PRODUCT NUMBER(S), OPTIONS, EQUIPMENT CAPACITY, DIMENSIONAL DATA, WEIGHTS, AND OTHER APPLICABLE TECHNICAL DATA FOR THE PROJECT.

TRADE NAMES, MANUFACTURERS, AND CATALOGUE NUMBERS ARE MENTIONED HEREIN AND ON THE DRAWINGS SOLELY IN ORDER TO ESTABLISH A STANDARD FOR THE TYPE, GENERAL DESIGN, AND QUALITY OF PRODUCT REQUIRED. OTHER PRODUCTS SIMILAR IN DESIGN OF EQUIVALENT QUALITY CAPABLE OF FITTING WITHIN THE SPACES ALLOCATED AND COMPLYING WITH THE DRAWINGS AND SPECIFICATIONS WILL BE CONSIDERED AFTER THE CONTRACT IS LET UNLESS “PRIOR APPROVAL” REQUIREMENTS ARE SET FORTH IN THESE DOCUMENTS.

WHERE TWO OR MORE MANUFACTURERS OR MATERIALS ARE NAMED, THE CONTRACTOR MAY SUBMIT ANY OF THOSE NAMES, PROVIDED THEY CONFORM TO THE SPECIFICATIONS AND DESIGN INTENT. CONTRACTOR SHALL INCLUDE WITH THE SUBMITTAL A LIST OF ALL COMPARATIVE FEATURES INDICATING COMPLIANCE WITH THE SPECIFICATIONS.

THE ARCHITECT AND/OR ENGINEER MAY REQUIRE THE SUBMISSION OF SAMPLES, PARTICULARLY WHEREVER EQUIPMENT OR APPLIANCES ARE VISIBLE IN FINISHED AREAS, SUCH AS CEILINGS, INTERIOR AND EXTERIOR WALLS. THE CONTRACTOR AND SUPPLIER SHALL ARRANGE FOR DEMONSTRATIONS OF THE INSTALLATION OF ANY OF THESE PRODUCTS AND THEIR ABILITY TO PERFORM AS SPECIFIED, IF REQUIRED.

REVIEW OF SUBMITTALS AND SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR FITTING THE EQUIPMENT IN THE SPACE ALLOTTED WITH SPACE FOR ALL CONNECTIONS AND SERVICING AND FOR THE COORDINATION OF THE WORK WITH WORK OF OTHER TRADES.

THE CONTRACTOR SHALL REVIEW ALL SUBMITTALS AND SHOP DRAWINGS AND INDICATE BY STAMP OR LETTER THAT HE HAS REVIEWED THEM, BEFORE FORWARDING THEM TO THE ARCHITECT AND/OR ENGINEER. SUBMITTALS AND DRAWINGS WILL BE RETURNED AFTER REVIEW INDICATING WHETHER EXCEPTIONS ARE TAKEN, THE SUBMITTAL RETURNED WITH CORRECTIONS, OR IS COMPLETELY REJECTED. RESUBMISSION OF REVISED SUBMITTALS AND SHOP DRAWINGS, IF REQUIRED, SHALL BE DONE BEFORE INSTALLATION AND CONSTRUCTION IS BEGUN.

CORRECTIONS OR COMMENTS MADE ON THE SUBMITTALS AND DRAWINGS DURING THIS REVIEW DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THIS REVIEW IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, FABRICATION PROCESSES, TECHNIQUES OF CONSTRUCTION, COORDINATING THE WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING WORK IN A SAFE AND SATISFACTORY MANNER. REVIEW OF THE SUBMITTALS SHALL NOT PERMIT ANY DEVIATION FROM PLANS AND SPECIFICATIONS.

SUBMITTALS FOR A SPECIFIC CLASS OF PRODUCTS, SYSTEMS, INSTALLATION PROCEDURES, SHOP DRAWINGS, ETC. WILL BE REVIEWED BY THE ENGINEER ONE TIME AND ITS RESUBMITTAL ONE TIME, IF NECESSARY, AS ABOVE, AT NO COST TO THE CONTRACTOR. THE CONTRACTOR WILL BEAR THE FULL COST FOR ALL SUBSEQUENT RESUBMITTAL REVIEWS AT THE ENGINEER'S STANDARD HOURLY RATES. PAYMENT WILL BE REQUIRED AT COMPLETION OF RESPECTIVE REVIEW.

REQUIRED SHOP DRAWINGS:

SUBMIT THE FOLLOWING SHOP DRAWINGS BEFORE ANY MECHANICAL DUCTWORK, PIPING, EQUIPMENT, ETC. IS FABRICATED AND INSTALLED. SUBMIT THESE SHOP DRAWINGS IN ¼ INCH PER FOOT MINIMUM SCALE WITH NECESSARY PLANS, ELEVATIONS, SECTIONS, DETAILS, AND ISOMETRICS. SUBMIT SIX (6) PAPER COPIES AND ONE (1) CD-ROM WITH ALL THESE DRAWINGS IN AUTOCAD DRAWING DWG FILES, LATEST AUTOCAD FORMAT.

SOON AFTER AWARD OF THE CONTRACT, DETERMINE WHERE THERE MAY BE INSTALLATION, SPACE CONCERNS, AND/OR WHERE OTHER CONFLICTS MAY OCCUR. SUBMIT COORDINATION DRAWINGS, RELATING TO THESE CONFLICTS WITH THE MECHANICAL EQUIPMENT, DUCT, PIPING, ELECTRICAL, STRUCTURAL AND ARCHITECTURAL SYSTEMS ETC., SHOWING CLEARANCES AND RELATIONSHIP TO STRUCTURAL MEMBERS, PIPING, LIGHTS, CONDUITS, ELECTRICAL EQUIPMENT, AND BUILDING COMPONENTS. IN PREPARING THESE SHOP DRAWINGS, ESTABLISH LINES AND LEVELS FOR ALL DIVISIONS OF THE WORK IN THE AFFECTED AREA. IMMEDIATELY CALL TO THE ATTENTION OF THE ARCHITECT ANY INTERFERENCE OR CONFLICT FOR CLARIFICATION IN WRITING.

SUBMIT SHOP DRAWINGS FOR ALL DUCTWORK. SUBMIT LAYOUT DRAWINGS OF EACH MECHANICAL SYSTEM SHOWING THE LOCATION, ARRANGEMENT, ETC. OF ALL EQUIPMENT, ALL TRADES, ETC. TO BE INSTALLED RELATED TO THE RESPECTIVE SYSTEM.

15. AS-BUILT DRAWINGS:

MAINTAIN DAILY UPDATED DRAWINGS SHOWING DEVIATIONS FROM CONSTRUCTION DOCUMENTS. AT THE END OF THE PROJECT, PROFESSIONALLY PREPARE AS-BUILT DRAWINGS AND SUBMIT THREE COPIES, ONE REPRODUCIBLE.

16. OPERATION AND MAINTENANCE MANUALS:

UPON COMPLETION OF THE PROJECT, SUBMIT THREE COPIES OF ALL OPERATION AND MAINTENANCE MANUALS, WARRANTIES, SPARE PARTS LIST, AS-BUILT DRAWINGS, TEST AND BALANCE REPORTS, AND LETTER OF GUARANTEE ALL BOUND IN THREE RING BINDERS, CLEARLY SHOWING WHICH EQUIPMENT WAS SUPPLIED TO THE JOB.

17. PROJECT COMPLETION:

BEFORE STARTING AND TESTING ANY SYSTEM, HVAC, OR PLUMBING, TO PREVENT INADVERTENT OPERATION OF THE MECHANICAL EQUIPMENT BEFORE THE MANUFACTURER'S INSPECTION AND TESTING, THE CONTRACTOR SHALL:

VERIFY THAT ALL ELECTRICAL POWER IS OFF TO ALL MECHANICAL EQUIPMENT, INCLUDING THE AHU'S, ACCU'S, BOOSTER PUMPS, FIRE PUMPS, ETC.

LOCK OUT EACH SYSTEM USING SETON MODEL NUMBER 70329; “DO NOT OPERATE” LOCK ON LOCKOUT TAGS, OR EQUIVALENT. INSTALL LOCKOUT TAGS AT EACH PIECE OF EQUIPMENT, ELECTRICAL DISCONNECTS, STARTERS, SWITCHES, ETC.

REMOVE THESE TAGS ONLY WHEN THE MANUFACTURER APPROVES OF THE EQUIPMENT INSTALLATION IN WRITING. EACH MANUFACTURER OR THEIR REPRESENTATIVE SHALL INSPECT THEIR EQUIPMENT FOR COMPLIANCE TO THEIR INSTALLATION REQUIREMENTS AND RECOMMENDATIONS. IN ADDITION, THE COMPRESSOR MANUFACTURER SHALL INSPECT EACH REFRIGERANT PIPING INSTALLATION FOR ADHERENCE TO THE APPROVED REFRIGERANT PIPING DIAGRAMS, ROUTING. EACH MANUFACTURER SHALL PREPARE A PUNCH LIST OF ALL DEFICIENCIES, IN WRITING WITH COPIES TO THE ARCHITECT AND CONTRACTOR.

EACH MANUFACTURER SHALL REINSPECT THE EQUIPMENT AFTER THE CONTRACTOR HAS CORRECTED ALL DEFICIENCIES. WHEN THE MANUFACTURER HAS GIVEN THEIR WRITTEN APPROVAL WITH COPIES TO THE ARCHITECT AND CONTRACTOR, THE CONTRACTOR MAY REMOVE THE LOCKOUT TAGS, SAFELY START, AND TEST THE EQUIPMENT, AS REQUIRED HEREIN.

CONTRACTOR SHALL PROVIDE FOR ALL NECESSARY DRILLING OF WALL STUDS, CEILING JOISTS, PLATES, FINISHES, ETC. TO ACCOMMODATE ROUTING AND INSTALLATION OF ALL PIPING, DUCT, ETC.

HVAC EQUIPMENT, METHODS AND MATERIALS

18. DUCTWORK GENERAL:

DUCT SIZES SHOWN ON THE DRAWINGS ARE INSIDE DIMENSIONS AND DO NOT TAKE INTO ACCOUNT LINING THICKNESS. DUCTWORK SHALL BE GALVANIZED SHEET METAL WITH GAUGES, CONSTRUCTION DETAILS AND INSTALLATION ACCORDING TO N.F.P.A. STANDARD 90A, ASHRAE, AND SMACNA DUCT CONSTRUCTION MANUALS AND REQUIREMENTS. PROVIDE FLEXIBLE CONNECTIONS AT AIR HANDLING UNITS AND FANS. PROVIDE SINGLE THICKNESS TURNING VANES IN ELBOWS. PAINT DUCTS, SLEEVES, PLENUMS, ETC., INTERIORS VISIBLE THROUGH AIR DEVICES WITH A MINIMUM OF ONE COAT OF PROPER TYPE RUST PREVENTATIVE PRIMER, SUITABLE FOR GALVANIZED STEEL, AND TWO FINISH COATS OF FLAT BLACK PAINT.

19. DUCT CONSTRUCTION MATERIALS:

ALL SUPPLY DUCTWORK WHICH IS CONCEALED ABOVE CEILINGS AND/OR LOCATED WITHIN MECHANICAL ROOMS SHALL BE EXTERNALLY INSULATED UNLESS SPECIFICALLY CALLED OUT ON THE DRAWINGS AS INTERNALLY LINED. RETURN DUCTS LOCATED OUTSIDE OF THE BUILDINGS INSULATION ENVELOPE SHALL BE INSULATED (EXTERNALLY IF NOT EXPOSED TO VIEW BY THE PUBLIC). ALL EXPOSED, SUPPLY AND RETURN DUCTWORK, SHALL BE DOUBLE-WALLED INTERNALLY INSULATED DUCT WITH PERFORATED INTERNAL LINER, 1” ACOUSTIC INSULATION AND GALVANIZED SHEET METAL EXPOSED ON EXTERIOR. ALL OUTSIDE AIR DUCTWORK SHALL BE INSULATED. ALL EXPOSED DUCTWORK SHALL BE SPIRAL SHEET METAL DUCTWORK.

FLEXIBLE DUCT: PRE-INSULATED FLEXIBLE DUCT. NO FLEXIBLE DUCT RUNS LONGER THAN 5 FEET.

20. FABRICATION, ERECTION, AND SUPPORT:

ALL DUCTWORK SHALL BE FABRICATED, ERECTED, BRACED, AND SUPPORTED IN STRICT ACCORDANCE WITH THE LATEST EDITIONS OF SMACNA AND ASHRAE REQUIREMENTS.

21. ACOUSTIC LINED DUCTWORK:

ACOUSTICALLY AND THERMALLY LINE RETURN, AND EXHAUST DUCT (WITHIN 10FT OF FANS) AND PLENUMS WITH 1” THICK, 1 1/2 PCF FIBERGLASS DUCT LINER, APPLIED PER THE MANUFACTURER'S AND NAIMA REQUIREMENTS. DUCT LINER SHALL MEET AND/OR EXCEED ASHRAE'S I.A.Q. STANDARD 62. USE WELDED STICK CLIPS, IN LIEU OF ADHESIVE TYPE FASTENERS AND FULL COVERAGE ADHESIVE. PROVIDE EDGE NOSINGS WHERE REQUIRED. COAT ALL EXPOSED FIBERGLASS WITH HARDCAST “LAG-GRIP 671”.

22. JOINT SEALING:

SEAL ALL DUCT JOINTS AND SEAMS (LONGITUDINAL AND TRANSVERSE) WITH HIGH PRESSURE DUCT SEALER, HARDCAST “IRON-GRIP 601” OR APPROVED EQUIVALENT. REINFORCED FOIL BACKED TAPES, CLOTH OR PLASTIC BACKED TAPES (DUCT TAPE) ARE NOT ACCEPTABLE.

23. FLEXIBLE AIR DUCT:

DUCT SHALL BE UL LISTED UL-181, CLASS I AIR DUCT MATERIAL AND SHALL COMPLY WITH N.F.P.A 90A AND 90B AND ALL LOCAL REQUIREMENTS. DUCT SHALL HAVE AN OPERATING AIR PRESSURE OF 6 INCHES WG POSITIVE AND 4 INCHES WG NEGATIVE, ACOUSTICAL DOUBLE LAMINATED INNER FABRIC BONDED TO A STEEL HELIX WIRE. OUTER JACKET FIRE RETARDANT REINFORCED ALUMINUM MYLAR WITH FIBERGLASS INSULATION. FLEXMASTER TYPE “8M” ACOUSTICAL INSULATED OR EQUIVALENT.

MAKE ALL FLEXIBLE DUCT CONNECTIONS TO HARD DUCT USING STAINLESS STEEL SCREW CLAMPING BANDS AND SEALED AIR TIGHT WITH HIGH PRESSURE DUCT SEALER. PLASTIC BANDS ARE NOT ACCEPTABLE.

SEAL FLEXIBLE DUCT VAPOR BARRIER TO HARD DUCT AND/OR ADJACENT INSULATION. NO EXPOSED FIBERGLASS SHALL BE VISIBLE.

24. AIR DISTRIBUTION DEVICES:

COORDINATE THE EXACT LOCATIONS OF ALL AIR DEVICE NEEDS WITH THE ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION. COORDINATE THE EXACT LOCATION OF EACH OUTLET WITH THE ARCHITECT WITH REGARD TO CEILING AND WALL SPACING, CENTERING ALONG SOFFITS, WALLS, ETC. FURNISH AND INSTALL WHERE SHOWN ON THE DRAWINGS ALL DIFFUSERS, GRILLES, AND REGISTERS OF THE SIZE, TYPE, AND CAPACITY AS INDICATED IN THE AIR DEVICE SCHEDULE.

ELBOWS:

25. TURNING VANES AND SMOOTH RADIUS ELBOW (WITHOUT VANES):

AT ALL DUCT TURNS OF 45 DEGREES OR MORE, PROVIDE SINGLE THICKNESS TURNING VANES PER SMACNA REQUIREMENTS. ALTERNATIVELY, USE SMOOTH RADIUS ELBOW (R/W = 1.5).

26. BRANCH TAKEOFF FITTINGS:

AT ALL MAIN TO BRANCH DUCT TAPS, TAKEOFFS, OR RUN-OUTS, PROVIDE 45 DEGREE ENTRANCE TAPS, AS DETAILED BY SMACNA STANDARDS.

27. DUCT MOUNTED ACCESS PANELS:

INSTALL ACCESS PANELS AS FOLLOWS:

AT INLET OF EACH DUCT MOUNTED FIRE AND MOTORIZED DAMPER.

FOR DUCT MOUNTED CONTROLS.

AS REQUIRED AND DIRECTED BY THE TEST AND BALANCE CONTRACTOR.

WHERE REQUIRED FOR DUCT INSPECTION, MAINTENANCE, AND CLEANING.

ACCESS PANELS SHALL BE 18 INCHES X 18 INCHES OR LARGEST DUCT WILL ALLOW. NORMALLY CENTER THE ACCESS PANEL IN THE BOTTOM OF THE DUCT AS CLOSE AS POSSIBLE TO THE DUCT MOUNTED DEVICE. ACCESS PANELS MAY BE INSTALLED ON THE SIDE OF THE DUCT, WHERE NECESSARY.

ACCESS PANELS SHALL BE DOUBLE WALL INSULATED HINGED WITH NEOPRENE GASKETS AND CAM LOCKS ON EACH UNHINGED SIDE. WHERE REQUIRED BECAUSE OF PANEL OPENING CLEARANCE, SUBSTITUTE UNHINGED ACCESS PANELS WITH CAM LOCKS ON EACH SIDE AND CAPTIVE CHAIN. ACCESS PANELS SHALL BE FLEXMASTER “TBSM-TAB DOOR” GREENHECK MODEL “HAD-10”, OR EQUIVALENT.

28. REFRIGERANT PIPING:

REFRIGERANT PIPING SHALL CONFORM TO THE REQUIREMENTS OF THE SAFETY CODES FOR MECHANICAL REFRIGERATION AND REFRIGERANT PIPING AND THE MANUFACTURER REQUIREMENTS.

RUN ALL PIPING SQUARE TO BUILDING LINES WHEREVER POSSIBLE. FIELD ROUTE PIPING IN ORDER TO PROVIDE FOR EASE OF ACCESS TO VALVES AND OTHER APPURTENANCES.

SUPPORT INTERIOR PIPING FROM THE BUILDING STRUCTURE USING COPPER OR PVC COATED HANGERS. SUPPORT REFRIGERANT PIPING 4 FOOT ON CENTER AND AT EACH CHANGE OF DIRECTION. PROVIDE 4” WIDE INSULATION SADDLES.

SUBMIT REFRIGERANT PIPING LAYOUT SHOP DRAWINGS FOR EACH UNIQUE SYSTEM, REVIEWED AND APPROVED BY THE MANUFACTURER, IN WRITING. SHOW ALL FILTERS, DRIERS, SIGHT-GLASSES, VALVES, ETC. AS REQUIRED BY THE MANUFACTURER.

USE REFRIGERANT GRADE, TYPE “K” HARD DRAWN COPPER PIPE WITH LONG RADIUS ELBOWS. NO CAST FITTINGS ARE ACCEPTABLE.

INSTALL FILTER DRIER EQUIVALENT TO SPORLAN CATCH-ALL.

INSTALL SIGHT GLASSES WITH MOISTURE INDICATORS COVERED BY A PROTECTIVE CAP. LOCATE THE SIGHT GLASSES INSIDE THE BUILDINGS, CLOSE TO THE FAN COIL IN THEIR RESPECTIVE MECHANICAL CLOSETS.

PROVIDE EXTERNAL FRONT SEATED BRASS SERVICE VALVES WITH SWEAT CONNECTIONS, WITH SERVICE PORTS FOR CHECKING OPERATING REFRIGERANT PRESSURES.

COPPER SHALL BE CLEANED AND SHINED BEFORE BRAZING. BRAZE USING J.W. HARRIS “DYNAFLOW” 6% SILVER BRAZING ALLOY.

PIPING SHALL BE PURGED WITH DRY NITROGEN WHILE BRAZING TO PREVENT OXIDATION. UPON COMPLETION OF A WELD, THE WELD SHALL BE WIPED WITH A DAMP RAG TO REMOVE FLUX WHILE STILL HOT.

ALL PIPING SHALL BE TESTED FOR 24 HOURS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE AND PROVEN TIGHT:

DISCHARGE AND LIQUID REFRIGERANT PIPING--300 PSIG, NITROGEN.

SUCTION REFRIGERANT PIPING--150 PSIG NITROGEN.

REFRIGERANT PIPING, AFTER PROVEN TIGHT, SHALL BE EVACUATED BY MEANS OF AN APPROVED VACUUM PUMP TO A VACUUM OF 2.5 MM HG ABSOLUTE. SYSTEMS SHALL STAND UNDER VACUUM WITH VACUUM PUMP OFF FOR A MINIMUM OF 12 HOURS. SYSTEMS MAY BE CHARGED WITH PROPER REFRIGERANT AFTER ARCHITECT'S APPROVAL OF VACUUM TEST. A DEHYDRATOR SHALL BE USED IN CHARGING HOSE DURING CHARGING OF SYSTEMS WITH REFRIGERANT.

29. GENERAL

THIS SECTION APPLIES TO ALL MECHANICAL WORK.

ALL INSULATION SHALL BE IN STRICT ACCORDANCE WITH ASHRAE STANDARDS AND ALL LOCAL AND STATE ENERGY CODES.

THE INSULATION WORK SHALL BE PERFORMED BY A FIRM REGULARLY ENGAGED IN THIS TYPE WORK USING MECHANICS SKILLED IN THE TRADE.

INSTALL ALL MATERIALS AS RECOMMENDED BY THE MANUFACTURER FOR THE SERVICE INTENDED. ALL INSULATION MATERIAL, INCLUDING SEALER MATERIAL, ADHESIVES, COVERING MATERIAL, FINISH, ETC. SHALL HAVE A U.L. LISTED FLAME SPREAD RATING NOT OVER 24 WITHOUT EVIDENCE OF CONTINUED PROGRESSIVE COMBUSTION AND WITH A SMOKE DEVELOPED RATING NOT HIGHER THAN 50. ALL COATINGS AND COVERINGS FOR HOT SERVICE SHALL BE BREATHER TYPE AND VAPOR BARRIER TYPE FOR COLD SERVICE.

HVAC PIPING:

INSULATE REFRIGERANT SUCTION LINES AND ALL CONDENSATE DRAIN LINES WITH 1” THICK CLOSE CELLED ELASTOMERIC INSULATION INSTALLED PER THE MANUFACTURERS REQUIREMENTS. PAINT EXTERIOR INSULATION WITH TWO COATS OF PAINT AS REQUIRED BY THE INSULATION MANUFACTURER.

EXTERNALLY INSULATED DUCTS:

EXTERNALLY INSULATE ALL ROUND SUPPLY, RETURN, OUTSIDE AIR, AND EXHAUST DUCTWORK WITH 1 1/2” THICK (3/4 LBS/CU. FT. DENSITY) DUCT WRAP WITH ALUMINUM ALL SERVICE JACKET, VAPOR BARRIER, EXCEPT PRE-INSULATED FLEXIBLE DUCT.

30. EQUIPMENT:

CAPACITY, PERFORMANCE AND CHARACTERISTICS OF EQUIPMENT SHALL BE AS INDICATED ON THE DRAWINGS AND AS SPECIFIED OR IMPLIED HEREIN. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY INCREASED COST TO HIMSELF OR OTHERS FOR EQUIPMENT WHICH DEVIATES FROM THAT SCHEDULED OR IMPLIED HEREIN. REGARDLESS OF COST AFFECT, THE ARCHITECT MUST APPROVE ANY DEVIATION FROM THE DRAWINGS AND THE SPECIFICATION.

31. MOTORS AND STARTERS:

ALL ELECTRIC MOTORS SHALL BE HIGH EFFICIENCY TYPE WITH MAXIMUM OF 1750 RPM WITH OPEN DRIP PROOF OR TEFC ENCLOSURES, UNLESS OTHERWISE NOTED. MOTORS LOCATED ON AIR HANDLING UNITS SHALL BE MOUNTED IN RUBBER SUPPORTS OR THE FAN SHALL BE INDEPENDENTLY SUPPORTED ON SPRING ISOLATORS. MOTORS LOCATED IN THE CONDITIONED SPACE SHALL BE SELECTED FOR QUIET OPERATION AND SHALL NOT PRODUCE AN OBJECTIONABLE “MOTOR NOISE” IN THE SPACE.

ELECTRICAL CHARACTERISTICS SHALL BE VERIFIED FROM THE ELECTRICAL DRAWINGS, PRIOR TO BIDDING, AND VERIFIED ON THE JOB WITH THE ELECTRICAL SUB-CONTRACTOR. IF A CONFLICT ARISES, THE ELECTRICAL DRAWINGS SHALL BE THE AUTHORITY.

PROVIDE MOTOR STARTERS AND PROPER HEATER ELEMENTS SIZED IN ACCORDANCE WITH NFPA 70. STARTERS SHALL BE SQUARE-D OR EQUIVALENT WITH OVERLOAD TRIP ELEMENT IN EACH PHASE. LARGER MOTORS AND THEIR STARTERS SHALL MEET THE REQUIREMENTS OF THE UTILITY COMPANY AS TO INRUSH ALLOWABLE AND THE TYPE OF STARTING PERMITTED.

SHOULD ANY MECHANICAL EQUIPMENT REQUIRE EXTRA WORK BY OTHER TRADES, FOR PROPER INSTALLATION, THIS CONTRACTOR SHALL BEAR ALL COSTS, SUCH AS INCREASED ELECTRICAL, STRUCTURAL, ROOFING, ETC.

32. SYSTEMS TEST AND BALANCE:

THE REQUIRED TEST & BALANCE OF THE HVAC SYSTEM SHALL BE PERFORMED BY AN APPROVED INDEPENDENT TESTING AGENCY AS SPECIFIED BELOW.

AGENCY QUALIFICATIONS:

TEST & BALANCE SHALL BE PERFORMED BY AN INDEPENDENT AGENCY ENGAGED SOLELY IN TEST AND BALANCE WORK. AGENCY SHALL BE A MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) AND NATIONAL ENVIRONMENTAL BALANCING BUREAU, (NEBB). SUBMIT A WRITTEN REPORT WITHIN 30 DAYS OF COMMENCING WORK, WITH ANY RECOMMENDED CHANGES TO INSURE BALANCING CAPABILITY. SUBMIT A DETAILED TEST PLAN TO THE ARCHITECT ILLUSTRATING ALL FORMATS, DRAWINGS, AND TEST PROCEDURE TO BE USED FOR TESTING THE COMPLETED SYSTEM. THE APPROVED PLAN WILL BE USED FOR TESTING THE SYSTEMS. PROCEDURES SHALL INCLUDE REQUIREMENTS LISTED IN AABC/NEBB STANDARDS, LATEST EDITION AND ANY SPECIAL REQUIREMENTS FOR THIS PROJECT. MAKE PROJECT VISITS AS REQUIRED DURING CONSTRUCTION PERIOD INSPECTING FOR PROPER INSTALLATION OF THE SYSTEM AND RELATED BALANCING DEVICES. PROJECT VISIT REPORTS SHALL BE MADE TO THE ARCHITECT IN WRITING.

CONTRACTORS REQUIREMENTS PRIOR TO TEST & BALANCE:

THE CONTRACTOR SHALL PERFORM ALL REQUIRED PRELIMINARY TESTS AND OTHER PREPARATORY WORK, INCLUDING BUT NOT LIMITED TO:

MAKE SURE ALL FANS ARE OPERATING, CHECK ROTATION, RPM, AND AMPS. CHECK ALL DAMPERS FOR OPERATION.

PUT ALL HVAC EQUIPMENT IN FULL OPERATION INCLUDING AIR UNITS AND FANS. MAKE SURE ALL HVAC CONTROLS ARE INSTALLED AND FULLY OPERATIONAL. CLEAN/REPLACE FILTERS JUST PRIOR TO TESTING.

PROVIDE ALL BALANCING DEVICES AND DRIVE CHANGES THAT ARE DEEMED NECESSARY BY T&B AGENCY FOR BALANCE AT NO ADDITIONAL COST TO THE OWNER.

TEST & BALANCE AGENCY SHALL BALANCE ALL AIR SYSTEMS FOR OPERATION WITHIN DESIGN CRITERIA. PRIME MOVERS SHALL BE WITHIN 5% OF DESIGN AND TERMINALS WITHIN 10% OF DESIGN. AIR SYSTEMS SHALL BE BALANCED AS DESCRIBED HEREIN.

TEST REPORT: THE FINAL TAB REPORT SHALL BE SUBMITTED IN PDF FORMAT.

REPORT SHALL BE INDEXED.

TABLE OF CONTENTS SHALL LIST ALL REPORTS.

ALL AIR OUTLETS SHALL BE LOCATED ON CODED DRAWINGS PREPARED BY THE T&B AGENCY. AIR OUTLETS FORMS SHALL BE PREPARED AND CORRELATED TO THE CODED DRAWINGS.

TEST SUMMARY SHALL DESCRIBE FINAL TEST PROCEDURES AND SPECIAL CONDITIONS DURING TESTS (SUCH AS THERMOSTAT OUTSIDE/RETURN AIR RELATIONSHIP), AND DUCT STATIC PRESSURE.

DESCRIBE OTHER DATA THAT MAY ASSIST OPERATING PERSONNEL IN THE CONTINUING OPERATION OF THE SYSTEM.

T&B CONTRACTOR SHALL TAKE AND RECORD ALL NECESSARY READINGS AT THE FINAL BALANCE POINTS, SUCH AS BUT NOT LIMITED TO: AIR QUANTITIES, PRESSURES, SETPOINTS, ENTERING AND LEAVING COIL TEMPERATURES, SPACE INDOOR AND OUTSIDE WET AND DRY BULB TEMPERATURES, OUTDOOR WEATHER CONDITIONS, ELECTRICAL READINGS OF ALL NEW AND EXISTING MOTORS, COMPRESSORS, ETC.

TEST REPORT SHALL CONTAIN TBA CERTIFICATION OF TEST DATA AND SYSTEM CONDITIONS. SUBMIT THE TEST REPORTS, FOR REVIEW, BEFORE SUBSTANTIAL COMPLETION.

END OF MECHANICAL SPECIFICATIONS.

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JOHN N. BERG, JR
Lic. No. 051165
1/10/2025
PROFESSIONAL ENGINEER

project
AHCS SUBSTANCE USE EXPANSION

address
311 SOUTH MONROE AVENUE
COVINGTON, VA 24426

sheet name
MECHANICAL SPECIFICATIONS

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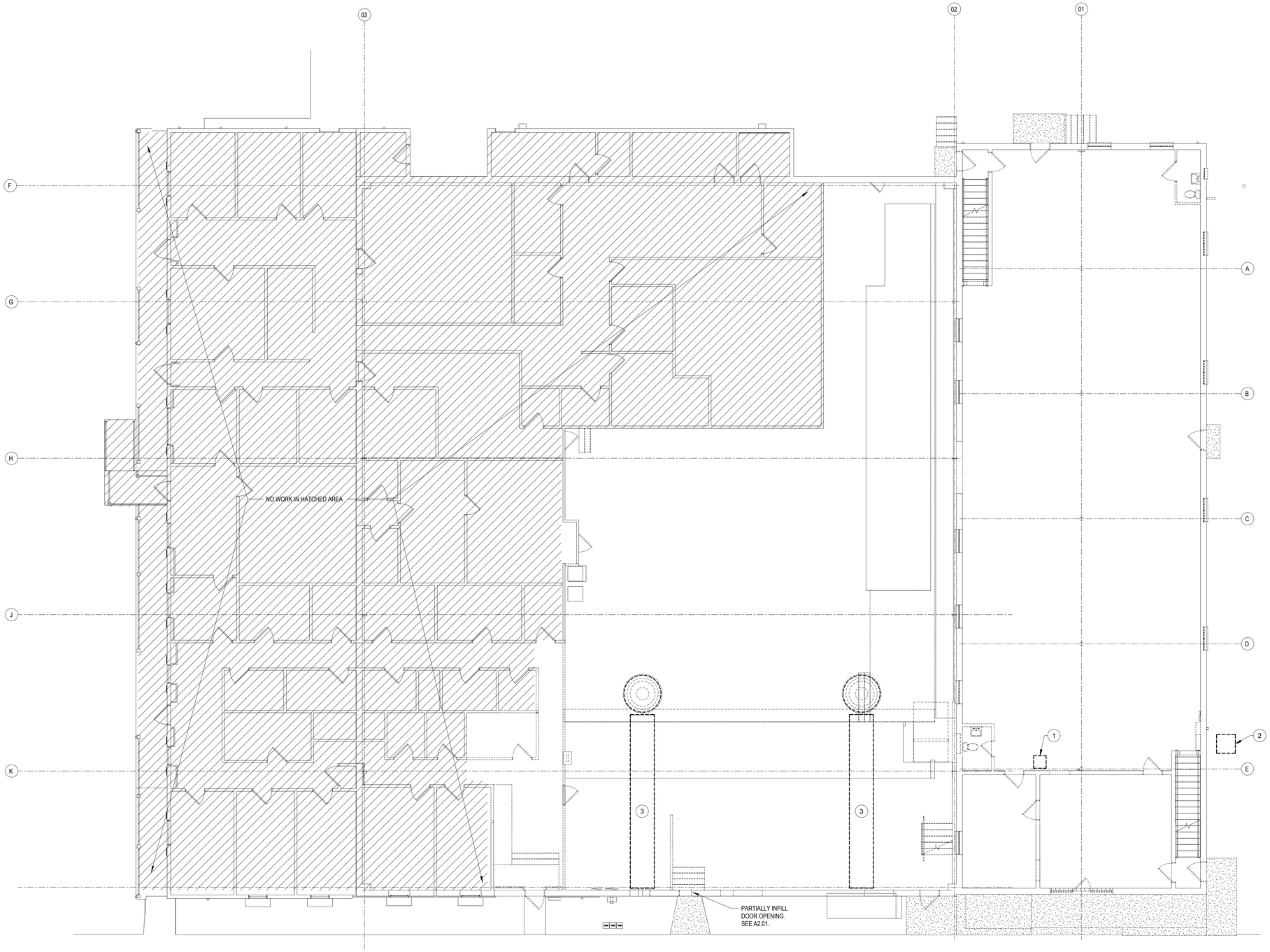

GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING.
2. ALL EXISTING MECHANICAL SYSTEMS LOCATED WITH THE TWO STORY PORTION OF THE RENOVATION AREA SHALL BE REMOVED IN THEIR ENTIRETY.

DEMOLITION KEYED NOTES:

1. EXISTING AIR HANDLER UNIT, ASSOCIATED DUCTWORK, CONTROLS, ASSOCIATED REFRIGERANT PIPING, AND CONDENSATE PIPING TO BE REMOVED IN THEIR ENTIRETY.
2. EXISTING CONDENSER UNIT ON EXTERIOR GRADE AND ALL ASSOCIATED REFRIGERANT PIPING TO BE REMOVED IN THEIR ENTIRETY.
3. EXISTING DUCTWORK AND AIR DEVICES TO BE REMOVED IN THEIR ENTIRETY.

1 / M2.01 MECHANICAL DEMO PLAN - 1ST FLOOR

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

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JOHN N. BERG, JR
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project
AHCS SUBSTANCE USE EXPANSION

address
311 SOUTH MONROE AVENUE
COVINGTON, VA 24426

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MECHANICAL DEMOLITION PLAN - FIRST FLOOR

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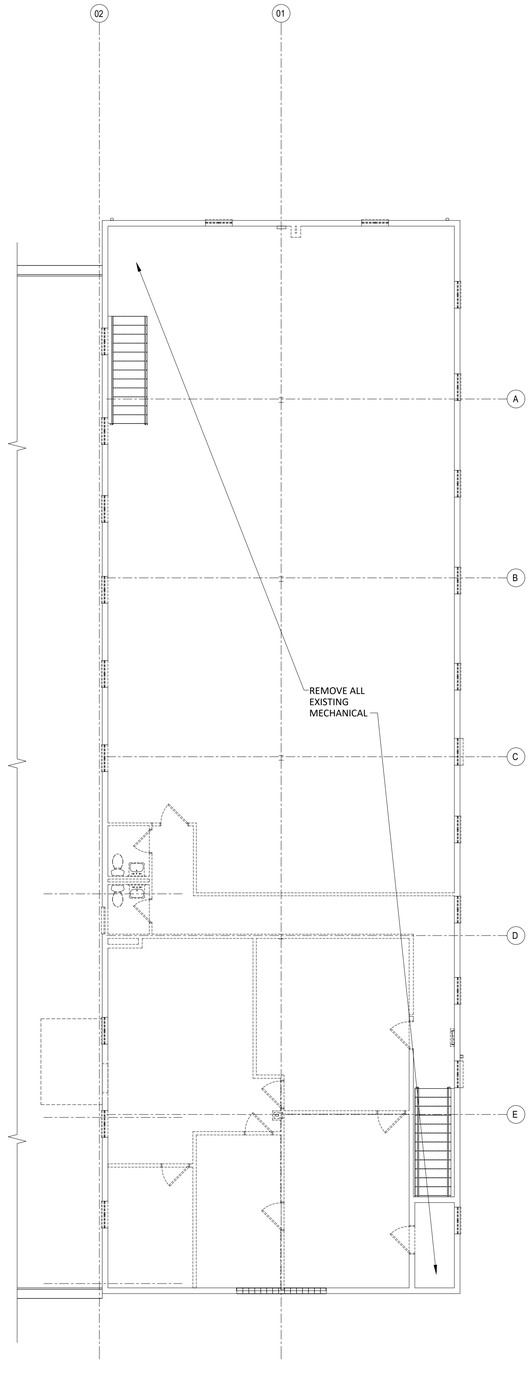
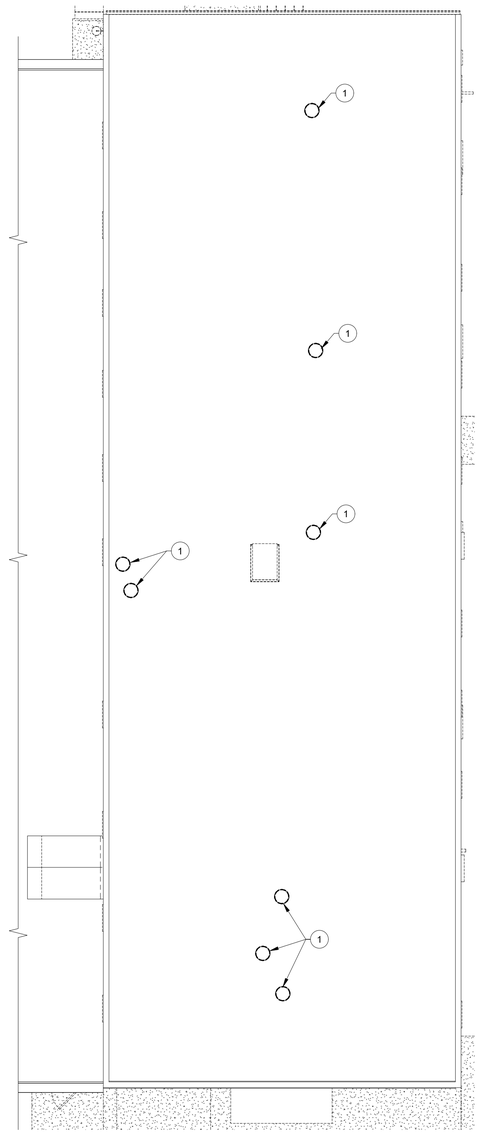


1 M2.02 **MECHANICAL DEMO PLAN - 2ND FLOOR**
SCALE = 1/8"=1'-0"



2 M2.02 **MECHANICAL DEMO PLAN - ROOF**
SCALE = 1/8"=1'-0"

GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING.
2. ALL EXISTING MECHANICAL SYSTEMS LOCATED WITH THE TWO STORY PORTION OF THE RENOVATION AREA SHALL BE REMOVED IN THEIR ENTIRETY.

DEMOLITION KEYED NOTES:

(1) EXISTING ROOF VENT TO BE REMOVED IN ITS ENTIRETY ENTIRETY.

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JOHN N. BERG, JR
Lic. No. 051165
1/10/2025
PROFESSIONAL ENGINEER

project
AHCS SUBSTANCE USE EXPANSION

address
311 SOUTH MONROE AVENUE
COVINGTON, VA 24426

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MECHANICAL DEMOLITION PLANS - SECOND FLOOR AND ROOF

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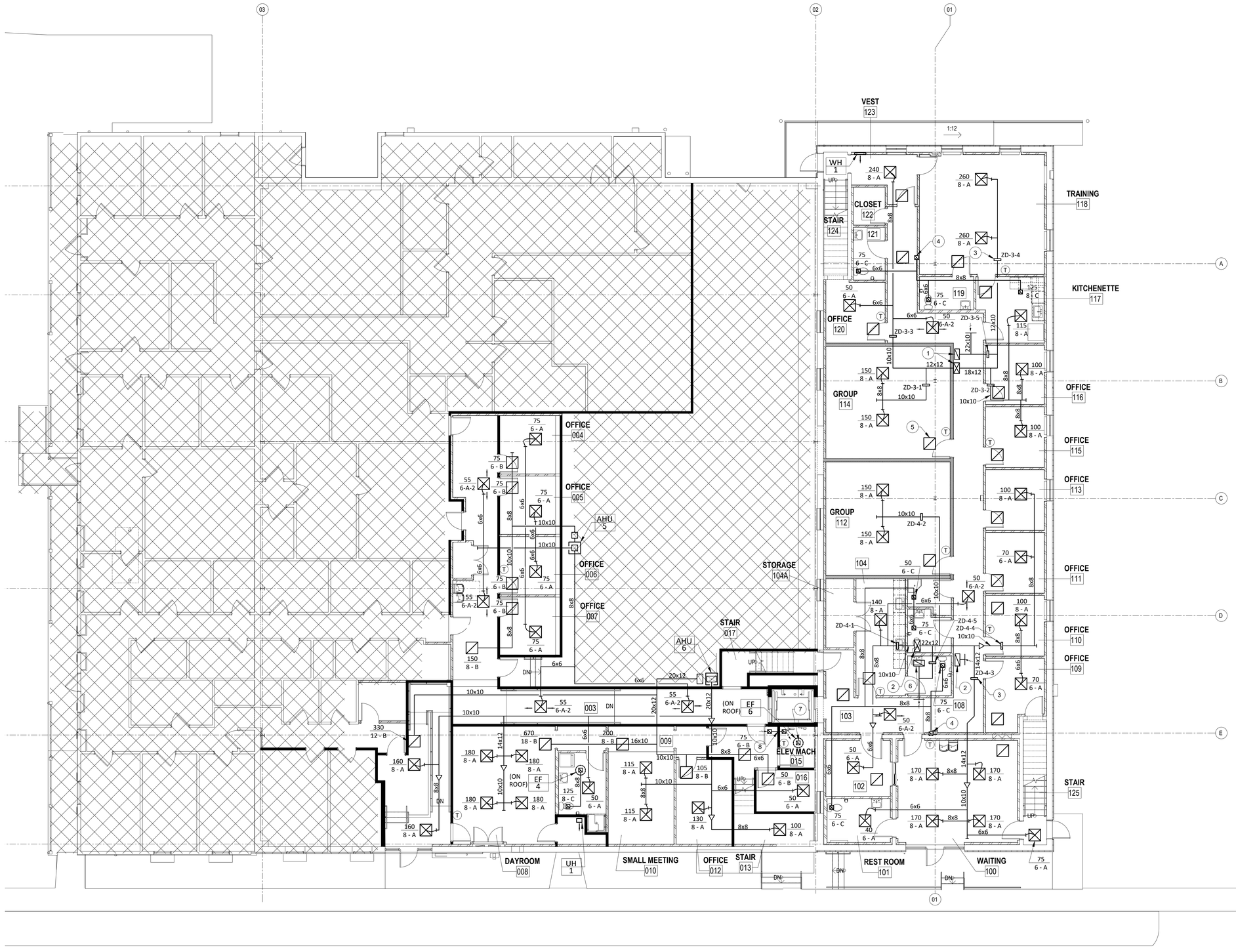

1 M3.01 **MECHANICAL NEW WORK PLAN - 1ST FLOOR**

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

GENERAL NOTES:

1. PROVIDE DUCT TRANSITIONS FROM UNIT INLET/OUTLET SIZE TO DUCT SIZES NOTED AND PROVIDE FLEXIBLE DUCT CONNECTORS AT UNIT.
2. REFER TO ARCHITECTURAL PLANS FOR ROOM NAMES AND NUMBERS IF NOT SHOWN ON THIS PLAN.
3. FOR DUCTWORK RUNOUT SIZES NOT SHOWN, PROVIDE SQUARE DUCT SIZE MATCHING AIR DEVICE SIZE (6=6x6, 8=8x8, ETC.).
4. ALL PENETRATIONS THROUGH FULL HEIGHT WALLS SHALL BE SEALED TO PREVENT THE INFILTRATION OF NOISE AROUND THE PENETRATION.
6. PROVIDE MANUAL VOLUME DAMPERS IN ALL BRANCH DUCT TAKE-OFFS TO SUPPLY, RETURN, EXHAUST AIR DEVICES.

KEYED NOTES:

1. 12x22 SUPPLY FROM ABOVE AND 10X22 RETURN UP.
2. 12X24 SUPPLY FROM ABOVE AND 22X10 RETURN UP.
3. ZONE DAMPER, PROVIDE TRANSITIONS TO ROUND INLET AND OUTLET OF DAMPERS AS REQUIRED. TYPICAL OF ALL.
4. 8x8 EXHAUST UP.
5. RETURN GRILLE, TYPE 'B'. TYPICAL OF ALL.
6. 22X10 TRANSFER DUCT UP.
7. 8x8 EXHAUST DUCT FROM EF ON ROOF TO DROP DOWN BELOW CEILING AND OPEN TO MACHINE ROOM. COVER DUCT OPENING WITH 1/2"x1/2" WIRE MESH.
8. PROVIDE 8x8 TRANSFER WITH 8x8 TYPE 'C' GRILLES IN CEILING. PROVIDE FIRE DAMPER WHERE DUCT CROSSES ELEVATOR MACHINE ROOM WALL.

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COMMONWEALTH OF VIRGINIA
JOHN N. BERG, JR
Lic. No. 051165
1/10/2025
PROFESSIONAL ENGINEER

project
AHCS SUBSTANCE USE EXPANSION

address
311 SOUTH MONROE AVENUE
COVINGTON, VA 24426

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MECHANICAL NEW WORK PLAN - FIRST FLOOR

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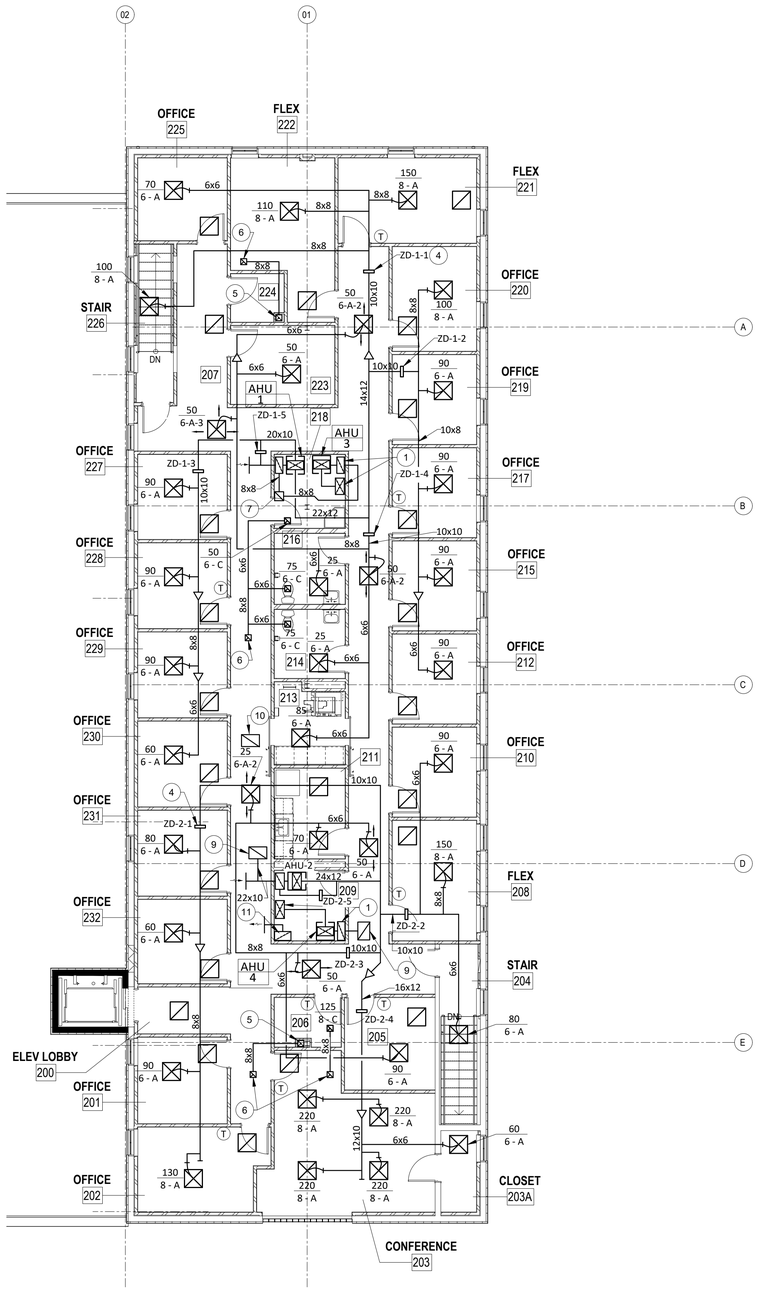

1 M3.02 **MECHANICAL NEW WORK PLAN - 2ND FLOOR**

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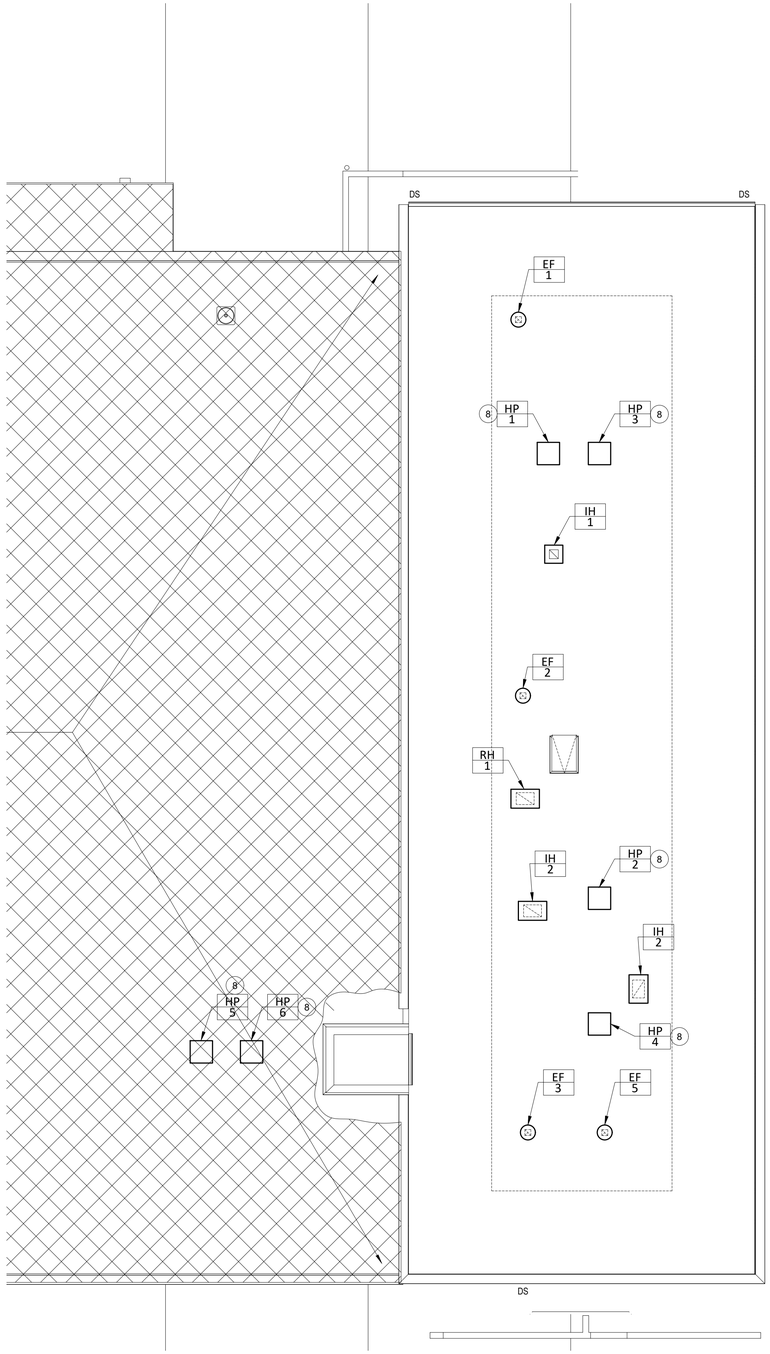

2 M3.02 **MECHANICAL NEW WORK PLAN - ROOF**

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

GENERAL NOTES:

1. PROVIDE DUCT TRANSITIONS FROM UNIT INLET/OUTLET SIZE TO DUCT SIZES NOTED AND PROVIDE FLEXIBLE DUCT CONNECTORS AT UNIT.
2. REFER TO ARCHITECTURAL PLANS FOR ROOM NAMES AND NUMBERS IF NOT SHOWN ON THIS PLAN.
3. FOR DUCTWORK RUNOUT SIZES NOT SHOWN, PROVIDE SQUARE DUCT SIZE MATCHING AIR DEVICE SIZE (6=6x6, 8=8x8, ETC.).
4. ALL PENETRATIONS THROUGH FULL HEIGHT WALLS SHALL BE SEALED TO PREVENT THE INFILTRATION OF NOISE AROUND THE PENETRATION.
5. PROVIDE MANUAL VOLUME DAMPERS IN ALL BRANCH DUCT TAKE-OFFS TO SUPPLY, RETURN, EXHAUST AIR DEVICES.
6. COVER OPEN ENDED DUCTS WITH 1/2"x 1/2" WIRE MESH.

KEYED NOTES:

1. 12x22 SUPPLY DOWN TO FIRST FLOOR AND 10x22 RETURN FROM FIRST FLOOR.
2. 12x17 SUPPLY FROM RTU ABOVE AND 12x24 SUPPLY DOWN TO FIRST FLOOR. 22x10 RETURN FROM FIRST FLOOR AND UP TO RTU. PROVIDE DUCT TRANSITIONS AS REQUIRED.
3. 12X17 SUPPLY FROM RTU ABOVE AND 10X22 RETURN UP TO RTU.
4. ZONE DAMPER, PROVIDE TRANSITIONS TO INLET AND OUTLET OF DAMPERS AS REQUIRED. TYPICAL OF ALL.
5. 8x8 EXHAUST FROM BELOW.
6. 8X8 EXHAUST UP TO FAN ON ROOF.
7. 12x12 OUTSIDE AIR DUCT UP TO INTAKE HOOD.
8. PROVIDE REFRIGERANT PIPING LINE SETS (LIQUID AND GAS LINES) TO/FROM ASSOCIATED OUTDOOR UNIT ON ROOF. PIPING SHALL BE INSTALLED, SIZED, AND INSULATED AS PER MANUFACTURERS RECOMMENDATIONS.
9. 24x16 OUTSIDE AIR DUCT UP TO INTAKE HOOD.
10. 28x16 DUCT UP TO RELIEF AIR HOOD.
11. 22x10 TRANSFER DUCT FROM BELOW.

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PROJECT #24024

COMMONWEALTH OF VIRGINIA
JOHN N. BERG, JR
Lic. No. 051165
1/10/2025
PROFESSIONAL ENGINEER

project

AHCS SUBSTANCE USE EXPANSION

address

311 SOUTH MONROE AVENUE
COVINGTON, VA 24426

sheet name

MECHANICAL NEW WORK PLANS - SECOND FLOOR AND ROOF

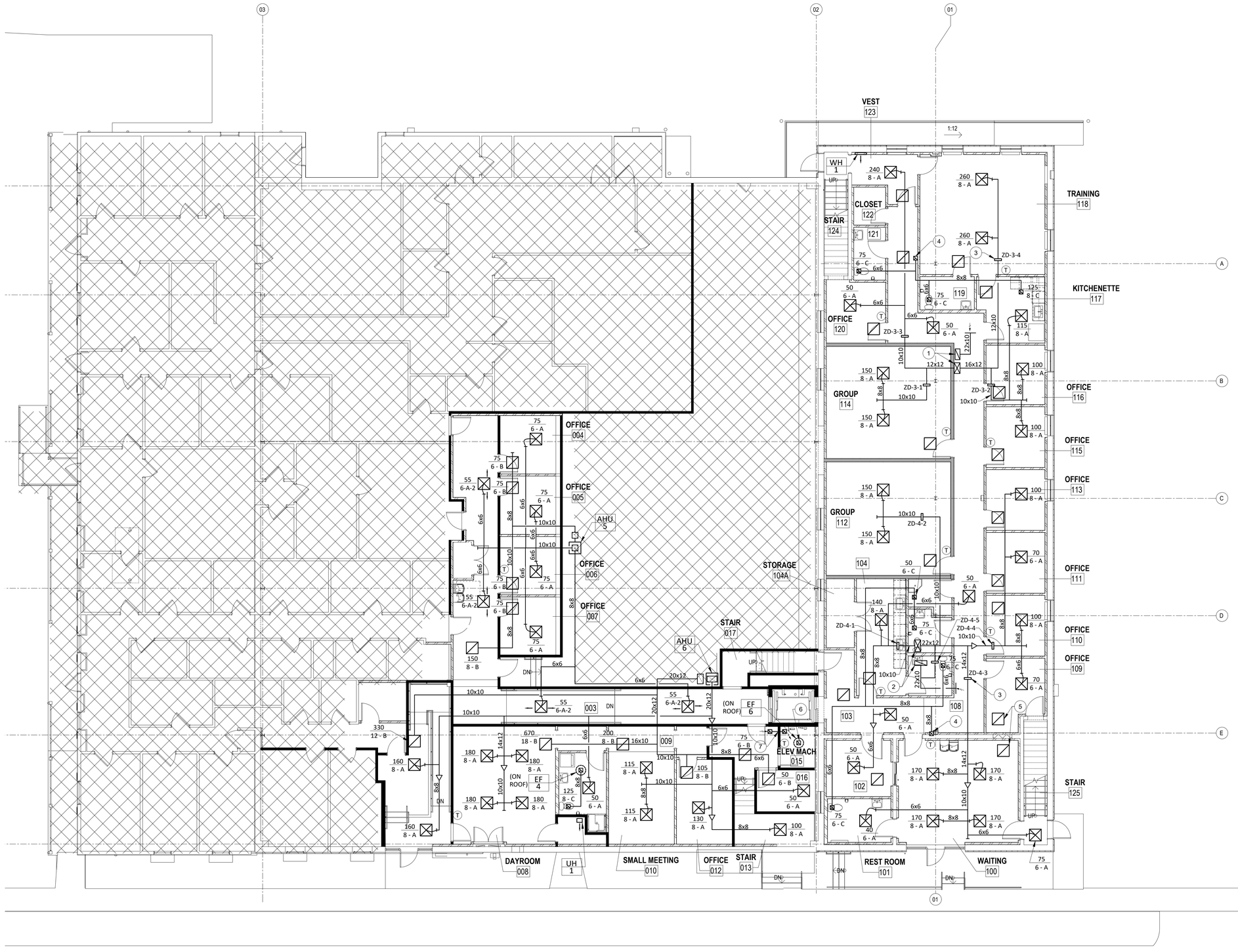
revisions

REV	REVISION	DATE

date: 01/10/2025

drawing no.

M3.02



1 M4.01 **MECHANICAL NEW WORK PLAN - 1ST FLOOR**

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

GENERAL NOTES:

1. PROVIDE DUCT TRANSITIONS FROM UNIT INLET/OUTLET SIZE TO DUCT SIZES NOTED AND PROVIDE FLEXIBLE DUCT CONNECTORS AT UNIT.
2. REFER TO ARCHITECTURAL PLANS FOR ROOM NAMES AND NUMBERS IF NOT SHOWN ON THIS PLAN.
3. FOR DUCTWORK RUNOUT SIZES NOT SHOWN, PROVIDE SQUARE DUCT SIZE MATCHING AIR DEVICE SIZE (6=6x6, 8=8x8, ETC.).
4. ALL PENETRATIONS THROUGH FULL HEIGHT WALLS SHALL BE SEALED TO PREVENT THE INFILTRATION OF NOISE AROUND THE PENETRATION.
6. PROVIDE MANUAL VOLUME DAMPERS IN ALL BRANCH DUCT TAKE-OFFS TO SUPPLY, RETURN, EXHAUST AIR DEVICES.

KEYED NOTES:

1. 12x22 SUPPLY FROM ABOVE AND 10X22 RETURN UP.
2. 12X24 SUPPLY FROM ABOVE AND 22X10 RETURN UP.
3. ZONE DAMPER, PROVIDE TRANSITIONS TO ROUND INLET AND OUTLET OF DAMPERS AS REQUIRED. TYPICAL OF ALL.
4. 8x8 EXHAUST UP.
5. RETURN GRILLE, TYPE 'B'. TYPICAL OF ALL.
6. 8X8 EXHAUST DUCT FROM EF ON ROOF TO DROP DOWN BELOW CEILING AND OPEN TO MACHINE ROOM. COVER DUCT OPENING WITH 1/2"X1/2" WIRE MESH.
7. PROVIDE 8X8 TRANSFER WITH 8X8 TYPE 'C' GRILLES IN CEILING. PROVIDE FIRE DAMPER WHERE DUCT CROSSES ELEVATOR MACHINE ROOM WALL.

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MECHANICAL NEW WORK PLAN - FIRST FLOOR - ADD ALTERNATE

revisions

REV	REVISION	DATE

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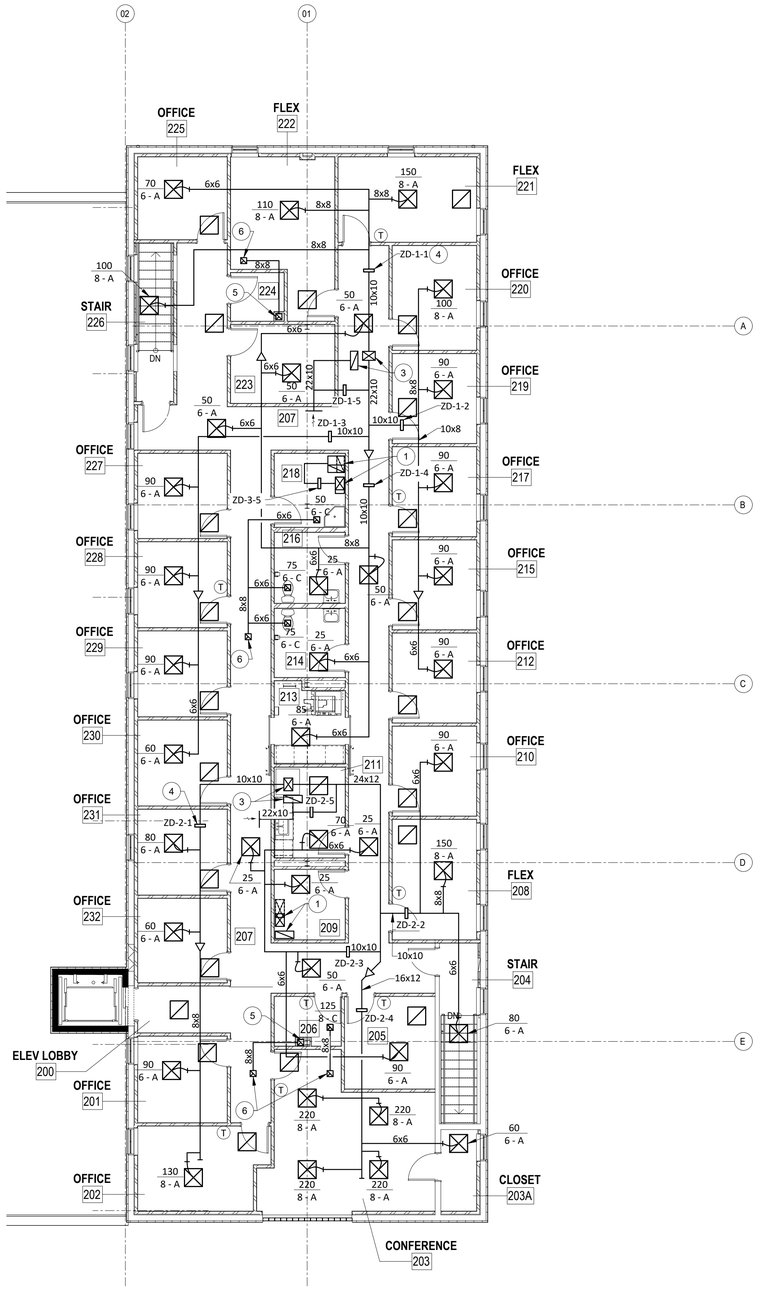
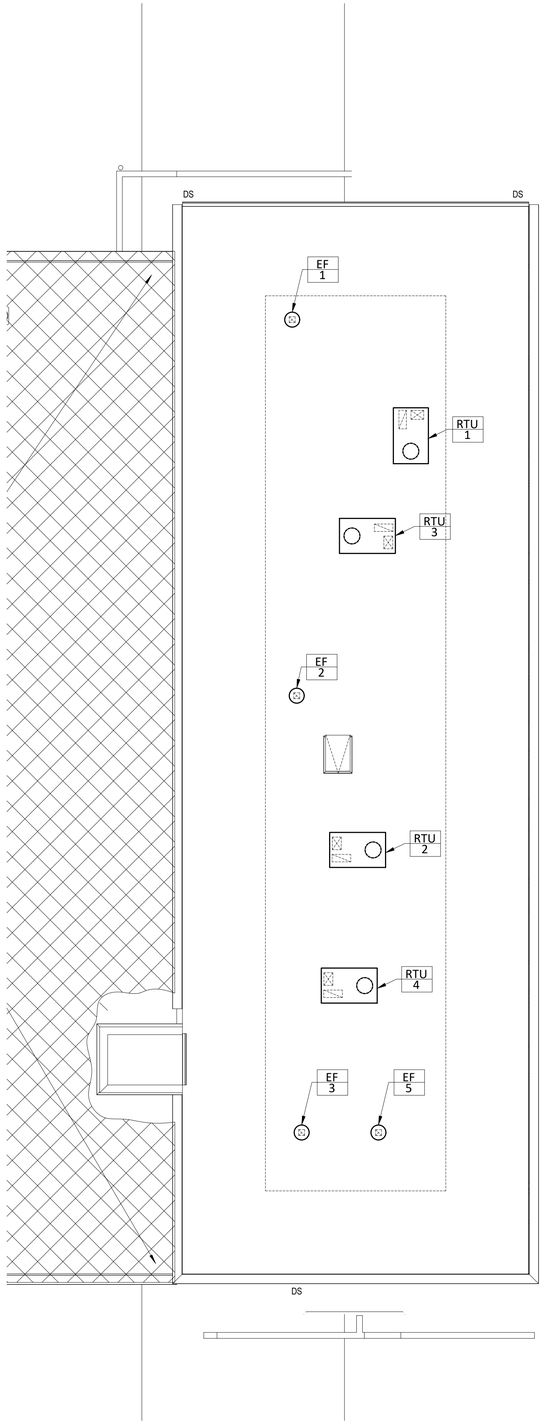


1 M4.02 **MECHANICAL NEW WORK PLAN - 2ND FLOOR**

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



2 M4.02 **MECHANICAL NEW WORK PLAN - ROOF**

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

GENERAL NOTES:

1. PROVIDE DUCT TRANSITIONS FROM UNIT INLET/OUTLET SIZE TO DUCT SIZES NOTED AND PROVIDE FLEXIBLE DUCT CONNECTORS AT UNIT.
2. REFER TO ARCHITECTURAL PLANS FOR ROOM NAMES AND NUMBERS IF NOT SHOWN ON THIS PLAN.
3. FOR DUCTWORK RUNOUT SIZES NOT SHOWN, PROVIDE SQUARE DUCT SIZE MATCHING AIR DEVICE SIZE (6=6x6, 8=8x8, ETC.).
4. ALL PENETRATIONS THROUGH FULL HEIGHT WALLS SHALL BE SEALED TO PREVENT THE INFILTRATION OF NOISE AROUND THE PENETRATION.
6. PROVIDE MANUAL VOLUME DAMPERS IN ALL BRANCH DUCT TAKE-OFFS TO SUPPLY, RETURN, EXHAUST AIR DEVICES.

KEYED NOTES:

1. 12x17 SUPPLY FROM RTU ABOVE AND 12x22 SUPPLY DOWN TO FIRST FLOOR. 10x22 RETURN FROM FIRST FLOOR AND UP TO RTU. PROVIDE DUCT TRANSITIONS AS REQUIRED.
2. 12x17 SUPPLY FROM RTU ABOVE AND 12x24 SUPPLY DOWN TO FIRST FLOOR. 22x10 RETURN FROM FIRST FLOOR AND UP TO RTU. PROVIDE DUCT TRANSITIONS AS REQUIRED.
3. 12X17 SUPPLY FROM RTU ABOVE AND 10X22 RETURN UP TO RTU.
4. ZONE DAMPER, PROVIDE TRANSITIONS TO ROUND INLET AND OUTLET OF DAMPERS AS REQUIRED. TYPICAL OF ALL.
5. 8x8 EXHAUST FROM BELOW.
6. 8X8 EXHAUST UP TO FAN ON ROOF.

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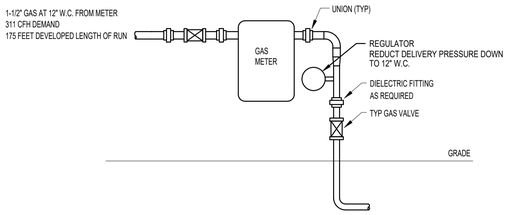
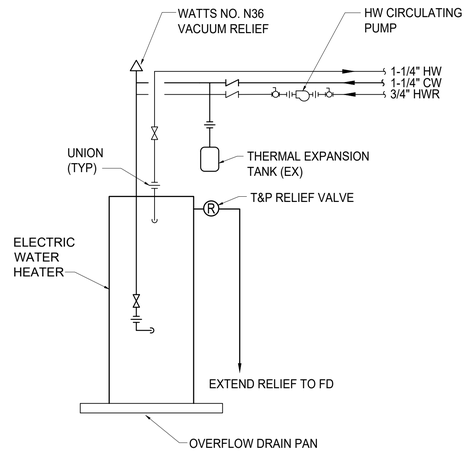


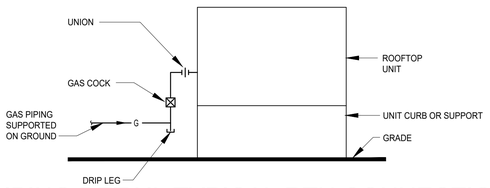
GAS METER DETAIL

NO SCALE

GAS SERVICE AND METER SHALL ONLY BE PROVIDED IF ALTERNATE #2 FOR GAS FIRED ROOFTOP UNITS IS PROVIDED. CONTRACTOR SHALL COORDINATE DELIVERY PRESSURE WITH GAS UTILITY.



DETAIL OF CONNECTIONS TO EWH



GAS PIPING DETAIL TYPICAL RTU CONNECTION

NO SCALE

PLUMBING FIXTURE SCHEDULE:

WC-1 WATER CLOSET: AMERICAN STANDARD "CHAMPION 4" MODEL, 1.6 GPF WATERSAVING, VITREOUS CHINA ELONGATED SIPHON JET BOWL, FLOOR MOUNTED, WHITE EXTRA HEAVY DUTY SOLID PLASTIC SEAT WITH COVER, CHECK HINGE, ADA COMPLIANT WITH TRIP LEVER ON OPEN STALL SIDE.

L-1 AMERICAN STANDARD "LUCERNE" 0355.012 WHITE VITREOUS CHINA WALL HUNG HANDICAP LAVATORY, THREE HOLE MOUNT FOR 4" CENTERS, WITH MOEN 8413F05 CENTERSET CHROME FAUCET WITH SINGLE LEVER HANDLE, METAL GRID STRAINER, OFFSET PVC P-TRAP, FLEXIBLE TUBING SUPPLIES, COMPRESSION FITTINGS AND STOPS. PROVIDE TRUEBRO #102W PRE- MOLDED INSULATION ON BOTH WATER SUPPLIES AND DRAIN. PROVIDE WITH WALL CARRIER.

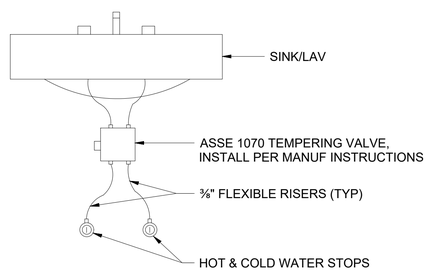
SH-1 SHOWER, AQUATIC BATH, MODEL 1363BFRF, 36x36x75 ONE-PIECE SHOWER WITH FOLDING SEAT ON LEFT SIDE, VERTICAL ENTRY BAR, L SHAPE HORIZONTAL GRAB BAR, AND HAND HELD SPRAYER AND SLIDE BAR. PROVIDE WITH PRESSURE BALANCING MIXING VALVE IN WALL, 2" BRASS SHOWER DRAIN WITH STRAINER, AND SHOWER CURTAIN WITH ROD. PROVIDE SHOWER SYSTEM WITH RIGHT HAND FIXTURE WALL AS INDICATED ON PLANS.

MS-1 MOP SINK: FIAT MODEL MSB-2424, 24 INCH X 24 INCH X 10 INCH MOLDED STONE MOP SERVICE BASIN, WITH BUMPER GUARD, STAINLESS STEEL DRAIN BODY, COMBINATION S.S. DOME STRAINER AND REMOVEABLE BASKET, FIAT 830-AA WALL MOUNTED CHROME COMBINATION FAUCET, SUPPLY FITTING WITH VACUUM BREAKER, FOUR ARM HANDLES, INTEGRAL STOPS, WALL BRACE, PAIL HOOK, THREADED SPOUT, RUBBER HOSE, WALL HOOK AND MOP HANGER

S-1 SINK, ELKAY, LUSTERTONE STAINLESS STEEL, 25"X22"X10-3/8", SINGLE BOWL, TOP MOUNT/DROP IN TYPE, MODEL DLR252210. PROVIDE WITH ELKAY SINGLE HOLE KITCHEN FAUCET PULL OUT SPRAY AND LEVER HANDLE AND 3-1/2" STAINLESS STEEL BODY STRAINER BASKET AND TAILPIECE.

S-2 SINK, ELKAY, LUSTERTONE STAINLESS STEEL, 25"X22"X10-3/8", SINGLE BOWL, TOP MOUNT/DROP IN TYPE, MODEL DLR252210. PROVIDE WITH 3-1/2" STAINLESS STEEL BODY STRAINER BASKET AND TAILPIECE. PROVIDE WITH ELKAY MODEL LKD2442C CENTERSET EXPOSED DECK MOUNT FAUCET WITH ARC SPOUT AND 2-5/8" LEVER HANDLES.

EWC-1: ELECTRIC WATER COOLER, ELKAY EZH20 BOTTLE FILLER STATION WITH FILTERED BI-LEVEL COOLER. MODEL LZSTL8WS(VR)SP WITH HI/LO CONFIGURATION. UNIT SHALL DELIVER 8 GPH OF 50°F OF DRINKING WATER AT 90°F AMBIENT AND 80°F INLET WATER. PUSH BAR ACTIVATION. BOTTLE FILLING UNITS SHALL INCLUDE AN ELECTRONIC SENSOR FOR TOUCHLESS ACTIVATION WITH AN AUTOMATIC 20-SECOND SHUT-OFF TIMER. LED LIGHT ILLUMINATING THE WATER DISPENSING AREA, BRIGHTENING AS WATER IS BEING DISPENSED. SHALL INCLUDE A GREEN TICKER™ DISPLAYING COUNT OF PLASTIC BOTTLES SAVED FROM WASTE. BOTTLE FILLER SHALL PROVIDE A 1.1 GPM FLOW RATE WITH LAMINAR FLOW TO MINIMIZE SPLASHING. SHALL INCLUDE THE WATERSENTRY® PLUS 3000-GALLON CAPACITY FILTER, CERTIFIED TO NSF/ANSI 42 & 53, WITH VISUAL FILTER MONITOR TO INDICATE WHEN REPLACEMENT IS NECESSARY. UNIT SHALL AUTOMATICALLY DETECT A NEW FILTER AND RESET VISUAL FILTER MONITOR ACCORDINGLY. UNIT SHALL HAVE THE ABILITY TO TURN OFF REFRIGERATION SYSTEM AS NEEDED, IN ADDITION TO SELF DIAGNOSING SYSTEM ISSUES AND DISPLAY RELATED MESSAGES. SHALL INCLUDE INTEGRATED SILVER ION ANTI-MICROBIAL PROTECTION IN KEY AREAS. UNIT SHALL MEET ADA GUIDELINES. UNIT SHALL BE A LEAD-FREE DESIGN WHICH IS CERTIFIED TO NSF/ANSI 61 AND 372 AND MEETS FEDERAL AND STATE LOW-LEAD REQUIREMENTS.



TYPICAL TEMPERING VALVE FOR LAV'S

LEGEND

- BRANCH CONNECTION - BOTTOM OF MAIN
- BRANCH CONNECTION - SIDE OF MAIN
- BRANCH CONNECTION - TOP OF MAIN
- PIPE DOWN OR PIPE FROM BELOW
- PIPE UP OR PIPE FROM ABOVE
- DIRECTION OF FLOW
- DOMESTIC COLD WATER
- DOMESTIC HOT WATER
- DOMESTIC HOT WATER RECIRCULATING
- NATURAL GAS PIPING
- SANITARY SEWER, GREASE WASTE OR DRAIN
- SANITARY VENT
- CLEANOUT FLUSH WITH FLOOR
- OUTLET WITH P-TRAP
- WALL HYDRANT
- WATER HAMMER ARRESTER
- BALL VALVE
- AUTOMATIC GAS SHUT OFF VALVE, INTERLOCK WITH HOOD
- SHUTOFF VALVE IN VERTICAL
- CHECK VALVE
- T&P RELIEF VALVE
- BALANCING COCK
- UNION
- PRESSURE GAUGE AND GAUGE COCK
- THERMOMETER
- GAS PRESSURE REGULATOR
- RELIEF VALVE
- BACKFLOW PREVENTER (BFP)
- EXISTING (EQUIPMENT OR DUCTWORK/PIPING)
- DEMOLITION (EQUIPMENT, PIPING, DUCTWORK, ETC.)

ABBREVIATIONS

AAV	AIR ADMITTANCE VALVEV
ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
BFF	BELOW FINISHED FLOOR
BTU	BRITISH THERMAL UNIT
BEL	BELOW
CLG	CEILING
CO	CLEANOUT
CONN	CONNECT, CONNECTION
CW	COLD WATER
CONT	CONTINUED
DN	DOWN
EA	EACH
ELEV	ELEVATION
EWC	ELECTRIC WATER COOLER
F	DEGREES FAHRENHEIT
FD	FLOOR DRAIN
FIN	FINISHED
FLR	FLOOR
FR	FROM
FT	FEET
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GW	GREASE WASTE
HB	HOSE BIBB
HC	HANDICAPPED ACCESSIBLE
HW	HOT WATER
HP	HORSEPOWER
IN	INCH, INCHES
INV	INVERT
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MIN	MINIMUM
SH	SHEET
TYP	TYPICAL
V	SANITARY VENT
VTR	VENT THRU ROOF
W	SANITARY WASTE
WCO	WALL CLEANOUT
WH	WALL HYDRANT
WHA	WATER HAMMER ARRESTER
ZVB	MEDICAL GAS ZONE VALVE BOX

CONNECT TO EXISTING

LIMITS OF DEMOLITION

PLUMBING EQUIPMENT SCHEDULE:

FD FLOOR DRAIN, ZURN MODEL Z415, DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAGE SLOTS.

FOR MECHANICAL ROOM DRAINS NOT RECIEVING INDIRECT WASTE, FINISHED SPACES INCLUDING TOILET, SHOWER, LOCKER ROOMS, ETC., PROVIDE WITH TYPE B, ROUND, POLISHED NICKEL BRONZE, LIGHT DUTY HEEL PROOF STRAINER.

FOR ANY FLOOR DRAINS RECIEVING INDIRECT WASTE OR CONDESATE (NOT FLOOR SINKS), PROVIDE TYPE I POLISHED NICKEL BRONZE STRAINER WITH RAISED FLANGE.

ALL FLOOR DRAINS SHALL BE PROTECTED AGAINST LOSS OF TRAP SEAL BY EVAPORATION BY INSTALLATION OF ELASTOMERIC TRAP GUARD DRAIN INSERT, EQUAL TO PROSET SYSTEMS MODEL #TG.

WH WALL HYDRANT, ZURN MODEL Z1320XL, ENCASED, ECOLOTROL, LEAD-FREE, NON-FREEZE AUTOMATIC DRAINING WALL HYDRANT FOR FLUSH INSTALLATION. HYDRANT FEATURES INTEGRAL BACKFLOW PREVENTER WITH ANTI-SIPHON TECHNOLOGY, COPPER CASING, ALL-BRONZE INTERIOR COMPONENTS WITH 1/2 TURN LONG-LIFE CERAMIC DISC CARTRIDGE, COMBINATION 3/4" FEMALE SOLDER AND 3/4" MALE PIPE THREAD INLET CONNECTION, AND 3/4" MALE HOSE CONNECTION. HYDRANT FURNISHED WITH TYPE 304 STAINLESS STEEL HOUSING WITH LOCKING HINGED COVER STAMPED "WATER" AND INCLUDES OPERATING KEY. CONTRACTOR SHALL COORDINATE WITH WALL THICKNESS.

BFP REDUCED PRESSURE ZONE BACK FLOW PREVENTER (FOR BUILDING SERVICE) SIZES 1/2" - 2": WATTS SERIES LFU009.

EX EXPANSION TANK - AMTROL THERM-X-TROL MODEL #ST-5 THERMAL EXPANSION TANK, 2.0 GALLONS MIN. ACCEPTANCE VOLUME WITH DIAPHRAGM. FACTORY PRE-CHARGED TO 40 PSI, SET EQUAL TO LINE PRESSURE.

EWH-1 ELECTRIC WATER HEATER, A.O. SMITH MODEL #DRE-52-9 , TRIPLE ELEMENT, 50 GALLON CAPACITY TANK, 37 GAL./HR. RECOVERY AT 40 DEG.F. ENT.AND 100 DEG.F. RISE, 9 KW, 208 V/ 3 PH; T & P RELIEF VALVE. PIPING CONNECTIONS INCLUDING T&P RELIEF VALVE ON SIDE OF EQUIPMENT.

HWCP-1 B&G SERIES ECOCIRC 20-18 CIRCULATING PUMP, 0-70 WATTS., 120V/1PH, 1.0 GPM AT 10 FT. OF HEAD. RECIRCULATION SYSTEM IS TO FUNCTION AS A CONSTANT TEMPERATURE SYSTEM WITH CONTROLS AS REQUIRED TO MAINTAIN A CONSTANT TEMP IN THE HOT WATER LOOP. PROVIDE WITH REMOTE TEMPERATURE SENSOR TO MONITOR LOOP TEMPS. PUMP SHALL BE AUTOMATICALLY DISABLED DURING NIGHT MODE/AFTER BUSINESS HOURS.

WB-1 WASHER BOX: OATEY CENTRO II WASHER BOX, HW & CW CONNECTION, 2" DRAIN OUTLET, RECESSED MOUNTED.

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PLUMBING LEGEND, NOTES, & SCHEDULES

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P1.01

PLUMBING SPECIFICATIONS:

1. GENERAL PROVISIONS:
   - 1.A. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2018 VIRGINIA UNIFORM STATEWIDE BUILDING CODE, ALL FEDERAL, STATE, AND CITY CODES, ORDINANCES, AND STANDARDS.
   - 1.B. THE PLANS ARE DIAGRAMMATIC IN NATURE AND BASED ON ONE MANUFACTURER'S EQUIPMENT. THEY ARE NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION, THE EXACT DIMENSIONS, OR ALL THE DETAILS OF THE EQUIPMENT. VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO BE USED. INSTALLATION SHALL BE WITHIN THE LIMITATIONS IMPOSED BY THE ARCHITECTURAL, STRUCTURAL, HVAC, ELECTRICAL, AND PLUMBING REQUIREMENTS WITH ADEQUATE SPACE FOR MAINTENANCE.
   - 1.C. GUARANTEE: ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED TO BE FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE AND CONTRACTOR SHALL MAKE GOOD, WITHOUT ADDITIONAL COST TO THE OWNER, ANY DEFECTS WHICH MAY APPEAR WITHIN THAT PERIOD. MANUFACTURER'S WARRANTIES EXTENDING BEYOND ONE YEAR SHALL BE PROCESSED AND TURNED OVER TO THE OWNER.
   - 1.D. MAJOR ITEMS ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INCIDENTAL ITEMS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM.
   - 1.E. A TRADE NAMES AND CATALOG NUMBERS SHALL BE INTERPRETED AS ESTABLISHING A GENERAL DESIGN AND STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. UNLESS STATED OTHERWISE, THE CONTRACTOR MAY USE ANY ARTICLE WHICH, IN HIS JUDGEMENT, AND WITH WRITTEN COMMENT FROM THE ARCHITECT/ENGINEER INDICATING NO OBJECTION, IS EQUAL OR SUPERIOR TO THAT SPECIFIED. DRAWINGS SHOWING CHANGES OR REVISIONS REQUIRED BY THE SUBSTITUTION FOR SPECIFIED ITEMS SHALL BE SUBMITTED WITH THE SHOP DRAWING DATA, AND THE COSTS OF ALL SUCH CHANGES SHALL BE BORNE BY THE CONTRACTOR.
   - 1.F. SIMILAR ITEMS SHALL BE PROVIDED BY A SINGLE MANUFACTURER.
   - 1.G. ALL REQUIRED WALL OR FLOOR OPENINGS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND/OR OTHER RELEVANT TRADES.
   - 1.H. ALL PIPING SHALL BE INSTALLED ABOVE THE CEILING UNLESS INDICATED OTHERWISE. ALL WATER PIPING AND P-TRAPS SHALL BE INSTALLED WITHIN THE BUILDINGS INSULATION ENVELOPE OR BE PROVIDED WITH A FREEZE PROTECTION SYSTEM.
   - 1.I. PROVIDE SUPPORTS TO RIGIDLY ATTACH ALL EQUIPMENT, APPURTENANCES AND PIPE AS REQUIRED FOR SUPPORT. PRIOR TO INSTALLATION OF HANGERS AND INSERTS, THE CONTRACTOR SHALL COORDINATE LOCATIONS AND REQUIREMENTS TO MINIMIZE CONFLICTS WITH OTHER BUILDING SYSTEMS. INSTALLATION OF PIPE HANGERS AND SUPPORTS SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURERS STANDARDIZATION SOCIETY (MSS) STANDARDS SP-58, 69 AND 89.
   - 1.J. THE CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO ALL EQUIPMENT INDICATED TO BE FURNISHED BY OTHERS.

2. SUBMITTAL AND SHOP DRAWINGS:
   - 2.A. SUBMIT MANUFACTURER'S CERTIFIED DATA RELATIVE TO ALL EQUIPMENT, PIPING, CONTROLS, ETC. REQUIRED FOR THE INSTALLATION OF THE PLUMBING AND FIRE PROTECTION SYSTEMS. SUBMIT FOR REVIEW ALL NECESSARY ENGINEERING, PRODUCT AND INSTALLATION DATA, SHOP DRAWINGS, SAMPLES ETC. FOR ALL EQUIPMENT, MATERIAL, AND SYSTEMS TO ASCERTAIN COMPLIANCE WITH THE TECHNICAL REQUIREMENTS OF THE CONTRACT DOCUMENTS.
   - 2.B. SUBMIT A DIGITAL PDF OF ALL NECESSARY DATA, CUTS, MANUFACTURER'S SELECTIONS, CATALOGS, BULLETINS, INSTALLATION INSTRUCTIONS, DRAWINGS, DIAGRAMS, CURVES, ETC. CLEARLY INDICATE ON THE SUBMITTED DATA, THE MANUFACTURER'S NAME, PRODUCT NUMBER(S), OPTIONS, EQUIPMENT CAPACITY, DIMENSIONAL DATA, WEIGHTS, AND OTHER APPLICABLE TECHNICAL DATA FOR THE PROJECT.
   - 2.C. TRADE NAMES, MANUFACTURERS, AND CATALOGUE NUMBERS ARE MENTIONED HEREIN AND ON THE DRAWINGS SOLELY IN ORDER TO ESTABLISH A STANDARD FOR THE TYPE, GENERAL DESIGN, AND QUALITY OF PRODUCT REQUIRED. OTHER PRODUCTS SIMILAR IN DESIGN OF EQUIVALENT QUALITY CAPABLE OF FITTING WITHIN THE SPACES ALLOCATED AND COMPLYING WITH THE DRAWINGS AND SPECIFICATIONS WILL BE CONSIDERED AFTER THE CONTRACT IS LET UNLESS “PRIOR APPROVAL” REQUIREMENTS ARE SET FORTH IN THESE DOCUMENTS.
   - 2.D. REVIEW OF SUBMITTALS AND SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR FITTING THE EQUIPMENT IN THE SPACE ALLOTTED WITH SPACE FOR ALL CONNECTIONS AND SERVICING AND FOR THE COORDINATION OF THE WORK WITH WORK OF OTHER TRADES.
   - 2.E. THE CONTRACTOR SHALL REVIEW ALL SUBMITTALS AND SHOP DRAWINGS AND INDICATE BY STAMP OR LETTER THAT HE HAS REVIEWED THEM, BEFORE FORWARDING THEM TO THE ARCHITECT AND/OR ENGINEER. SUBMITTALS AND DRAWINGS WILL BE RETURNED AFTER REVIEW INDICATING WHETHER EXCEPTIONS ARE TAKEN, THE SUBMITTAL RETURNED WITH CORRECTIONS, OR IS COMPLETELY REJECTED. RESUBMISSION OF REVISED SUBMITTALS AND SHOP DRAWINGS, IF REQUIRED, SHALL BE DONE BEFORE INSTALLATION AND CONSTRUCTION IS BEGUN.
   - 2.F. CORRECTIONS OR COMMENTS MADE ON THE SUBMITTALS AND DRAWINGS DURING THIS REVIEW DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THIS REVIEW IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, FABRICATION PROCESSES, TECHNIQUES OF CONSTRUCTION, COORDINATING THE WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING WORK IN A SAFE AND SATISFACTORY MANNER. REVIEW OF THE SUBMITTALS SHALL NOT PERMIT ANY DEVIATION FROM PLANS AND SPECIFICATIONS.

3. AS-BUILT DRAWINGS:
   - 3.A. MAINTAIN DAILY UPDATED DRAWINGS SHOWING DEVIATIONS FROM CONSTRUCTION DOCUMENTS. AT THE END OF THE PROJECT, PROFESSIONALLY PREPARE AS-BUILT DRAWINGS AND SUBMIT DRAWINGS TO THE ARCHITECT/ENGINEER.

4. OPERATION AND MAINTENANCE MANUALS:
   - 4.A. UPON COMPLETION OF THE PROJECT, SUBMIT ALL OPERATION AND MAINTENANCE MANUALS, WARRANTIES, SPARE PARTS LIST, AS-BUILT DRAWINGS, TEST AND BALANCE REPORTS, AND LETTER OF GUARANTEE ALL BOUND IN THREE RING BINDERS, CLEARLY SHOWING WHICH EQUIPMENT WAS SUPPLIED TO THE JOB.

5. PIPING SPECIALTIES:
   - 5.A. ACCESS DOORS: ACCESS DOORS SHALL BE PROVIDED FOR ALL CONCEALED VALVES, CONTROLS, AND ANY OTHER EQUIPMENT OR MATERIALS REQUIRING INSPECTION OR MAINTENANCE. ACCESS DOORS SHALL BE FURNISHED FOR FLOORS, WALLS AND CEILINGS, OF ADEQUATE SIZE SO THAT CONCEALED ITEMS WILL BE READILY ACCESSIBLE FOR SERVICING OR FOR REMOVAL AND REPLACEMENT IF NECESSARY.
   - 5.B. PIPE ESCUTCHEONS: INSTALL PIPE ESCUTCHEONS ON EACH PIPE PENETRATION THRU FLOORS, WALLS PARTITIONS, AND CEILINGS WHERE PENETRATION IS EXPOSED TO VIEW AND ON EXTERIOR OF BUILDING. SECURE ESCUTCHEON TO PIPE OR INSULATION SO ESCUTCHEON COVERS PENETRATION HOLE, AND IS FLUSH WITH ADJOINING SURFACE. PROVIDE SHEET STEEL ESCUTCHEONS, SOLID OR SPLIT HINGED. FOR AREAS WHERE WATER AND CONDENSATION CAN BE EXPECTED TO ACCUMULATE, PROVIDE CAST BRASS OR SHEET BRASS ESCUTCHEONS, SOLID OR SPLIT HINGED.
   - 5.C. PIPE SLEEVES: INSTALL PIPE SLEEVES WHERE PIPING PASSES THROUGH WALLS, FLOORS, CEILINGS, AND ROOFS. DO NOT INSTALL SLEEVES THROUGH STRUCTURAL MEMBERS OF WORK, EXCEPT AS DETAILED ON DRAWINGS, OR AS REVIEWED BY ARCHITECT/ENGINEER. SIZE SLEEVES SO THAT PIPING AND INSULATION (IF ANY) WILL HAVE FREE MOVEMENT IN SLEEVE, INCLUDING ALLOWANCE FOR THERMAL EXPANSION; BUT NOT LESS THAN 2 PIPE SIZES LARGER THAN PIPING RUN. INSTALL LENGTH OF SLEEVE EQUAL TO THICKNESS OF CONSTRUCTION PENETRATED, AND FINISH FLUSH TO SURFACE; EXCEPT FLOOR SLEEVES. EXTEND FLOOR SLEEVES 1/4 INCH ABOVE LEVEL FLOOR FINISH, AND 3/4 INCH ABOVE FLOOR FINISH SLOPED TO DRAIN. PROVIDE TEMPORARY SUPPORT OF SLEEVES DURING PLACEMENT OF CONCRETE AND OTHER WORK AROUND SLEEVES, AND PROVIDE TEMPORARY CLOSURE TO PREVENT CONCRETE AND OTHER MATERIALS FROM ENTERING SLEEVES.
   - 5.D. WATER HAMMER ARRESTORS (WHA): PROVIDE AT ALL FAST OPENING WATER VALVES INCLUDING WATER CLOSETS, URNIALS, AND CLOTHES WASHERS. SHALL BE ZURN MODEL 1260XL OR EQUIVALENT AND SHALL BE SIZED AND PLACED WITHIN THE SYSTEM AS RECOMMENDED BY THE MANUFACTURER.

6. INSULATION:
   - 6.A. FLAME/SMOKE RATINGS: PROVIDE COMPOSITE PLUMBING INSULATION (INSULATION, JACKETS, COVERINGS, SEALERS, MASTICS AND ADHESIVES) WITH FLAME-SPREAD RATING OF 25 OR LESS, AND SMOKE-DEVELOPED RATING OF 50 OR LESS, AS TESTED BY ASTM E84 METHOD. INSULATION SHALL BE LABELED BY THE MANUFACTURER. THE LABEL SHALL INDICATE THE INSULATING VALUE, FLAME SPREAD AND SMOKE-DEVELOPED RATING.
   - 6.B. INSTALLATION: INSULATION SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS USING ONLY ADHESIVES, MASTICS AND PLUMBING FASTENERS APPROVED BY THE INSULATION MANUFACTURER. INSULATION SHALL NOT BE APPLIED UNTIL AFTER THE EQUIPMENT HAS BEEN TESTED WITH RESULTS ACCEPTABLE TO THE ARCHITECT/ENGINEER. INSULATION WITH A VAPOR BARRIER JACKET SHALL BE APPLIED WITH A CONTINUOUS, UNBROKEN VAPOR SEAL AND ALL JOINTS SHALL BE SEALED WITH A VAPOR BARRIER ADHESIVE UNLESS OTHERWISE INDICATED. STAPLES, STICK CLIPS AND HANGERS SHALL BE VAPOR SEALED WHERE THEY PUNCTURE VAPOR BARRIER JACKETS.
   - 6.C. MATERIALS:
     - 6.C.A. GLASS FIBER PIPE INSULATION: HEAVY DENSITY PREFORMED PIPE INSULATION WITH OPERATING TEMPERATURE RANGE OF -60 DEGREES F TO 350 DEGREES F, THERMAL CONDUCTIVITY "K"=0.24 BTU-IN/HOUR-SF-DEG F AT 100 DEGREES F. FACTORY APPLIED JACKET (ASJ) SHALL CONSIST OF WHITE KRAFT PAPER BONDED TO ALUMINUM FOIL AND REINFORCED WITH GLASS FIBER YARN. EQUAL TO OWENS-CORNING ASJ.
     - 6.C.B. CELLULAR FOAM PIPE INSULATION: TUBULAR, FLEXIBLE, FIRE RESISTANT INSULATION WITH OPERATING TEMPERATURE RANGE OF -40 DEGREES F TO 220 DEGREES F, THERMAL CONDUCTIVITY "K"=0.27 BTU-IN/HOUR-SF-DEG F AT 75 DEGREES F. NO JACKET REQUIRED. EQUAL TO ARMSTRONG ARMAFLEX AP.
     - 6.C.C. A POLYETHYLENE PIPE INSULATION: INSULATION MATERIALS CORPORATION OF AMERICA (IMCOA), FLEXIBLE CLOSED CELL POLYETHYLENE TUBING, ASTM C534, "K"=0.24 AT 75 DEGREES F, SERVICE TEMPERATURE -110F TO 210F. NO JACKET REQUIRED.
   - 6.D. OMIT INSULATION ON EXPOSED PLUMBING FIXTURE RUNOUTS FROM FACES OF WALL OR FLOOR TO FIXTURE; ON UNIONS, FLANGES, STRAINERS, FLEXIBLE CONNECTIONS, AND EXPANSION JOINTS.
   - 6.E. COVER VALVES, FITTINGS AND SIMILAR ITEMS IN EACH PIPING SYSTEM WITH EQUIVALENT THICKNESS AND COMPOSITION OF INSULATION AS APPLIED TO ADJOINING PIPE RUN.
   - 6.F. ALL HOT WATER DOMESTIC WATER PIPING SHALL BE INSULATED WITH A MINIMUM 1" THICK INSULATION.
   - 6.F. ALL COLD DOMESTIC WATER PIPING ABOVE GROUND SHALL BE INSULATED WITH A MINIMUM 1/2" THICK INSULATION.

7. PLUMBING PIPING:
   - 7.A. DOMESTIC WATER PIPING SHALL BE COPPER TUBE AND FITTINGS IN ACCORDANCE WITH ASTM B88, TYPE L HARD DRAWN COPPER. JOINTS SHALL BE MADE WITH LEAD FREE SOLDER.
   - 7.B. STORM, SOIL, WASTE, AND VENT PIPING BELOW GRADE SHALL BE SCHEDULE 40 PVC PIPE AND FITTINGS. PVC SCHEDULE 40 PIPE SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM D 1785. INJECTION MOLDED PVC SCHEDULE 40 FITTINGS SHALL CONFORM TO ASTM D 2466. PIPE AND FITTINGS SHALL BE MANUFACTURED AS A SYSTEM AND BE THE PRODUCT OF ONE MANUFACTURER. PIPE AND FITTINGS SHALL CONFORM TO NSF INTERNATIONAL STANDARD 61 AND THE HEALTH-EFFECTS PORTION OF NSF STANDARD 14.
   - 7.C. STORM, SOIL, WASTE, AND VENT PIPING ABOVE GRADE SHALL BE HUBLESS CAST IRON TYPE DESIGNED FOR SAID APPLICATION. HUBLESS CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A 888 AND CISPI STANDARD 301. ALL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE® AND LISTED BY NSF® INTERNATIONAL. HUBLESS COUPLINGS SHALL CONFORM TO CISPI STANDARD 310, SHALL BE MANUFACTURED IN THE UNITED STATES, AND BE CERTIFIED BY NSF® INTERNATIONAL.
   - 7.D. CONDENSATE DRAINS SHALL BE TYPE L HARD DRAWN COPPER. JOINTS SHALL BE MADE WITH LEAD FREE SOLDER.
   - 7.E. SLOPE ALL DRAIN LINES AT 1/4 INCH PER FOOT FOR SIZES LESS THAN 4 INCHES. SLOPE AT 1/8 INCH PER FOOT FOR SIZES 4 INCH AND LARGER.
   - 7.F. SOIL, WASTE, AND VENT PIPING BELOW GRADE SHALL BE A MINIMUM OF 2 INCH AND SHALL BE PROVIDED WITH METALLIC TRACING/DETECTION WIRE.
   - 7.G. VENTS SHALL EXTEND A MINIMUM OF 12 INCHES ABOVE THE ROOF. ROOF FLASHING SHALL BE PROVIDED AND COORDINATED WITH THE GENERAL AND ROOFING CONTRACTORS.
   - 7.H. TRENCHING AS REQUIRED FOR UNDERGROUND PIPING SHALL BE GRADED TO UNIFORM PITCH AND SHALL BE NO WIDER THAN NECESSARY FOR PIPING INSTALLATION. CLEAN BACKFILL SHALL BE USED AND THOROUGHLY TAMPED IN LAYERS NOT EXCEEDING 6 INCHES TO A MINIMUM DEPTH OF 1 FOOT ABOVE PIPE. COMPACTED BACKFILL SHALL BE USED FOR THE ENTIRE DEPTH OF EXCAVATION UNDER SLAB ON GRADE CONSTRUCTION.

8. PLUMBING FIXTURES, PUMPS, AND WATER HEATERS SHALL BE PROVIDED AND INSTALLED AS PER THE PLUMBING FIXTURE SCHEDULE. ALL EXPOSED FIXTURE SUPPLIES AND WASTE LINES SHALL BE CHROME PLATED. NO EXPOSED COPPER, PVC, AND/OR CAST IRON IS ALLOWED.

9. CLEANOUTS SHALL BE THE SAME SIZE AS LINE SERVED, BUT NOT LARGER THAN 4 INCHES, AND SHALL BE PROVIDED AT THE BASE OF EACH SOIL AND WASTE STACK, AT ALL POINTS WHERE DIRECTION CHANGE IS MORE THAN 45 DEGREES, AT MINIMUM INTERVALS OF 50 FEET FOR 4 INCH AND SMALLER PIPING, AT MINIMUM INTERVALS OF 100 FEET FOR PIPING LARGER THAN 4 INCHES, AS REQUIRED BY CODE AND AS INDICATED ON THE DRAWINGS. COVERS SHALL BE SET FLUSH WITH FLOOR OR WALL.

10. PLUMBING VALVES
    - 10.A. PROVIDE SHUT-OFF VALVE AND UNION OR EQUIVALENT AT EACH HOT AND COLD WATER EQUIPMENT CONNECTION. PROVIDE SHUTOFF VALVE ON EACH BRANCH OR RISER THAT SERVES TWO OR MORE PLUMBING FIXTURES.
    - 10.B. GATE VALVES 2-1/2 INCHES AND SMALLER: ALL BRONZE, RISING STEM, SOLID WEDGE DISC. STOCKHAM B-100 OR B-108.
    - 10.C. GLOBE VALVES: ALL BRONZE, RENEWABLE COMPOSITION DISC. STOCKHAM B-16 OR B-14-T.
    - 10.D. CHECK VALVES IN HORIZONTAL PIPES: 2 INCHES AND SMALLER: ALL BRONZE, REGRINDING BRONZE DISC, HORIZONTAL SWING, Y-PATTERN. STOCKHAM B-319OR B-309.
    - 10.E. CHECK VALVES IN VERTICAL PIPES AND PUMP DISCHARGE: SILENT CHECK VALVE WITH SEMI-STEEL BODY, BRONZE TRIM AND STAINLESS STEEL SPRING. METRAFLEX 700 SERIES.
    - 10.F. BALL VALVES MAY BE USED IN LIEU OF GATE VALVES 2 INCHES AND SMALLER. BALL VALVES SHALL HAVE BRONZE BODY, BRONZE BALL AND TFE SEATS AND SEALS. STOCKHAM S-216BRRT OR S-216BRRS.

11. CLEANING AND TESTING
    - 11.A. ALL WATER PIPING, VALVES, ETC. SHALL BE THOROUGHLY FLUSHED OF FOREIGN MATTER AND TESTED FOR LEAKS IN ACCORDANCE WITH THE PLUMBING AND BUILDING CODE, LATEST EDITION. ANY LEAKAGE SHALL BE REPAIRED. DISINFECT DOMESTIC WATER PIPING INCLUDING WATER SERVICE PIPING IN ACCORDANCE WITH AWWA C601.
    - 11.B. ALL DRAIN, WASTE AND VENT PIPING SHALL BE TESTED FOR LEAKS IN ACCORDANCE WITH THE PLUMBING AND BUILDING CODE CODE, LATEST EDITION. NO VISIBLE DROP IN WATER LEVEL WILL BE ACCEPTABLE.

END OF SPECIFICATIONS.

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JOHN N. BERG, JR.
Lic. No. 051165
1/10/2025
PROFESSIONAL ENGINEER

project
AHCS SUBSTANCE USE EXPANSION

address
311 SOUTH MONROE AVENUE
COVINGTON, VA 24426

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PLUMBING SPECIFICATIONS

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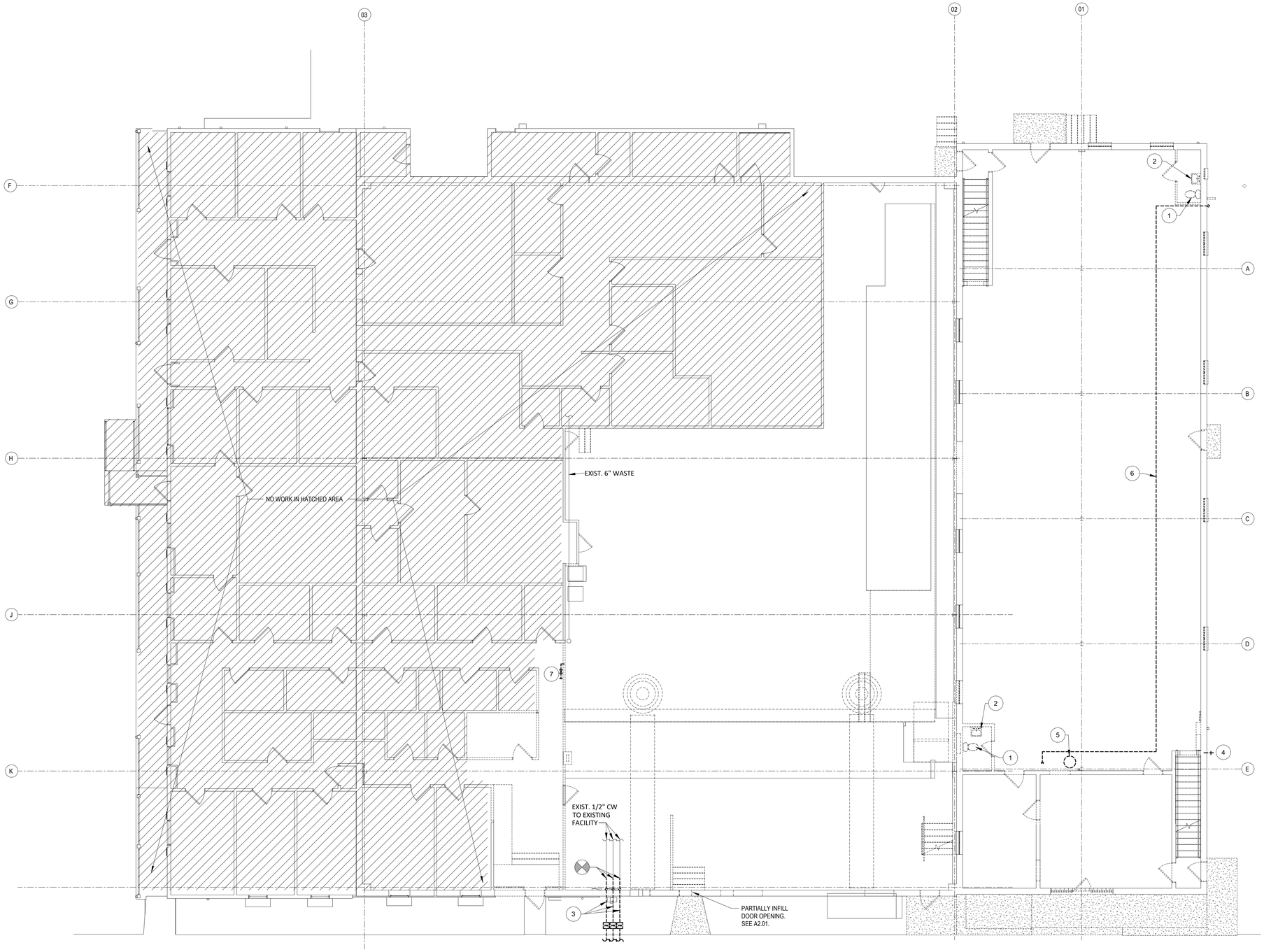

PLUMBING DEMO PLAN - 1ST FLOOR

1 / P2.01 SCALE = 1/8"=1'-0"

GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING.
2. ALL EXISTING PLUMBING SYSTEMS LOCATED WITH THE TWO STORY PORTION OF THE RENOVATION AREA SHALL BE REMOVED IN THEIR ENTIRETY.

DEMOLITION KEYED NOTES:

1. EXISTING WATER CLOSET TO BE REMOVED IN ITS ENTIRETY.
2. EXISTING LAVATORY TO BE REMOVED IN ITS ENTIRETY.
3. EXISTING 1/2" DOMESTIC WATER SERVIES (3) INCLUDING SHUT OFF VALVES AND WATER METERS TO BE REMOVED. PREPARE PIPING WITHIN BUILDING FOR RECONNECTION.
4. EXISTING WALL HYDRANT TO BE REMOVED IN ITS ENTIRETY.
5. EXISTING WATER HEATER TO BE REMOVED IN ITS ENTIRETY.
6. EXISTING GAS PIPING TO BE REMOVED IN ITS ENTIRETY.
7. EXISTING 3/8" CW LINE TO BE REMOVED BACK TO MAIN AND CAPPED.

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PROFESSIONAL ENGINEER

project
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PLUMBING DEMOLITION PLAN - FIRST FLOOR

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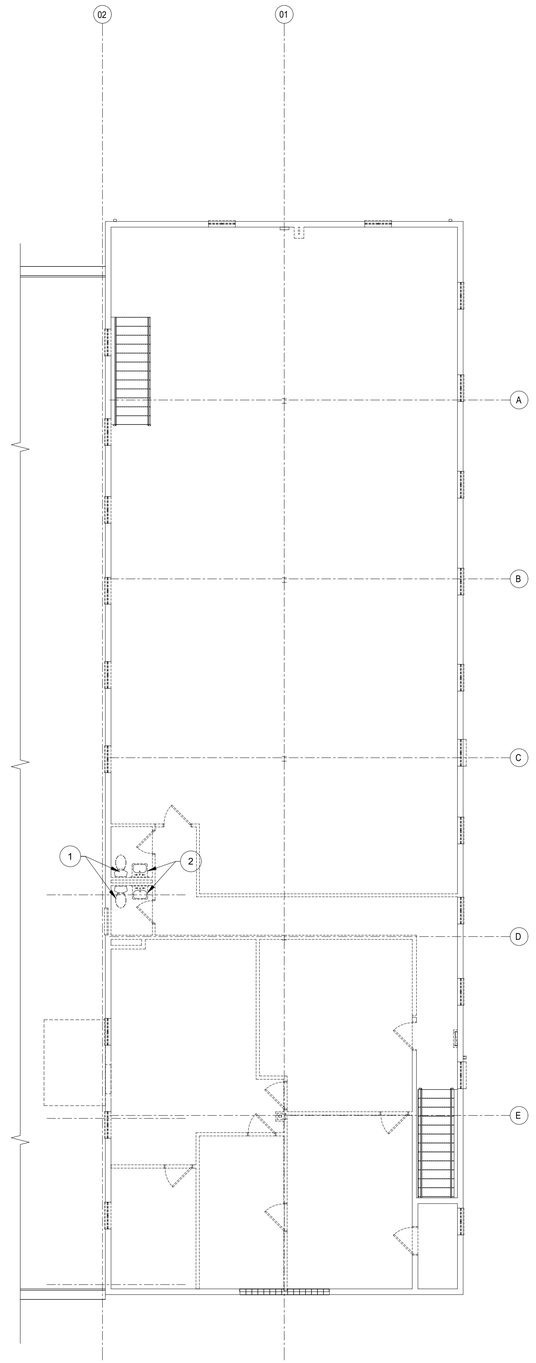

GENERAL NOTES:

1. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING.
2. ALL EXISTING PLUMBING SYSTEMS LOCATED WITH THE TWO STORY PORTION OF THE RENOVATION AREA SHALL BE REMOVED IN THEIR ENTIRETY.

DEMOLITION KEYED NOTES:

1. EXISTING WATER CLOSET TO BE REMOVED IN ITS ENTIRETY.
2. EXISTING LAVATORY TO BE REMOVED IN ITS ENTIRETY.

1 P2.02 PLUMBING DEMO PLAN - 2ND FLOOR

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

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PROFESSIONAL ENGINEER

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PLUMBING DEMOLITION PLAN - SECOND FLOOR

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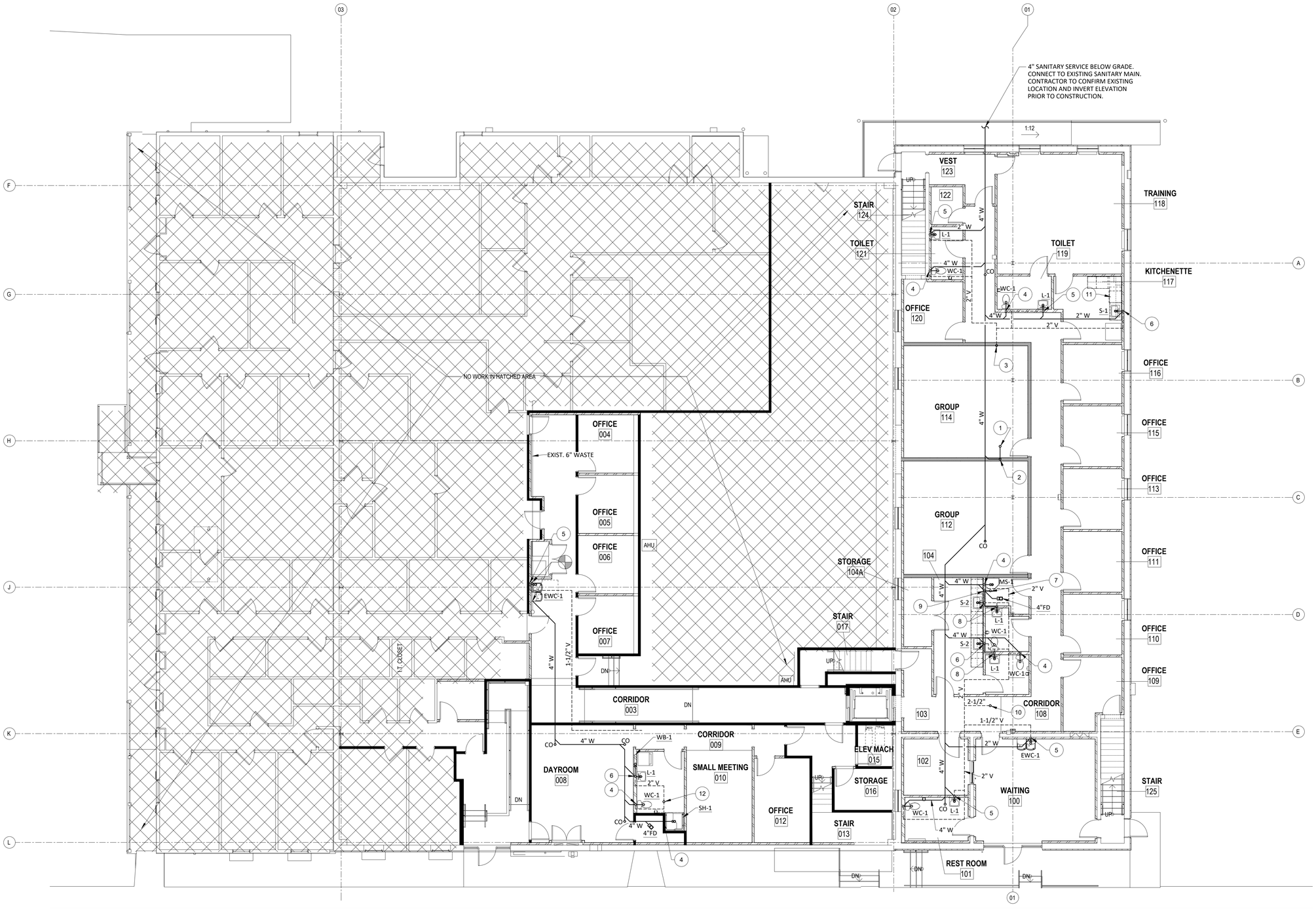

1 P3.01 **PLUMBING PLAN - 1ST FLOOR W&V**

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

GENERAL NOTES:

1. REFER TO ARCHITECTURAL PLANS FOR ROOM NAMES AND NUMBERS IF NOT SHOWN ON THIS PLAN.
2. ALL PENETRATIONS THROUGH FULL HEIGHT WALLS AND FLOORS SHALL BE SEALED TO PREVENT THE INFILTRATION OF NOISE AROUND THE PENETRATION.

KEYED NOTES:

1. 4" WASTE FROM ABOVE.
2. 4" WASTE DOWN.
3. 2" VENT FROM ABOVE.
4. 2" VENT DOWN.
5. 1-1/2" VENT AND 2" WASTE DOWN.
6. 2" VENT AND 2" WASTE DOWN.
7. 2" WASTE FROM ABOVE.
8. 1-1/2" VENT DOWN. ROUTE 1-1/2" WASTE HORIZONTALLY IN WALL TO DROP BELOW FLOOR AS NOTED.
9. 2" WASTE DOWN.
10. 2-1/2" VENT UP.
11. PROVIDE 3/4" WASTE FROM DISHWASHER TO SINK DRAIN.
12. 3" VENT UP TO VTR.

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PLUMBING NEW WORK PLAN - FIRST FLOOR - WASTE & VENT

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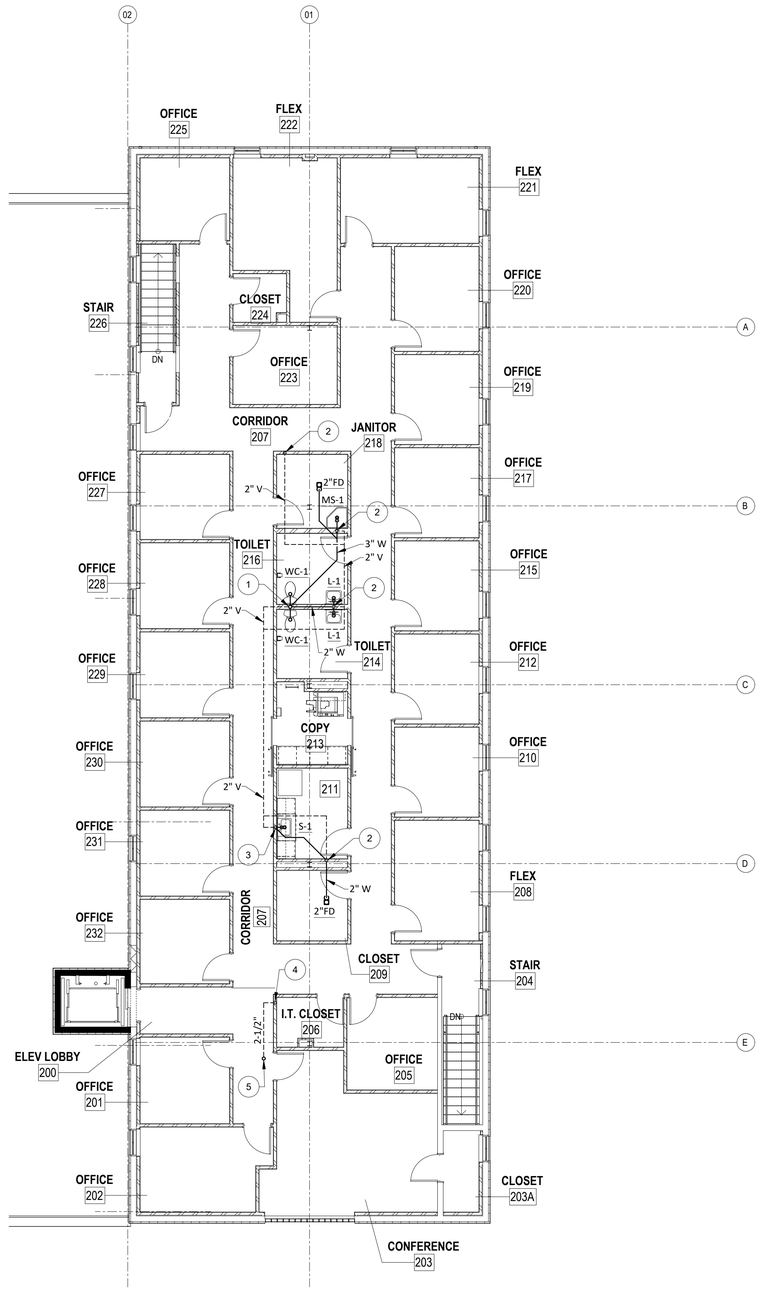

1 P3.02 **PLUMBING PLAN - 2ND FLOOR W & V**

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

GENERAL NOTES:

1. REFER TO ARCHITECTURAL PLANS FOR ROOM NAMES AND NUMBERS IF NOT SHOWN ON THIS PLAN.
2. ALL PENETRATIONS THROUGH FULL HEIGHT WALLS AND FLOORS SHALL BE SEALED TO PREVENT THE INFILTRATION OF NOISE AROUND THE PENETRATION.

KEYED NOTES:

1. 4" WASTE DOWN AND 3" VENT UP TO VTR.
2. 2" VENT DOWN.
3. 2" VENT AND 2" WASTE DOWN.
4. 2-1/2" VENT UP DOWN.
5. 2-1/2" VENT UP TO VTR.

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PLUMBING NEW WORK PLAN - SECOND FLOOR - WASTE & VENT

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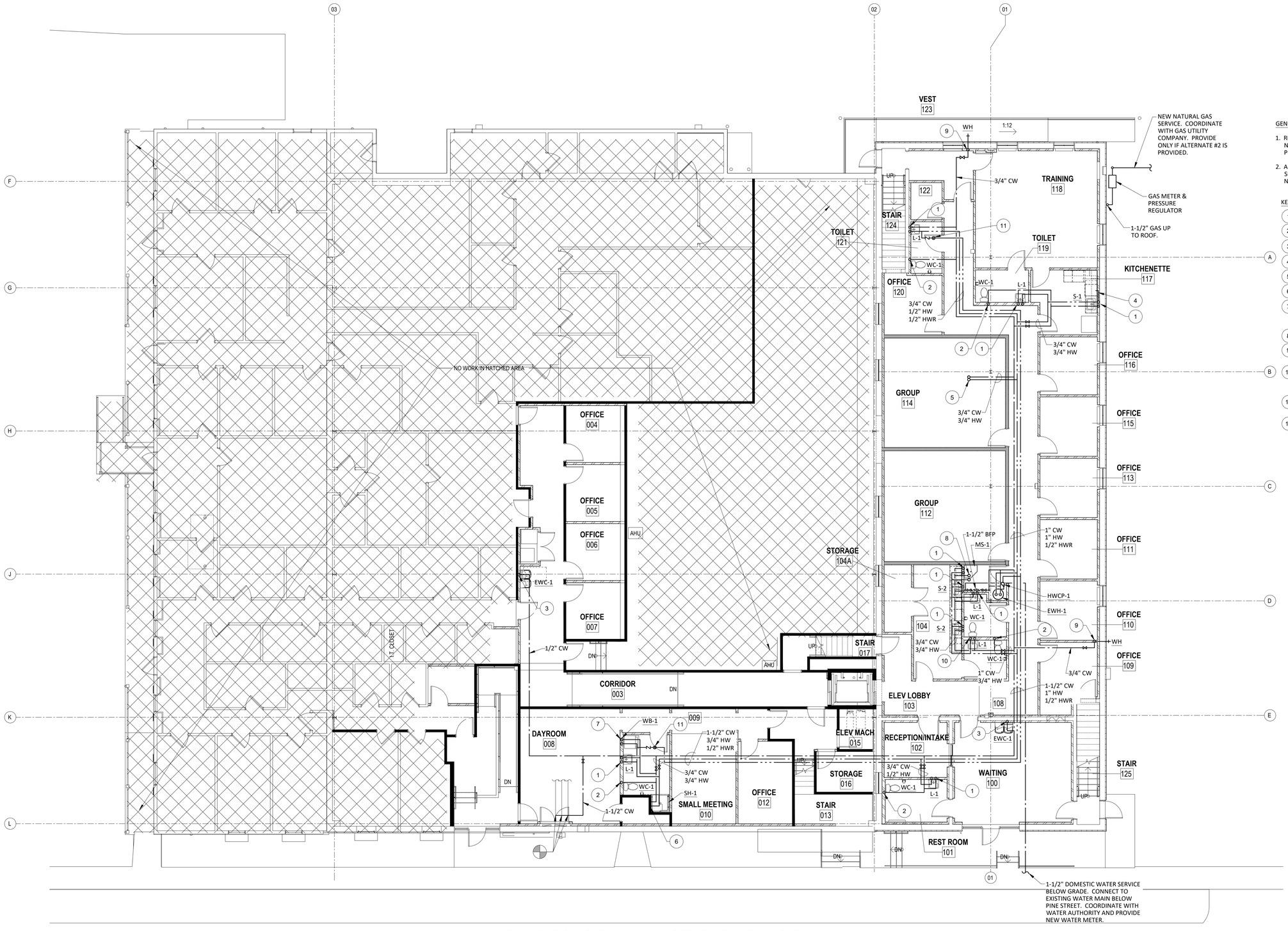

GENERAL NOTES:

1. REFER TO ARCHITECTURAL PLANS FOR ROOM NAMES AND NUMBERS IF NOT SHOWN ON THIS PLAN.
2. ALL PENETRATIONS THROUGH FULL HEIGHT WALLS SHALL BE SEALED TO PREVENT THE INFILTRATION OF NOISE AROUND THE PENETRATION.

KEYED NOTES:

1. 1/2" CW AND 1/2" HW DOWN TO SINK/LAV.
2. 1/2" CW DOWN TO WATER CLOSET.
3. 1/2" CW DOWN TO WATER COOLER.
4. EXTEND 1/2" HW TO DISHWASHER.
5. 3/4" CW AND 3/4" HW UP.
6. 1/2" CW AND 1/2" HW DOWN TO SHOWER.
7. 1/2" CW AND 1/2" HW DOWN TO WASHER BOX. PROVIDE HOSES TO CONNECT TO WASHER.
8. 1/2" CW AND 1/2" HW UP.
9. 3/4" CW DOWN TO WALL HYDRANT AT 24" AFF.
10. 3/4" CW AND 1/2" HW DOWN. ROUTE 1/2" CW TO WATER CLOSET AND 1/2" CW/HW TO LAV.
11. CHECK VALVE AND BALANCING COCK. SET TO 0.5 GPM.
11. CONNECT 1/2" CW TO EACH OF THREE EXISTING WATER MAINS TO BACK FEED EXISTING FACILITY.

1 P4.01 PLUMBING PLAN - 1ST FLOOR W&G

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

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PLUMBING NEW WORK PLAN - FIRST FLOOR WATER & GAS

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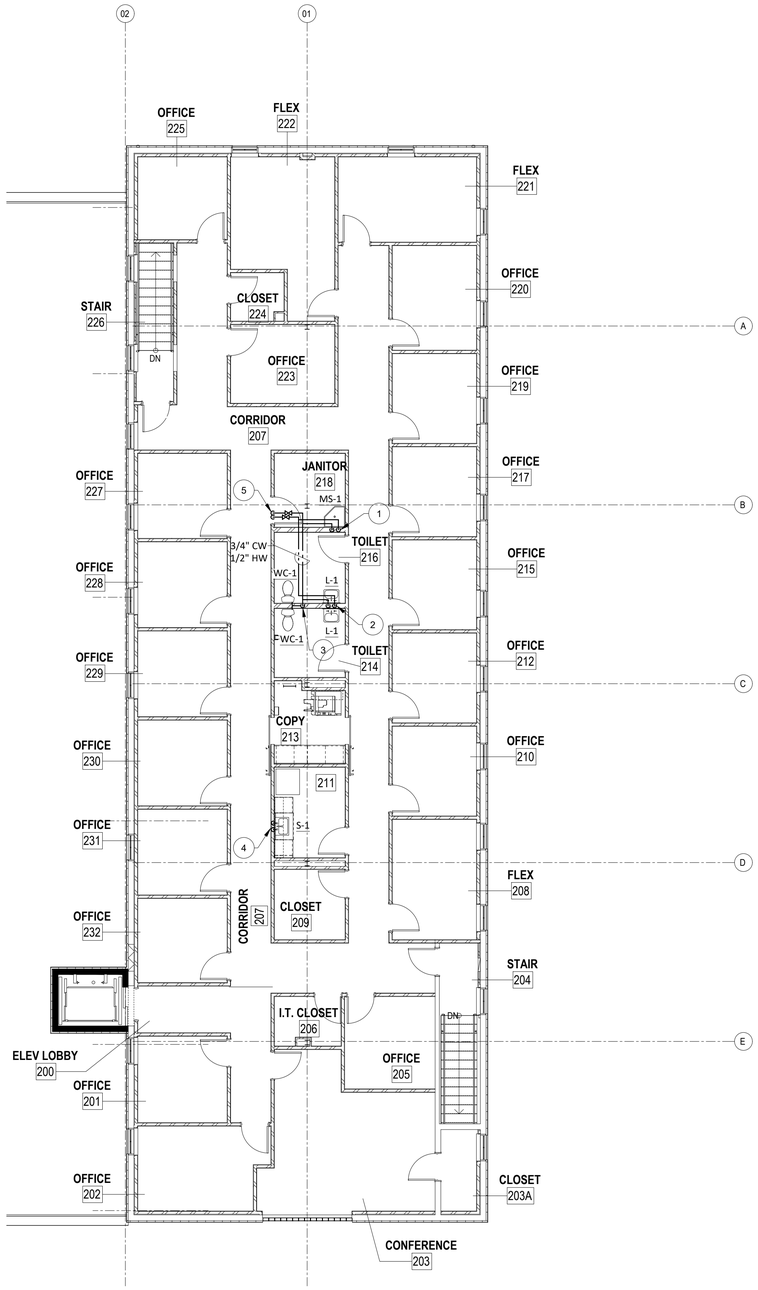
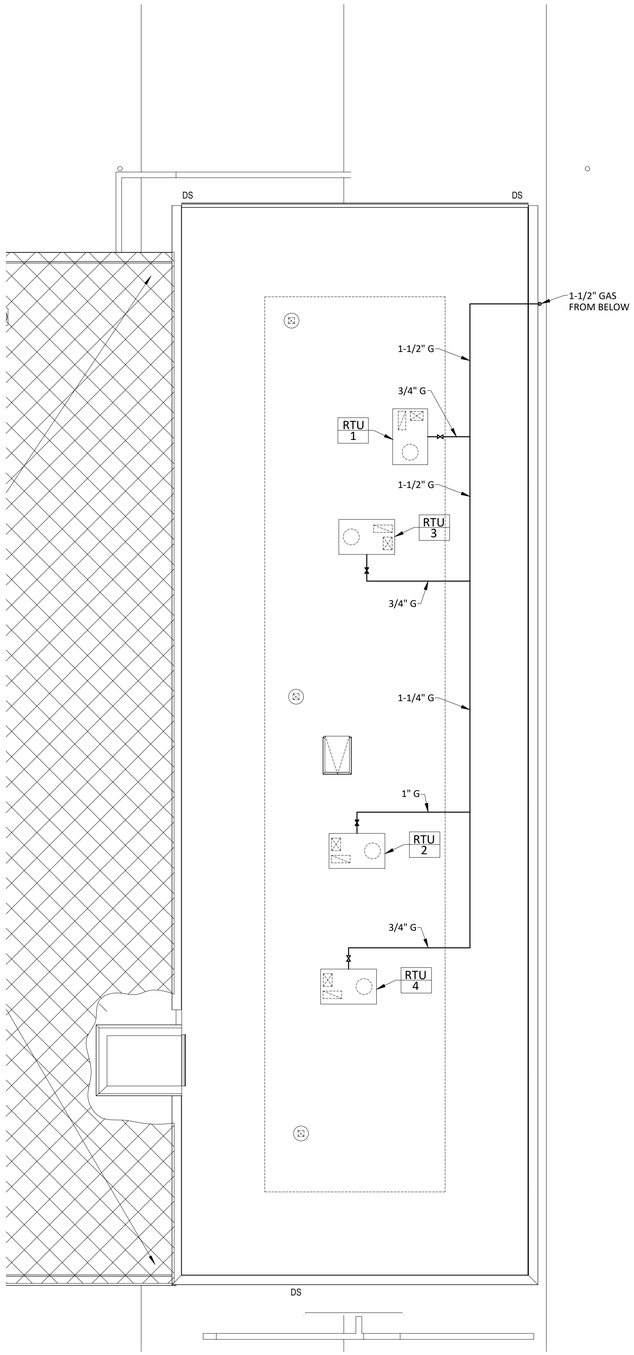


1 P4.02 **PLUMBING PLAN - 2ND FLOOR W&G**

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



2 P4.02 **PLUMBING PLAN - ROOF**

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

GENERAL NOTES:

1. REFER TO ARCHITECTURAL PLANS FOR ROOM NAMES AND NUMBERS IF NOT SHOWN ON THIS PLAN.
2. ALL PENETRATIONS THROUGH FULL HEIGHT WALLS AND FLOORS SHALL BE SEALED TO PREVENT THE INFILTRATION OF NOISE AROUND THE PENETRATION.

KEYED NOTES:

1. 1/2" CW AND 1/2" HW DOWN TO MOP SINK.
2. 1/2" CW AND 1/2" HW DOWN, CONNECT TO EACH TO LAV.
3. 3/4" CW DOWN, CONNECT 1/2" CW TO EACH WATER CLOSET.
4. 1/2" CW AND 1/2" HW TO SINK FROM BELOW.
5. 3/4" CW AND 3/4" HW FROM BELOW.

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PLUMBING NEW WORK PLANS - SECOND FLOOR AND ROOF - WATER AND GAS

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GENERAL NOTES

1. MECHANICAL EQUIPMENT IS SHOWN IN APPROXIMATE LOCATIONS. FOR EXACT LOCATIONS OF MECHANICAL EQUIPMENT AND PIPING, SEE MECHANICAL DRAWINGS. SOME MECHANICAL EQUIPMENT IS LOCATED ON THE ROOF. VERIFY LOCATION WITH MECHANICAL AND PROVIDE ALL CONDUIT AND WIRING TO OUTDOOR EQUIPMENT.
2. WHERE LIGHT SWITCHES ARE INDICATED TO BE MOUNTED BEHIND DOOR, MOUNT SUCH SWITCHES A MINIMUM OF 3'-9" FROM HINGED SIDE.
3. REVISE PANELBOARD SCHEDULES ON PANEL DIRECTORIES TO REFLECT FINAL INSTALLATION CONDITIONS.
4. LOCATE ALL RACEWAYS TO AVOID INTERFERENCE WITH DUCTS, PIPES, MECHANICAL EQUIPMENT, WITH REMOVAL OF CEILING TILES, OR WITH ACCESS TO EQUIPMENT WHICH REQUIRES PERIODIC ADJUSTMENT OR MAINTENANCE.
5. PROVIDE NAMEPLATES ON THE EXTERIOR OF ALL ELECTRICAL PANELS AND ENCLOSURES WITH THE DEVICE ID, RATING, POWER SOURCE AND INSTALLATION DATE AND BY WHICH SWITCH OR STARTER.
6. COUNTER AND TOILET RECEPTACLES TO BE GFI AND COUNTER HEIGHT EXCEPT WHERE NOTED. REFRIGERATOR RECEPTACLE TO BE 36" AFF.
7. LIGHT FIXTURE TYPE IS SHOWN ONLY ONCE AS TYPICAL FOR THE ENTIRE ROOM UNLESS SPECIFICALLY INDICATED OTHERWISE.
8. UNLESS INDICATED OTHERWISE, SIZE CONDUITS IN ACCORDANCE WITH NFPA 70.
9. COORDINATE WITH THE MECHANICAL CONTRACTOR TO ENSURE ALL WORKING CLEARANCE AND DEDICATED WORKING SPACE OF PANELBOARDS.
10. COORDINATE ELECTRICAL INSTALLATION WITH ALL CASEWORK TO BE INSTALLED. PROVIDE THE NECESSARY JUNCTION BOXES FOR ALL POWER AND DATA CONNECTIONS INDICATED.
11. GROUNDING CONDUCTORS ARE NOT INDICATED IN BRANCH CIRCUIT RACEWAYS. PROVIDE GROUND CONDUCTORS AS REQUIRED BY NEC.
12. OCCUPANCY SENSORS SHOULD CONTROL ALL LIGHTING IN ROOMS, BOTH INBOARD AND OUTBOARD SWITCHING WHERE APPLICABLE, UNLESS INDICATED OTHERWISE.
13. PROVIDE PLASTIC BUSHING ON THE END OF ALL CONDUIT.
14. PROVIDE LABELS ON ALL RECEPTACLE INDICATING PANEL AND CIRCUIT FEEDING EACH DEVICE.
15. COORDINATE WITH DOC ELECTRONIC SECURITY CONTRACTOR TO PROVIDE DATA DROPS AS REQUIRED AND TO EXACT LOCATION OF DESIRED DROPS. PROVIDE PULL CORDS WITH ALL DATA BOXES. ALL WORK STATIONS REQUIRE DATA DROP.

ELECTRICAL LEGEND

EM / b / NL	LED LIGHTING FIXTURE, RECESSED, SURFACE OR PENDANT CEILING MOUNTED, COORDINATE WITH OWNER FOR ANY DESIRED NIGHT LIGHT LOCATIONS. 'EM' INDICATES INTEGRAL OR REMOTE INVERTER TO PROVIDE STANDBY POWER FOR EGRESS. 'NL' INDICATES NIGHT LIGHT. 'b' SUBSCRIPT INDICATES SWITCHING CONTROL WHEN SHOWN FOR CLARITY.
	EXIT LIGHTING FIXTURE, SURFACE CEILING MOUNTED, DIRECTIONAL ARROWS AS INDICATED. VR SUBSCRIPT INDICATES VANDAL RESISTANT.
	EXIT LIGHTING FIXTURE, SURFACE WALL MOUNTED, DIRECTIONAL ARROWS AS INDICATED.
J	FURNITURE WHIPS UNLESS INDICATED OTHERWISE, FOR FURNITURE WHIPS PROVIDE POWER
	QUAD-PLEX WALL RECEPTACLE
	DUPLEX WALL RECEPTACLE, MOUNTING HEIGHT = 1'-6", EXCEPT 'C' SUBSCRIPT INDICATES MOUNTING IN CASEWORK(TYP). 'GF' SUBSCRIPT INDICATES GROUND FAULT, 'WP' SUBSCRIPT INDICATES WEATHERPROOF, 'EWC' SUBSCRIPT INDICATES GROUND FAULT BEHIND ELECTRIC WATER COOLER. '*' INDICATES MOUNTED HEIGHT = 10" ABOVE COUNTER (ALL OF THE COUNTERTOPS HAVE A 4" BACKSPLASH). 'TV' INDICATES COORDINATE MOUNTING HEIGHT WITH TENANT SECURITY PLANS FOR MONITOR LOCATIONS. RECEPTACLE AND DATA OUTLET TO BE BEHIND MONITOR. OUTLETS SHALL BE NEMA 5-20R UNLESS SPECIFIED OTHERWISE.
OS	OCCUPANCY SENSOR, DUAL TECHNOLOGY
	EMERGENCY BATTERY UNIT
	COMBO EXIT SIGN/ EMERGENCY BATTERY UNIT
	EMERGENCY BATTERY UNIT, REMOTE HEAD
	FIRE ALARM STROBE
S	SMOKE DETECTOR
H	HEAT SENSOR
F	FIRE ALARM PULL STATION
F	FIRE ALARM HORN/STROBE

	CONDUCTORS IN CONDUIT CONCEALED IN CEILING OR WALL.
	BRANCH CIRCUIT HOME RUN TO PANELBOARD. NOTATION INDICATES PANELBOARD & BRANCH CIRCUIT CONNECTION.
	CONDUCTORS IN CONDUIT CONCEALED IN SLAB OR BELOW GRADE.
	CONDUCTORS IN CONDUIT TURNED UP.
	CONDUCTORS IN CONDUIT TURNED DOWN.
S	SINGLE-POLE SWITCH, MOUNTING HEIGHT = 4'-0" TO TOP. LOWER CASE SUBSCRIPT WHEN USED, INDICATES FIXTURES CONTROLLED (TYP).
S_3	THREE-WAY SWITCH, MOUNTING HEIGHT = 4'-0" TO TOP.
S_{MC}	INTEGRAL OCCUPANCY SENSOR SWITCH, MOUNTING HEIGHT = 4'-0" TO TOP.
	COMBINATION 2 DATA/VOICE OUTLET. DATA SYSTEM OUTLET, MOUNTING HEIGHT = 1'-6" UNLESS INDICATED OTHERWISE. PROVIDE 3/4" EMT CONDUIT FROM BOX TO ABOVE ACCESSIBLE CEILING WITH PULL WIRE/STRING WHERE MOUNTED BESIDE COUNTER RECEPTACLE: MOUNT SAME HEIGHT AS RECEPTACLE.
S_D	DIMMER SWITCH, MOUNTING HEIGHT = 4'-0" TO TOP, SUBSCRIPT INDICATES FIXTURES CONTROLLED WITH THIS SWITCH
	PANELBOARD, 480Y/277 VOLT, 208Y/120-VOLT, 3-PHASE, 4-WIRE, MOUNTING HEIGHT=6'-0" TO TOP. SEE PANELBOARD SCHEDULES.
	DISCONNECT SWITCH, EXTERNALLY OPERATED, 240V, 3 ø UNLESS OTHERWISE NOTED. NOTATION INDICATES NUMBER OF POLES AND AMPERAGE CAPACITY. 'NF' SUBSCRIPT INDICATES NON FUSED.

LEGEND NOTES:
1. ALL MOUNTING HEIGHTS ARE TO TOP OF DEVICE UNLESS INDICATED OTHERWISE.

LIGHTING FIXTURE SCHEDULE

MARK	MANUFACTURER	CATALOG	INPUT VOLTAGE	TOTAL WATTS	NOTES
A	LITHONIA	CPANL 2X4 AL06 SWW7 M2	MVOLT	31	SURFACE MOUNTED 2X4 PANEL
B	LITHONIA	STAK 2X2 4000LM 80CRI 35K COL MVOLT	MVOLT	33.3	SURFACE MOUNTED 2X2 PANEL
C	LITHONIA	CLX L48 4000LM SEF WDL MVOLT GZ10 40K 80CRI WH			ELEVATOR SHAFT LIGHT
D	LITHONIA	CLX L24 3500LM SEF WDL MVOLT GZ10 40K 80CRI WH			ELEVATOR SHAFT LIGHT
E					
F					
	LITHONIA	EUL2	MVOLT		EMERGENCY LIGHT
	LITHONIA	LLXC W 1 RW	MVOLT		COMBO EXIT SIGN/EMERGENCY BATTERY UNIT
	LITHONIA	EUL2 REM	MVOLT		REMOTE EMERGENCY HEAD

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CHRISTIANSBURG VA 24073
P. 540.998.6069

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DANIEL W. GIBSON
Lic. No. 44271
1/10/25
PROFESSIONAL ENGINEER

project
AHCS - SUBSTANCE USE EXPANSION

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COVINGTON, VA 24426

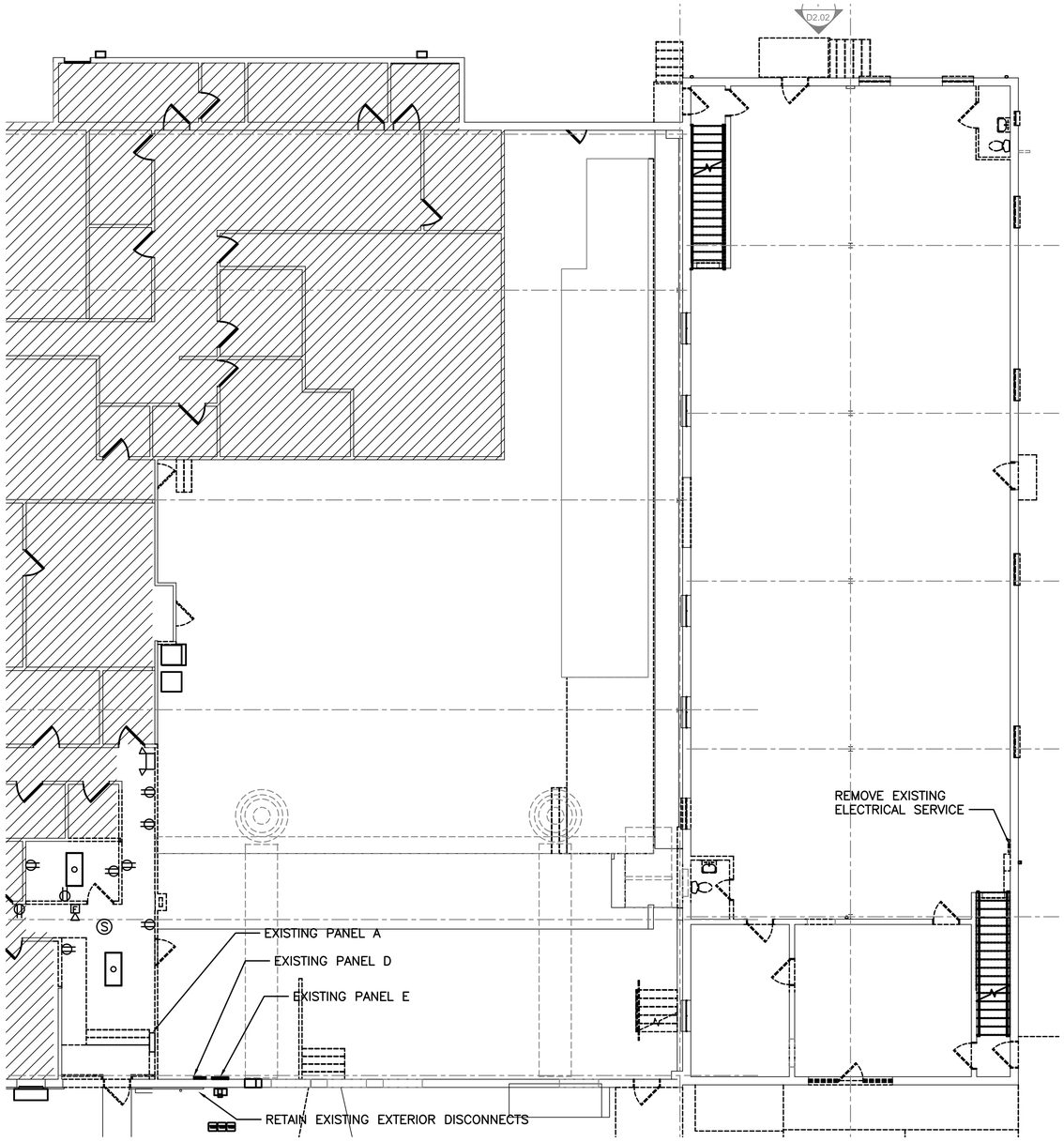
sheet name
GENERAL NOTES, LEGEND, LIGHTING FIXTURE SCHEDULE

revisions

REV	REVISION	DATE

date: 01/10/2025

drawing no.
E1.1



DEMOLITION PLAN

1/8" = 1'-0"

GENERAL DEMOLITION

1. REMOVE EXISTING PANEL A. RETAIN CIRCUITS AND RELOCATE TO PANEL TO NEW LOCATION INDICATED ON NEW WORK PLAN. EXTEND CIRCUITS AS REQUIRED TO NEW UNITS. PROVIDE UNCTION BOXES TO EXTEND CIRCUIT.
2. REMOVE EXISTING RECEPTACLES AND DEVICES ON WALLS SCHEDULED TO BE REMOVED. REMOVE EXISTING CIRCUITS BACK TO A LOCATION SUITABLE FOR REUSE. REINSTALL EXITING CIRCUITS WITH NEW WORK.
3. REMOVE EXISTING ELECTRICAL EQUIPMENT IN 2 STORY BUILDING. REMOVE CONDUIT AND WIRING ENTIRELY.
4. RETAIN EXISTING FIRE ALARM SYSTEM. EXPAND EXISTING SYSTEM TO NEW WORK. PROVIDE A NEW MASTER PANEL TO BACKFEED EXISTING OR UPGRADE EXISTING PANEL TO HANDLE NEW ELEVATOR RECALL. COORDINATE WITH EXISTING FIRE ALARM INSTALLED AND OWNER FOR REQUIREMENTS.

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CHRISTIANSBURG VA 24073
P. 540.998.6069

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ELECTRICAL DEMOLITION

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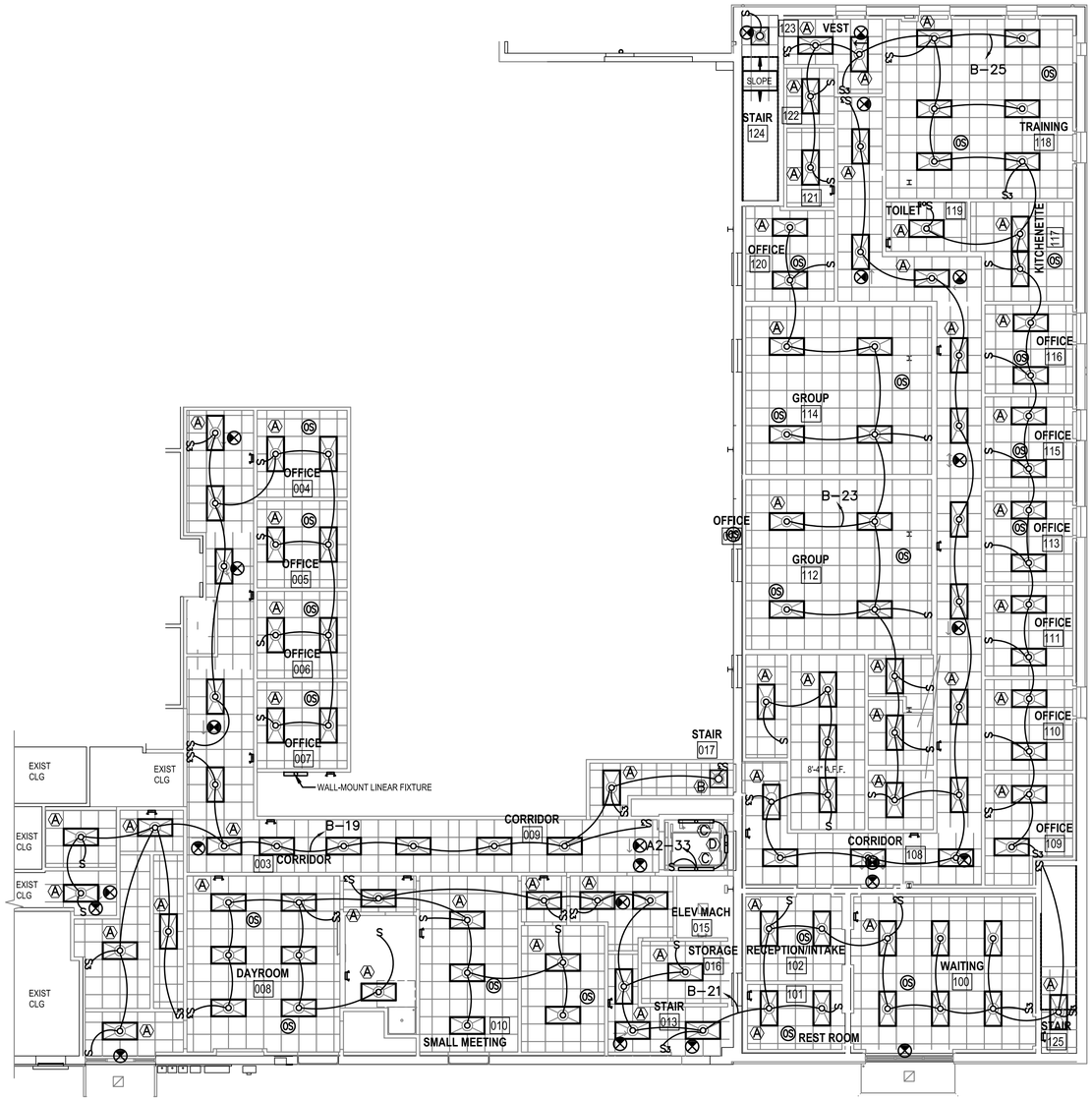
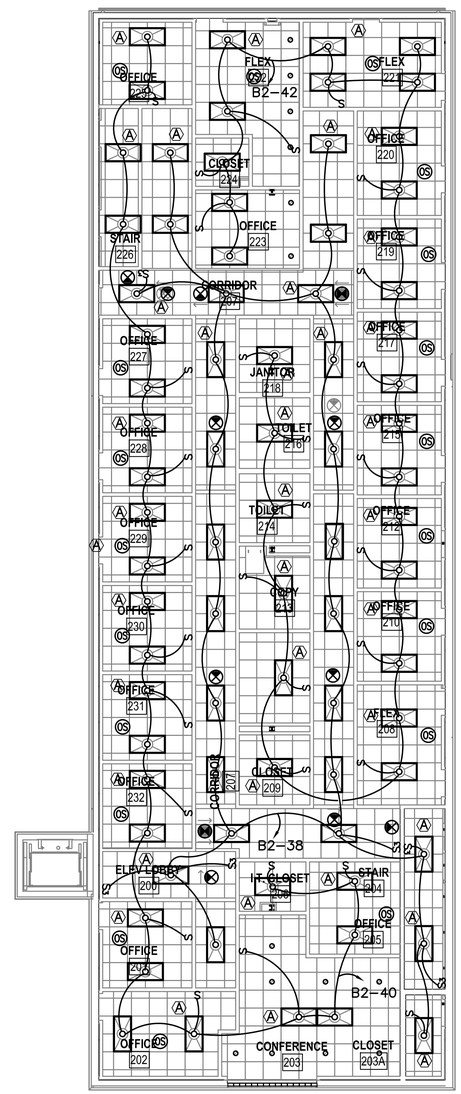
E2.1



FIRST FLOOR LIGHTING PLAN

1/8" = 1'-0"



SECOND FLOOR LIGHTING PLAN

1/8" = 1'-0"

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Lic. No. 44271
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LIGHTING PLAN

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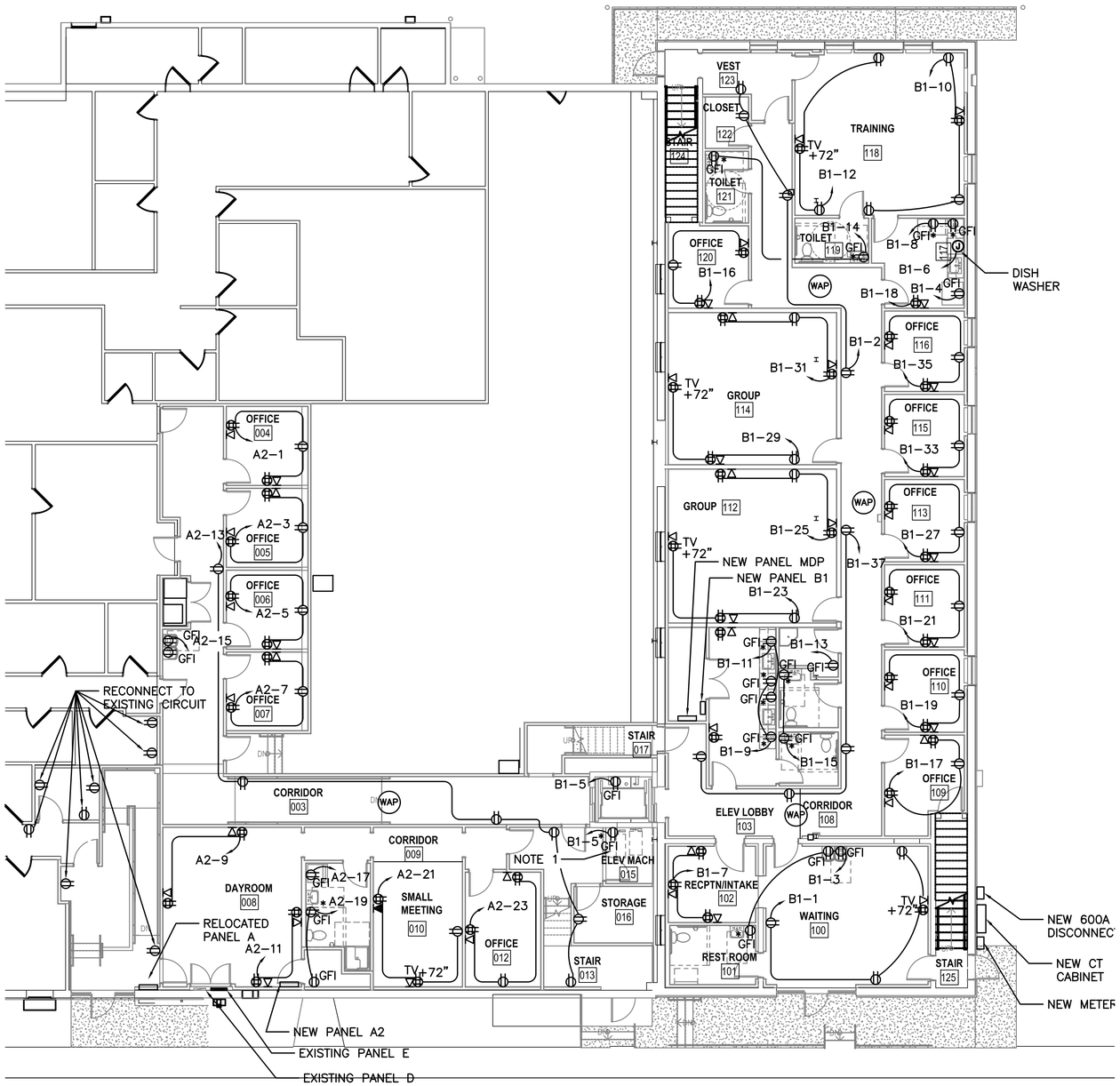
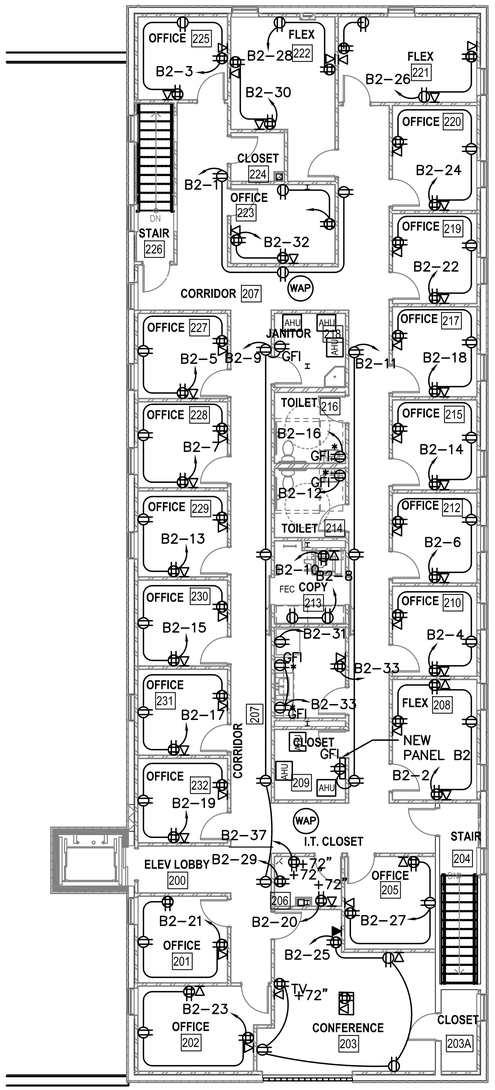
E3.1



FIRST FLOOR POWER AND DATA PLAN

1/8" = 1'-0"



SECOND FLOOR POWER AND DATA PLAN

1/8" = 1'-0"

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Lic. No. 44271
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POWER AND DATA PLAN

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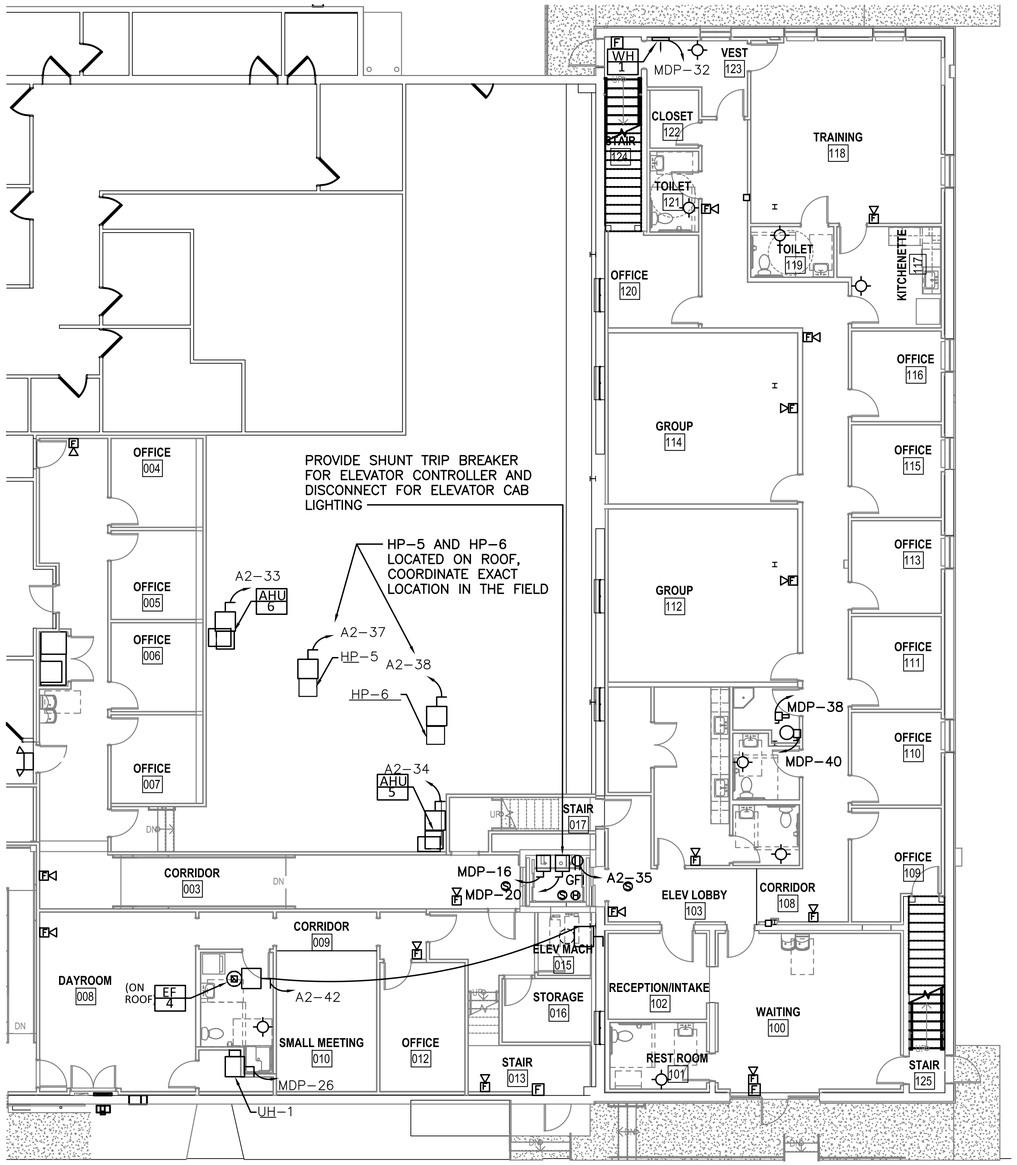
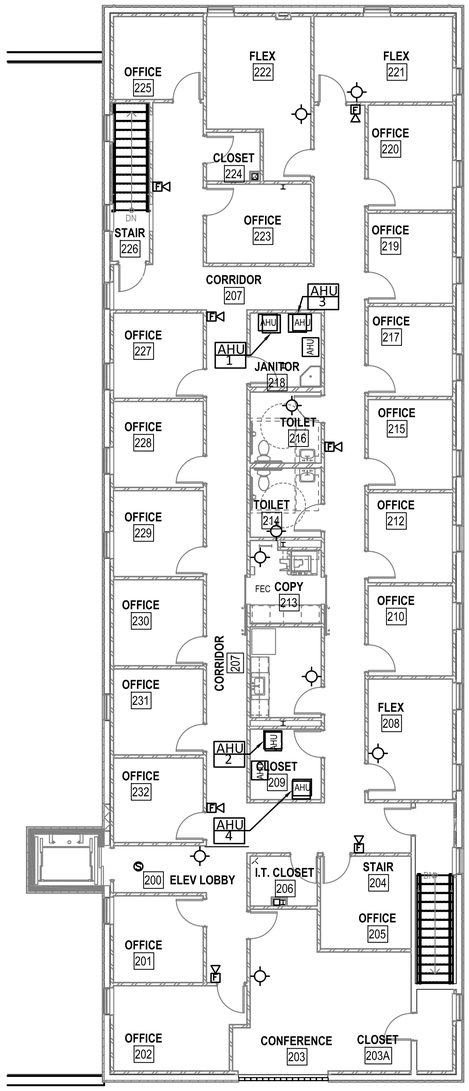
drawing no.

E4.1



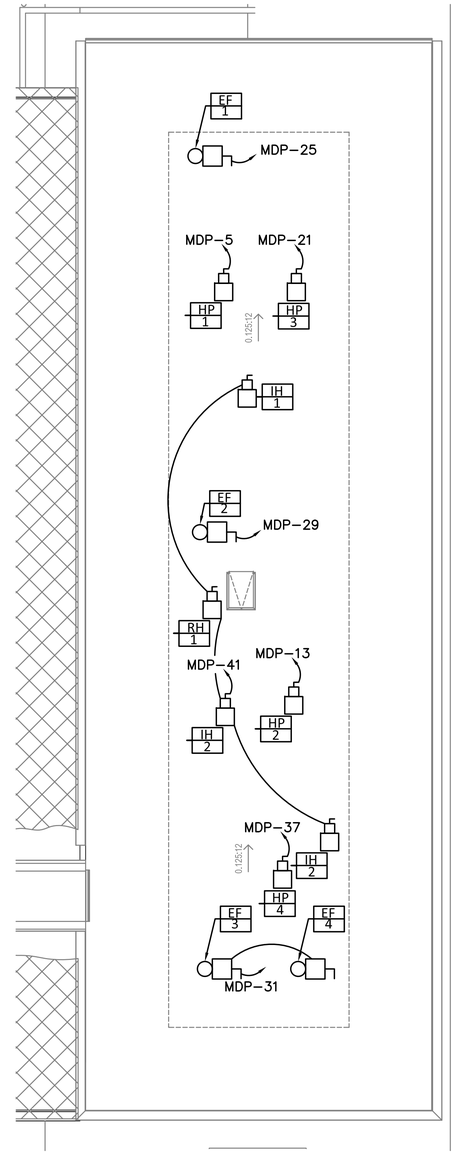
MECHANICAL AND FIRE ALARM PLAN: FIRST FLOOR

1/8" = 1'-0"



MECHANICAL AND FIRE ALARM PLAN: SECOND FLOOR

1/8" = 1'-0"



MECHANICAL AND FIRE ALARM PLAN: ROOF PLAN

1/8" = 1'-0"

NOTES THIS SHEET:

1. PROVIDE AN ELEVATOR CONTROLLER W/ SHUNT TRIP IN ELEVATOR EUIPMENT ROOM.

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CHRISTIANSBURG VA 24073
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Lic. No. 44271
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MECHANICAL AND FIRE ALARM PLAN

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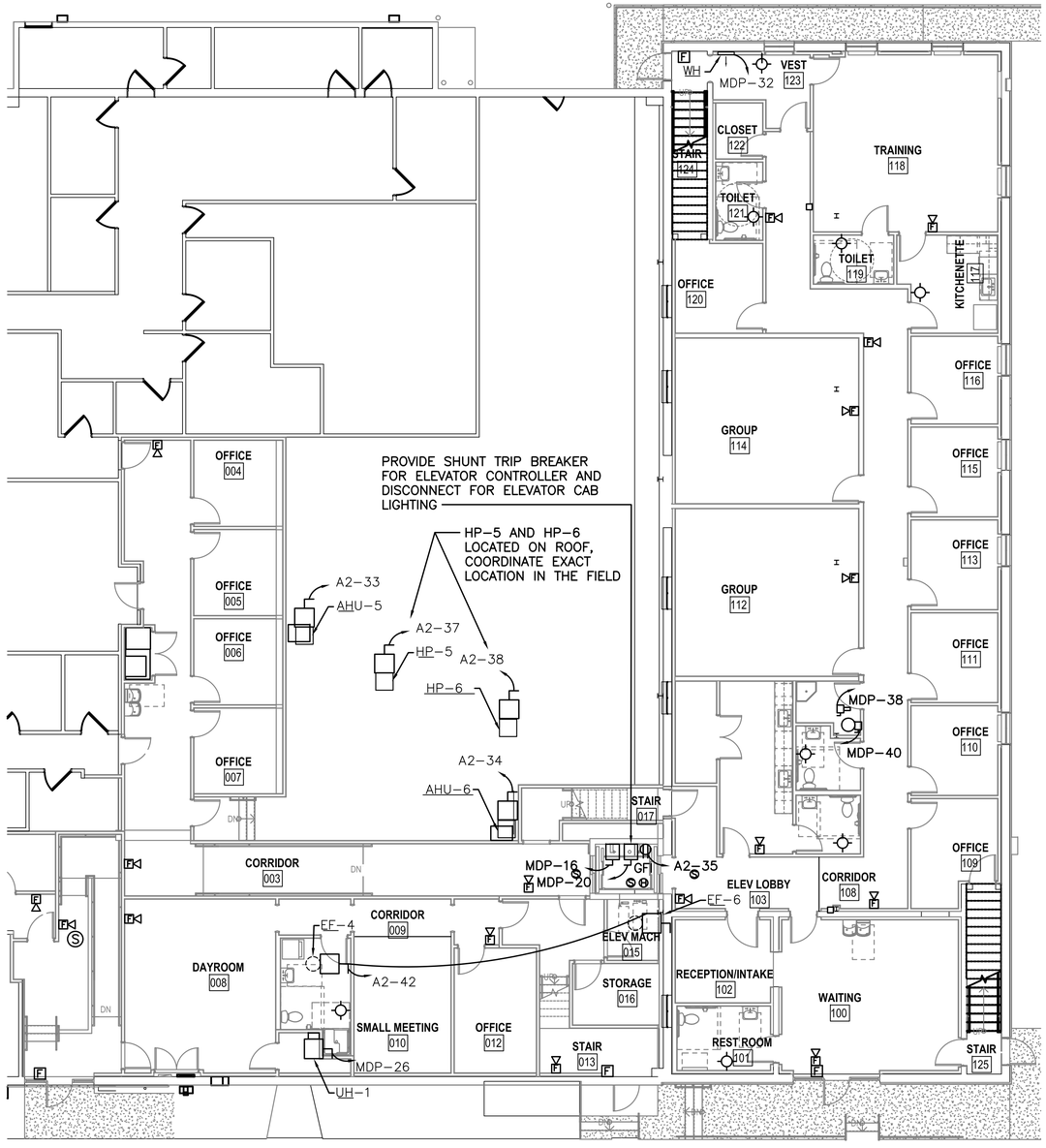
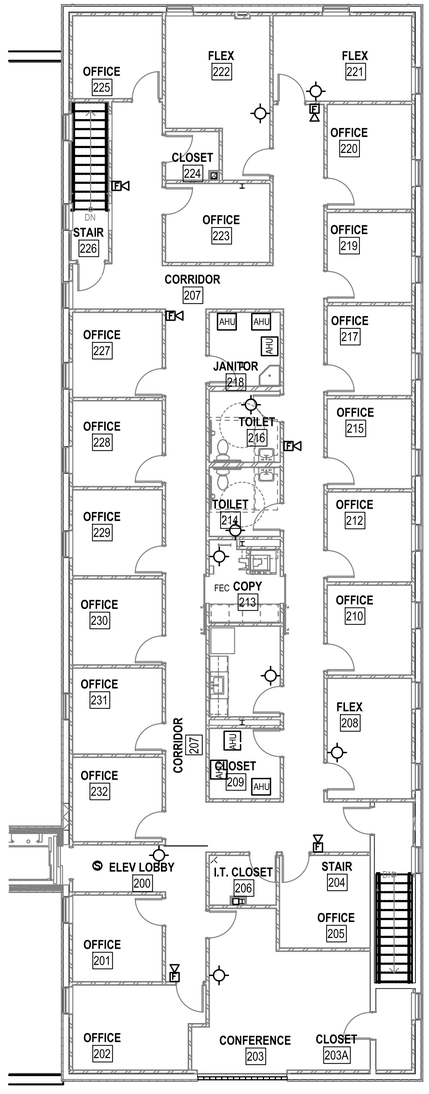
drawing no.

E5.1



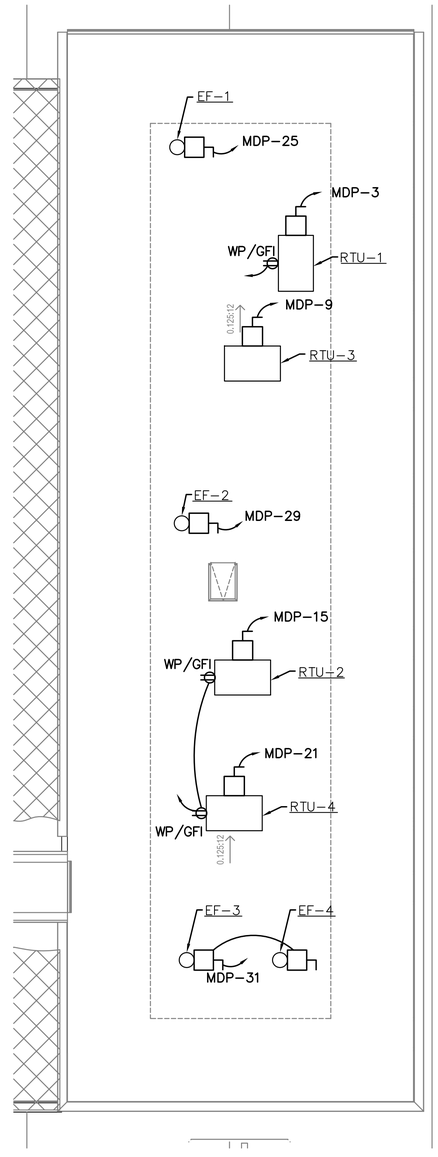
MECHANICAL AND FIRE ALARM PLAN: FIRST FLOOR

1/8" = 1'-0"



MECHANICAL AND FIRE ALARM PLAN: SECOND FLOOR

1/8" = 1'-0"



MECHANICAL AND FIRE ALARM PLAN: ROOF PLAN

1/8" = 1'-0"

NOTES THIS SHEET:

1. PROVIDE AN ELEVATOR CONTROLLER W/ SHUNT TRIP IN ELEVATOR EUIPMENT ROOM.

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MECHANICAL AND FIRE ALARM PLAN - ADD ALTERNATE

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REV	REVISION	DATE

date: 01/10/2025

drawing no.

E5.2

PANEL MDP (ADD ALTERNATE)

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 600A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 42,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1										
3	3	45	4	8		RTU-1				9.3
5										
7										
9	3	45	4	8		RTU-3				9.3
11										
13										
15	3	50	4	8		RTU-2				10.2
17										
19										
21	3	50	4	8		RTU-4				10.2
23										
25	1	20	2			EF-1	0.2			
27	1	20	2			EF-2		0.2		
29	1	20	2			EF-3			0.2	
31	1	20	2			EF-4	0.2			
33	1					SPACE				
35	1					SPACE				
37	1					SPACE				
39	1					SPACE				
41	1					SPACE				
2										
4	3	200				PNL B1				
6										
8										
10	3	200				PNL B2				
12										
14										
16	3	100	4	2		ELEV				
18										
20	1	20	2	12		ELEVCAB LT	1.0			
22										
24										
26	3	20	4	12		UH-1				
28										
30										
32	3	20	4	12		WH-1				
34										
36	1					SPACE				
38	1	20	2	12		HWCP-1	0.5			
40	2	30	3	10		EWH-1		2.5		
42									2.5	
						TOTAL LEFT SIDE	0.4	0.2	0.2	39.0
						TOTAL RIGHT SIDE	16.7	15.2	14.2	31.3
						TOTAL	17.1	15.4	14.4	70.3
						TOTAL RIGHT SIDE	6.8	5.8		0.0
									4.7	
							8.4	6.9		0.0
									7.0	
										25.0
							1.0			
										3.3
										3.0
							0.5			
								2.5		
						TOTAL RIGHT SIDE	16.7	15.2	14.2	31.3
						TOTAL CONNECTED LOAD				117.3

* NOTES
1.

PANEL B1

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		100 WAITING	0.7			
3	1	20	2	12		100 WTR FTN		0.4		
5	1	20	2	12		101 RR			0.2	
7	1	20	2	12		102 RECEPTION	0.7			
9	1	20	2	12		103 BREAK ROOM		0.4		
11	1	20	2	12		103 BREAK ROOM			0.4	
13	1	20	2	12		103 JANITOR	0.2			
15	1	20	2	12		103 RR		0.4		
17	1	20	2	12		109 OFFICE			0.7	
19	1	20	2	12		110 OFFICE	0.7			
21	1	20	2	12		111 OFFICE		0.7		
23	1	20	2	12		112 GROUP			0.5	
25	1	20	2	12		112 GROUP	0.5			
27	1	20	2	12		113 OFFICE		0.7		
29	1	20	2	12		114 GROUP			0.5	
31	1	20	2	12		114 GROUP	0.5			
33	1	20	2	12		115 OFFICE		0.7		
35	1	20	2	12		116 OFFICE			0.7	
37	1	20	2	12		108 CORR	0.7			
39	1	20	2	12		SPARE				
41	1	20	2	12		SPARE				
2	1	20	2	12		123 CORR	0.5			
4	1	20	2	12		117 KITCHEN FRIDGE		0.2		
6	1	20	2	12		117 DISHWASH			0.2	
8	1	20	2	12		117 KITCHEN	0.4			
10	1	20	2	12		118 TRAINING		0.7		
12	1	20	2	12		118 TRAINING			0.5	
14	1	20	2	12		119 RR	0.2			
16	1	20	2	12		120 OFFICE		0.7		
18	1	20	2	12		121 RR			0.7	
20	1	20	2	12		SPARE				
22	1	20	2	12		1ST FLR LTS	0.8			
24	1	20	2	12		1ST FLR LTS		1.0		
26	1	20	2	12		1ST FLR LTS			0.9	
28	1	20	2	12		1ST FLR LTS	0.8			
30	1	20	2	12		WH-1				
32	1	20	2	12		SPARE				
34	1	20	2	12		SPARE				
36	1	20	2	12		SPARE				
38	1	20	2	12		SPARE				
40	1	20	2	12		SPARE				
42	1	20	2	12		SPARE				
						TOTAL LEFT SIDE	4.1	3.2	3.1	0.0
						TOTAL RIGHT SIDE	2.7	2.6	1.7	0.0
						TOTAL	6.8	5.8	4.7	0.0
						TOTAL RIGHT SIDE	2.7	2.6	1.7	0.0
						TOTAL CONNECTED LOAD				17.4

* NOTES
1.

PANEL B2

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		207 CORR.	0.5			
3	1	20	2	12		225 OFFICE		0.7		
5	1	20	2	12		227 OFFICE			0.7	
7	1	20	2	12		228 OFFICE	0.7			
9	1	20	2	12		207 CORR.		0.5		
11	1	20	2	12		207 CORR.			0.5	
13	1	20	2	12		229 OFFICE	0.7			
15	1	20	2	12		230 OFFICE		0.7		
17	1	20	2	12		231 OFFICE			0.7	
19	1	20	2	12		232 OFFICE	0.7			
21	1	20	2	12		201 OFFICE		0.7		
23	1	20	2	12		202 OFFICE			0.7	
25	1	20	2	12		203 CONFERENCE	0.9			
27	1	20	2	12		205 OFFICE		0.7		
29	1	20	2	12		206 IT CLOSET			0.5	
31	1	20	2	12		207 BREAK FRIDGE	0.2			
33	1	20	2	12		207 BREAK ROOM		0.4		
35	1	20	2	12		RM 211			0.2	
37	1	20	2	12		206 IT CLOSET	0.4			
39	1	20	2	12		SPARE				
41	1	20	2	12		SPARE				
2	1	20	2	12		208 FLEX	0.7			
4	1	20	2	12		210 OFFICE		0.7		
6	1	20	2	12		212 OFFICE			0.7	
8	1	20	2	12		213 COPY	0.4			
10	1	20	2	12		213 COPY		0.2		
12	1	20	2	12		214 RR			0.2	
14	1	20	2	12		215 OFFICE	0.7			
16	1	20	2	12		216 RR		0.2		
18	1	20	2	12		217 OFFICE			0.7	
20	1	20	2	12		218 JANITOR	0.2			
22	1	20	2	12		219 OFFICE		0.7		
24	1	20	2	12		220 OFFICE			0.7	
26	1	20	2	12		221 FLEX	0.7			
28	1	20	2	12		222 FLEX		0.5		
30	1	20	2	12		222 FLEX			0.4	
32	1	20	2	12		223 OFFICE	0.7			
34	1	20	2	12		SPARE				
36	1	20	2	12		SPARE				
38	1	20	2	12		2ND FLR LTS	0.8			
40	1	20	2	12		2ND FLR LTS		0.8		
42	1	20	2	12		2ND FLR LTS			0.9	
						TOTAL LEFT SIDE	4.1	3.8	3.4	0.0
						TOTAL RIGHT SIDE	4.2	3.1	3.6	0.0
						TOTAL	8.4	6.9	7.0	0.0
						TOTAL RIGHT SIDE	4.2	3.1	3.6	0.0
						TOTAL CONNECTED LOAD				22.3

* NOTES
1.

EXISTING PANEL A

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		1ST RR				
3	1	20	2	12		UNKNOWN				
5	1	20	2	12		UNKNOWN				
7	1	20	2	12		UNKNOWN				
9	1	20	2	12		UNKNOWN				
11	1	20	2	12		UNKNOWN				
13	1	20	2	12		UNKNOWN				
15	1	20	2	12		UNKNOWN				
17	1	20	2	12		OFFICE 9				
19	1	20	2	12		UNKNOWN				
21	1	20	2	12		CNTRL ROOM				
23	1	20	2	12		UNKNOWN				
25	1	20	2	12		UNKNOWN				
27	2	30	2	12		HWH				
29										
31	2	60	2	12		HEAT PUMP				
33										
35	2	30	2	12		UNKNOWN				
37										
39	1	20	2	12		UNKNOWN				
2	2	30				UNKNOWN				
4										
6	1	20	2	12		UNKNOWN				
8	1	20	2	12		UNKNOWN				
10	1	20	2	12		LT S/RCPT COPYRM				
12	1	20	2	12		2ND RR				
14	1	20	2	12		UNKNOWN				
16	1	20	2	12		UNKNOWN				
18	1	20	2	12		UNKNOWN				
20	1	20	2	12		UNKNOWN				
22	1	20	2	12		UNKNOWN				
24	1	20	2	12		UNKNOWN				
26	1	20	2	12		UNKNOWN				
28	2	125				AIR HANDLER				
30										
32	1	20	2	12		COPIER				
34	1	20	2	12		UNKNOWN				
36	1	20	2	12		UNKNOWN				
38	1	20	2	12		UNKNOWN				
40	1	20	2	12		UNKNOWN				
						TOTAL LEFT SIDE	0.0	0.0	0.0	0.0
						TOTAL RIGHT SIDE	0.0	0.0	0.0	0.0
						TOTAL	0.0	0.0	0.0	0.0
						TOTAL RIGHT SIDE	0.0	0.0	0.0	0.0
						TOTAL CONNECTED LOAD				0.0

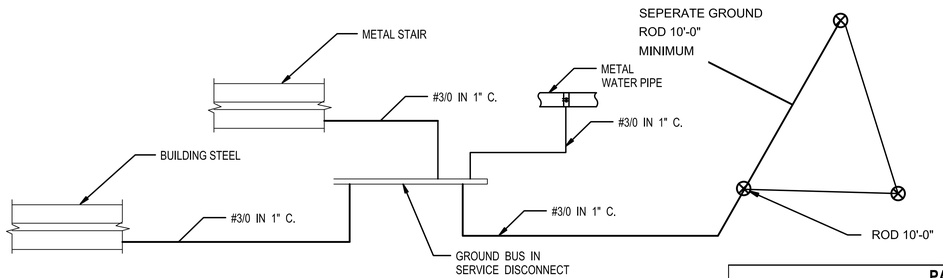
* NOTES
1.

PANEL A2

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 200A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 22,000

CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	1	20	2	12		004 OFFICE	0.7			
3	1	20	2	12		005 OFFICE		0.7		
5	1	20	2	12		006 OFFICE			0.7	
7	1	20	2	12		007 OFFICE	0.7			
9	1	20	2	12		008 DAYROOM		0.7		
11	1	20	2	12		008 DAYROOM			0.5	
13	1	20	2	12		003 CORR.	0.7			
15	1	20	2	12		009 WTR FTN		0.4		
17	1	20	2	12		RR, W/D			0.2	
19	1	20	2	12		RR, W/D	0.2			
21	1	20	2	12		010 SMALL MEETING		0.5		
23	1	20	2	12		012 OFFICE			0.7	
25	1	20	2	12		100 WAITING	0.7			
27	1	20	2	12		100 WTR FTN		0.4		
29	1	20	2	12		101 RR			0.2	
31	1	20	2	12		102 RECEPTION	0.7			
33	2	20	2	12		AHU-5		0.5		
									0.5	
37	2	40	2	8		HP-5	2.0			
								2.0		
41	1	20	2	12		SPARE				
2	1	20	2	12		103 BREAK ROOM	0.4			
4	1	20	2	12		103 BREAK ROOM		0.4		
6	1	20	2	12		103 JANITOR			0.2	
8	1	20	2	12		103 RR	0.2			
10	1	20	2	12		103 RR		0.2		
12	1	20	2	12		109 OFFICE			0.7	
14	1	20	2	12		110 OFFICE	0.7			
16	1	20	2	12		111 OFFICE		0.7		
18	1	20	2	12		112 GROUP			0.5	
20	1	20	2	12		112 GROUP	0.5			
22	1	20	2	12		113 OFFICE		0.7		
24	1	20	2	12		114 GROUP			0.5	
26	1	20	2	12		114 GROUP	0.5			
28	1	20	2	12		115 OFFICE		0.7		
30	1	20	2	12		116 OFFICE			0.7	
32	1	20	2	12		108 CORR	0.7			
34	2	20	2	12		AHU-6		0.5		
									0.5	
38	2	20	2	12		HP-6	2.7			
								2.7		
42	1	20	2	12		EF-4,EF-6			0.5	
						TOTAL LEFT SIDE	5.8	5.2	2.8	0.0
						TOTAL RIGHT SIDE	5.8	5.9	3.7	0.0
						TOTAL	11.5	11.1	6.5	0.0
						TOTAL RIGHT SIDE	5.8	5.9	3.7	0.0
						TOTAL CONNECTED LOAD				29.2

* NOTES
1.



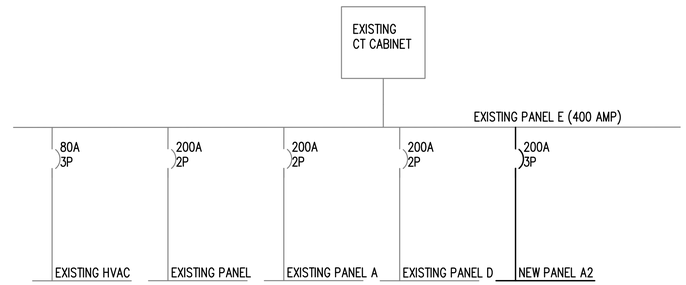
GROUNDING DETAIL

PANEL MDP (BASE)

VOLTAGE: 208Y/120 | PHASE: 3 | WIRE: 4 | BUS AMPS: 600A | MAIN BREAKER AMPS: MLO | [X] SURFACE MOUNTED | [ ] FLUSH MOUNTED | kAIC RATING: 42,000

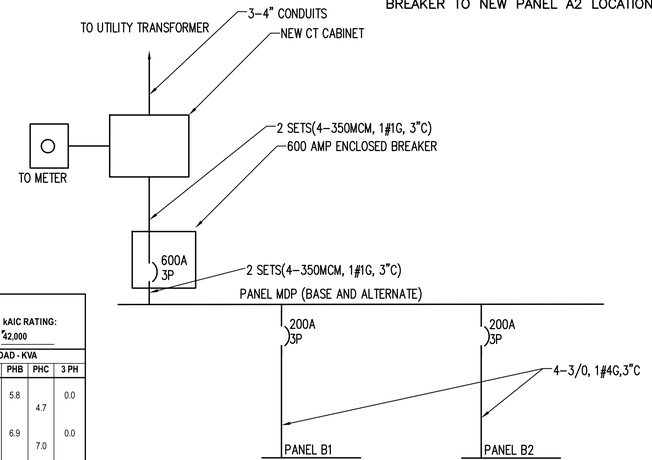
CKT NO.	BRKR P	BRKR AMPS	WIRE NO	WIRE SZ	*	CIRCUIT DESCRIPTION	LOAD - KVA PHA	PHB	PHC	3 PH
1	2	15	3	12		AHU-1	0.5			
3								0.5		
5	2	50	3	8		HP-1			2.7	
7							2.7			
9	2	15	3	12		AHU-2		0.7		
11									0.7	
13	2	60	4	6		HP-2	3.4			
15								3.4		
17	2	15	3	12		AHU-3			0.5	
19							0.5			
21	2	50	3	8		HP-3		2.7		
23									2.7	
25	1	20	2	12		EF-1	0.2		.	
27	1	20	2	12		EF-2		0.2		
29	1	20	2	12		EF-3			0.2	
31	1	20	2	12		EF-4	0.2			
33	2	15	3	12		AHU-4		0.7		
35									0.7	
37	2	60	3	6		HP-4	3.4			
39								3.4		
41	1	20	2	10		IH-1,2,3., RH-1			0.5	
2										
4	3	200				PNL B1				
6										
8										
10	3	200				PNL B2				
12										
14										
16	3	100	4	2		ELEV				
18										
20	1	20	2	12		ELEVCAB LT	1.0			
22										
24										
26	3	20	4	12		UH-1				
28										
30										
32	3	20	4	12		WH-1				
34										
36	1					SPACE				
38	1	20	2	12		HWCP-1	0.5			
40	2	30	3	10		EWH-1		2.5		
42									2.5	
						TOTAL LEFT SIDE	10.9	11.6	8.0	0.0
						TOTAL RIGHT SIDE	16.7	15.2	14.2	31.3
						TOTAL	27.6	26.8	22.2	31.3
						TOTAL RIGHT SIDE	6.8	5.8		0.0
									4.7	
							8.4	6.9		0.0
									7.0	
										25.0
							1.0			
										3.3
										3.0
							0.5			
								2.5		
						TOTAL RIGHT SIDE	16.7	15.2	14.2	31.3
						TOTAL CONNECTED LOAD				107.9

* NOTES



ONE LINE DIAGRAM
SCALE: NONE

PROVIDE NEW PANEL A2. PROVIDE A NEW PANEL IN EXISTING PANEL E PROVIDE 4–3/0,1–#4G,2 1/2"C FROM BREAKER TO NEW PANEL A2 LOCATION



ONE LINE DIAGRAM
SCALE: NONE

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2100 LUBNA DR
CHRISTIANSBURG VA 24073
P. 540.998.6069

STOTTSBERG ENGINEERING
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COMMONWEALTH OF VIRGINIA
DANIEL W. GIBSON
Lic. No. 44271
1/10/25
PROFESSIONAL ENGINEER

project
AHCS - SUBSTANCE USE EXPANSION

address
311 SOUTH MONROE AVE & 320 E PINE ST
COVINGTON, VA 24426

sheet name
PANEL SCHEDULES AND ONE-LINE DIAGRAM

revisions

REV	REVISION	DATE

date: 01/10/2025

drawing no.
E6.1

SECTION 16000

ELECTRICAL SPECIFICATIONS

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

Provide new lighting, power, as indicated on the plans.

1.2 QUALITY ASSURANCE

A. General

a. Comply with IEEE C2, "National Electrical Safety Code".

b. IEEE Compliance: Comply with applicable Institute of Electrical and Electronics Engineers, Inc. standards pertaining to generator construction.

c. NEC Compliance: Comply with NFPA 70, "National Electrical Code" as applicable to construction and installation of products required in this specification.

d. UL and NEMA Compliance and Labeling: Provide products which have been labeled by Underwriters Laboratories and have been certified to comply with UL requirements.

e. IEEE Compliance: Comply with STD 241, "IEEE Recommended Practice for Electrical Power Systems in Commercial Buildings" pertaining to communication systems.

B. MOTOR CONTROLLERS

a. UL and NEMA Compliance and Labeling: Provide products which have been labeled by Underwriters' Laboratories and have been certified to comply with UL and NEMA.

C. LIGHTING

a. NEMA Compliance: Comply with applicable requirements of NEMA Stds. Pub/No.'s LE 1 and LE 2 pertaining to lighting equipment.

b. UL Compliance: Comply with UL standards, including UL 486A and B, pertaining to lighting fixtures. Provide lighting fixtures and components which are UL_listed and labeled. Provide exterior fixtures with "Suitable for Wet Location" label.

c. CBM Labels: Provide fluorescent lamp ballasts which comply with Certified Ballast Manufacturers Association standards and carry the CBM label.

1.3 COORDINATION OF ELECTRICAL WORK

A. General: Refer to the division sections for general coordination requirements applicable to the entire work. It is recognized that the contract documents are diagrammatic in showing certain physical relationships which must be established within the electrical work and in its interface with other work including utilities and mechanical work and that such establishment is the exclusive responsibility of the Contractor.

a. Arrange electrical work in a neat, well organized manner with conduit and similar services running parallel with primary lines of the building construction and with the maximum headroom possible, but a minimum 7"_0" overhead clearance.

b. Locate operating and control equipment properly to provide easy access and arrange entire electrical work with adequate access for operation and maintenance.

c. Advise other trades of openings required in their work for the subsequent move_in of large units of electrical equipment.

d. Coordinate all work, including power outages, with Owner's Schedule of Operation.

B. Product Handling: Space at the project for storage of materials and products is limited. Coordinate the deliveries of electrical materials and products with the scheduling and sequencing of the work so that storage requirements at the project are minimized. In general, do not deliver individual items of electrical equipment to the project substantially ahead of the time of installation.

1.3 ELECTRICAL SYSTEM IDENTIFICATION

A. Conduit Systems: Provide adequate marking of primary conduits which are exposed or concealed in accessible spaces. to distinguish each run as either a power or signal/communication conduit. Except as otherwise indicated, use orange banding with black lettering. Provide self_adhesive or snap_on type plastic markers. Indicate voltage ratings of conductors where above 240 V. Locate markers at ends of conduit runs, near switches and other control devices and near items of equipment served by the conductors. Switch_leg conduit and short branches for power connections need not be marked, except where conduit is larger than 1 inch. Label all junction boxes with branch circuit numbers terminated within.

B. Identification Labels and Warning Signs: Provide engraved plastic_laminate or baked enamel labels on major units of electrical equipment including switchboards, panelboards, motor controllers, disconnect switches, signal and similar systems. Label shall include equipment identification mark and voltage characteristics and shall be melamine plastic, 0.125_inch thick, white with black center core. Provide warning signs where there is hazardous exposure or danger associated with access to or operation of electrical facilities. Provide text of sufficient clarity and lettering of sufficient size, minimum 0.25 inch nominal block style, to convey adequate information at each location; mount permanently in an appropriate and effective location.

1.4 PAINTING ELECTRICAL WORK

A. General: Except as otherwise indicated, comply with the applicable provisions of Division 9 for electrical_work painting. Electrical equipment shall have factory_applied painting systems which shall meet the requirements of NEMA ICS6. The work of this article shall include general field painting of electrical work.
a. Coordinate the painting with the painting of other work of a similar nature and comply with indicated color and color matching requirements. Except as otherwise indicated, paint surfaces of electrical work which would normally be painted in the application and exposure indicated.

B. Do not paint over nameplates on equipment, sliding/rotating shaft surfaces, non_ferrous hardware/accessories/trim and similar items where painting would normally be omitted.

1.5 ELECTRICAL SYSTEM PERFORMANCE

A. General: The overall system performances of electrical work are of even greater importance than the specified individual unit_of_work performances. Each unit of electrical work has been designed and specified to perform at minimum levels of output and efficiency and is intended to contribute to and be compatible with the entire system. Compatibility of actual performances by electrical system performances is the Contractor's responsibility.

B. Adjustments: Where it has been determined that electrical systems do not or will not perform in compliance with the specified performances, adjustments or corrections shall be made to the work as necessary to achieve required performances.

1.6 ELECTRICAL WORK CLOSEOUT

A. Additional Service: Perform services within the above 12-month period not classified as routine maintenance or as warranty work as described in Division 1 Section "Warranties and Bonds" when authorized in writing. Compensation for additional services must be agreed upon in writing prior to performing services.

B. Closeout Coordination: Coordinate closeout operations with closeout of mechanical systems and other power consuming equipment.

C. Record Drawings: Maintain a blue_line set of electrical contract drawings and/or shop drawings in clean, undamaged condition, for indication of major electrical equipment or concealed lines located in position other than that shown on the contract drawings. Mark_up whatever drawings are most capable of showing installed conditions accurately. In general, record every substantive installation of electrical work which previously is either not shown or shown inaccurately, specifically record the following:
a. Work concealed behind or within other work, in a nonaccessible location.
b. Main feeders with switchgear, panelboards, and control devices located, identified and numbered. This information shall be displayed in a glazed, hardwood frame, minimum two (2) feet square, near the main service disconnect.
c. Maintenance procedures and schedules.
d. Testing procedures and acceptable parameters.

G. Cleaning and Lubrication: After final testing of each electrical system, clean system both externally and internally. Comply with manufacturer's instructions for lubrication of both power and hand operated equipment. Touch_up minor damage to factory_painted finishes and provide one pint of touch-up paint for each color of major equipment installed.

1.10 SUBMITTALS

A. LIGHTING

1. Product Data: Submit manufacturer's product data and installation instructions on each type building lighting fixture photocell, contactor and component.

2. Shop Drawings: Submit fixture shop drawings where specifically indicated in booklet form with separate sheet for each fixture, assembled in "luminare type" alphabetical or numerical order, with proposed fixture and accessories clearly indicated on each sheet.

3. Maintenance Data: Submit maintenance data and parts list for each lighting fixture and accessory; including "trouble_shooting" maintenance guide. Include that data, product data, and shop drawings in a maintenance manual.

PART 2 - PRODUCTS

2.1 CABLE AND WIRE

A. Provide factory-fabricated wire or cable of the size, rating, material and type as indicated for each service in compliance with NECA - Standard of Installation. Where not indicated, provide proper selection as determined by the work requiring the installation to comply with NEC standards. Conductors shall be rated 600 volt of insulation type THW, THWN, THHN, or USE installed in compliance with National Electrical Code requirements.

B. Provide bonding conductors for sizes No. 8 AWG and smaller of solid bare copper per ASTM B 1, and for sizes No. 6 AWG and larger stranded bare copper per ASTM B 8.

C. No. 10 AWG and smaller diameter shall be solid copper; No. 8 AWG and larger diameter shall be stranded copper.

D. Provide color coding for service, feeder, branch, control, and signaling circuit conductors. Color shall be green for grounding conductors and white for neutrals; except where neutrals of more than one system are installed in same raceway or box, other neutral shall be white with colored (not green) stripe. Color of ungrounded conductors in different voltage systems shall be as follows:
a. 120/208 volt, 3-phase:
i. Phase A - black.
ii. Phase B - red.
iii. Phase C - blue.

E. Provide the following types of cables in NEC approved locations and applications where indicated. Provide cable UL listed for its intended use.
a. Metal clad cable: Type MC.

F. Provide UL 486A, factory-fabricated, solderless, metal connectors of the size, ampacity, rating, material, type and class as indicated for each service. Where not indicated, provide proper selection as determined by the work requiring the installation to comply with NEC standards. Provide insulating tape in compliance with UL 510.

2.2 ELECTRICAL RACEWAYS

A. Metal Conduit, Tubing and Fittings: Provide metal conduit, tubing and fittings of type, grade, size and weight indicated for each service. Where type and grade are not indicated, provide proper selection as determined by the work requiring the installation to comply with NEC standards for wiring requirements.

a. Rigid Steel Conduit: ANSI C80.1, UL 6.
b. Intermediate Steel Conduit (Zinc Coated Steel): UL 1242.
c. Rigid Metal Conduit Fittings: UL 514B, cadmium- or zinD- coated threaded type.
d. Electrical Metal Tubing (EMT): ANSI C80.3, UL 797.
e. EMT Fittings: UL 514B, compression or set-screw type
f. Flexible Metal Conduit: Cadmium- or zinD-coated steel.
g. Flexible Metal Conduit Fittings: UL 514B, cadmium- or zinD-coated.
h. Liquid-Tight Flexible Metal Conduit: UL 360, provide liquid-tight flexible metal conduit comprised of single strip, continuous, flexible, interlocked, double-wrapped steel, galvanized inside and outside; forming smooth internal wiring channel; with liquid-tight jacket of flexible polyvinyl chloride.
i. Liquid-Tight Flexible Metal Conduit Fittings: FS W-F-406.

B. Wireways: Electrical wireways shall be of types, sizes, and number of channels as indicated. Fittings and accessories including but not limited to couplings, offsets, elbows, expansion joints, adapters, hold-down straps, and end caps shall match and mate with wireway as required for complete system. Where features are not indicated, select to fulfill wiring requirements and comply with applicable provisions of NEC. Wireway covers shall be hinged type.

C. Surface Metal Raceways and Fittings: UL 5, two-piece steel, totally enclosed. Snap cover type with wiring devices, sizes and channels as indicated. Wiremold, or approved equal.
a. Type a: Two section, steel, approximately 7/8 inch x 1 1/4 inch wide, with 20 amp, 125V, specification grade grounding surge protection receptacles 2'-6" on centers, alternating circuits. Provide with ivory paintable finish.

2.3 ELECTRICAL OUTLET BOXES AND FITTINGS

A. Interior Outlet Boxes: UL 514A, provide galvanized flat rolled sheet steel interior outlet wiring boxes, flush mounted of type, shapes and sizes, including box depths, to suit each respective location and installation; construct with stamped knockouts in back and sides, and with threaded screw holes with corrosion-resistant screws for securing box covers and wiring devices. Provide feraloy cast outlet boxes where surface mounted with threaded conduit hubs to suit each respective location and installation.

B. Weatherproof Outlet Boxes: Provide corrosion-resistant cast metal weatherproof outlet wiring boxes, of types, shapes and sizes, with threaded conduit ends, cast metal face plates with spring-hinged waterproof caps suitably configured for each application, including faceplate gaskets and corrosion-resistant fasteners. Weatherproof while in operation.

C. Cast-Iron Floor Boxes: Fully adjustable, waterproof, with threaded raceway entrances, adjusting rings, gaskets, and brass floor plates. Provide multi-section boxes with individual screw type brass section covers, barrier between compartments and provide for a duplex receptacle under one or more of the covers. Telephone outlets shall have provisions to accommodate 10-wire telephone terminal block. Provide gaskets where required to ensure watertight installation. Provide trim suitable for floor conditions.

2.4 WIRING DEVICES

A. General: Provide factory-fabricated wiring devices, in types, colors and electrical ratings for applications indicated and complying with NEMA Standards Publication No. WD 1. Where types and grades are not indicated, provide proper selection as determined by installer to fulfill wiring requirements, and comply with NEC and NEMA standards for wiring devices. Provide receptacles with isolated ground and/or surge protection where indicated.

B. Receptacles:
a. Hospital Grade Duplex: UL 498, provide duplex heavy duty type receptacles, 2-pole, 3-wire grounding, with green hexagonal equipment ground screw, ground terminals and poles internally connected to mounting yoke, 20-amperes, 125 volt, white nylon face with metal plaster ears, side wiring, NEMA Configuration 5-20R, unless otherwise indicated.
b. Hospital Grade Ground Fault Receptacle: Provide ground fault protected duplex receptacle
i. Provide with cast aluminum weatherproof cover where indicated to be WP while in operation.

C. Switches:
a Snap: UL 20, provide general duty flush single-pole toggle switches, 20-amperes, 120-277 volts AC only, with mounting yoke insulated from mechanism, equip with plaster ears, white switch handle and side wired screw terminals. Single pole, Three-way and Four-way as indicated on drawings.

D. Wiring Device Accessories:
a. Wall Plates: Provide UL listed, one-piece device plates for outlets and fittings to fit the device installed. For flush-mounted outlets on finished walls, provide white switch and outlet plates of types, sizes and with ganging and cutouts as indicated. Install with metal screws for securing plates to devices; screw heads colored to match finish of plate.
b. For surface mounted boxes, provide feraloy cast outlet plates on all outlet boxes, type suitable for wiring device installed in box.
c. Provide plate with engraved legend where indicated.

2.5 SAFETY AND DISCONNECT SWITCHES

A. General: UL 98, NEMA KS1, provide surface-mounted, sheet-steel enclosed switches, of types, sizes and electrical characteristics indicated; 3-blades, 4-wire with amperage rating as required, 60 hertz and visible blades with door in open position. Provide with safety handle which is easily recognizable and is capable of being padlocked in the open position and operating mechanism for quick-make and quick-break. Current carrying parts of high-conductivity copper, with silver-tungsten type switch contacts. Provide NEMA 1 type enclosures indoors and NEMA 3R type enclosures with raintight hubs outdoors.

B. Provide General Duty Type: 240 volts AC, Type GD. Heavy Duty Type: 600 volts AC.

C. Switches used as motor disconnect means shall be horsepower rated. Fused switches shall utilize Class R fuseholder and fuses unless indicated otherwise or recommended by equipment manufacturer.

2.6 ELECTRICAL GROUNDING AND BONDING EQUIPMENT

A. General: UL 467. Provide grounding products of types indicated and of sizes and ratings as required by NEC. Provide all material required including but not necessarily limited to, cable/wire, connectors, terminals (solderless lugs), grounding rods/electrodes, bonding jumper braid and other items and accessories needed for a complete installation. Where more than one type meets indicated requirements, selection is installer's option. Where materials or components are not otherwise indicated, provide products complying with NEC, and established industry standards.

B. Electrical Grounding Conductors: Unless otherwise indicated, provide electrical grounding conductors for grounding connections matching power supply wiring materials except bare or green insulation and sized according to NEC. Equipment grounding conductors shall have green insulation. Solid conductors shall comply with ASTM B-3, stranded conductors with ASTM B-8.

C. Grounding Connectors: Provide listed and labeled grounding connectors for the required materials. Provide high-conductivity plated pressure connector units or exothermic welded connections.

2.7 COMBINATION MOTOR CONTROLLERS

A. General: Motor circuit protector; molded-case circuit-type breaker type with magnetiD-only trip element calibrated to coordinate with the actual locked-rotor current of the connected motor and the controller overload relays. Provide breakers that are factory assembled with the controller, interlocked with unit cover or door, and arranged to disconnect the controller. Provide motor circuit-protectors with field-adjustable trip elements.

2.8 LIGHTING FIXTURES

A. Provide lighting fixtures of sizes, types, and ratings indicated in lighting fixture schedule

B. Wiring: Provide electrical wiring within fixture suitable for connecting to branch circuit.
a. NEC Type AF for 120 volt, minimum No. 18 AWG.
b. NEC Type SF_2 for 277 volt, minimum No. 18 AWG.

2.9 TIME CONTROLLED SWITCHES

D. Provide electrically operated time controlled maintained contact switches with 24_hour dials capable of periodically and automatically switching mechanically held or electrically held contactors ON and OFF. Select switches which permit selection of from 1 to 7 ON_OFF operations each day; with coil ratings of 120 volts, 60 Hz, and with DPDT switch. Provide flush mount enclosure, NEMA Type 1, with side hinged door and lock, mounting holes and knockouts. Provide timing switch with manual circuit by_pass switch, 10 hour reserve power, and separate grounding terminal. Finish enclosure with manufacturer's standard gray finish.

2.10 MOTION DETECTORS

A. Outdoor Motion Detectors: Passive infrared motion sensor in weatherproof enclosure with adjustable digital sensitivity and time delay and isolated SPDT relay contact. Provide unit suitable for operation at temperatures as low as -40F. Provide adjustable mounting bracket.

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CHRISTIANSBURG VA 24073
P. 540.998.6069

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www.stottsbergeng.com
PROJECT #24024

COMMONWEALTH OF VIRGINIA
DANIEL W. GIBSON
Lic. No. 44271
1/10/25
PROFESSIONAL ENGINEER

project
AHCS - SUBSTANCE USE EXPANSION

address
311 SOUTH MONROE AVE & 320 E PINE ST
COVINGTON, VA 24426

sheet name
SPECIFICATIONS

revisions

REV	REVISION	DATE

date: 01/10/2025

drawing no.
E7.1

INSTALLATION
PART 3 - INSTALLATION

3.1 General

A. Verify final locations for rough_in with field measurements and with the requirements of the actual equipment to be connected.

B. Rough_in for owner furnished equipment to make equipment operate as intended, including providing miscellaneous wiring items.

C. Adjust operating mechanisms for free mechanical movement. Clean interior and exterior using manufacturer's approved methods and materials.

D. Touch-up scratched or marred surfaces to match original finish.

E. In general, perform cutting and patching as necessary. Exercise care where cutting, channeling, chasing or drilling floors, walls, partitions, ceilings or other surfaces for installation of electrical work.

F. Patch finished surfaces and building components using new materials specified for the original installation and experienced installers. Installers' qualifications refer to the materials and methods required for the surface and building components being patched.

3.2 CABLE, WIRE AND CONNECTORS

A. Provide insulated conductors installed in conduit, except where specifically indicated or specified otherwise or required by NEC to be installed otherwise. Provide insulated equipment grounding conductor in feeder and branch circuits, including lighting circuits. Grounding conductor shall be separate from electrical system neutral conductor.

B. Coordinate cable and wire installation with electrical raceway and equipment installation. Conductor sizes indicated are copper. Pull conductors together where more than one is being installed. Use pulling means and lubricant that will not damage conductor or raceway. Use splice and tap connectors which are compatible with conductor material, and only in accessible junction, pull or outlet boxes.

C. Tighten electrical connectors and terminals, including screws and bolts, in accordance with manufacturer's published torque tightening values. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL 486A.

3.2 ELECTRICAL RACEWAYS

A. Provide with complete electrical raceway system before installing conductors within raceways. Provide support as required by NEC but within 1 foot of a change in direction or connection to an enclosure, cover ends of empty conduit to prevent entry of debris during rough-in, provide bonding type locknuts at boxes. Conceal conduit, unless indicated otherwise within finished walls, ceilings and floors. Run exposed conduits parallel or perpendicular to the building structure, close to the ceiling or beams. Keep raceways at least 6 inches away from parallel runs of flues, steam, and hot water pipes.

B. Use the following wiring methods:
   a. Outdoors:
   i. Intermediate metal conduit
   ii. Rigid metal conduit
   iii. Liquid-tight flexible metal conduit
   b. Indoors:
   i. Electrical metallic tubing
   ii. Flexible metal conduit
   iii. Rigid metal conduit (where exposed and subject to damage)

C. Use raceway fittings that are of types compatible with the associated raceway and suitable for the use and location. For intermediate steel conduit, use threaded rigid steel conduit fittings except as otherwise indicated.

D. Run exposed, parallel, or banked raceways together. Make bends in parallel or banked runs from the same center line so that the bends are parallel. Factory elbows may be used in banked runs only where they can be installed parallel. This requires that there be a change in the plane of the run such as from wall to ceiling and that the raceways be of the same size. In other cases provide field bends for parallel raceways.

E. Install pull wires in empty raceways. Use No. 14 AWG zinD-coated steel or monofilament plastic line having not less than 200-lb. tensile strength. Leave not less than 12 inches of slack at each end of the pull wire.

F. Flexible Connections: Use short length (maximum of 6 ft.) of flexible conduit for recessed and semirecessed lighting fixtures, for equipment subject to vibration, noise transmission, or movement; and for all motors. Use liquid-tight flexible conduit in wet locations. Install separate ground conductor across flexible connections.

G. Surface Metal Raceway: Install to walls, cabinets, and ceilings as recommended by equipment manufacturer with fasteners suitable for the material to which the surface metal raceway is being attached. Install a separate green ground conductor in raceway from the junction box supplying the raceway to receptacle or fixture ground terminals. Provide as an integral part or install wiring devices as indicated. Make cuts and other modifications with factory cuts and other modifications with factory furnished tools specifically designed for the purpose.

3.3 ELECTRICAL BOXES AND FITTINGS

A. Provide weatherproof outlet boxes for interior and exterior locations exposed to moisture, flush mounted boxes for connection to concealed conduit and pull boxes as required for installation of conductors. Sizes shall be adequate to meet NEC volume requirements, but not smaller than sizes indicated. Remove knockouts only as required and plug unused openings.

B. Fasten boxes rigidly to substrate or structural surfaces to which they are to be mounted, or solidly embed electrical boxes in concrete or masonry.

3.4 WIRING DEVICES

A. Install wiring devices in clean outlets after wiring has been installed. Do not install plates and cover installed wiring devices until painting is complete.

B. Ground all wiring devices unless indicated otherwise. Test wiring devices for correct polarity, proper ground and electrical continuity.

C. Install covers and device plates with edges in continuous contact with finished wall surfaces without use of mats or similar devices. Plaster or caulking used as a filling to repair openings around outlets shall not be applied without removing the cover or device plate. Plates installed in wet areas shall be gasketed.

3.5 SAFETY AND DISCONNECT SWITCHES

A. Install disconnect switches used for motor-driven equipment within sight of the controller and motor and not more than 50 feet from the controller and motor unless indicated otherwise.

B. Provide an electrical ground for all disconnect switches.
C. Test all switches for proper operation by operating them energized, but without load for six opening/closing cycles. Inspect switch and correct deficiencies, then retest to demonstrate compliance.

3.6 ELECTRICAL GROUNDING EQUIPMENT

A. Install electrical grounding systems where shown, in accordance with applicable portions of National Electrical Code, **NECA 331-2014 "Standard for Building and Service Entrance Grounding and Bonding,"** and in accordance with recognized industry practices to ensure that products comply with requirements and serve intended functions.

B. Provide separate grounding conductor with wiring in all raceways.

C. Provide grounding electrode conductor and connect to reinforcing steel in foundation footing where indicated.

D. Install clamp-on connectors only on thoroughly cleaned metal contact surfaces, to ensure electrical conductivity and circuit integrity.

3.7 LIGHTING FIXTURES

A. General: Install lighting fixtures of types indicated, where shown and at indicated heights, in accordance with lighting fixture manufacturer's written instructions and with recognized industry practices. Comply with NEMA standards and requirements of National Electrical Code pertaining to installation of lighting fixtures and with applicable portions of NECA's "Standards of Installation".

B. Fasten surfaced LED fixtures to suspended ceiling system near corner of each unit. Bolt fixture to main ceiling supports with stud_clips minimum 1/2_20. Support fixtures weighing in excess of 56 pounds directly from the building structure. Recessed and semi_recessed fixtures may be supported from suspended ceiling support system ceiling tees if the ceiling system support wires are provided at a minimum of four wires per fixture and located not more than 6 inches from each corner of each fixture. In addition, provide support clips securely fastened to ceiling grid members at or near corner of each recessed fixture.

C. Mounting heights indicated are to bottom of ceiling_mounted fixtures and to center of wall mounted fixtures.

D. Install parking lighting units complete with poles/standards and products as indicated, in accordance with manufacturer's written instructions, applicable requirements of NEC, NESC and NEMA standards, and with recognized industry practices to ensure that roadway and parking area lighting equipment fulfill requirements.

E. Adjust poles as necessary to provide a permanent plumb vertical position with the bracket arm in proper position for luminaire location. After installation, touch up pole finish with paint furnished by pole manufacturer.

F. Metal Poles: Provide anchor bases with galvanized steel anchor bolts, threaded at the top end and bent 90 degrees at the bottom end. Provide galvanized nuts, washers, and ornamental covers for anchor bolts. Concrete for anchor bases, polyvinyl chloride (PVC) conduit ells, and ground rods shall be as specified. Thoroughly compact backfill with compacting arranged to prevent any pressure between conductor, jacket, or sheath and the end of the conduit ell.

G. Install all exit lights lighting units plumb, square and level with walls and ceilings and secure in accordance with manufacturer's written instructions Mounting heights shall be to bottom of unit.

H. Clean lighting fixtures of dirt and debris upon completion of installation. Protect installed fixtures from damage during remainder of construction period.

I. Do not install interior fixture lens until construction is complete or protect lens from accumulation of dust and debris.

J. Adjust all fixtures with adjustable aiming to meet the Architect/Engineer's approval.

K. Test all lighting fixtures for compliance with intended purpose. Correct malfunctioning or noisy units, then retest to demonstrate compliance.

L. At date of substantial completion, replace all lamps which are observed to be noticeably dimmed as judged by the Architect/Engineer.

M. Provide tight equipment grounding connections to comply with tightening torques specified in UL 486A for each lighting fixture.

GIBSON ENGINEERING
2100 LUBNA DR
CHRISTIANSBURG VA 24073
P. 540.998.6069

STOTTSBERG ENGINEERING
www.stottsbergeng.com
PROJECT #24024

COMMONWEALTH OF VIRGINIA
DANIEL W. GIBSON
Lic. No. 44271
1/10/25
PROFESSIONAL ENGINEER

project
AHCS - SUBSTANCE USE EXPANSION

address
311 SOUTH MONROE AVE & 320 E PINE ST
COVINGTON, VA 24426

sheet name
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