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FOR BIDDING ONLY

SUPERVISOR OF ELECTIONS BUILDING TI
365 E. Burleigh Blvd., Tallahassee, FL 32378.

CODE ANALYSIS

JOB NAME: SUPERVISOR OF ELECTIONS BUILDING TI
DATE: 04/22/2025
SHEET NUMBER: G-002

ANY DISCREPANCY OR ERROR IN DIMENSIONS OR NOTES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN PROFESSIONAL FOR CLARIFICATION PRIOR TO COMMENCEMENT OF CONSTRUCTION.

BUILDING CODE ANALYSIS

CODES IN EFFECT:
-FLORIDA BUILDING CODE, BUILDING, 8TH EDITION (2023)
-FLORIDA BUILDING CODE, ACCESSIBILITY, 8TH EDITION (2023)
-NATIONAL ELECTRIC CODE 2020, EDITION NFPA 70
-FLORIDA FIRE PREVENTION CODE, 8TH EDITION (2023):
BASED ON NFPA 1 FIRE CODE 2021 EDITION
NFPA 101 LIFE SAFETY CODE 2021 EDITION
-NFA 72 (2019 EDITION)
-FLORIDA BUILDING CODE, ENERGY CONSERVATION, 8TH EDITION (2023)

Add:
2023 Florida Building Code, Fuel Gas, Eighth Edition

PROJECT: SUPERVISOR OF ELECTIONS BUILDING
ADDRESS: 365 E. Burleigh Blvd., Tallahassee, FL 32378.
SCOPE OF PROJECT: REMODEL / RENOVATION
BUILDING DATA: BUILDING CONSTRUCTION TYPE (FBC TABLE 601):
FBC: TYPE V-B
PRIMARY STRUCTURAL FRAME 0 HOUR
EXT. BEARING WALLS 0 HOUR
EXT. NON-BEAR. WALLS 0 HOUR
NON-BEAR. WALLS 0 HOUR
FLOOR & FLOOR CLG 0 HOUR
ROOF & ROOF CLG 0 HOUR
RISK CATEGORY: IV B
FIRE PROTECTION: FULLY SPRINKLERED

CODE ANALYSIS

OCCUPANCY CLASSIFICATION (FBC SECTION 302)
A3, ASSEMBLY AND B-BUSINESS

ALLOWABLE HEIGHTS AND AREAS (FBC TABLE 504.3, 504.4, 506.2)
AREAS INCREASES (FBC SECTION 506.2 & 506.3) : NOT USED

	ALLOWABLE	ACTUAL
OFFICE BUILDING HEIGHT	EXISTING	22'-0"
EXISTING OFFICE BUILDING AREAS SQ. FT.	EXISTING	20,417

PLUMBING FIXTURE COUNT (FBC TABLE 2902.1)

REQUIRED:

ASSEMBLY: 264 OCCUPANTS - 132 MALE, 132 FEMALE
1 WATER CLOSET/125 OCCUPANTS = 1.06 MALE 2.03 FEMALE
1 LAVATORY/200 OCCUPANTS = .66 MALE .66 FEMALE
1 WATER FOUNTAIN/500 OCCUPANTS = .53 WATER FOUNTAIN

OFFICE: 88 OCCUPANTS - 44 MALE, 44 FEMALE
1 WATER CLOSET/25 OCCUPANTS = 1.76 MALE 1.76 FEMALE (FOR THE FIRST 50)
1 LAVATORY/100 OCCUPANTS = 1.10 MALE 1.10 FEMALE (FOR THE FIRST 80)
1 WATER FOUNTAIN/100 OCCUPANTS = .88 WATER FOUNTAIN

STORAGE / M.E.& I.T.: 9 OCCUPANTS - 5 MALE, 5 FEMALE
1 WATER CLOSET/100 OCCUPANTS = .05 MALE .05 FEMALE
1 LAVATORY/100 OCCUPANTS = .05 MALE .05 FEMALE
1 WATER FOUNTAIN/1000 OCCUPANTS = .009 WATER FOUNTAIN

TOTAL REQUIRED:	TOTAL PROVIDED:
WATER CLOSET: 2.87 (3) MALE 3.84 (4) FEMALE 1.81 (2) MALE 1.81 (2) FEMALE	WATER CLOSET: 2 MALE 4 FEMALE 1 UNISEX
WATER FOUNTAIN: 1.41 (2) WATER FOUNTAINS	LAVATORY: 4 MALE 5 FEMALE 1 UNISEX
SERVICE SINK: 1	WATER FOUNTAIN: 2 WATER FOUNTAINS URINAL: 1 MALE SERVICE SINK: 1

OCCUPANCY CLASSIFICATIONS AND LOAD - FIRST FLOOR PLAN AND MEZZANINE

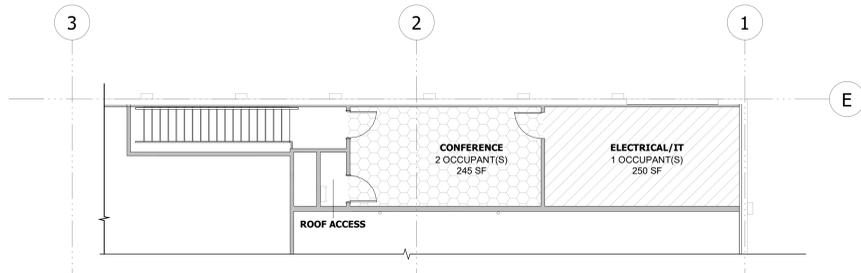
NOTE: IN SOME INSTANCES, MATHEMATICAL COUNT IS ROUNDED UP TO MATCH BY-ROOM COUNT - SEE 1/G002

USE OF SPACE	OCCUPANCY CATEGORY	S.F.	OCCUPANT LOAD FACTOR	INDIVIDUAL OCCUPANT LOAD
TRAINING SPACE	A3 - ASSEMBLY	3,924	15 NET	262
OFFICES	B - BUSINESS	10,650	150 GROSS	88
IT ROOM	MECH. EQUIPMENT ROOM	250	300 GROSS	1
STORAGE	S2 - LOW HAZARD STORAGE	1,983	500 GROSS	8
CIRCULATION/NOT NORMALLY OCCUPIED				
TOTAL OCCUPANCY FOR EGRESS = 359				

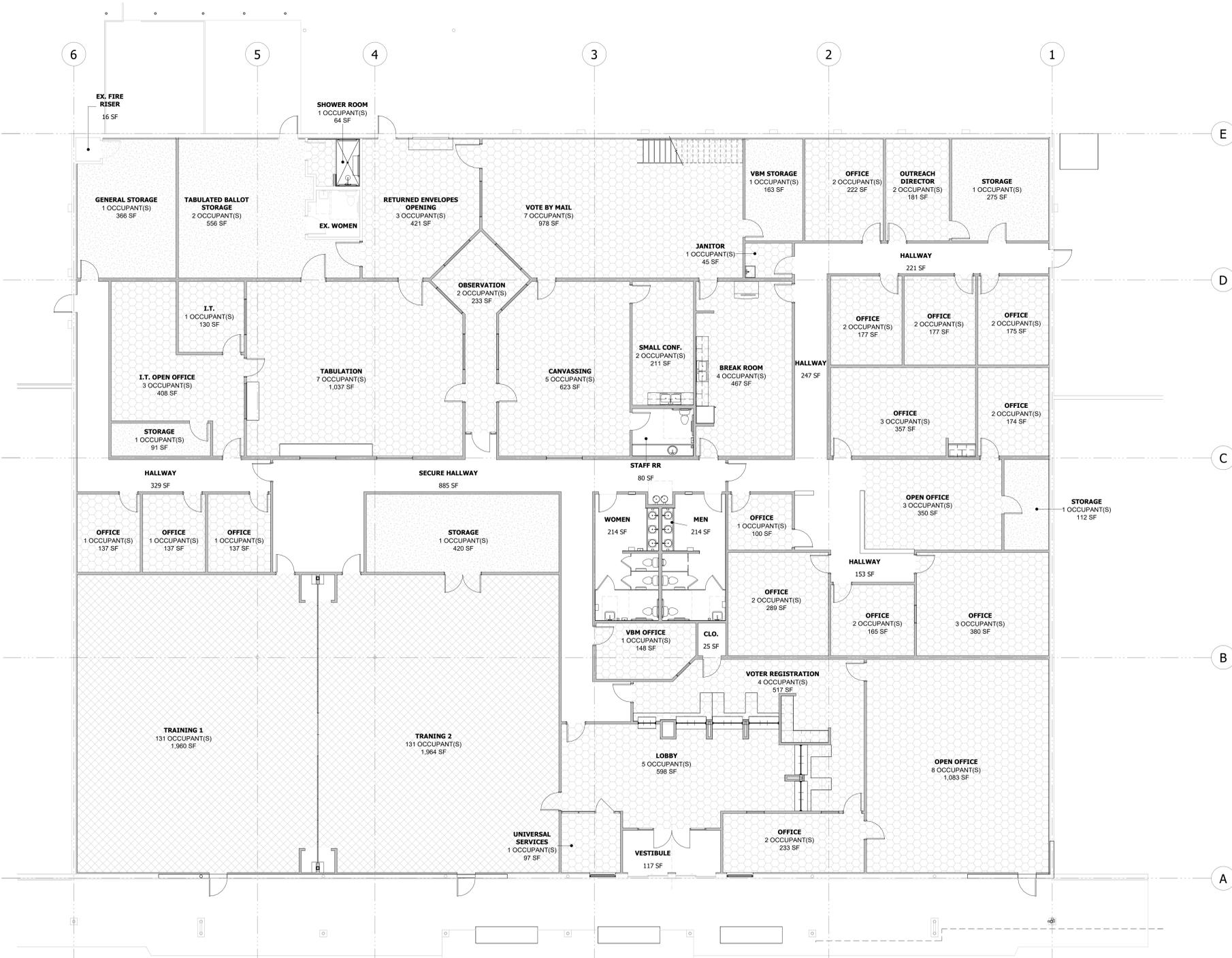
OCCUPANCY PLAN LEGEND

ROOM NAME	ROOM NAME
ROOM OCCUPANTS	ROOM NUMBER OF OCCUPANTS (FBC TABLE 1004.5)
AREA	ROOM AREA

2 OCCUPANCY CALCULATION PLAN - MEZZANINE LEVEL
1/8" = 1'-0"



1 OCCUPANCY CALCULATIONS PLAN - FIRST LEVEL
1/8" = 1'-0"



<p>1.06 MOCK-UP A. Construct mock-up illustrating full panel sheet, edge trim, joint trim, applied finish, and aluminum channel reveals. B. Locate where directed. C. Mock-up may remain as part of the Work.</p> <p>1.07 DELIVERY, STORAGE, AND HANDLING A. Protect work from moisture damage. B. Do not deliver wood materials to project site until building is fully enclosed and interior temperature and humidity are in accordance with recommendations of AWI/AWMA/CVI (AWS) or AWMA/CVI (NAAWS).</p> <p>PART 2 PRODUCTS</p> <p>2.01 PANELING A. Quality Standard: Custom Grade, in accordance with AWI/AWMA/CVI (AWS) or AWMA/CVI (NAAWS), unless otherwise indicated. B. Flat Paneling: 1. Species: Oak 2. Cut: Plain 3. Panels: Veneer of full width and balanced sequence matched. 4. Visible Edges and Reveals: Sanded and painted. 5. Outside Corners: Mitered and scribed.</p> <p>2.02 WOOD-BASED MATERIALS - GENERAL A. Hardwood Plywood: 1/2" Grade A, veneer core, type of glue recommended for application; of grain quality suitable for transparent finish. B. Lumber: Maximum moisture content of 6 percent; with vertical grain, of quality suitable for transparent finish.</p> <p>2.03 ADHESIVES AND FASTENERS A. Adhesives: Types suitable for intended purpose, complying with applicable air quality regulations. B. Fasteners: Of size and type to suit application; standard finish in concealed locations and black finish in exposed locations.</p> <p>2.04 WOOD-TREATMENT PROCESSES A. Fire-Retardant Treatment (FR-S Type) Lumber: Chemically treated and pressure impregnated; capable of providing flame spread index of 25, maximum, and smoke developed index of 450, maximum, when tested in accordance with ASTM E99. B. Wood Preservative by Pressure Treatment (PT Type): Provide AFWA U1 using waterborne preservative to 0.25 lb/cu ft retention.</p> <p>2.05 SHOP TREATMENT OF WOOD MATERIALS A. Finish and identify on identification on fire-retardant treated material.</p> <p>2.06 FABRICATION A. Prepare panels for delivery to site, permitting passage through building openings. B. Finish exposed edges of panels as specified by grade requirements.</p> <p>2.07 SHOP FINISHING A. Sand work smooth and set exposed nails and screws. B. Apply wood filler in exposed nail and screw indentations. C. Items of woodwork to be finished, use wood filler that matches surrounding surfaces and is of type recommended for the applicable finish. D. Finish work in accordance with AWI/AWMA/CVI (AWS) or AWMA/CVI (NAAWS), Section 5 - Finishing for grade specified and as follows: 1. Transparent: a. System - 1, Lacquer, Nitrocellulose. b. Sheen: Flat. c. Products: 1. Sherwin-Williams; Sher-Wood F3 Hi-Build Precat Lacquer Varnish, AWI Finishing System 2. www.sherwin-williams.com/#/se. 3. Sherwin-Williams; Sher-Wood F3 Kemvar Conversion Varnish, AWI Finishing System www.sherwin-williams.com/#/se. 4. Sherwin-Williams; Sher-Wood Ultra-Cure 100% Solids UV Topcoat, Rollcoat, AWI Finishing System 9: www.sherwin-williams.com/#/se. 5. Substitutions: Section 01 60 00 - Product Requirements. 2. Wood Sealer: Factory-applied, water-based polymer, water-repellent sealer that reacts chemically with untreated, natural wood surfaces. a. Manufacturers: 1. Centennial Woods LLC, Centennial-Seal: www.centennialwoods.com/#/se. 2. Substitutions: See Section 01 60 00 - Product Requirements.</p>	<p>2.03 FASTENERS A. Air- and Moisture-Sealing Insulation Fasteners: Preassembled fastener units consisting of sealing washer, screw, and gasketing tube. 1. Length as required for thickness of insulation material and penetration of deck substrate. 2. Thread and tip types as required for substrate material. 3. Products: a. TruFast Walls, a Division of Atlanta, Brinck & Co. US, Inc.; Grip-Deck TubeSeal: www.trufastwalls.com/#/se. b. Substitutions: See Section 01 60 00 - Product Requirements. B. Self-Sealing Washers: Solid plastic, 2 inch diameter washers; seals building-wrap air barriers against air penetration. 1. Products: a. TruFast Walls, a Division of Atlanta, Brinck & Co. US, Inc.; Thermal-Grip Flat Washer: www.trufastwalls.com/#/se. b. Substitutions: See Section 01 60 00 - Product Requirements.</p> <p>PART 3 EXECUTION</p> <p>3.01 EXAMINATION A. Verify that surfaces and conditions comply with requirements of this section.</p> <p>3.02 PREPARATION A. Remove projections, protruding fasteners, and loose or foreign matter that might interfere with proper installation: 1. Clean and prime substrate surfaces to receive adhesives and sealants in accordance with manufacturer's installation instructions. 2. Mechanically Fastened Sheets: 1. Install sheets in single fashion to shed water; align horizontally. 2. Overlap seams as recommended by manufacturer, 6 inches, minimum. 3. Overlap at outside and inside corners as recommended by manufacturer, 12 inches, minimum. 4. Install water-resistive barrier over jamb flashings. 5. Install head flashings under water-resistive barrier. 6. At framed openings with frames having nailing flanges, extend sheet into opening and over flanges; at head of opening, seal sheet over flange and flashing. C. Self-Adhesive Sheets: 1. Prepare substrate in accordance with sheet manufacturer's installation instructions; fill and tape joints in substrate and between dissimilar materials. 2. Lap sheets shingle-fashion to shed water and seal laps airtight. 3. Upon placement of sheets, firmly press onto substrate with resilient hand roller; ensure that laps are firmly adhered with no gaps or fishmouths. 4. Use same material, or other material approved by sheet manufacturer, to seal sheets to adjacent substrates, and as flashing. 5. At expansion joints, provide transition to joint assemblies approved by sheet manufacturer. D. Openings and Penetrations in Exterior Water-Resistive Barriers: 1. Install flashing over sills, covering entire sill framing member, and extend at least 5 inches onto water-resistive barrier and at least 6 inches up jamb; seal joints with flashing and jamb flanges using a continuous bead of sealant compressed by flange and cover flanges with sealing tape at least 4 inches wide; do not seal sill flange. 2. At framed openings with nonframed frames, seal water-resistive barrier to each side of framing at opening using flashing at least 9 inches wide, and covering entire depth of framing. 3. At head of openings, install flashing under water-resistive barrier extending at least 2 inches beyond face of jamb; seal water-resistive barrier to flashing. 4. At interior face of openings, seal gaps between window and door frames and rough framing using appropriate joint sealant over backer rod. 5. Service and Other Penetrations: Form flashing around penetrating items and seal to surface of water-resistive barrier.</p> <p>3.03 PROTECTION A. Do not leave materials exposed to weather longer than recommended by manufacturer.</p> <p>END OF SECTION</p> <p>SECTION 07 60 00 - SHEET METAL FLASHING AND TRIM</p> <p>PART 1 GENERAL</p> <p>1.01 SECTION INCLUDES A. Fabricated sheet metal items, including flashings, counterflashings, gutters, downspouts, sheet metal roofing, exterior penetrations, and other items indicated in Schedule.</p> <p>1.02 RELATED REQUIREMENTS A. Section 07 71 23 - Manufactured Gutters and Downspouts.</p> <p>1.03 REFERENCE STANDARDS A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2022. B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvalume) by Hot Dip. C. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2021a. D. ASTM B370 - Standard Specification for Copper Sheet and Strip for Building Construction; 2022. E. ASTM C920 - Standard Specification for Elastomeric Joint Sealant. F. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement, Asbestos-Free; 2007 (Reapproved 2018). G. CDA A4950 - Copper in Architecture - Handbook; current edition. H. SMACNA (ASPM) - Architectural Sheet Metal Manual; 2012.</p> <p>1.04 SUBMITTALS A. See Section 01 33 00 - Administrative Requirements for submittal procedures.</p> <p>1.05 QUALITY ASSURANCE A. Perform work in accordance with SMACNA (ASPM) and CDA A4950 requirements and standard details, except as otherwise indicated. B. Fabricator and Installer Qualifications: Company specializing in sheet metal work with 3 years of documented experience.</p> <p>1.06 DELIVERY, STORAGE, AND HANDLING A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage. B. Prevent contact with materials that could cause discoloration or staining.</p> <p>PART 2 PRODUCTS</p> <p>2.01 MANUFACTURERS A. Sheet Metal Flashing and Trim: 1. ALUCOBOND by 3A Composites USA; ALUCOBOND AXCENT: 2. Petersen Aluminum Corporation; 3. Taylor Metal Products; 4. Substitutions: See Section 01 60 00 - Product Requirements. B. Exterior Penetration Flashing Panel: 1. Quickflash Weatherproofing Products, Inc; 2. Substitutions: See Section 01 60 00 - Product Requirements.</p> <p>2.02 SHEET MATERIALS A. Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24-gauge, 0.0239-inch thick base metal. B. Pre-Finished Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24-gauge, 0.0239-inch thick base metal, shop pre-coated with PVDF coating. 1. Polyvinylidene Fluoride (PVDF) Coating: Superior performance organic powder coating, AAMA 2605; multiple color, thermally cured fluoropolymer finish system. C. Anodized Aluminum: ASTM B209/B209M, 3005 alloy, H12 or H14 temper; 20 gauge, 0.032 inch thick; clear anodized finish. D. Pre-Finished Aluminum: ASTM B209/B209M, 3005 alloy, H12 or H14 temper; 18 gauge, 0.042 inch thick; plain finish shop pre-coated with silicone modified polyurethane coating.</p> <p>2.03 FABRICATION A. Form sections true to shape, accurate in size, square, and free from distortion or defects. B. Form pieces in longest possible lengths. C. Hem exposed edges on underside 1/2 inch; miter and seam corners. D. Form material with flat lock seams, except where otherwise indicated; at moving joints, use sealed lapped, bayonet-type or interlocking hooked seams. E. Fabricate corners from one piece with minimum 18-inch long legs; seam for rigidity, seal with sealant. F. Fabricate flashings to allow tube to extend 2 inches over roofing frame. Return and brake edges.</p> <p>2.04 FLASHING A. Flashing Panels for Exterior Wall Penetrations: Premanufactured components and accessories as required to penetrate exterior wall building envelope; suitable for conduits and facade materials to be installed.</p> <p>2.05 ACCESSORIES A. Fasteners: Galvanized steel, with soft nonferrous washers. B. Primer Type: Zinc chromate. C. Concoaled Sealants: Non-curing butyl sealant. D. Exposed Sealants: ASTM C920; elastomeric sealant, with minimum movement capability as recommended by manufacturer for substrates to be sealed; color to match adjacent material.</p> <p>PART 3 EXECUTION</p> <p>3.01 EXAMINATION A. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly sealed and nailing strips are in place. B. Verify roofing termination and base flashings are in place, sealed, and secure.</p> <p>3.02 PREPARATION A. Install starter and edge strips, and cleats before starting installation. B. Seal back paint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mil, 0.015 inch. 3.03 INSTALLATION A. Comply with drawing details. B. Insert flashings into reglets to form tight fit; secure in place with lead wedges; pack remaining spaces with lead wool; seal flashings into reglets with sealant. C. Seal flashing flashings in place using caulking fasteners, and use exposed fasteners only where permitted. D. Apply plastic cement compound between metal flashings and felt flashings. E. Fit flashings tight in place; make corners square, surfaces true and straight in planes, and lines accurate to profiles. F. Exterior Flashing Receivers: Install in accordance with manufacturer's recommendations, and in proper relationship with adjacent construction, and as follows: G. Secure gutters and downspouts in place with concealed fasteners. H. Set splash pads under downspouts.</p> <p>END OF SECTION</p>	<p>SECTION 07 91 00 - PREFORMED JOINT SEALS</p> <p>GENERAL</p> <p>1.01 SECTION INCLUDES A. Precompressed foam seals. B. Compression gaskets. C. Prefomed strip seals.</p> <p>1.02 RELATED REQUIREMENTS A. Section 07 92 00 - Joint Sealants: Liquid and mastic joint sealants and their backing materials.</p> <p>1.03 SUBMITTALS A. See Section 01 30 00 - Administrative Requirements for submittal procedures. B. Product Data: Manufacturer's technical data sheets for each product, including chemical composition, movement capability, color availability, limitations on application, and installation instructions. C. Color Cards: For color selection. D. Installer's Qualification Statement.</p> <p>1.04 QUALITY ASSURANCE A. Installer Qualifications: Company specializing in performing work of the type specified in this section with at least three years of documented experience.</p> <p>1.05 WARRANTY A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements. B. Correct defective work within a two year period after Date of Substantial Completion. C. Warranty: Include coverage for installed sealers that fail to achieve watertight seal or exhibit loss of adhesion or cohesion.</p> <p>PART 2 PRODUCTS</p> <p>2.01 MANUFACTURERS A. Precompressed Foam Seals: 1. Balco, Inc; www.balcousa.com/#/se. 2. EMSEAL Joint Systems, Ltd; www.emseal.com/#/se. 3. Tremco Commercial Sealants & Waterproofing; www.tremco sealants.com/#/se. B. Compression Gaskets: C. Prefomed Strip Seals: 1. Sika Corporation; www.usa-sika.com/#/se. 2. Tremco Commercial Sealants & Waterproofing; www.tremco sealants.com/#/se. 3. Substitutions: See Section 01 60 00 - Product Requirements.</p> <p>2.02 PRECOMPRESSED FOAM SEALS A. Preformed Strip Seal: Factory formed profile for adhered application to face of joint substrate. 1. Measure size of existing joints before selecting seal width. 2. Products: a. Dow, DOWSIL 123 Silicone Seal: www.dow.com/#/se. b. Sika Corporation; Sika Silridge-300; www.usa-sika.com/#/se. c. Tremco Commercial Sealants & Waterproofing; Spectrem Restoration Overlay: www.tremco sealants.com/#/se. 3. Substitutions: See Section 01 60 00 - Product Requirements.</p> <p>2.05 ACCESSORIES A. Adhesive: As recommended by seal manufacturer. B. Masking Tape: Self-adhesive, nonabsorbent, non-staining, removable without adhesive residue, and compatible with other materials indicated. C. Substrate Cleaner: Non-corrosive, non-staining type recommended by seal manufacturer; compatible with joint forming materials. D. Sealant Primer: Self-adhesive polyethylene tape with surface that seal will not adhere to.</p> <p>2.06 DELIVERY, STORAGE, AND HANDLING A. Store in original containers in a cool, dry place. B. Backing Tape: Self-adhesive polyethylene tape with surface that seal will not adhere to.</p> <p>2.07 FABRICATION A. Verify that joints are ready to receive this work. B. Measure joint dimensions and verify that seal products are of the correct size to properly seal the joints.</p> <p>2.08 PREPARATION A. Prepare joints and install seals in accordance with manufacturer's written recommendations. B. Remove loose materials and foreign matter that could impair adhesion of sealant. C. Do not stretch precompressed seal; avoid joints except at corners, ends, and intersections; install with face 1/8 to 1/4 inch below adjoining surface. D. Compression Gaskets: 1. Install only when ambient temperature is within recommended application temperature range of adhesive. Consult manufacturer when installing outside this temperature range. 2. Prepare joints and install seals in accordance with manufacturer's written recommendations. 3. Remove loose materials and foreign matter that could impair adhesion of sealant. 4. Do not stretch precompressed seal; avoid joints except at corners, ends, and intersections; install with face 1/8 to 1/4 inch below adjoining surface. E. Compression Gaskets: 1. Install only when ambient temperature is within recommended application temperature range of adhesive. Consult manufacturer when installing outside this temperature range. 2. Prepare joints and install seals in accordance with manufacturer's written recommendations. 3. Remove loose materials and foreign matter that could impair adhesion of sealant. 4. Avoid joints except at ends, corners, and intersections; seal joints with adhesive; install with face 1/8 to 1/4 inch below adjoining surface. F. Prefomed Strip Seals: 1. Install when ambient temperature is within recommended application temperature range of adhesive, and consult with manufacturer before installing outside this temperature range. 2. Prepare joints and install seals in accordance with manufacturer's written recommendations. 3. Remove loose materials and foreign matter that could impair adhesion. 4. When installing over existing non-functioning sealant, remove portions of existing installation that protrude beyond surface. 5. Install existing sealant backing tape on surface of existing sealant installation to prevent adhesion of strip seal.</p> <p>2.09 CLEANING A. Clean adjacent soiled surfaces.</p> <p>2.10 PROTECTION A. Protect joints from damage until adhesives have properly cured.</p> <p>END OF SECTION</p> <p>SECTION 07 92 00 - JOINT SEALANTS</p> <p>PART 1 GENERAL</p> <p>1.01 SECTION INCLUDES A. Nonseal gunnable joint sealants. B. Self-leveling pourable joint sealants. C. Joint backings and accessories.</p> <p>1.02 RELATED REQUIREMENTS A. Section 07 91 00 - Prefomed Joint Seals: Precompressed foam, gaskets, and strip seals. B. Section 09 21 16 - Gypsum Board Assemblies: Sealing acoustical and sound-rated walls and ceilings. C. Section 09 30 00 - Tiling: Sealant between tile and plumbing fixtures and at joints with other materials and changes in plane.</p> <p>1.03 REFERENCE STANDARDS A. ASTM C661 - Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer; 2015 (Reapproved 2020). B. ASTM C794 - Standard Test Method for Adhesion-to-Peel of Elastomeric Joint Sealants; 2018 (Reapproved 2022). C. ASTM C834 - Standard Specification for Latex Sealants; 2017 (Reapproved 2023). D. ASTM C881/C881M - Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete; 2020a. E. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018. F. ASTM C1087 - Standard Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems; 2023. G. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2016 (Reapproved 2023). H. ASTM C1248 - Standard Test Method for Staining of Porous Substrate by Joint Sealants; 2022. I. ASTM C1362 - Standard Test Method for Determining Tensile Adhesion Properties of Sealants When Used in Exterior Insulation and Finishing Systems (EIFS) Joints; 2016 (Reapproved 2023). J. ASTM C1521 - Standard Practice for Evaluating Adhesion of Installed Waterproofing Sealant Joints; 2019 (Reapproved 2020). K. ASTM D2440 - Standard Test Method for Rubber Property-Durometer Hardness; 2015 (Reapproved 2021). L. ASTM D638 - Standard Test Methods for Tensile Properties of Plastics; 2022. M. ASTM E119 - Standard Test Method for Fire Tests of Building Construction and Materials; 2022. N. UL 263 - Standard for Fire Tests of Building Construction and Materials; Current Edition, Including All Revisions.</p> <p>1.04 SUBMITTALS A. See Section 01 30 00 - Administrative Requirements for submittal procedures. B. Product Data: Submit manufacturer's technical data sheets for each product to include the following: 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability. 2. Backing materials approved for use with the specific product. 3. Backing material recommended by sealant manufacturer. 4. Substrates that product is known to satisfactorily adhere to and with which it is compatible. 5. Substrates the product should not be used on. C. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools. D. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard color selections. E. Preconstruction Laboratory Test Reports: Submit at least four weeks prior to start of installation. F. Preinstallation Field Adhesion Test Plan: Submit at least two weeks prior to start of installation. G. Preinstallation Field Adhesion Test Reports: Submit filled out Preinstallation Field Adhesion Test Reports log within 10 days after completion of tests; include tagged test samples and photographic records. H. Executed warranty.</p> <p>1.05 QUALITY ASSURANCE A. Installer Qualifications: Company specializing in performing the work of this section and with at least three years of documented experience. B. Preconstruction Laboratory Testing: Arrange for sealant manufacturer's (s) to test each combination of sealant, substrate, backing, and accessories. C. Adhesion Testing: In accordance with ASTM C794. D. Compatibility Testing: In accordance with ASTM C1087. 3. Allow sufficient time for testing to avoid delaying the work. 4. Deliver sufficient samples to manufacturer for testing. 5. Report manufacturer's recommended corrective measures, if any, including primers or techniques not indicated in product data submittals.</p>	<p>C. Preinstallation Field Adhesion Test Plan: Include destructive field adhesion testing of one sample of each combination of sealant type and substrate, except interior acrylic latex sealants, and include the following for each tested sample. 1. Identification of testing agency. 2. Preinstallation Field Adhesion Test Log Form: Include the following data fields, with known information filled out: a. Test date. b. Copy of test method documents. c. Age of sealant and substrate materials. d. Test results, modeled after the sample form in the test method document. e. Indicate use of photographic record of test. D. Field Adhesion Test Procedures: 1. Allow sealants to fully cure as recommended by manufacturer before testing. 2. Have a copy of the test method document available during tests. 3. Record the type of failure that occurred, other information required by test method, and the information required on the Field Quality Control Log. 4. When performing destructive tests, also inspect the opened joint for proper installation characteristics recommended by manufacturer, and report any deficiencies. 5. Deliver the samples removed during destructive tests in separate sealed plastic bags, identified with project, location, test date, and test results, to Owner. 6. If any combination of sealant type and substrate does not show evidence of minimum adhesion or shows cohesion failure before minimum adhesion, report results to Architect. E. Destructive Field Adhesion Test: Test for adhesion in accordance with ASTM C1521, using Destructive Tail Procedure. 1. Sample: At least 18 inches long. 2. Minimum Elongation without Adhesive Failure: Consider the tail at rest, not under any elongation stress; multiply the stated movement capability of the sealant in percent by two; then multiply 1 inch by that percentage; if adhesion failure occurs before the 1-inch mark is that distance from the substrate, the test has failed. 3. If either adhesive or cohesive failure occurs before minimum elongation, take necessary measures to correct conditions and retest; record each modification to products or installation procedures.</p> <p>1.06 WARRANTY A. Deliver the samples removed during destructive tests in separate sealed plastic bags, identified with project, location, test date, and test results, to Owner. B. Manufacturer Warranty: Provide 2-year manufacturer warranty for installed sealants and accessories that fail to achieve a watertight seal, exhibit loss of adhesion or cohesion, or do not cure. Complete forms in Owner's name and return to manufacturer.</p> <p>PART 2 PRODUCTS</p> <p>2.01 MANUFACTURERS A. Nonseal Sealants: 1. Bostik Inc; www.bostik-us.com/#/se. 2. Dow; www.dow.com/#/se. 3. Hilli, Inc; www.hilli.com/#/se. 4. Tremco Commercial Sealants & Waterproofing; www.quikrete.com/#/se. 5. Sherwin-Williams Company; www.sherwin-williams.com/#/se. 6. Sika Corporation; www.usa-sika.com/#/se. 7. W. R. Meadows, Inc; www.wrmeadows.com/#/se. 8. Substitutions: See Section 01 60 00 - Product Requirements. B. Self-Leveling Sealants: 1. Bostik Inc; www.bostik-us.com/#/se. 2. Dow; www.dow.com/#/se. 3. QUIKRETE Companies; www.quikrete.com/#/se. 4. Sherwin-Williams Company; www.sherwin-williams.com/#/se. 5. Sika Corporation; www.usa-sika.com/#/se. 6. Tremco Commercial Sealants & Waterproofing; www.tremco sealants.com/#/se. 7. W. R. Meadows, Inc; www.wrmeadows.com/#/se. 8. Substitutions: See Section 01 60 00 - Product Requirements.</p> <p>2.02 JOINT SEALANT APPLICATIONS A. Scope: 1. Exterior Joints: a. Seal open joints except open joints indicated on drawings as not sealed. 2. Interior Joints: a. Seal open joints except open joints indicated on drawings as not sealed. 3. Do Not Seal: a. Interior weep holes in masonry. b. Joints indicated to be covered with expansion joint cover assemblies. c. Joints where sealant installation is specified in other sections. B. Exterior Joints: Use nonsag nonstaining silicone sealant, unless otherwise indicated. C. Interior Joints: Use nonsag polyurethane sealant, unless otherwise indicated. D. Interior Wet Areas: Bathrooms, restrooms, kitchens, food service areas, and food processing areas; fixtures in wet areas include plumbing fixtures, food service equipment, countertops, cabinets, and other similar items. E. Sound-Rated Assemblies: Walls and ceilings identified as STC-rated, sound-rated, or acoustical. F. Prefomed Joint Seal: See Section 07 91 00 for information.</p> <p>2.03 JOINT SEALANTS - GENERAL A. Sealants and Primers: Select sealants with acceptable levels of volatile organic compound (VOC) content. B. Colors: Best match to adjacent surfaces.</p> <p>2.04 NONSAG JOINT SEALANTS A. Nonsagging Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic. 1. Movement Capability: Plus and minus 25 percent, minimum. 2. Nonstaining to Porous Stone: Nonstaining to light-colored natural stone when tested in accordance with ASTM C1248. 3. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants. 4. Products: a. Dow, DOWSIL 755 SMS Building Sealant: www.dow.com/#/se. b. Dow, DOWSIL 790 Silicone Bulky Sealant: www.dow.com/#/se. c. Dow, DOWSIL 791 Silicone Weatherproofing Sealant: www.dow.com/#/se. d. Dow, DOWSIL 795 Silicone Building Sealant: www.dow.com/#/se. e. Pecora Corporation; Pecora 890 NST (Non-Staining Technology); www.pecora.com/#/se. f. Pecora Corporation; Pecora 864 NST (Non-Staining Technology); www.pecora.com/#/se. g. Sika Corporation; Sikasil WS-290: www.usa-sika.com/#/se. h. Sika Corporation; Sikasil WS-295: www.usa-sika.com/#/se. i. Sika Corporation; Sikasil Z8NS: www.usa-sika.com/#/se. j. Tremco Commercial Sealants & Waterproofing; Spectrem 1: www.tremco sealants.com/#/se. k. Tremco Commercial Sealants & Waterproofing; Spectrem 2: www.tremco sealants.com/#/se. l. M. Substitutions: See Section 01 60 00 - Product Requirements. B. Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic. 1. Movement Capability: Plus and minus 25 percent, minimum. 2. Products: a. Dow, DOWSIL 999-A Building and Glazing Sealant: www.dow.com/#/se. b. Dow, DOWSIL 999-B Building and Glazing Sealant: www.dow.com/#/se. c. Pecora Corporation; Pecora 860: www.pecora.com/#/se. d. Pecora Corporation; Pecora 890FTS (Field-Tintable Smooth); www.pecora.com/#/se. e. Pecora Corporation; Pecora 890FTS-TXTR (Field-Tintable Textured); www.pecora.com/#/se. f. Sherwin-Williams Company; Silconex Rubber All Purpose Sealant: www.sherwin-williams.com/#/se. g. Sika Corporation; Sikasil GP: www.usa-sika.com/#/se. h. Sika Corporation; Sikasil WS-295: www.usa-sika.com/#/se. i. Sika Corporation; Sikasil N-Plus US: www.usa-sika.com/#/se. j. Sika Corporation; Sikasil Z8NS: www.usa-sika.com/#/se. k. Substitutions: See Section 01 60 00 - Product Requirements. C. Mildew-Resistant Silicone Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or traffic. 1. Color: White. 2. Products: a. Pecora Corporation; Pecora 898 NST (Non-Staining Technology): www.pecora.com/#/se. B. Substitutions: See Section 01 60 00 - Product Requirements. D. Polymer Sealant: ASTM C920; single component, cured sealant is paintable and mold/mildew resistant, low odor VOC, and ultraviolet (UV) resistant. 1. Color: White. 2. Products: a. DAP Products Inc; DYNAFLEX 800 Sealant: www.dapsealant.com/#/se. b. Sika Cover Inc; SIGA-Metall: www.siga-wiss/usa/global_en/#/se. c. Substitutions: See Section 01 60 00 - Product Requirements. E. Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multi-component; not expected to withstand continuous water immersion or traffic. 1. Movement Capability: Plus and minus 25 percent, minimum. 2. Products: a. Sherwin-Williams Company; Stampede 1-J/TX Polyurethane Sealant: www.sherwin-williams.com/#/se. b. Sherwin-Williams Company; Stampede 2NS Polyurethane Sealant: www.sherwin-williams.com/#/se. c. Sika Corporation; Sikaflex-15: www.usa-sika.com/#/se. d. Sika Corporation; Sikaflex-15 LR: www.usa-sika.com/#/se. e. Sika Corporation; Sikaflex-2 NS: www.usa-sika.com/#/se. f. Tremco Commercial Sealants & Waterproofing; Dymonic 100: www.tremco sealants.com/#/se. g. Tremco Commercial Sealants & Waterproofing; Vulkan 116: www.tremco sealants.com/#/se. h. W. R. Meadows, Inc; POURTHANE NS: www.wrmeadows.com/#/se. I. Insulation: See Section 01 60 00 - Product Requirements. F. Nonseal Traffic-Forgo Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multi-component; explicitly approved by manufacturer for continuous water immersion and traffic without the necessity to recess sealant below traffic. 1. Movement Capability: Plus and minus 25 percent, minimum. 2. Hardness Range: 30 to 30, Shore A, when tested in accordance with ASTM C661. 3. Products: a. Mapei; Mapeflex P2 NS: www.mapei.com/#/se. b. Substitutions: See Section 01 60 00 - Product Requirements. G. Epoxy Sealant: ASTM C81/C881M, Type 1 and II, Grade 3, Class B and C; two-component. 1. Hardness Range: 65 to 75, Shore D, when tested in accordance with ASTM C661. 2. Products: a. Pecora Corporation; DynaPoxy EP-200 Two-Part Epoxy Security Sealant: www.pecora.com/#/se. b. Substitutions: See Section 01 60 00 - Product Requirements. H. Acrylic-Urethane Sealant: ASTM C920, Grade NS, Uses M and A; single component; paintable; not expected to withstand continuous water immersion or traffic. 1. Movement Capability: Plus and minus 12-1/2 percent, minimum. 2. Products: a. DAP Products Inc; DYNAFLEX 800 Sealant: www.dapsealant.com/#/se. b. Sherwin-Williams Company; Shermax Urethaneized Elastomeric Sealant: www.sherwin-williams.com/#/se. 3. Noncuring Butyl Sealant: Solvent-based, single component, nonsag, nonskinning, nonhardening, nonbleeding; nonporous permeable; intended for fully concealed applications. 1. Products: a. Pecora Corporation; Pecora BA-98 Non-Skinning Butyl Sealant: www.pecora.com/#/se. b. Tremco Commercial Sealants & Waterproofing; Acoustical/Curtainwall Seal: www.tremco sealants.com/#/se. c. Substitutions: See Section 01 60 00 - Product Requirements. I. Thermoplastic Elastomer Joint Sealant: Single component, nonsag, thermoplastic elastomer; intended for glazing and siding applications and for sealing residential wood, PVC and aluminum window perimeters. 1. Products: a. Tremco Commercial Sealants & Waterproofing; Tremco 830: www.tremco sealants.com/#/se. b. Substitutions: See Section 01 60 00 - Product Requirements.</p>	<p>2.05 SELF-LEVELING JOINT SEALANTS A. Self-Leveling Silicone Sealant: ASTM C920, Grade P, Uses M and A; single or multi-component, explicitly approved by manufacturer for traffic exposure when recessed below traffic surface; not expected to withstand continuous water immersion. 1. Movement Capability: Plus 100 percent, minus 50 percent, minimum. 2. Products: a. Dow, DOWSIL SL Parking Structure Sealant: www.dow.com/#/se. b. Sika Corporation; Sikasil Z8RCS: www.usa-sika.com/#/se. c. Tremco Commercial Sealants & Waterproofing; Spectrem 900SL: www.tremco sealants.com/#/se. d. Substitutions: See Section 01 60 00 - Product Requirements. B. Self-Leveling Polyurethane Sealant for Horizontal Expansion Joints: ASTM C920, Grade P, Uses T, M, and O; multi-component; explicitly approved by manufacturer for horizontal expansion joints. 1. Movement Capability: Plus and minus 25 percent, minimum. 2. Hardness Range: 30 to 35, Shore A, when tested in accordance with ASTM C661. 3. Products: a. Pecora Corporation; Urepan NR-200: www.pecora.com/#/se. b. Tremco Commercial Sealants & Waterproofing; www.tremco sealants.com/#/se. c. Substitutions: See Section 01 60 00 - Product Requirements. C. High Quality Latex-Based Sound Sealant: ASTM C894, Type OF an opaque sealant, and Grade O, 32 degrees F, meets requirements for low-temperature flexibility. 1. Products: a. Substitutions: See Section 01 60 00 - Product Requirements. D. Semi-Rigid Self-Leveling Epoxy Joint Filler: Epoxy or epoxy/polyurethane copolymer; intended for filling cracks and control joints not subject to significant movement; rigid enough to support concrete edges under traffic. 1. Composition: Multi-component, 100 percent solids by weight. 2. Durometer Hardness: Minimum of 85 for Type A or 35 for Type D, after seven days when tested in accordance with ASTM D2240. 3. Joint Width, Minimum: 1/8 inch. 4. Products: a. Euclid Chemical Company; EUCO 700: www.euclidchemical.com/#/se. b. Mapei; Mapeflex Joint Sealer EP 90/50: www.mapei.com/#/se. c. Substitutions: See Section 01 60 00 - Product Requirements. 2.06 ACCESSORIES A. Sealant Backing Materials: General: Materials placed in joint before applying sealants; assists sealant performance and saves sealant. Composed of sealant profile and preventing three-part cure cure; type and size recommended by sealant manufacturer for compatibility with sealant, substrate, and application. B. Overlay Extrusion for Glazing System Joint Protection: Rubber profiled extrusions placed over joints in glazing system and provided with watertight seal. 1. Profile: As required to match existing metal glazing cap requirements. 2. Products: a. Tremco Commercial Sealants & Waterproofing; Spectrem Restoration Overlay: www.tremco sealants.com/#/se. b. Substitutions: See Section 01 60 00 - Product Requirements. C. Prefomed Extruded Silicone Joint Seal: Pre-cured low-modulus silicone extrusion, in sizes to fit applications indicated on drawings, combined with a neutral-curing liquid silicone sealant for bonding joint seal to substrates. 1. Size: 1 inch wide, in rolls 100 feet long. 2. Thickness: 0.78 inch, with ridges along outside bottom edges for bonding area. 3. Products: a. Tremco Commercial Sealants & Waterproofing; Spectrem Simple Seal: www.tremco sealants.com/#/se. b. Substitutions: See Section 01 60 00 - Product Requirements. D. Prefomed Extruded Polyurethane Joint Seal: Medium-modulus, preformed polyurethane extrusion used to bridge joints under elastomeric wall coatings, in sizes to fit applications indicated on drawings, combined with polyurethane sealant for bonding joint seal to substrates. 1. Size: 1 1/2 inch wide, in rolls 100 feet long. 2. Thickness: 0.051 inch, with ridges along outside bottom edges for bonding area. 3. Products: a. Tremco Commercial Sealants & Waterproofing; www.tremco sealants.com/#/se. b. Substitutions: See Section 01 60 00 - Product Requirements. E. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application. F. Joint Cleaner: Noncorrosive and nonstaining type, type recommended by sealant manufacturer; compatible with joint forming materials. G. Primer: As recommended by sealant manufacturer to suit application; nonstaining.</p> <p>PART 3 EXECUTION</p> <p>3.01 EXAMINATION A. Verify that joints are ready to receive work. B. Verify that backing materials are compatible with sealants. C. Verify that backer rods are of the correct size. D. Preinstallation Adhesion Testing: Install a sample for each test location indicated in the test plan. E. Test and evaluate sample as specified in PART 1.05 QUALITY ASSURANCE article. 2. Notify Architect of date and time that tests will be performed, at least seven days in advance. 3. Record each test on Preinstallation Adhesion Test Log as indicated. 4. If any sample fails, reprepare products and installation procedures, consult manufacturer, or take other measures that are necessary to ensure adhesion; retest in a different location; if unable to obtain satisfactory adhesion, report to Architect. 4. After completion of tests, remove remaining sample material and prepare joints for new sealant installation.</p> <p>3.02 PREPARATION A. Remove loose materials and foreign matter that could impair adhesion of sealant. B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions. C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193. D. Mask elements and surfaces adjacent to joints from damage and displacement due to sealant work; be aware that sealant drips and seams may not be completely removable. E. Concrete Floor Joints That Will Be Exposed in Completed Work: Test joint filler in an inconspicuous area to verify that it will not stain or discolor slab.</p> <p>3.03 INSTALLATION A. Install this work in accordance with sealant manufacturer's requirements for preparation of surfaces and metal installation details. B. Provide joint sealant installations complying with ASTM C1193. C. Install bond breaker backing tape where backer rod cannot be used. D. Install sealant over fire air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces. E. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed. F. Nonseal Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface. G. Concrete Floor Joint Filler: After full cure, shave joint filler flush with top of concrete slab.</p> <p>END OF SECTION</p> <p>SECTION 08 11 13 - HOLLOW METAL DOORS AND FRAMES</p> <p>PART 1 - GENERAL</p> <p>1.1 RELATED DOCUMENTS A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.</p> <p>1.2 SUMMARY A. Section Includes: 1. Standard and custom hollow metal doors and frames. 2. Standard and custom hollow metal door and frame frames. 3. Louvers installed in hollow metal doors. 4. Light frames and glazing installed in hollow metal doors. B. Related Sections: 1. Division 01 Section "General Conditions". 2. Division 04 Section "Unit Masonry" for embedding anchors for hollow metal work into masonry construction. 3. Division 08 Section "Flush Wood Doors". 4. Division 08 Section "Glass and Glass View Panels in Hollow Metal Doors". 5. Division 08 Section "Door Hardware". 6. Division 08 Section "Access Control Hardware". 7. Division 09 Sections "Exterior Painting" and "Interior Painting" for field painting hollow metal doors and frames. C. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction. 1. ANSI/SDI A250.8 - Recommended Specifications for Standard Steel Doors and Frames. 2. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors and Frames, Frames Anchors and Hardware Reinforcing. 3. ANSI/SDI A250.6 - Recommended Practice for Reinforcing for Hardware Reinforcing on Standard Steel Doors and Frames. 4. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames. 5. ANSI/SDI A250.11 - Recommended Erection Instructions for Steel Frames. 6. ANSI/SDI A250.13 - Testing and Rating of Swire Windstorm Resistant Components for Swing Door Assemblies. 7. ASTM A1008 - Standard Specification for Steel Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability. 8. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvalume) by the Hot-Dip Process. 9. ASTM A924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process. 10. UL 501-113 Standard Practice for Determining the Steady-State Thermal Transmittance of Steel Door & Frame Assemblies. 11. ASTM C 1363 - Standard Test Method for Thermal Performance of Building Assemblies by Means of a Hot Box Apparatus. 12. ASTM C1199 - Standard Test Method</p>
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<p>1.4 QUALITY ASSURANCE A.Source Limitations: Obtain hollow metal doors and frames through one source from a single manufacturer wherever possible. B.Quality Standard: In addition to requirements specified, furnish SDI-Certified manufacturer products that comply with ANS/SDI A250.8, latest edition, "Recommended Specifications for Standard Steel Doors and Frames". C.Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings, based on testing at positive pressure according to UL10C (neutral pressure at 40" above sill) or UL 10C. D. Oversize Fire-Rated Door Assemblies: For units exceeding sizes of tested assemblies, attach construction label certifying doors are built to standard construction requirements for tested and labeled fire-rated door assemblies except for size. E. Temperature-Rise Limit: Where indicated and at all vertical exit enclosures (stairwell openings) and exit passageways, provide doors that have a maximum transmitted temperature end point of not more than 450 deg F (250 deg C) above ambient after 30 minutes of standard fire test exposure. F.Smoke Control Door Assemblies: Comply with NFPA 105. G. Smoke "S" Label: Doors to bear "S" label, and include smoke and draft control gasketing applied to frame and on meeting stiles of pair doors. H. Fire-Rated, Borrowed-Light Frame Assemblies: Assemblies complying with NFPA 80 that are listed and labeled, by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 257. Provide labeled glazing material. I.Hurricane Resistant Exterior Openings (State of Florida including High Velocity Hurricane Zone (HVHZ): Provide exterior hollow metal doors and frames as complete and tested assemblies, or component assemblies, including approved hardware specified under Section 08710 "Door Hardware", to meet the design pressures, debris impact resistance, and glass and glazing requirements as detailed in the current State of Florida building code sections applicable to the Project. J. Each unit to bear third party permanent label in accordance with Florida Building Code requirements. K.Storm Shelter Openings: Provide complete door systems for hurricane or tornado storm shelters, and other areas of refuge, complying and tested according to ICC 500 (2014/2022), ICC/ANSI Standard for the Design and Construction of Storm Shelters. L. Each unit to bear third party permanent label indicating compliance with the referenced testing standards. M. Pre-Submittal Conference: Conduct conference with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier, Installer, and Contractor to review project methods and procedures for installing hollow metal doors and frames and to verify installation of electrical knockout boxes and conduit at frames with electrical and access control hardware. 1.5 DELIVERY, STORAGE, AND HANDLING A.Deliver hollow metal work palletized, wrapped, or crated to provide protection during transit and Project site storage. Do not use non-vented plastic. B.Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and Mullions. C.Store hollow metal work under cover at Project site. Place in stacks of five units maximum in a vertical position with heads up, spaced by blocking, on minimum 4-inch high wood blocking. Do not store in a manner that traps excess humidity. D. Provide minimum 1/4-inch space between each stacked door to permit air circulation. Door and frames to be stacked in a vertical upright position. 1.6 PROJECT CONDITIONS A.Field Measurements: Verify actual dimensions of openings by field measurements before fabrication. 1.7 COORDINATION A.Coordinate installation of anchorages for hollow metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation. B.Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace doors that fail in mullions or workmanship within specified warranty period. 2. WARRANTY A. Installation and finishing that may be required due to repair or replacement of defective doors. PART 2 - PRODUCTS 2.1 MANUFACTURERS A.Manufacturers: Subject to compliance with requirements, provide steel doors and frames from a SDI Certified manufacturer: 1.CEOO Door Products (C). 2.Curries Company (CU). 2.2 MATERIALS A.Cold-Rolled Steel Sheet: ASTM A 1008/A 1009M, Commercial Steel (CS), Type B; suitable for exposed applications. B.Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating. C.Frame Anchors: ASTM A 653/A 653M, Commercial Steel (CS), Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating. 2.3 HOLLOW METAL DOORS A.General: Provide 1-3/4 inch doors as designed indicated, not less than thickness indicated; fabricated with smooth surfaces, with visible joints and seams on exposed faces unless otherwise indicated. Comply with ANS/SDI A250.8 and ANS/NAAMH HHMA 867. B.Exterior Doors: Face sheets fabricated of commercial quality hot-dipped zinc coated steel that complies with ASTM A 653/A 653M, Coating Designation A60. Provide doors complying with requirements indicated below by referencing ANS/SDI A250.8 for level and model and ANS/SDI A250.4 for physical performance level: 1.Design: Flush panel. 2.Core Construction: Manufacturer's standard polystyrene. Where indicated, provide doors fabricated as thermal-rated assemblies with a minimum R-value of 2.8 or better. 3.Level/Model: Level 3 and Physical Performance Level A (Extra Heavy Duty), Minimum 16 gauge (0.053-inch - 1.3-mm) thick steel, Model 2. 4.Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet. Doors with an inverted top channel to include a steel closure channel, screw attached, with the web of the channel flush with the face sheets of the door. Plastic or composite channel fillers is not acceptable. 5.Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9" or minimum 14 gauge continuous channel with pierced holes, drilled and tapped. C.Hardware Reinforcements: Fabricate according to ANS/SDI A250.6 with reinforcing plates from same material as door face sheets. C.Interior Doors: Face sheets fabricated of commercial quality cold rolled steel that complies with ASTM A 1008/A 1009M. Provide doors complying with requirements indicated below by referencing ANS/SDI A250.8 for level and model and ANS/SDI A250.4 for physical performance level: 1.Design: Flush panel. 2.Core Construction: Manufacturer's standard kraft-paper honeycomb, or one-piece polystyrene core, securely bonded to both faces. A. Fire Door Core: As required to provide fire-protection and temperature-rise ratings indicated. 3.Level/Model: Level 2 and Physical Performance Level B (Heavy Duty), Minimum 18 gauge (0.042-inch - 1.0-mm) thick steel, Model 2. 4.Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet. 5.Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9" or minimum 14 gauge continuous channel with pierced holes, drilled and tapped. D.Hardware Reinforcements: Fabricate according to ANS/SDI A250.6 with reinforcing plates from same material as door face sheets. D.Manufacturers Basis of Design: 1.Curries Company (CU) - Polystyrene Core - 707 Series. 2.4 HOLLOW METAL FRAMES A.General: Comply with ANS/SDI A250.8 and with details indicated for type and profile. B.Thermal Break Frames: Subject to the same compliance standards and requirements as standard hollow metal frames. Tested for thermal performance in accordance with NFRC 102, and resistance to air infiltration in accordance with NFRC 400. Where indicated provide thermal broken frame profiles available for use in both masonry and drywall construction. Fabricate with 1/16" positive thermal break and integral vinyl weatherstripping. C.Exterior Frames: Fabricated of hot-dipped zinc coated steel that complies with ASTM A 653/A 653M, Coating Designation A60. D. Fabricate frames with mitered or coped corners. Profile as indicated on drawings. E. Frames: Minimum 16 gauge (0.053-inch - 1.3-mm) thick steel sheet. F.Manufacturers Basis of Design: 1.Curries Company (CU) - M Series. 2.5 FRAME ANCHORS A.Jamb Anchors: 1.Masonry Type: Adjustable strap-and-strap or T-shaped anchors to suit frame size, formed from A60 metallic coated material, not less than 0.042 inch thick, with corrugated or perforated straps not less than 2 inches wide and 10 inches long; or wire anchors not less than 0.177 inch thick. 2.Stud Wall Type: Designed to engage stud and not less than 0.042 inch thick. 3.Hurricane Opening Anchors: Types as tested and required for indicated wall types to meet specified design pressure and impact rating to be provided. B.Floor Anchors: Floor anchors to be provided at each jamb, formed from A60 metallic coated material, not less than 0.042 inches thick. C.Mortar Guards: Formed from same material as frames, not less than 0.016 inches thick. D.LOUVERS A.Metal Louvers: Unless otherwise indicated provide louvers to meet the following requirements. 1.Blade Type: Vision proof inverted V or inverted Y. 2.Metal and Finish: Galvanized steel, 0.040 inch thick, factory primed for paint finish with baked enamel or powder coated finish. Match pre-finished door paint color where applicable. B.Louvers for Fire Rated Doors: Metal louvers with fusible link and closing device, listed and labeled for use in doors with fire protection rating of 1-1/2 hours and less. C.Manufacturers: Subject to compliance with requirements, provide louvers to meet rating indicated. D.Metal and Finish: Galvanized steel, 0.040 inch thick, factory primed for paint finish with baked enamel or powder coated finish. Match pre-finished door paint color where applicable. 2.7 LIGHT OPENINGS AND GLAZING A.Stops and Moldings: Provide stops and moldings around glazed lites where indicated. Form corners of stops to allow moldings with butted or mitered hairline joints at fabricator's shop. Fixed and removable stops for all multiple glazed lites each to be removed independently. Coordinate frame rabbet widths between fixed and removable stops with the type of glazing and installation indicated. B.Molding for Glazed Lites in Doors and Loose Stops for Glazed Lites in Frames: Minimum 20 mesh rigid, fabricated from same material as door face sheet in which they are installed. C.Fixed Frame Moldings: Formed integral with hollow metal frames, a minimum of 5/8 inch (16 mm) high unless otherwise indicated. Provide fixed frame moldings and stops on outside of exterior and on outside of interior doors and frames. D. Preframed Metal Frames for Light Openings: Manufacturer's standard frame formed of 0.048-inch-thick, cold rolled steel sheet; with baked enamel or powder coated finish; and approved for use in doors of fire protection rating indicated. Match pre-finished door paint color where applicable. 2.8 ACCESSORIES A.Mullions and Transom Bars: Join to adjacent members by welding or rigid mechanical anchors. B.Great Guards: Formed from same material as frames, not less than 0.016 inch mechanical anchors. 2.9 FABRICATION A.Fabricate hollow metal work to be rigid and free of defects, warp, or buckle. Assemble form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. When shipping limitations so dictate, frames for large openings are to be fabricated in sections for splicing or splicing in the field. B.Tolerances: Fabricate hollow metal work to tolerances indicated in ANS/SDI A250.8.</p>	<p>C.Hollow Metal Doors: 1.Exterior Doors: Provide optional weep-hole openings in bottom of exterior doors to permit moisture to escape where specified. 2.Glazed Lites: Factory cut openings in doors with applied trim or kits to fit. Factory install glazing where indicated. 3.Astragals: Provide overlapping astragals as noted in door hardware sets in Division 08 Section "Door Hardware" on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4 inch beyond edge of door in which astragal is mounted. 4.Continuous Hinge Reinforcement: Provide welded continuous 12 gauge strap for continuous hinges specified in hardware sets in Division 08 Section "Door Hardware". D. Hollow Metal Frames: 1.Shipping Limitations: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angle at each joint, fabricated of same thickness metal as frames. 2.Welded Frames: Weld flush face joints continuously; grind, mill, and make smooth, flush, and invisible. 3. Frame F (250 deg C) above ambient after 30 minutes of standard fire test exposure. 4.Smoke Control Door Assemblies: Comply with NFPA 105. A. Smoke "S" Label: Doors to bear "S" label, and include smoke and draft control gasketing applied to frame and on meeting stiles of pair doors. 3.Sideglit and Transom Bar Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as door frame. Fasten members at crossings and to jambs by butt welding. 4. Provide countersink, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated for removable stops, provide security screws at exterior locations. 5.Mortar Guards: Provide guard boxes at back of hardware mortises in frames at all hinges and strike prep openings of ground opening routings. 6.Floor Anchors: Weld anchors to bottom of jambs and mullions with at least four spot welds per anchor. 7.Jamb Anchors: Provide number and spacing of anchors as follows: a. Masonry Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches on-center and as follows: 1) Two anchors per jamb up to 60 inches high. 2) Three anchors per jamb from 60 to 90 inches high. 3) Four anchors per jamb from 90 to 120 inches high. 4) Four anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 120 inches high. b. Stud Wall Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches c/c and as follows: 1) Three anchors per jamb up to 60 inches high. 2) Four anchors per jamb from 60 to 90 inches high. 3) Five anchors per jamb from 90 to 96 inches high. 4) Five anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 96 inches high. 5) Two anchors per head for frames above 42 inches wide and mounted in metal stud partitions. 8.Door Silencers: Except on weatherstripped or gasketed doors, drill stop to receive door silencers. Silencers to be supplied by frame manufacturer regardless if specified in Division 08 Section "Door Hardware". 9.Bluminox Coatings: Where frames are fully grouted and primed, apply a mortise and grout or mortar, coat inside of frame throat with a water based bituminous or asphaltic emulsion coating to a minimum thickness of 3 mils DFT, tested in accordance with UL 10C and applied to the frame under a 3rd party independent follow up service procedure. E.Hardware Preparation: Factory prepare hollow metal work to receive template mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to the Door Hardware Schedule and templates furnished as specified in Division 08 Section "Door Hardware". A. Locate hardware as indicated, or if not indicated, according to ANS/SDI A250.8. 2.Reinforce doors and frames to receive non-template, mortised and surface mounted door hardware. 3.Comply with applicable requirements in ANS/SDI A250.6 and ANS/DH1 A1115 Series Specifications for preparation of hollow metal work for hardware. 4.Coordinate locations of conduit and wiring boxes for electrical connections provided by 26 Sections. 2.10 STEEL FINISHES A.Prime Finishes: Doors and frames to be cleaned, and chemically treated to insure maximum finish paint adhesion. Surfaces of the door and frame exposed to view and frame to receive a mortise and grout or mortar. 1.Shop Primer: Manufacturer's standard, fast-curing, lead and chromate free primer complying with ANS/SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; and compatible with substrate and field-applied coatings. PART 3 - EXECUTION 3.1 EXAMINATION A.Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work. B.General Contractor to verify the accuracy of dimensions given to the steel door and frame manufacturer for existing openings or existing frames (strike height, hinge spacing, hinge back set, etc.). C.Proceed with installation only after unsatisfactory conditions have been corrected. 3.2 PREPARATION A.Remove welded in shipping spreaders installed at factory. Restore exposed faces by grinding, filing, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces. B.Prior to installation, adjust and secure brace welded hollow metal frames for square, level, twist, and plumb condition. Tolerances shall comply with SDI-117 "Manufacturing Tolerances Standard Steel Doors and Frames." C. Drill and tap doors and frames to receive hardware and non-template mortised and surface mounted door hardware. E. Verify tolerances against manufacturer's installation instructions for tornado and hurricane storm shelter openings. 3.3 INSTALLATION A.General: Install hollow metal work plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions. B.Hollow Metal Frames: Install hollow metal frame of size and profile indicated. Comply with ANS/SDI A250.11 and NFPA 80 at fire rated openings. 1. Set frames accurately in position, plumbed, leveled, aligned, and braced securely until permanent anchors are set. After wall construction is complete and frames properly set and secured, remove temporary braces, leaving surfaces smooth and undamaged. Shim as necessary to comply with installation tolerances. 2.Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with post-installed expansion anchors. 3.Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with mortar. 4.Great Requirements: Do not grout head of frames unless reinforcing has been installed in head of frame. Do not grout vertical or horizontal closed mullion members. C.Hollow Metal Doors: Fit hollow metal doors accurately in frames, with clearances specified below. Shim as necessary. 1.Non-Fire-Rated Standard Steel Doors: a.Jambs and Head: 1/8 inch plus or minus 1/16 inch. b. Between Edges of Pairs of Doors: 1/8 inch plus or minus 1/16 inch. c. Between Bottom of Door and Top of Threshold: Maximum 1/8 inch. d. Between Bottom of Door and Top of Finish Floor (No Threshold): Maximum 3/4 inch. 2. Fire-Rated Doors: Comply with clearances according to NFPA 80. D. Field Glazing: Install door glazing in accordance with Division 08 Section "Glazing" and with hollow metal manufacturer's written instructions. 3.4 ADJUSTING AND CLEANING A.Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow metal work that is warped, bowed, or otherwise unacceptable. B.Remove grout and other bonding material from hollow metal work immediately after installation. C.Prime-Coat and Paint. 3.5 FIELD QUALITY CONTROL A.Field Inspection (Punch Report): Reference Division 01 Sections "Closeout Procedures". Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating, and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected. 1. Organization of List: Include separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Items and Video Recordings.</p>	<p>2.03 DOOR FINISHES A.Veneer Facing for Transparent Finish: Red oak, veneer grade in accordance with quality standard indicated, plain sliced (flat cut), with book match between leaves of veneer, running match of spliced veneer leaves assembled on door or panel face. B.Vertical Edges: Any option allowed by quality standard for grade. 2. "Running Match" each pair of doors and doors in close proximity to each other. 3. "Pair Match" each pair of doors; "Set Match" pairs of doors within 10 feet of each other when doors are closed. C.Transoms: Continuous match to doors. 2.04 DOOR CONSTRUCTION A.Fabricate doors in accordance with door quality standard specified. B. Glazed Doors: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings. C.Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions. D. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard. E. Provide edge clearances in accordance with the quality standard specified. 2.05 FINISHES - WOOD VENEER DOORS A. Finish: In accordance with AWI/AWWAC/WI (AWS) or AWWAC/WI (NAAWS), Section 5 - Finishing for grade specified and as follows: 1. Transparent: a. System - 1, Lacquer, Nitrocellulose. b. Stain: As selected by Architect. c. Sheen: Flat. 2.06 ACCESSORIES A.Hollow Metal Door Frames: See Section 08 11 13. B. Door Window Frames: Door window frames with glazing securely fastened within door opening. 1. Frame Material: 18 gauge, 0.0478 inch, galvanized steel. C. Glazing: See Section 08 80 00. D. Glazing Slops: Wood, of same species as door facing, butted corners; prepared for countersink style tamper proof screws. E.Astragals and Edges for Double Doors: Pairs of doors astragals, and door edge sealing and protection devices. 1. Provide surface mounted astragal to cover or fill space for full door height between pair doors or door and adjacent jamb. 2.Astragal Type: Split, two parts, and with automatic locking, cutouts for other door hardware, and sealing spacers. F.Astragals for Non-Rated Double Doors: Steel, T shaped, overlapping and recessed at face edge. PART 3 EXECUTION 3.01 EXAMINATION A. Verify existing conditions before starting work. B. Verify that opening sizes and tolerances are acceptable. C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment. 3.02 INSTALLATION A. Install doors in accordance with manufacturer's instructions and specified quality standard. B. Factory-Finished Doors: Do not field cut or trim; if fit or clearance is not correct, replace door. C. Use machine tools to cut or drill for hardware. D. Coordinate installation of doors with installation of frames and hardware. E. Coordinate installation of glazing. 3.03 TOLERANCES A. Comply with specified quality standard for fit and clearance tolerances. B. Comply with specified quality standard for telegraphing, warp, and squariness. 3.04 ADJUSTING A. Adjust doors for smooth and balanced door movement. B. Adjust closing devices for full closure. END OF SECTION SECTION 08 31 00 - ACCESS DOORS AND PANELS PART 1 - GENERAL 1.01 SECTION INCLUDES A. Wall-mounted access units. B. Railing-mounted access units. 1.02 RELATED REQUIREMENTS A. Section 09 11 13 - Exterior Painting: Field paint finish. B. Section 09 11 23 - Interior Painting: Field paint finish. 1.03 SUBMITTALS A. See Section 01 30 00 - Administrative Requirements for submittal procedures. C. Proceed with installation only after unsatisfactory conditions have been corrected. C. Shop Drawings: Indicate exact position of each access door and/or panel unit. 1.04 QUALITY ASSURANCE A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience. B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years documented experience. PART 2 - PRODUCTS A. Wall-Mounted Units with Return Air Grille: 1. Panel Material: Aluminum extrusions with gypsum board inlay. 2. Panel Material: Hinged, standard duty, with tool-operated spring or cam lock and no handle. 3. Gypsum Board Mounting Criteria: Provide drywall lead frame with door surface flush with wall surface. 4. Masonry Mounting Criteria: Provide surface-mounted frame with door surface flush with frame surface. 1. Size: 12 by 12 inches. 2. Door Panel: Hinged, standard duty, with tool-operated spring or cam lock and no handle. 3. Gypsum Board Mounting Criteria: Provide drywall lead frame with door surface flush with wall surface. installed expansion anchors. 2.02 WALL- AND CEILING-MOUNTED ACCESS UNITS A.Manufacturers: 1.ACUDOR Products Inc. www.acudor.com/#se. 2. Babcock Davis; _____; www.babcockdavis.com/#se. 3. BAUCO Access Panel Solutions Inc.; www.baucos.com/#se. 4. Elmдор; www.elmdor.com/#se. 5. FF Systems, Inc. www.fyesteminc.com/#se. 6.Substitutions: See Section 01 60 00 - Product Requirements. B. Wall- and Ceiling-Mounted Units: Factory-fabricated door or frame, fully assembled units with corner joints welded, filed and ground flush; square and without rack or warp; coordinate requirements with type of installation assembly being used for each unit. 1. Door Style: Single thickness with rolled or turned in ends. 2. Frames: 16-gauge, 0.0598-inch minimum thickness. 3. Heavy-Duty Frames: 14-gauge, 0.0747-inch minimum thickness. 4. Single Steel Sheet Door Panels: 16-gauge, 0.0625-inch minimum thickness. 5. Units in Fire-Rated Assemblies: Fire ratings as required by applicable code for fire-rated assembly that access doors are being installed. 6. Steel Finish: Primed. 7. Primed and Factory Finish: Polyester powder coat; color to be selected by architect from manufacturer's full range. 8. Hardware: a. Hinges for Non-Fire-Rated Units: Concealed, constant force closure spring type. PART 3 EXECUTION 3.01 EXAMINATION A. Verify that rough openings are correctly sized and located. B. Begin installation only after substrates have been properly prepared, and if the responsibility of another Architect, notify Architect of unsatisfactory preparation before proceeding. 3.02 PREPARATION A. Clean surfaces thoroughly prior to proceeding with this work. B. Prepare surfaces using methods recommended by manufacturer for applicable substrates in accordance with project conditions. 3.03 INSTALLATION A. Install units in accordance with manufacturer's instructions. B. Install frames, plumb and level, and secure units rigidly in place. C. Position units to provide convenient access to concealed equipment when necessary. END OF SECTION SECTION 08 33 23 - OVERHEAD COILING DOORS PART 1 - GENERAL 1.01 SECTION INCLUDES A. Exterior coiling doors. 1.02 RELATED REQUIREMENTS A. Section 07 20 20 - Sealants: Sealing joints between frames and adjacent construction. 1.03 REFERENCE STANDARDS A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2019. B. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017. C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvanneal) by the Hot-Dip Process; 2023. D. ITS (DIR) - Directory of Listed Products; Current Edition. E. UL (DIR) - Online Certifications Directory; Current Edition. F. UL 325 - Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems; Current Edition, Including All Revisions. 1.04 ACCESSORIES A. See Section 01 30 00 - Administrative Requirements for submittal procedures. B. Product Data: Provide general construction, electrical equipment, component connections and details. C. Shop Drawings: Indicate pertinent dimensioning, anchorage methods, hardware locations, and installation details. D. Warranty: Execute in Owner's name. 1.05 QUALITY ASSURANCE A. Maintain one copy of the specified door quality standard on site for review during installation and finishing. B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section, with not less than three years of documented experience. C. Installer Qualifications: Company specializing in performing work of the type specified in this section, with not less than three years of documented experience. 1.06 DELIVERY, STORAGE, AND HANDLING A. Package, deliver and store doors in accordance with specified quality standard. B. Accept doors on site in manufacturer's packaging, and inspect for damage. C. Protect doors with resilient packaging sealed with heat shrink plastic; do not store in damp or wet areas or areas where sunlight might bleach veneer; seal top and bottom edges with lintel sealed if stored more than one week, and break seal on site to permit ventilation. 1.07 WARRANTY A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements. B. Manufacturer Warranty: Provide manufacturer's warranty on interior doors for the life of the installation. Complete forms in Owner's name and register with manufacturer. 1. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction. PART 2 - PRODUCTS 2.01 MANUFACTURERS A. Wood Veneer Faced Doors: 1. Haley Brothers; www.haleybroys.com/#se. 2. Horton Automatics, a division of Overhead Door Corporation; FlexBar; www.overheaddoor.com/#se. 3. Krueger Specialty Products; www.kruegerproducts.com/#se. 4. Masonite Architectural; Aspire Select Wood Veneer Doors; www.architectural.masonite.com/#se. 5. Substitutions: See Section 01 60 00 - Product Requirements. 2.02 DOORS AND PANELS A. Doors: See drawings for locations and additional requirements. 1. Quality Standard: Custom Grade, Heavy Duty performance, in accordance with AWI/AWWAC/WI (AWS) or AWWAC/WI (NAAWS), unless noted otherwise. 2. Wood Veneer Faced Doors: 5-ply unless otherwise indicated. B. Interior Doors: 1-3/4 inches thick unless otherwise indicated; flush construction. 1. Provide solid core doors at each location.</p>	<p>2.03 MATERIALS A. Metal Curtain Construction: Interlocking slats. 1. Curtain Bottom for Slit Curtains: Fitted with angles to provide reinforcement and positive contact in closed position. 2. Weatherstripping for Exterior Doors: Moisture and rot proof, resilient type, located at jamb edges, bottom of curtain, and where it meets curtain extenders. Head end of exterior door. B. Guide Construction: Continuous, of profile to retain door in place with snap-on trim, mounting brackets of same metal. C. Guides - Angle: ASTM A36/A36M metal with angles, size as indicated. 1. Hot-dip galvanized in compliance with ASTM A123/A123M. 2. Hood Endcouse and Trim: Internally reinforced to maintain rigidity and shape. D. Lock Hardware: 1. Manual Chain Lift: Provide padlockable chain keeper on guide. PART 3 EXECUTION 3.01 EXAMINATION A. Verify that construction is suitable for door installation. B. Verify that door opening is plumb, header is level, and dimensions are correct. C. Notify Architect of any unacceptable conditions or varying dimensions. D. Commencement of installation indicates acceptance of substrate and door opening conditions. 3.02 INSTALLATION A. Install units in accordance with manufacturer's instructions. B. Use anchorage devices to securely fasten assembly to wall construction and building framing without distortion of drawings, plans, 3/4-inch deep, and level. C. Securely and rigidly brace components suspended from structure. Secure guides to structural members only. D. Fit and align assembly including hardware; level and plumb, to provide smooth operation. E. Install enclosure and perimeter trim. 3.03 TOLERANCES A. Maintain dimensional tolerances and alignment with adjacent work. B. Maximum Variation From Plumb: 1/16 inch. C. Maximum Variation From Level: 1/16 inch. D. Longitudinal or Diagonal Warp: Plus or minus 1/8 inch per 10 feet straight edge. 3.04 ADJUSTING A. Finish and adjust operating assemblies for smooth and noiseless operation. B. Clean installed components. C. Remove labels and visible markings. END OF SECTION SECTION 08 34 53 - BULLET RESISTANT DOOR AND FRAME ASSEMBLY PART 1 - GENERAL 1.1 SECTION INCLUDES A. Bullet resistant aluminum door and frame assembly. 1.2 REFERENCES A. Underwriters Laboratory UL 752-Standard for Ball Resisting Equipment. B. ASTM C 1172 - Standard Specification for Laminated Architectural Flat Glass. C. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate. D. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes. 1.3 SUBMITTALS A. Refer to Section 01 30 00 Submittal Procedures. B. Product Data: For each type of framing and glass including manufacturer recommended installation instructions. C. Shop Drawings: Include plans, elevations, sections, details, attachment to other work. D. Samples: For each exposed finish. 1.4 INFORMATION SUBMITTALS A. Product Test Reports: Indicating compliance with requirements. B. Warranty: Submit full finish warranty. 1.5 CLOSEOUT SUBMITTALS A. Refer to Section 01 78 00 Closeout Submittals. B. Maintenance data. 1.6 DELIVERY, STORAGE AND HANDLING A. Deliver materials to the project site with the manufacturer's UL Listed labels intact and legible. Handle the materials with care to prevent damage. Store materials inside and under cover, stack flat and off floor. Project conditions (temperature, humidity, and ventilation) shall be within the maximum limit recommendations provided by manufacturer. Do not install products stored in conditions outside manufacturer's recommended limits. B. Substitutions: See Section 01 60 00 - Product Requirements. C. Door and Frame Performance: 1. Standard door and frame assembly shall be manufactured to defeat ballistic assaults from a .44 magnum superpower small arms handgun, in accordance with UL Standard 752, Level 3. 2. Standard Aluminum Doors: a. Top rail and stile: 2-3/4". 2. Bottom rail, including glass stops: 8-1/2". 3. Aluminum Door and Sidelight Frames and Extrusions: 1-3/4" x 4" with structural section 125" thick. 4. Door Rail and Push Bar: 9" aluminum pull handle and door width push bar as selected by Architect from manufacturer's standard options. 5. Door Hardware: a. Hinges: Select SL-11HD continuous aluminum gear hinge. b. Deadlock: Adams Rite MS1850 deadlock. c. Thumb Turn: Adams Rite 4510 Series mortise thumb turn. d. Keyed Mortise Cylinder: Adams Rite 4510 Series. e. Door Pull and Push Bar: 9" aluminum pull handle and door width push bar as selected by Architect from manufacturer's standard options. f. Door Closer: LCN 400 Series Heavy Duty. E. Door Frame Construction: 1. Frame assembly shall provide UL Level 3 protection level to match bullet resistance of door. 2. Non-riochet type, ballistic extruded aluminum in 6061-T6 alloy, aluminum finish. 3. Sizes: 2-3/8" thick medium stile door rails with 1-3/4" x 4" BR aluminum fin. F. Factory-applied finish: 1. Clear Anodic Finish: Architectural Class 1, clear coating AA-M10C22441 Mechanical Finish Chemical Finish: etched, medium matte; 0.70 mils minimum complying with AAMA 611 "Voluntary Specification for Anodized Architectural Aluminum". G. Field alterations to the construction of the assembly fabricated under the acceptable standards are not allowed unless approved in writing by the manufacturer and the Architect. H. Standard manufacturing tolerances +/- .116" shall be maintained.</p>	<p>1.03 REFERENCE STANDARDS A. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018. B. ASTM C1036 - Standard Specification for Flat Glass; 2021. C. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2018. D. BHMA A156.3 - Exit Devices; 2020. E. BHMA A156.4 - Door Hardware and Pivots; 2024. F. BHMA A156.13 - Mortise Locks & Latches Series 1000; 2022. G. BHMA A156.17 - Self Closing Hinges & Pivots; 2019. 1.04 SUBMITTALS A. See Section 01 30 00 - Administrative Requirements , for submittal procedures. B. Product Data: Manufacturer's descriptive literature for each component in all-glass entrance assembly. C. Shop Drawings: Drawings showing layout, dimensions, identification of components, and interface with adjacent construction. 1. Include elevations showing: a. Appearance of all-glass entrance layouts. b. Locations and identification of manufacturer-supplied door hardware and fittings. c. Locations and sizes of cut-outs and drilled holes for other door hardware. 2. Include details of: a. Requirements for support and bracing at openings. b. Installation details for glass swing doors. c. Appearance of manufacturer-supplied door hardware and fittings. 3. Schedule: Listing of each type component in all-glass entrance assemblies, cross-referenced to shop drawings, plans, 3/4-inch deep, and level. D. Selection Samples: Two sets, representing manufacturer's full range of available metal materials and finishes. 1.05 QUALITY ASSURANCE A. Designer Qualifications: Design under direct supervision of a Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located. B. Installer Qualifications: Minimum three years of experience installing entrance assemblies similar to those specified in this section. 1.06 DELIVERY, STORAGE, AND HANDLING A. Store products in manufacturer's unopened packaging until installation. B. Part 2 Products: Prepare submittals for smooth and noiseless operation. 2.01 MANUFACTURERS A. All-Glass Entrances and Storefronts: 1. Avanti Systems USA; Eclipse Standard Doors; www.avantisystemsusa.com/#se. 2. Optima Products Ltd; Asile Series Sliding Glass Doors; optimasystems.com. 3. Trulite Glass & Aluminum Solutions, LLC; _____; www.trulite.com/#se. 4. Substitutions: See Section 01 60 00 - Product Requirements. 1. Avanti Systems USA; DORMA Glass Acoustic Swing Door Hardware; www.avantisystemsusa.com/#se. 2. DORMA USA, Inc.; _____; www.dorma.com/#se. 3. Substitutions: See Section 01 60 00 - Product Requirements. 2.02 ALL-GLASS ENTRANCES AND STOREFRONTS ASSEMBLIES A. Entrances: Provide complete entrance assembly consisting of frameless glass panels fastened with metal structural fittings in configuration indicated on drawings. 1. Operational Louvers: Designed to withstand door operation under normal traffic without damage, racking, sagging, or deflecting. 2. Prepared for all specified hardware whether specified in this section or not. 3. Finished metal surfaces protected with strippable film. 4. Factory assembly to greatest extent practicable; may be disassembled to accommodate shipping constraints. B. Swinging Door Fittings and Hardware: 1. Top and bottom pivots concealed in full wall rails top and bottom. 2. Single Doors: Floor-mounted door stop. 2.03 ALL-GLASS ENTRANCES AND STOREFRONTS A.Manufacturers: 1. Avanti Systems USA, Inc.; www.avantisystemsusa.com/#se. 2. DORMA USA, Inc.; www.dorma.com/#se. 3. Trulite Glass & Aluminum Solutions, LLC; _____; www.trulite.com/#se. 4. Substitutions: See Section 01 60 00 - Product Requirements. 2.04 FITTINGS AND HARDWARE A. Rail Style Fittings for Swinging Doors and Related Fixed Glazing: 1. Top Rails: 4-7/8 inch high with matching end caps. 2. Bottom Rails: 4 inch high with matching end caps. 3. Sidelite Rails: Match top and bottom rails. 4. Exposed Edge Profile: Square. B. Headers for Swinging Doors and Related Fixed Glazing: 1. Dimensions: 1-3/4 inch deep by 4-1/8 inch high. 2. Aluminum Finish: As indicated. C. Pivot Systems for Glass Swinging Doors: 1. Dimensions: Comply with BHMA A156.17. D. Overhead Concealed Bottom Pivots for Glass Swinging Doors: Non-handed closer for both single and double-acting doors with mechanical backcheck, and meeting requirements of BHMA A156.4, Grade 1. 1. Application: Center hung, with swing as indicated on drawings. 2. Hold Open: 3. Opening Force: Comply with requirements of authorities having jurisdiction. 4. Door Weight: Maximum 200 lbs for</p>
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<p>a. On the roof and outdoors, paint equipment exposed to weather or to view, including factory-finished materials.</p> <p>D. Do Not Paint or Finish the Following Items:</p> <ol style="list-style-type: none"> Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished. Items indicated to receive other finishes. Items indicated to remain unfinished. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment. Non-metallic roofing and flashing. Stainless steel, anodized aluminum, bronze, lame-coated stainless steel, zinc, and lead. Marble, granite, slate, and other natural stones. Floors, unless specifically indicated. Ceramic and other types of tiles. Brick, glass unit masonry, architectural concrete, cast stone, integrally colored plaster and stucco. Glass. Concealed pipes, ducts, and conduits. <p>1.02 RELATED REQUIREMENTS</p> <p>A. Section 05 50 00 - Metal Fabrications: Shop-primed items.</p> <p>B. Section 05 31 00 - Metal Stairs: Shop-primed items.</p> <p>C. Section 09 12 23 - Interior Painting:</p> <ol style="list-style-type: none"> Section 09 12 23 - Interior Painting. Section 09 96 00 - High-Performance Coatings. <p>1.03 REFERENCE STANDARDS</p> <p>A. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2020.</p> <p>B. MPI (APM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.</p> <p>C. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016).</p> <p>D. SSPC-SP 6/NACE No. 3 - Commercial Blast Cleaning; 2006.</p> <p>E. SSPC-SP 13/NACE No. 6 - Surface Preparation of Concrete; 2018.</p> <p>1.04 SUBMITTALS</p> <p>A. Section 01 30 00 - Administrative Requirements, for submittal procedures.</p> <p>B. Product Data: Provide complete list of products to be used, with the following information for each:</p> <ol style="list-style-type: none"> Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel"). MPI product number (e.g., MPI #47). Cross-reference to specified paint system(s) product to be used in; include description of each system. <p>C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.</p> <ol style="list-style-type: none"> Where shade is specified, submit samples in only that shade. Where shade is not specified, submit each color in each shade available. <p>1.05 QUALITY ASSURANCE</p> <p>A. Applicator Qualifications: Company specializing in performing the type of work specified with minimum 3 years experience and approved by manufacturer.</p> <p>1.06 DELIVERY, STORAGE, AND HANDLING</p> <p>A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.</p> <p>B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.</p> <p>C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.</p> <p>1.07 FIELD CONDITIONS</p> <p>A. Do not apply materials when surface and ambient temperatures are outside the paint product manufacturer's temperature ranges.</p> <p>B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.</p> <p>C. Minimum Application Temperature for Latex Paints: 50 degrees F for exterior; unless required otherwise by manufacturer's instructions.</p> <p>D. Provide lighting level of 80 ft candles measured mid-height at substrate surface.</p> <p>PART 2 PRODUCTS</p> <p>2.01 MANUFACTURERS</p> <p>A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.</p> <p>B. Paints:</p> <ol style="list-style-type: none"> Behr Paint Company. Diamond Vogel Paints. Dow. Dunn-Edwards Corporation. PPG Paints. Sherwin-Williams Company. Primer Sealers: Same manufacturer as top coats. D. Substitutions: See Section 01 60 00 - Product Requirements. <p>2.02 PAINTS AND FINISHES - GENERAL</p> <p>A. Paints and Finishes: Ready-mixed, unless required to be a field-catalyzed paint.</p> <ol style="list-style-type: none"> Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags. Supply each paint material in quantity required to complete entire project's work from a single production run. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is described explicitly in manufacturer's product instructions. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full range. <p>C. Colors: To be selected from manufacturer's full range of available colors.</p> <ol style="list-style-type: none"> Selection to be made by Architect after award of contract. Allow for minimum of three colors for each system, unless otherwise indicated, without additional cost to Owner. Extend colors to surface edges; colors may change at any edge as directed by Architect. <p>2.03 PAINT SYSTEMS - EXTERIOR</p> <p>A. Paint E-OP - Exterior Surfaces to be Painted, Unless Otherwise Indicated: Including concrete, concrete masonry units, brick, fiber cement siding, primed wood, and primed metal.</p> <ol style="list-style-type: none"> Two top coats and one coat primer. Behr UltraColor Exterior Latex Enamel Paint; MPI #315. Dunn-Edwards Corporation; Sparshield Exterior 100% Acrylic Semi-Gloss Paint; MPI # 311. <p>a. Top Coat Sheen:</p> <ol style="list-style-type: none"> Flat: MPI gloss level 1; use this sheen for overhead surfaces. Eggshell: MPI gloss level 3; use this sheen at all locations. <p>c. Primer: As recommended by top coat manufacturer for specific substrate.</p> <ol style="list-style-type: none"> Paint ME-OP-3A - Ferrous Metals, Unprimed, Alkyd, 3 Coat: Semi-gloss: Two coats of alkyd enamel. Paint ME-OP-2A - Ferrous Metals, Primed, Alkyd, 2 Coat: Touch-up with rust-inhibitive primer recommended by top coat manufacturer. Paint Mgt-OP-3L - Galvanized Metals, Latex, 3 Coat: One coat galvanize primer. Semi-gloss: Two coats of latex enamel. Paint Mgt-OP-2A - Aluminum and Copper, Unprimed, Alkyd, 2 Coat: One coat etching primer. Semi-gloss: One coat of alkyd enamel. <p>1. PRIMERS</p> <p>Provide the following unless other primer is required or recommended by manufacturer of top coats.</p> <ol style="list-style-type: none"> Alkali-Resistant Water-Based Primer; MPI #3. <p>a. Products:</p> <ol style="list-style-type: none"> Behr Premium Plus Interior Multi-Surface Primer and Sealer [No.436]; (MPI #3) Dunn-Edwards Corporation; EFF-STOP Medium Interior/Exterior Primer/Sealer (MPI #3) PPG Paints Series Seal Grip Interior/Exterior Acrylic Universal Primer/Sealer; 17-921X1 Series; (MPI #3) Sherwin-Williams Loxon Concrete and Masonry Primer Sealer; LX02W50; (MPI #3) Zinsser by Rust-Oleum Corporation Mold Killing Primer; www.rustoleum.com/#/se. <p>b. Substitutions: See Section 01 60 00 - Product Requirements</p> <p>b. Interior/Exterior Latex Block Filler; MPI #4.</p> <p>a. Products:</p> <ol style="list-style-type: none"> Behr Pro Block Filler Primer PPS0; (MPI #4) Dunn-Edwards Corporation; Smooth BLOCFL Select Interior/Exterior Concrete Block Filler; (MPI #4) Kilz Pro-xp Block Filler Primer; (MPI #4) PPG Paints; Perma-Crete Concrete Block & Masonry Surface/Filler; 4-100X1; (MPI #4) Sherwin-Williams Loxon Block Surface/Filler; 4-100X1; (MPI #4) Zinsser by Rust-Oleum Corporation Mold Killing Primer; www.rustoleum.com/#/se. <p>b. Substitutions: See Section 01 60 00 - Product Requirements</p> <p>2.02 PAINTS AND FINISHES - GENERAL</p> <p>A. Paints and Finishes: Ready-mixed, unless intended to be a field-catalyzed paint.</p> <ol style="list-style-type: none"> Where MPI paint numbers are specified, provide products listed in Master Painters Institute Approved Product List, current edition available at www.paintinfo.com, for specified MPI categories, except as otherwise indicated. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags. Supply each paint material in quantity required to complete entire project's work from a single production run. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full range. C. Colors: To be selected from manufacturer's full range of available colors. Selection to be made by Architect after award of contract. Allow for minimum of three colors for each system, unless otherwise indicated, without additional cost to Owner. Extend colors to surface edges; colors may change at any edge as directed by Architect. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling under which they are mounted. <p>2.03 PAINT SYSTEMS - INTERIOR</p> <p>A. Paint I-OP - Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board, concrete, concrete masonry units, brick, wood, plaster, uncoated steel, shop primed steel, galvanized steel, aluminum, and acoustical ceilings.</p> <ol style="list-style-type: none"> Two top coats and one coat primer. Top Coat(s): Interior Latex; MPI #43, 44, 52, 53, 54, or 114. <p>a. Products:</p> <ol style="list-style-type: none"> Behr Premium Plus Interior Flat [No.1050]; (MPI #53) Behr Premium Plus Interior Eggshell Enamel [No.2050]; (MPI #53) Dunn-Edwards Corporation; Suprema Interior Flat; (MPI #53) Dunn-Edwards Corporation; Acri-Wall Interior Eggshell Paint; (MPI #44) PPG Paints Speedshield Interior Latex; 6-70 Series; Flat; (MPI #53) PPG Paints Speedshield Interior Latex; 6-4101 Series, Low-Sheen Eggshell; (MPI #44) Sherwin-Williams Solo Series; Flat; (MPI#53) Sherwin-Williams Solo Series; Egg-Shel. <p>a. Top Coat Sheen:</p> <ol style="list-style-type: none"> Flat: MPI gloss level 1; use this sheen for ceilings and other overhead surfaces. Eggshell: MPI gloss level 3; use this sheen at all locations. <p>b. Primer: As recommended by top coat manufacturer for specific substrate.</p> <p>END OF SECTION</p>	<p>1. Paint I-OP-MD-DT - Medium Duty Door/Trim: For surfaces subject to frequent contact by occupants, including metals and wood:</p> <ol style="list-style-type: none"> Two top coats and one coat primer. Top Coat(s): High Performance Architectural Interior Latex; MPI #138, 139, 140, or 141. <p>a. Products:</p> <ol style="list-style-type: none"> Dunn-Edwards Corporation; Suprema Interior Eggshell; (MPI #139) Dunn-Edwards Corporation; Suprema Interior Low Sheen; (MPI #140) PPG Paints Pure Performance Interior Latex; 9-310X1 Series; Eggshell; (MPI #138) Sherwin-Williams Pro Industrial Pre-Catalyzed Waterbased Epoxy; Egg-Shel; (MPI #139) <p>5. Substitutions: See Section 01 60 00 - Product Requirements</p> <p>c. Top Coat Sheen:</p> <ol style="list-style-type: none"> Eggshell: MPI gloss level 3; use this sheen at all locations. Primer: As recommended by top coat manufacturer for specific substrate. <p>d. Paint I-OP-MD-WC - Medium Duty Vertical and Overhead: Including gypsum board, plaster, concrete, concrete masonry units, uncoated steel, shop primed steel, galvanized steel, and aluminum.</p> <ol style="list-style-type: none"> Two top coats and one coat primer. Top Coat(s): High Performance Architectural Interior Latex; MPI #138, 139, 140, or 141. <p>a. Products:</p> <ol style="list-style-type: none"> Behr Premium Plus Interior Eggshell Enamel [No.2050]; (MPI #139) PPG Paints Pure Performance Interior Latex; 9-310X1 Series; Eggshell; (MPI #138) Sherwin-Williams Pro Industrial Pre-Catalyzed Waterbased Epoxy; Egg-Shel; (MPI #139) Substitutions: See Section 01 60 00 - Product Requirements <p>c. Top Coat Sheen:</p> <ol style="list-style-type: none"> Flat: MPI gloss level 1; use this sheen for ceilings and other overhead surfaces. Eggshell: MPI gloss level 3; use this sheen at all locations. Primer: As recommended by top coat manufacturer for specific substrate. <p>d. Paint I-OP-DF - Dry Film: Metals; exposed structure and overhead-mounted services in utilitarian spaces, including shop primed steel, structural steel, metal fabrications, galvanized ducts, galvanized conduit, and galvanized piping.</p> <p>a. Shop-applied primer.</p> <p>b. One top coat.</p> <p>c. Top Coat: Latex Dry Fall; MPI #118, 155, or 226. <p>a. Products:</p> <ol style="list-style-type: none"> Dunn-Edwards Corporation; Aquafill Interior Eggshell Dry Fall Paint; (MPI #155) PPG Paints Speedshield Super Tech Water Based Interior Dry-Fog Latex; 6-725X1 Series; Flat; (MPI #118) Zinsser by Rust-Oleum Corporation Dryfil Commercial and Industrial Waterborne Coating; www.rustoleum.com/#/se; (MPI #118) Substitutions: See Section 01 60 00 - Product Requirements <p>d. Top Coat Sheen:</p> <ol style="list-style-type: none"> Flat: MPI gloss level 1; use this sheen at all locations. Eggshell: MPI gloss level 3; use this sheen at all locations. <p>e. Primer: As recommended by top coat manufacturer for specific substrate.</p> <p>f. Surface Preparation: As recommended by manufacturer for specific substrate.</p> <p>B. FIELD APPLICATION OF PAINTS</p> <p>C. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.</p> <ol style="list-style-type: none"> Prime surfaces to receive wall coverings. Mechanical and Electrical: <ol style="list-style-type: none"> In finished areas, paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment, unless otherwise indicated. In finished areas, paint shop-primed items. Do Not Paint or Finish the Following Items: <ol style="list-style-type: none"> Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished. Items indicated to receive other finishes. Items indicated to remain unfinished. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment. Stainless steel, anodized aluminum, bronze, lame-coated stainless steel, and lead tiles. Marble, granite, slate, and other natural stones. Floors, unless specifically indicated. Ceramic and other types of tiles. Brick, architectural concrete, cast stone, integrally colored plaster, and stucco. Glass. Acoustical materials, unless specifically indicated. Concealed pipes, ducts, and conduits. <p>1.02 RELATED REQUIREMENTS</p> <p>A. Section 05 50 00 - Metal Fabrications: Shop-primed items.</p> <p>B. Section 05 31 00 - Metal Stairs: Shop-primed items.</p> <p>C. Section 09 12 23 - Interior Painting.</p> <p>1.03 REFERENCE STANDARDS</p> <p>A. ASTM D4428 - Standard Practice for Surface Cleaning Concrete for Coating; 2023.</p> <p>B. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2020.</p> <p>C. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association; Current Edition.</p> <p>D. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.</p> <p>E. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016).</p> <p>F. SSPC-SP 6/NACE No. 6 - Surface Preparation of Concrete; 2018.</p> <p>1.04 SUBMITTALS</p> <p>A. Section 01 30 00 - Administrative Requirements, for submittal procedures.</p> <p>B. Product Data: Provide complete list of products to be used, with the following information for each:</p> <ol style="list-style-type: none"> Manufacturer's name, product name and/or catalog number, and general product category (e.g., "alkyd enamel"). MPI product number (e.g., MPI #47). Cross-reference to specified paint system products to be used in; include description of each system. <p>C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.</p> <ol style="list-style-type: none"> Where shade is not specified, submit each color in each shade available. <p>1.05 QUALITY ASSURANCE</p> <p>A. Applicator Qualifications: Company specializing in performing the type of work specified with minimum 3 years experience and approved by manufacturer.</p> <p>1.06 DELIVERY, STORAGE, AND HANDLING</p> <p>A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.</p> <p>B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.</p> <p>C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.</p> <p>1.07 FIELD CONDITIONS</p> <p>A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.</p> <p>B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.</p> <p>C. Provide lighting level of 80 ft measured mid-height at substrate surface.</p> <p>PART 2 PRODUCTS</p> <p>2.01 MANUFACTURERS</p> <p>A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.</p> <p>B. Paints:</p> <ol style="list-style-type: none"> Behr Paint Company; www.behr.com/#/se. Diamond Vogel Paints; www.diamondvogel.com/#/se. PPG Paints; www.ppgpaints.com/#/se. Sherwin-Williams Company; www.sherwin-williams.com/#/se. Primer Sealers: Same manufacturer as top coats. D. Substitutions: See Section 01 60 00 - Product Requirements. <p>2.02 PAINTS AND FINISHES - GENERAL</p> <p>A. Paints and Finishes: Ready-mixed, unless intended to be a field-catalyzed paint.</p> <ol style="list-style-type: none"> Where MPI paint numbers are specified, provide products listed in Master Painters Institute Approved Product List, current edition available at www.paintinfo.com, for specified MPI categories, except as otherwise indicated. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags. Supply each paint material in quantity required to complete entire project's work from a single production run. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full range. C. Colors: To be selected from manufacturer's full range of available colors. Selection to be made by Architect after award of contract. Allow for minimum of three colors for each system, unless otherwise indicated, without additional cost to Owner. Extend colors to surface edges; colors may change at any edge as directed by Architect. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling under which they are mounted. <p>2.03 PAINT SYSTEMS - INTERIOR</p> <p>A. Paint I-OP - Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board, concrete, concrete masonry units, brick, wood, plaster, uncoated steel, shop primed steel, galvanized steel, aluminum, and acoustical ceilings.</p> <ol style="list-style-type: none"> Two top coats and one coat primer. Top Coat(s): Interior Latex; MPI #43, 44, 52, 53, 54, or 114. <p>a. Products:</p> <ol style="list-style-type: none"> Behr Premium Plus Interior Flat [No.1050]; (MPI #53) Behr Premium Plus Interior Eggshell Enamel [No.2050]; (MPI #53) Dunn-Edwards Corporation; Suprema Interior Flat; (MPI #53) Dunn-Edwards Corporation; Acri-Wall Interior Eggshell Paint; (MPI #44) PPG Paints Speedshield Interior Latex; 6-70 Series; Flat; (MPI #53) PPG Paints Speedshield Interior Latex; 6-4101 Series, Low-Sheen Eggshell; (MPI #44) Sherwin-Williams Solo Series; Flat; (MPI#53) Sherwin-Williams Solo Series; Egg-Shel. <p>a. Top Coat Sheen:</p> <ol style="list-style-type: none"> Flat: MPI gloss level 1; use this sheen for ceilings and other overhead surfaces. Eggshell: MPI gloss level 3; use this sheen at all locations. <p>b. Primer: As recommended by top coat manufacturer for specific substrate.</p> <p>END OF SECTION</p> </p>	<p>1. Clean surfaces thoroughly and correct defects prior to application.</p> <p>2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.</p> <p>3. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing.</p> <p>4. Seal surfaces that might cause bleed through or staining of topcoat.</p> <p>5. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.</p> <p>6. Exterior Surco: Fill hairline cracks, small holes, and imperfections with exterior patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkal surfaces.</p> <p>7. Wood Doors to be Field-Finished: Seal wood door top and bottom edge surfaces with tinted primer.</p> <p>8. Dark Doors to be Painted: Prime metal door top and bottom edge surfaces.</p> <p>C. APPLICATION</p> <ol style="list-style-type: none"> Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual". Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied. Apply each coat to uniform appearance. Dark Colors and Deep Color Colors: Regardless of number of coats specified, apply additional coats until complete hide is achieved. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing. <p>4. FIELD QUALITY CONTROL</p> <ol style="list-style-type: none"> See Section 01 40 00 - Quality Requirements, for general requirements for field inspection. Owner will provide field inspection. <p>5. CLEANING</p> <ol style="list-style-type: none"> Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site. <p>6. PROTECTION</p> <ol style="list-style-type: none"> Protect finishes until completion of project. Touch-up damaged finishes after Substantial Completion. <p>SECTION 09 91 23 - INTERIOR PAINTING</p> <p>PART 1 GENERAL</p> <p>1.01 SECTION INCLUDES</p> <p>A. Surfaces preparation.</p> <p>B. Field application of paints.</p> <p>C. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.</p> <ol style="list-style-type: none"> Prime surfaces to receive wall coverings. Mechanical and Electrical: <ol style="list-style-type: none"> In finished areas, paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment, unless otherwise indicated. In finished areas, paint shop-primed items. Do Not Paint or Finish the Following Items: <ol style="list-style-type: none"> Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished. Items indicated to receive other finishes. Items indicated to remain unfinished. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment. Stainless steel, anodized aluminum, bronze, lame-coated stainless steel, and lead tiles. Marble, granite, slate, and other natural stones. Floors, unless specifically indicated. Ceramic and other types of tiles. Brick, architectural concrete, cast stone, integrally colored plaster, and stucco. Glass. Acoustical materials, unless specifically indicated. Concealed pipes, ducts, and conduits. <p>1.02 RELATED REQUIREMENTS</p> <p>A. Section 05 50 00 - Metal Fabrications: Shop-primed items.</p> <p>B. Section 05 31 00 - Metal Stairs: Shop-primed items.</p> <p>C. Section 09 12 23 - Interior Painting.</p> <p>1.03 REFERENCE STANDARDS</p> <p>A. ASTM D4428 - Standard Practice for Surface Cleaning Concrete for Coating; 2023.</p> <p>B. 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Cross-reference to specified paint system products to be used in; include description of each system. <p>C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.</p> <ol style="list-style-type: none"> Where shade is not specified, submit each color in each shade available. <p>1.05 QUALITY ASSURANCE</p> <p>A. Applicator Qualifications: Company specializing in performing the type of work specified with minimum 3 years experience and approved by manufacturer.</p> <p>1.06 DELIVERY, STORAGE, AND HANDLING</p> <p>A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.</p> <p>B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.</p> <p>C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.</p> <p>1.07 FIELD CONDITIONS</p> <p>A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.</p> <p>B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.</p> <p>C. Provide lighting level of 80 ft measured mid-height at substrate surface.</p> <p>PART 2 PRODUCTS</p> <p>2.01 MANUFACTURERS</p> <p>A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.</p> <p>B. Paints:</p> <ol style="list-style-type: none"> Behr Paint Company; www.behr.com/#/se. Diamond Vogel Paints; www.diamondvogel.com/#/se. PPG Paints; www.ppgpaints.com/#/se. Sherwin-Williams Company; www.sherwin-williams.com/#/se. Primer Sealers: Same manufacturer as top coats. D. Substitutions: See Section 01 60 00 - Product Requirements. <p>2.02 PAINTS AND FINISHES - GENERAL</p> <p>A. Paints and Finishes: Ready-mixed, unless intended to be a field-catalyzed paint.</p> <ol style="list-style-type: none"> Where MPI paint numbers are specified, provide products listed in Master Painters Institute Approved Product List, current edition available at www.paintinfo.com, for specified MPI categories, except as otherwise indicated. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags. Supply each paint material in quantity required to complete entire project's work from a single production run. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full range. C. Colors: To be selected from manufacturer's full range of available colors. Selection to be made by Architect after award of contract. Allow for minimum of three colors for each system, unless otherwise indicated, without additional cost to Owner. Extend colors to surface edges; colors may change at any edge as directed by Architect. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling under which they are mounted. <p>2.03 PAINT SYSTEMS - INTERIOR</p> <p>A. Paint I-OP - Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board, concrete, concrete masonry units, brick, wood, plaster, uncoated steel, shop primed steel, galvanized steel, aluminum, and acoustical ceilings.</p> <ol style="list-style-type: none"> Two top coats and one coat primer. Top Coat(s): Interior Latex; MPI #43, 44, 52, 53, 54, or 114. <p>a. Products:</p> <ol style="list-style-type: none"> Behr Premium Plus Interior Flat [No.1050]; (MPI #53) Behr Premium Plus Interior Eggshell Enamel [No.2050]; (MPI #53) Dunn-Edwards Corporation; Suprema Interior Flat; (MPI #53) Dunn-Edwards Corporation; Acri-Wall Interior Eggshell Paint; (MPI #44) PPG Paints Speedshield Interior Latex; 6-70 Series; Flat; (MPI #53) PPG Paints Speedshield Interior Latex; 6-4101 Series, Low-Sheen Eggshell; (MPI #44) Sherwin-Williams Solo Series; Flat; (MPI#53) Sherwin-Williams Solo Series; Egg-Shel. <p>a. Top Coat Sheen:</p> <ol style="list-style-type: none"> Flat: MPI gloss level 1; use this sheen for ceilings and other overhead surfaces. Eggshell: MPI gloss level 3; use this sheen at all locations. <p>b. Primer: As recommended by top coat manufacturer for specific substrate.</p> <p>END OF SECTION</p>	<p>SECTION 09 93 00 - STAINING AND TRANSPARENT FINISHING</p> <p>PART 1 GENERAL</p> <p>1.01 SECTION INCLUDES</p> <p>A. Field application of stains.</p> <p>B. Field application of transparent finishes.</p> <p>1.02 REFERENCE STANDARDS</p> <p>A. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.</p> <p>1.03 SUBMITTALS</p> <p>A. Section 01 30 00 - Administrative Requirements for submittal procedures.</p> <p>B. Product Data: Provide complete list of products to be used, with the following information for each:</p> <ol style="list-style-type: none"> Manufacturer's name, product name and catalog number, and general product category. Cross-reference to specified paint system products to be used in; include description of selected colors and sheens for each system, with specified coats cascaded. <p>1.04 QUALITY ASSURANCE</p> <p>A. Applicator Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.</p> <p>1.05 DELIVERY, STORAGE, AND HANDLING</p> <p>A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.</p> <p>B. Container Label: Include manufacturer's name, type of stain or transparent finish, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.</p> <p>C. Stain and Transparent Finish Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.</p> <p>1.06 FIELD CONDITIONS</p> <p>A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the manufacturer for staining and transparent finishes.</p> <p>B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.</p> <p>PART 2 PRODUCTS</p> <p>2.01 MANUFACTURERS</p> <p>A. Provide finishes used in any individual system from the same manufacturer; no exceptions.</p> <p>B. Stains:</p> <ol style="list-style-type: none"> Dunn-Edwards Corporation; Aquafill Interior Eggshell Dry Fall Paint; (MPI #155) Bona US; www.bona.com/#/se. PPG Paints; www.ppgpaints.com/#/se. Sherwin-Williams Company; www.sherwin-williams.com/#/se. Substitutions: See Section 01 60 00 - Product Requirements. <p>2.02 STAINS AND TRANSPARENT FINISHES - GENERAL</p> <p>A. Finishes:</p> <ol style="list-style-type: none"> Provide finishes capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags. Provide materials compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience. Supply each finish material in quantity required to complete entire project's work from a single production run. Do not reduce, thin, or dilute finishes or add materials unless such procedure is specifically described in manufacturer's product instructions. Flammability: Comply with applicable code for surface burning characteristics. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full range of available colors. Colors: To be selected from manufacturer's full range of available colors. Selection to be made by Architect after award of contract. <p>2.03 INTERIOR STAIN AND TRANSPARENT FINISH SYSTEMS</p> <p>A. Finish on Wood - Vertical Surfaces:</p> <ol style="list-style-type: none"> 2-coat sealer. Stain: Semi-transparent stain for wood, solvent based. <ol style="list-style-type: none"> One coat of latex primer sealer. Behr Premium Semi-Transparent Waterborne Penetrating Oil Stain and Sealer [4600]. Bona US; Craft Oil 2k; www.bona.com/#/se. Substitutions: See Section 01 60 00 - Product Requirements. <p>a. Sealer: Water based, sanding sealer, clear. <ol style="list-style-type: none"> Products: <ol style="list-style-type: none"> Behr Water-Based Pre-Stain Wood Conditioner [No.82080]. Substitutions: See Section 01 60 00 - Product Requirements. <p>b. Top Coat: Polyurethane varnish, oil modified; MPI #56 or 57. <ol style="list-style-type: none"> Products: <ol style="list-style-type: none"> Bona US; Sport Poly 275; www.bona.com/#/se. Substitutions: See Section 01 60 00 - Product Requirements. Top Coat Sheen: <ol style="list-style-type: none"> Flat: MPI gloss level 1; use this sheen at all locations. <p>1. ACCESSORY MATERIALS</p> <p>A. Accessory Materials: Cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of finished surfaces.</p> <p>PART 3 EXECUTION</p> <p>1. EXAMINATION</p> <ol style="list-style-type: none"> Verify that surfaces are ready to receive work as instructed by the product manufacturer. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application. Test shop-applied primer for compatibility with subsequent cover materials. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces is below the following maximums: <ol style="list-style-type: none"> Gypsum Wallboard: 12 percent. Plaster and Stucco: 12 percent. Masonry, Concrete, and Concrete Masonry Units: 12 percent. Interior Wood: 15 percent, measured in accordance with ASTM D4442. Concrete Floors and Traffic Surfaces: 8 percent. <p>2. PREPARATION</p> <ol style="list-style-type: none"> 1. Clean surfaces thoroughly and correct defects prior to application. 2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions. 3. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing. 4. Seal surfaces that might cause bleed through or staining of topcoat. 5. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair. 6. Aluminum: Remove surface contamination and oils and wash with solvent according to SSPC-SP 1. 7. Galvanized Surfaces: <ol style="list-style-type: none"> Remove surface contamination and oils and wash with solvent according to SSPC-SP 1. Solvent Metal: <ol style="list-style-type: none"> Solvent cleaning according to SSPC-SP 1. Shop-Primed Surfaces: Sand and scrape to remove loose primer. Rub. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-write entire shop-primed item. 8. Dark Colors and Deep Color Colors: Regardless of number of coats specified, apply as many coats as necessary to achieve complete hide. 9. Sand wood and metal surfaces lightly between coats to achieve required finish. 10. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat. 11. Wood to Receive Transparent Finishes: See Section 09 93 00. 12. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing. <p>a. Top Coat Sheen:</p> <ol style="list-style-type: none"> Flat: MPI gloss level 1; use this sheen for ceilings and other overhead surfaces. Eggshell: MPI gloss level 3; use this sheen at all locations. <p>b. Primer: As recommended by top coat manufacturer for specific substrate.</p> <p>4. FIELD QUALITY CONTROL</p> <ol style="list-style-type: none"> See Section 01 40 00 - Quality Requirements, for general requirements for field inspection. Owner will provide field inspection. <p>5. PROTECTION</p> <ol style="list-style-type: none"> Protect finishes until completion of project. Touch-up damaged finishes after Substantial Completion. <p>END OF SECTION</p> </p></p>	<p>PART 3 EXECUTION</p> <p>3.01 EXAMINATION</p> <ol style="list-style-type: none"> Verify that surfaces are ready to receive work as indicated. <p>3.02 INSTALLATION</p> <ol style="list-style-type: none"> Install partitions secure, rigid, plumb, and level in accordance with manufacturer's instructions. Maintain 3/8 inch to 1/2 inch space between wall and panels and between wall and end pilasters. Attach panels to wall and ceiling using wall and ceiling anchors. Attach panels and pilasters to brackets. Locate head rail joints at pilaster center lines. <p>3.03 ADJUSTING</p> <ol style="list-style-type: none"> Adjust and align hardware to uniform clearance at vertical edge of doors, not exceeding 3/16 inch. Adjust hinges to position doors in partial opening position when unlatched. Return out-swinging doors to closed position. Adjust adjacent components for consistency of line or plane. <p>END OF SECTION</p> <p>10 22 26 - OPERABLE PARTITIONS</p> <p>PART 1 - GENERAL</p> <p>1.1 RELATED DOCUMENTS</p> <p>A. Division 10 - Partitions. See general provisions of the Contract including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.</p> <p>1.2 SUMMARY</p> <p>6. This Section includes the following:</p> <ol style="list-style-type: none"> Manually operated, paired panel operable partitions. Related Sections include the following: <ol style="list-style-type: none"> Related Sections for concrete tolerances required. Structural Steel: Reinforcing steel, including pre-punching of support members by 3/8" section steel supplier per operable partition supplier's template. Division 06 Sections for wood framing & supports, and all blocking at head and jambs as required. Division 09 Sections for wall and ceiling framing at head and jambs. </
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Limiting Wall Heights - Non-Composite



Interior Non-Structural Non-Composite Table Notes

1. 5 pcf, 7.5 pcf, and 10 pcf loads have NOT been reduced for strength or deflection checks. Full lateral load is applied.
2. Calculated properties are based on AISI S100-16/S1-18, North American Specification for Cold-Formed Steel Structural Members.
3. Limiting heights are based on continuous support of each flange over the full length of the stud.
4. Limiting heights are based on steel properties only (non-composite).
5. Web crippling checks are based on end-one flange loading condition using 1-inch end bearing.
6. Allowable Flexural Strength is based on lateral and torsional bracing at a maximum spacing of 4 ft on center.

Interior Nonstructural Non-Composite											
Stud Member	Spacing In. oc	Fy ksi	5 pcf			7.5 pcf			10 pcf		
			L/20	L/24	L/30	L/20	L/24	L/30	L/20	L/24	L/30
1625125-18	12	33	9'-4"	7'-4"	6'-5"	8'-10"	6'-8"	5'-7"	8'-11"	6'-10"	5'-7"
1625125-27	12	33	10'-0"	8'-7"	7'-8"	9'-12"	7'-6"	6'-4"	9'-11"	7'-6"	6'-0"
1625125-30	12	33	11'-3"	9'-11"	8'-9"	10'-7"	8'-4"	7'-1"	10'-11"	8'-5"	7'-0"
1625125-33	12	33	12'-6"	10'-11"	9'-11"	11'-10"	9'-4"	8'-0"	11'-11"	9'-4"	7'-8"
1625125-36	12	33	13'-9"	11'-11"	10'-11"	12'-10"	10'-0"	8'-6"	12'-11"	10'-0"	8'-6"
1625125-39	12	33	15'-2"	12'-11"	11'-11"	13'-10"	10'-10"	9'-0"	13'-11"	10'-10"	8'-6"
1625125-42	12	33	16'-5"	13'-11"	12'-11"	14'-10"	11'-10"	9'-6"	14'-11"	11'-10"	9'-0"
1625125-45	12	33	17'-8"	14'-11"	13'-11"	15'-10"	12'-10"	10'-0"	15'-11"	12'-10"	9'-6"
1625125-48	12	33	19'-1"	15'-11"	14'-11"	16'-10"	13'-10"	11'-0"	16'-11"	13'-10"	10'-0"
1625125-51	12	33	20'-4"	16'-11"	15'-11"	17'-10"	14'-10"	12'-0"	17'-11"	14'-10"	10'-0"
1625125-54	12	33	21'-7"	17'-11"	16'-11"	18'-10"	15'-10"	13'-0"	18'-11"	15'-10"	10'-0"
1625125-57	12	33	23'-0"	18'-11"	17'-11"	19'-10"	16'-10"	14'-0"	19'-11"	16'-10"	10'-0"
1625125-60	12	33	24'-3"	19'-11"	18'-11"	20'-10"	17'-10"	15'-0"	20'-11"	17'-10"	10'-0"
1625125-63	12	33	25'-6"	20'-11"	19'-11"	21'-10"	18'-10"	16'-0"	21'-11"	18'-10"	10'-0"
1625125-66	12	33	26'-9"	21'-11"	20'-11"	22'-10"	19'-10"	17'-0"	22'-11"	19'-10"	10'-0"
1625125-69	12	33	28'-2"	22'-11"	21'-11"	23'-10"	20'-10"	18'-0"	23'-11"	20'-10"	10'-0"
1625125-72	12	33	29'-5"	23'-11"	22'-11"	24'-10"	21'-10"	19'-0"	24'-11"	21'-10"	10'-0"
1625125-75	12	33	30'-8"	24'-11"	23'-11"	25'-10"	22'-10"	20'-0"	25'-11"	22'-10"	10'-0"
1625125-78	12	33	32'-1"	25'-11"	24'-11"	26'-10"	23'-10"	21'-0"	26'-11"	23'-10"	10'-0"
1625125-81	12	33	33'-4"	26'-11"	25'-11"	27'-10"	24'-10"	22'-0"	27'-11"	24'-10"	10'-0"
1625125-84	12	33	34'-7"	27'-11"	26'-11"	28'-10"	25'-10"	23'-0"	28'-11"	25'-10"	10'-0"
1625125-87	12	33	36'-0"	28'-11"	27'-11"	29'-10"	26'-10"	24'-0"	29'-11"	26'-10"	10'-0"
1625125-90	12	33	37'-3"	29'-11"	28'-11"	30'-10"	27'-10"	25'-0"	30'-11"	27'-10"	10'-0"
1625125-93	12	33	38'-6"	30'-11"	29'-11"	31'-10"	28'-10"	26'-0"	31'-11"	28'-10"	10'-0"
1625125-96	12	33	39'-9"	31'-11"	30'-11"	32'-10"	29'-10"	27'-0"	32'-11"	29'-10"	10'-0"
1625125-99	12	33	41'-2"	32'-11"	31'-11"	33'-10"	30'-10"	28'-0"	33'-11"	30'-10"	10'-0"
1625125-102	12	33	42'-5"	33'-11"	32'-11"	34'-10"	31'-10"	29'-0"	34'-11"	31'-10"	10'-0"
1625125-105	12	33	43'-8"	34'-11"	33'-11"	35'-10"	32'-10"	30'-0"	35'-11"	32'-10"	10'-0"
1625125-108	12	33	45'-1"	35'-11"	34'-11"	36'-10"	33'-10"	31'-0"	36'-11"	33'-10"	10'-0"
1625125-111	12	33	46'-4"	36'-11"	35'-11"	37'-10"	34'-10"	32'-0"	37'-11"	34'-10"	10'-0"
1625125-114	12	33	47'-7"	37'-11"	36'-11"	38'-10"	35'-10"	33'-0"	38'-11"	35'-10"	10'-0"
1625125-117	12	33	49'-0"	38'-11"	37'-11"	39'-10"	36'-10"	34'-0"	39'-11"	36'-10"	10'-0"
1625125-120	12	33	50'-3"	39'-11"	38'-11"	40'-10"	37'-10"	35'-0"	40'-11"	37'-10"	10'-0"
1625125-123	12	33	51'-6"	40'-11"	39'-11"	41'-10"	38'-10"	36'-0"	41'-11"	38'-10"	10'-0"
1625125-126	12	33	52'-9"	41'-11"	40'-11"	42'-10"	39'-10"	37'-0"	42'-11"	39'-10"	10'-0"
1625125-129	12	33	54'-2"	42'-11"	41'-11"	43'-10"	40'-10"	38'-0"	43'-11"	40'-10"	10'-0"
1625125-132	12	33	55'-5"	43'-11"	42'-11"	44'-10"	41'-10"	39'-0"	44'-11"	41'-10"	10'-0"
1625125-135	12	33	56'-8"	44'-11"	43'-11"	45'-10"	42'-10"	40'-0"	45'-11"	42'-10"	10'-0"
1625125-138	12	33	58'-1"	45'-11"	44'-11"	46'-10"	43'-10"	41'-0"	46'-11"	43'-10"	10'-0"
1625125-141	12	33	59'-4"	46'-11"	45'-11"	47'-10"	44'-10"	42'-0"	47'-11"	44'-10"	10'-0"
1625125-144	12	33	60'-7"	47'-11"	46'-11"	48'-10"	45'-10"	43'-0"	48'-11"	45'-10"	10'-0"
1625125-147	12	33	62'-0"	48'-11"	47'-11"	49'-10"	46'-10"	44'-0"	49'-11"	46'-10"	10'-0"
1625125-150	12	33	63'-3"	49'-11"	48'-11"	50'-10"	47'-10"	45'-0"	50'-11"	47'-10"	10'-0"
1625125-153	12	33	64'-6"	50'-11"	49'-11"	51'-10"	48'-10"	46'-0"	51'-11"	48'-10"	10'-0"
1625125-156	12	33	65'-9"	51'-11"	50'-11"	52'-10"	49'-10"	47'-0"	52'-11"	49'-10"	10'-0"
1625125-159	12	33	67'-2"	52'-11"	51'-11"	53'-10"	50'-10"	48'-0"	53'-11"	50'-10"	10'-0"
1625125-162	12	33	68'-5"	53'-11"	52'-11"	54'-10"	51'-10"	49'-0"	54'-11"	51'-10"	10'-0"
1625125-165	12	33	69'-8"	54'-11"	53'-11"	55'-10"	52'-10"	50'-0"	55'-11"	52'-10"	10'-0"
1625125-168	12	33	71'-1"	55'-11"	54'-11"	56'-10"	53'-10"	51'-0"	56'-11"	53'-10"	10'-0"
1625125-171	12	33	72'-4"	56'-11"	55'-11"	57'-10"	54'-10"	52'-0"	57'-11"	54'-10"	10'-0"
1625125-174	12	33	73'-7"	57'-11"	56'-11"	58'-10"	55'-10"	53'-0"	58'-11"	55'-10"	10'-0"
1625125-177	12	33	75'-0"	58'-11"	57'-11"	59'-10"	56'-10"	54'-0"	59'-11"	56'-10"	10'-0"
1625125-180	12	33	76'-3"	59'-11"	58'-11"	60'-10"	57'-10"	55'-0"	60'-11"	57'-10"	10'-0"
1625125-183	12	33	77'-6"	60'-11"	59'-11"	61'-10"	58'-10"	56'-0"	61'-11"	58'-10"	10'-0"
1625125-186	12	33	78'-9"	61'-11"	60'-11"	62'-10"	59'-10"	57'-0"	62'-11"	59'-10"	10'-0"
1625125-189	12	33	80'-2"	62'-11"	61'-11"	63'-10"	60'-10"	58'-0"	63'-11"	60'-10"	10'-0"
1625125-192	12	33	81'-5"	63'-11"	62'-11"	64'-10"	61'-10"	59'-0"	64'-11"	61'-10"	10'-0"
1625125-195	12	33	82'-8"	64'-11"	63'-11"	65'-10"	62'-10"	60'-0"	65'-11"	62'-10"	10'-0"
1625125-198	12	33	84'-1"	65'-11"	64'-11"	66'-10"	63'-10"	61'-0"	66'-11"	63'-10"	10'-0"
1625125-201	12	33	85'-4"	66'-11"	65'-11"	67'-10"	64'-10"	62'-0"	67'-11"	64'-10"	10'-0"
1625125-204	12	33	86'-7"	67'-11"	66'-11"	68'-10"	65'-10"	63'-0"	68'-11"	65'-10"	10'-0"
1625125-207	12	33	88'-0"	68'-11"	67'-11"	69'-10"	66'-10"	64'-0"	69'-11"	66'-10"	10'-0"
1625125-210	12	33	89'-3"	69'-11"	68'-11"	70'-10"	67'-10"	65'-0"	70'-11"	67'-10"	10'-0"
1625125-213	12	33	90'-6"	70'-11"	69'-11"	71'-10"	68'-10"	66'-0"	71'-11"	68'-10"	10'-0"
1625125-216	12	33	91'-9"	71'-11"	70'-11"	72'-10"	69'-10"	67'-0"	72'-11"	69'-10"	10'-0"
1625125-219	12	33	93'-2"	72'-11"	71'-11"	73'-10"	70'-10"	68'-0"	73'-11"	70'-10"	10'-0"
1625125-222	12	33	94'-5"	73'-11"	72'-11"	74'-10"	71'-10"	69'-0"	74'-11"	71'-10"	10'-0"
1625125-225	12	33	95'-8"	74'-11"	73'-11"	75'-10"	72'-10"	70'-0"	75'-11"	72'-10"	10'-0"
1625125-228	12	33	97'-1"	75'-11"	74'-11"	76'-10"	73'-10"	71'-0"	76'-11"	73'-10"	10'-0"
1625125-231	12	33	98'-4"	76'-11"	75'-11"	77'-10"	74'-10"	72'-0"	77'-11"	74'-10"	10'-0"
1625125-234	12	33	99'-7"	77'-11"	76'-11"	78'-10"	75'-10"	73'-0"	78'-11"	75'-10"	10'-0"
1625125-237	12	33	101'-0"	78'-11"	77'-11"	79'-10"	76'-10"	74'-0"	79'-11"	76'-10"	10'-0"
1625125-240	12	33	102'-3"	79'-11"	78'-11"	80'-10"	77'-10"	75'-0"	80'-11"	77'-10"	10'-0"
1625125-243	12	33	103'-6"	80'-11"	79'-11"	81'-10"	78'-10"	76'-0"	81'-11"	78'-10"	10'-0"
1625125-246	12	33	104'-9"	81'-11"	80'-11"	82'-10"	79'-10"	77'-0"	82'-11"	79'-10"	10'-0"
1625125-249	12	33	106'-2"	82'-11"	81'-11"	83'-10"	80'-10"	78'-0"	83'-11"	80'-10"	10'-0"
1625125-252	12	33	107'-5"	83'-11"	82'-11"	84'-10"	81'-10"	79'-0"	84'-11"	81'-10"	10'-0"
1625125-255	12	33	108'-8"	84'-11"	83'-11"	85'-10"	82'-10"	80'-0"	85'-11"	82'-10"	10'-0"
1625125-258	12	33	110'-1"	85'-11"	84'-11"	86'-10"	83'-10"	81'-0"	86'-11"	83'-10"	10'-0"
1625125-261	12	33	111'-4"	86'-11"	85'-11"	87'-10"	84'-10"	82'-0"	87'-11"	84'-10"	10'-0"
1625125-264	12	33	112'-7"	87'-11"	86'-11"	88'-10"	85'-10"	83'-0"	88'-11"	85'-10"	10'-0"
1625125-267	12	33	114'-0"	88'-11"	87'-11"	89'-10"	86'-10"	84'-0"	89'-11"	86'-10"	10'-0"
1625125-270	12	33	115'-3"	89'-11"	88'-11"	90'-10"	87'-10"	85'-0"	90'-11"	87'-10"	10'-0"
1625125-273	12	33	116'-6"	90'-11"	89'-11"	91'-10"	88'-10"	86'-0"	91'-11"	88'-10"	10'-0"
1625125-276	12	33	117'-9"	91'-11"	90'-11"	92'-10"	89'-10"	87'-0"	92'-11"	89'-10"	10'-0"
1625125-279	12	33	119'-2"	92'-11"	91'-11"	93'-10"	90'-10"	88'-0"	93'-11"	90'-10"	10'-0"
1625125-282	12	33	120'-5"	93'-11"	92'-11"	94'-10"	91'-10"	89'-0"	94'-11"	91'-10"	10'-0"
1											

WALL LEGEND

	EXISTING 8" CMU WALL TO REMAIN
	NEW FRAME WALL WITH METAL STUDS
	WALL TO BE DEMOLISHED

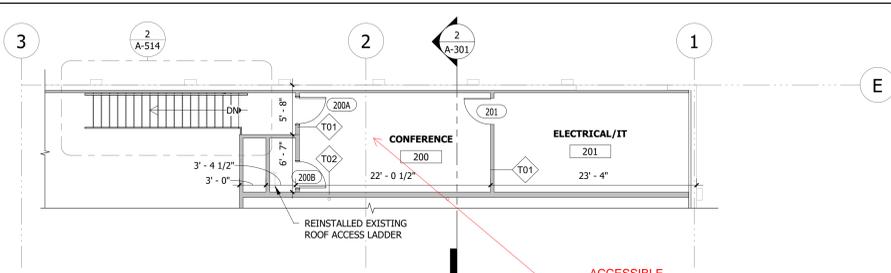
DOOR AND WINDOW LEGEND

	DOOR TAG. SEE SHEET A601 FOR DOOR SCHEDULE.
	WINDOW TAG. SEE SHEET A601 FOR WINDOW SCHEDULE.
	STOREFRONT TAG. SEE SHEET A601 FOR STOREFRONT SCHEDULE.

WALL TYPES - SEE SHEET A101 OR A102

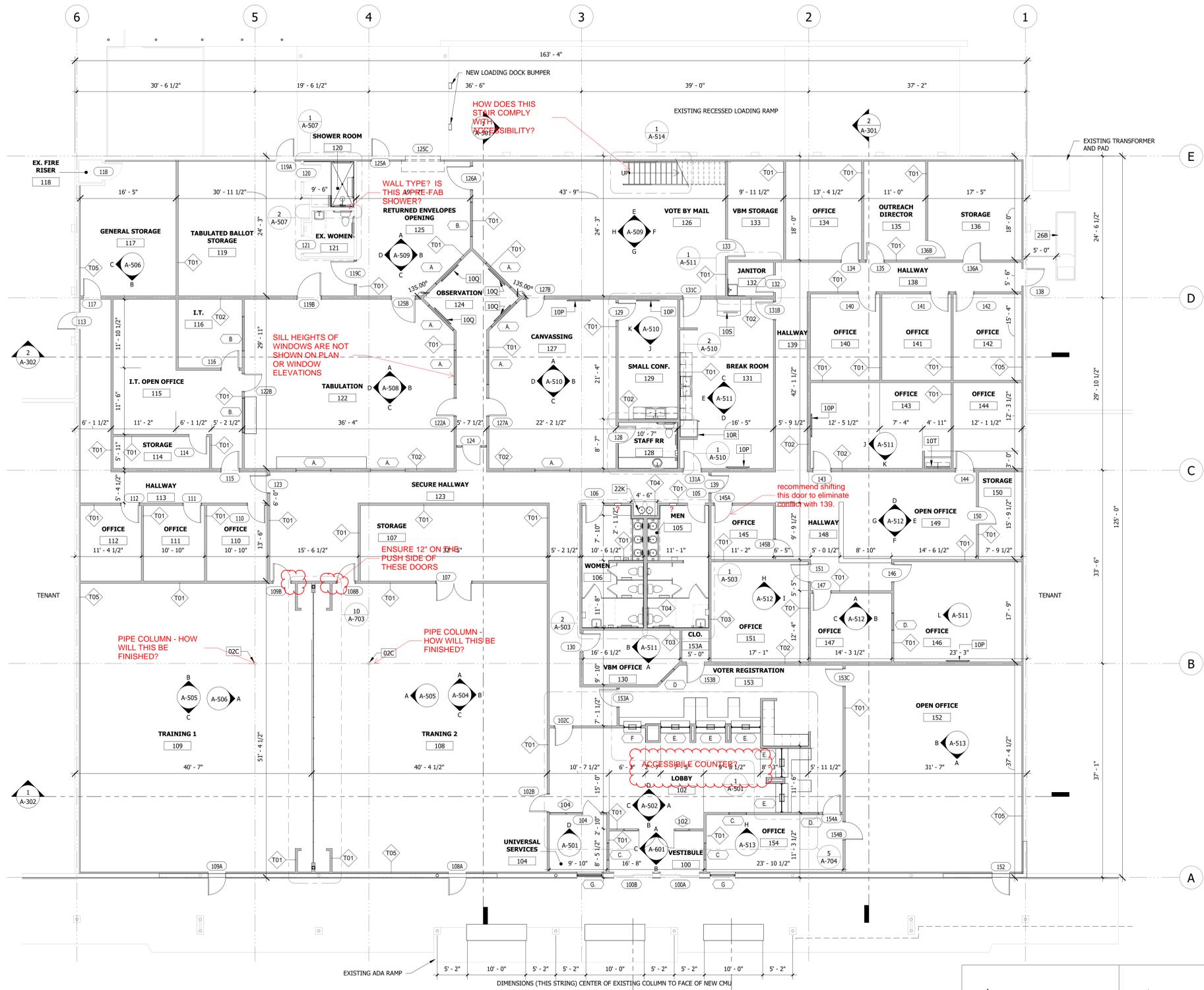
KEYNOTES

NO.	KEY
02C	EXISTING PIPE COLUMN
10P	WALL MOUNTED TV, 6" HGT FROM FF. (BY OWNER)
10Q	WALL MOUNTED TV, ABOVE WINDOW (BY OWNER)
10R	FRIDGE (MANUFACTURER AND MODEL TBD BY OWNER)
10S	ICE MACHINE (MANUFACTURER AND MODEL TBD BY OWNER)
10T	CAMERA MONITOR
22K	DRINKING FOUNTAIN PER PLUMBING
26B	POWER GENERATOR PER ELECTRICAL DRAWINGS



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

ACCESSIBLE ROUTE TO COMMON USE CONFERENCE ROOM?



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

GENERAL NOTES FOR NEW CONSTRUCTION AND DIMENSION PLANS

- CONTRACTOR SHALL COMPLY WITH THE STATE OF FLORIDA STATE BUILDING CODE CURRENT EDITION, THE FLORIDA BUILDING CODE 2023 (WITH ALL APPLICABLE REVISIONS), FLORIDA FIRE PREVENTION CODE 2023, ALL STATE AND LOCAL ZONING CODES AND THE CITY OF TALLAHASSEE PERMITS SHALL BE POSTED IN A VISIBLE PLACE AT ALL TIMES.
- ALL PERMITS, UTILITY AND METER CONNECTION FEES SHALL BE OBTAINED AND PAID FOR BY THE CONTRACTOR.
- ALL WORK, MATERIALS AND EQUIPMENT UTILIZED IN THIS PROJECT SHALL BE NEW AND INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS.
- ALL WORK FOR THIS PROJECT SHALL CONFORM TO STANDARDS PUBLISHED BY RECOGNIZED PROFESSIONAL AND INDUSTRY ORGANIZATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE PRIOR TO BIDDING AND FAMILIARIZING HIMSELF WITH ALL EXISTING CONDITIONS AFFECTING THE WORK, INCLUDING BUT NOT LIMITED TO PRIVATE AND PUBLIC UTILITIES, ON AND OFF SITE, ACCESS ROADS AND OTHER SUPPORT FACILITIES.
- CONTRACTOR TO REMOVE, RELOCATE OR RE-ROUTE, AS NECESSARY, ELECTRICAL, TELEPHONE, WATER, SEWER, GAS (IF APPLICABLE) OR ANY OTHER UTILITY LINES ENCOUNTERED AND SHALL COORDINATE THIS WORK WITH ALL LOCAL UTILITY COMPANIES.
- CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY UNEXPECTED OR UNKNOWN FIELD CONDITIONS, ERRORS, OMISSIONS, OR DISCREPANCIES IN THE DRAWINGS, PROJECT MANUAL, OR CONTRACT DOCUMENT.
- CONTRACTOR SHALL PREPARE AND MAINTAIN ALL CONSTRUCTION AREAS, AS WELL AS SURROUNDING AREAS FREE OF DEBRIS OR HAZARDOUS EQUIPMENT AT ALL TIMES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND/OR REPLACEMENT OF ANY ITEMS DAMAGED DURING CONSTRUCTION OR CLEAN-UP. CONSTRUCTION PERSONNEL SHALL BE CONFINED TO THE LIMITS OF THE CONSTRUCTION AREA. ALL OSHA REGULATIONS FOR CONSTRUCTION AREAS SHALL BE STRICTLY FOLLOWED.
- CONTRACTOR SHALL NOT BE SCALED. WRITTEN DIMENSIONS SHALL BE FOLLOWED.
- ALL DIMENSIONS ARE BASED ON NOMINAL SIZES OF MEMBERS AND ARE GIVEN TO THE OUTER FACE OF SUCH MEMBERS, NOT TO THE CENTERLINE OF FINISH MATERIALS UNLESS OTHERWISE NOTED ON DRAWINGS. WHERE A DIMENSION IS LABELED "CLEAR" IT IS TAKEN FROM THE FACE OF FINISH MATERIALS TO FACE OF FINISH MATERIALS.
- CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL BEFORE COMMENCING FABRICATION AND/OR INSTALLATION OF ALL APPLICABLE ITEMS FOR CONSTRUCTION. ALL SHOP DRAWINGS DIMENSIONS SHALL BE FIELD VERIFIED, REVIEWED AND APPROVED BY CONTRACTOR BEFORE SUBMITTAL. SHOP DRAWINGS WHICH ARE INCOMPLETE OR LACKING SUFFICIENT INFORMATION WILL BE RETURNED WITHOUT REVIEW. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- PRESSURE TREATED WOOD SHALL BE USED WHERE WOOD IS IN CONTACT WITH CONCRETE OR MASONRY OR IN CONTACT WITH THE ELEMENTS (EXTERIOR).
- CONTRACTOR TO FURNISH AND INSTALL ALL METAL AND WOOD BLOCKING REQUIRED FOR WALL MOUNTED OR BRACED FIXTURES, MILLWORK, SHELVES, BATHROOM FIXTURES AND ACCESSORIES OR BY OTHER ITEMS DESCRIBED IN INTERIOR DESIGN AND ARCHITECTURAL DRAWINGS.
- IN ADDITION TO WALL TYPES SHOWN ON PLANS THE CONTRACTOR SHALL REFER TO THE ROOM FINISH SCHEDULE, INTERIOR ELEVATIONS AND DETAILS FOR ADDITIONAL INFORMATION REGARDING FINISHES.
- CONTRACTOR SHALL COORDINATE WITH MECHANICAL AND ELECTRICAL CONTRACTORS THE LOCATION OF ALL ACCESS PANELS SO AS TO ALLOW FOR PROPER EQUIPMENT ACCESSIBILITY, MAINTENANCE, AND/OR OPERATION OF THE BUILDING SYSTEMS PRIOR TO THE START OF WORK. THE OMISSIONS OF ANY OR ALL ACCESS PANELS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FROM PROVIDING AND INSTALLING SUCH PANELS OR DOORS.
- ACCESS PANELS IN RATED ELEMENTS SHALL HAVE THE SAME FIRE RATING.
- CONTRACTOR SHALL PAINT ALL VISIBLE SURFACES OF FACTORY PRIMED OR FACTORY PAINT FINISHED EQUIPMENT, A.C. GRILLS OR REGISTERS, COVERS, ETC. UNLESS SPECIFICALLY NOTED OTHERWISE VERIFY AND COORDINATE COLORS WITH INTERIOR DESIGN AND ARCHITECT.
- ALL INTERIOR AND EXTERIOR JOINTS BETWEEN DIFFERENT MATERIALS OR FINISHES SHALL RECEIVE A BEAD OF CAULKING OR FORM A REVEAL TO MATCH COLOR OF ADJACENT SURFACE. COORDINATE COLORS WITH ARCHITECT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL DEBRIS AND CONSTRUCTION MATERIAL FROM THE SITE.
- CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROPERLY CLEANING ALL AREAS PRIOR TO FINAL ACCEPTANCE BY THE OWNER INCLUDING BUT NOT LIMITED TO WINDOWS, FLOORS, CARPETS, WALLS, DOORS, EQUIPMENT, ETC.
- UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL GIVE TO THE OWNER A COMPLETE SET OF AS-BUILT CIVIL, LANDSCAPE, ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS ALONG WITH THE WRITTEN GUARANTEES, OPERATION AND MAINTENANCE MANUALS OF ALL EQUIPMENT AND FINISHES INSTALLED. THE CONTRACTOR SHALL MAINTAIN A CURRENT SET OF AS-BUILT DRAWINGS AND SPECIFICATIONS. INFORMATION SHALL BE RECORDED BY CONTRACTOR AS CONSTRUCTION PROGRESSES AND REVIEWED FOR COMPLETENESS AT EACH REQUISITION REQUEST. REFER TO PROJECT MANUAL.
- CONTRACTOR SHALL PROVIDE PROPER SAFEGUARDS IN COMPLIANCE WITH THE LIFE SAFETY PLANS DURING ALL PHASES OF CONSTRUCTION.
- CONTRACTOR TO PROVIDE A SAFETY PLAN PRIOR TO START OF CONSTRUCTION TO CLEARLY DELINEATE AREAS FOR CONSTRUCTION, SAFETY BARRIERS, EXITS, CONSTRUCTION TRAFFIC DURING THE VARIOUS PHASES AND WHEN CONDITIONS CHANGE.

DIMENSIONS (THIS STRING) CENTER OF EXISTING COLUMN TO FACE OF NEW CMU

WALL TYPE	SCALE	DESCRIPTION
INTERIOR EXTERIOR WALL TYPE - 05 (T05)	SCALE: 3/4" = 1'-0"	EXISTING CMU 5/8" GYP BD, FINISHED AND PAINTED 1/2" DENS-SHIELD BACKER BOARD 2-1/2" X 25-GAUGE GALVANIZED STEEL FURRING CHANNEL @ 16" O.C.
INTERIOR INTERIOR WALL TYPE - 04 (T04)	SCALE: 3/4" = 1'-0"	TILE MORTAR 1/2" DENS-SHIELD BACKER BOARD 5" METAL STUD @ 16" O.C.
INTERIOR INTERIOR WALL TYPE - 03 (T03)	SCALE: 3/4" = 1'-0"	5/8" GYP BD. TILE MORTAR 1/2" DENS-SHIELD BACKER BOARD 3 5/8" METAL STUD @ 16" O.C. GAUGE?
INTERIOR INTERIOR WALL TYPE - 02 (T02)	SCALE: 3/4" = 1'-0"	5/8" GYP BD, FINISHED AND PAINTED 6" METAL STUD @ 16" O.C. GAUGE?
INTERIOR INTERIOR WALL TYPE - 01 (T01)	SCALE: 3/4" = 1'-0"	INSULATION? 5/8" GYP BD, FINISHED AND PAINTED 3 5/8" METAL STUD @ 16" O.C. GAUGE?

This sheet doesn't include minimum metal stud gauges.

SEE SHEET A-011 FOR MINIMUM STUD GAUGES, SIZE FOR L/240 MAX. DEFLECTION.

WE SEE NO REFERENCE TO ACOUSTICAL INSULATION BEING PROVIDED IN WALL CAVITIES OR ABOVE CEILINGS. HOW IS SOUND BEING ATTENUATED?
WHAT IS THE STC RATING OF THE INTERIOR WALLS?

GAUGE OF STUD?

KEYNOTES	
NO.	KEY
02A	EXISTING ROOF HATCH



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MARK.	DATE	DESCRIPTION

JOB NAME	SHEET NAME

DATE	DESCRIPTION

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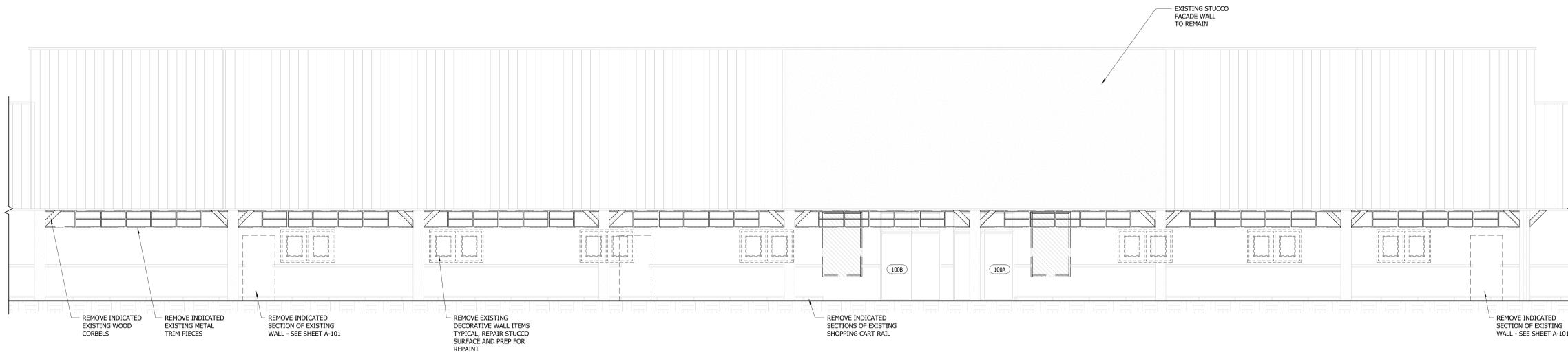
EXISTING & NEW BUILDING ELEVATIONS

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JOB # 25-11111
DATE 04/22/2025
SHEET NUMBER

A-201

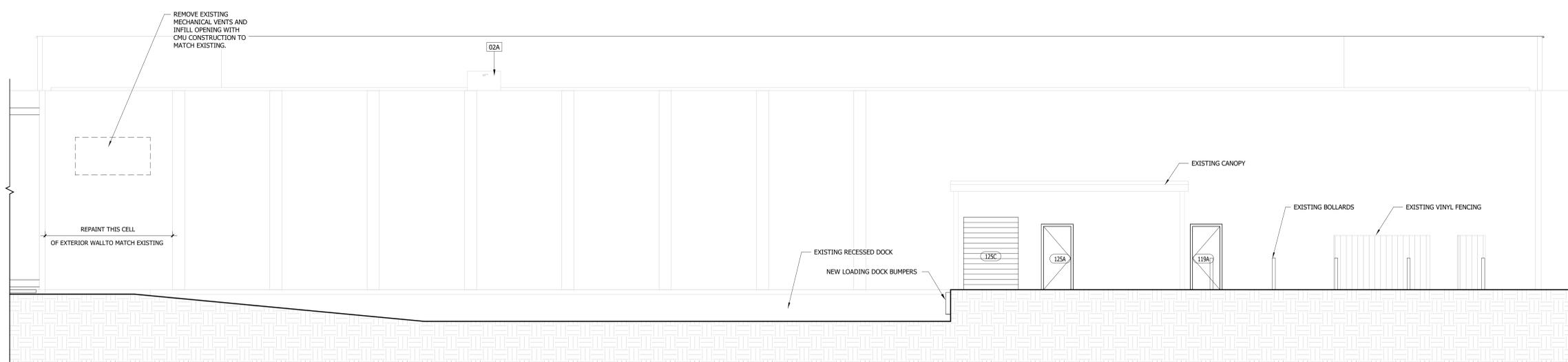
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3 NORTH ELEVATION - EXISTING/DEMO
3/16" = 1'-0"



2 NORTH ELEVATION
3/16" = 1'-0"

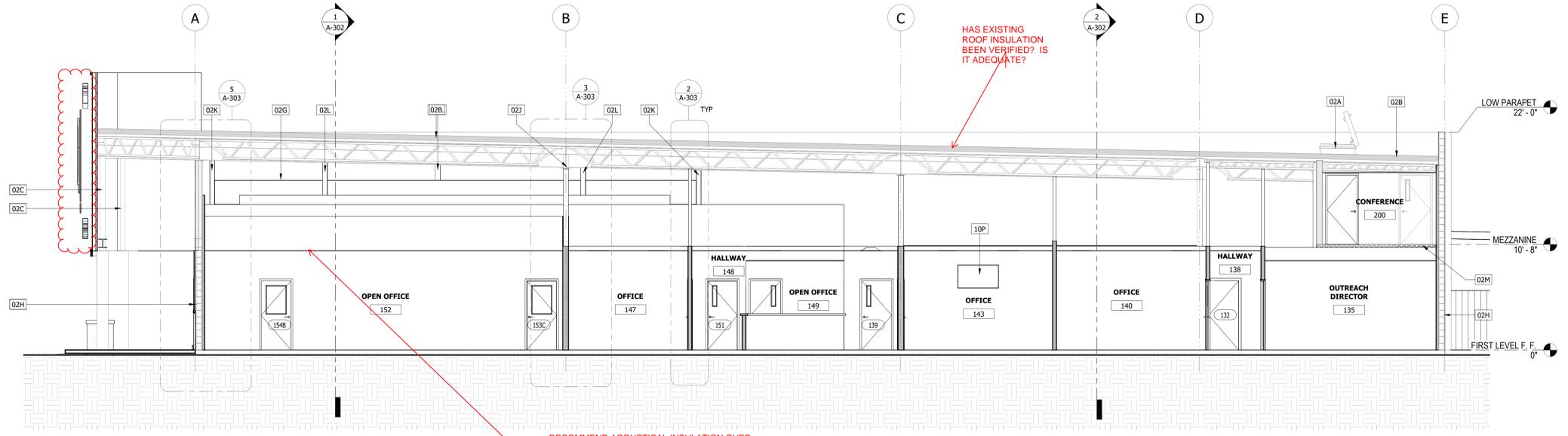


1 SOUTH ELEVATION
3/16" = 1'-0"

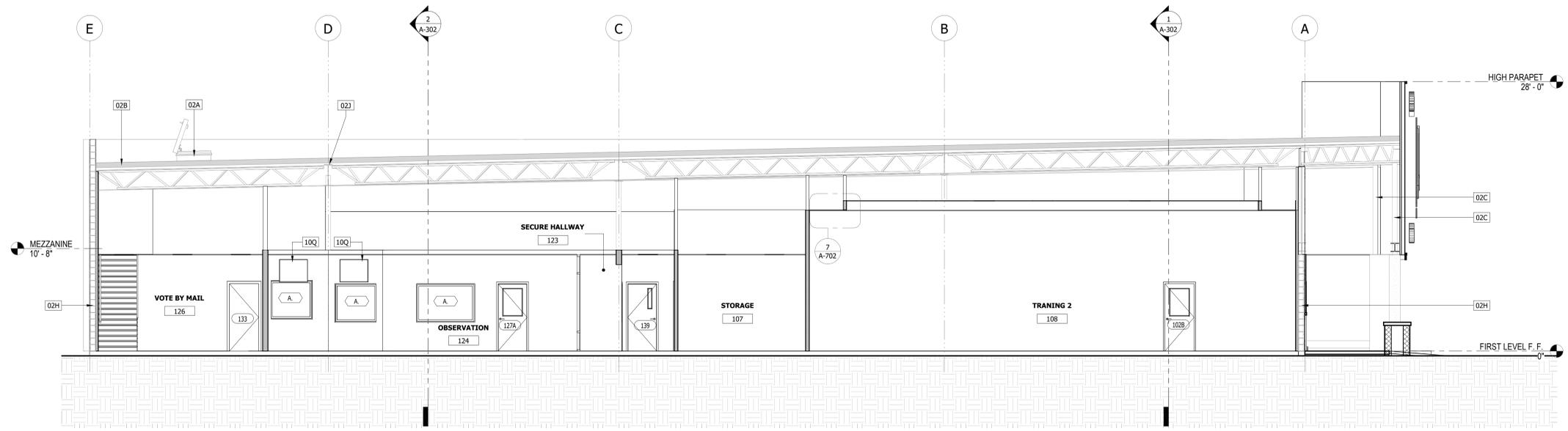
GENERAL NOTES FOR EXTERIOR ELEVATIONS

- PAINT EXPOSED WALL-MOUNTED EQUIPMENT, PIPING, SCREENS, ETC. IN A COLOR AS SELECTED BY THE DESIGN PROFESSIONAL. EXCEPT THAT, ITEMS WHICH ARE ALUMINUM OR STAINLESS STEEL SHALL NOT BE PAINTED.
- REFER TO THE GRAPHICS SHEETS FOR WALL-MOUNTEDS. SIGNAGE
- PROVIDE BLOCKING AND WEATHERTIGHT ATTACHMENTS FOR ALL EXTERIOR WALL-MOUNTED EQUIPMENT AND DEVICES, INCLUDING, BUT NOT LIMITED TO SIGNAGE, ARTWORK, MECHANICAL, PLUMBING, ELECTRICAL, AND/OR LOW VOLTAGE ITEMS, ETC.

KEYNOTES	
NO.	KEY
02A	EXISTING ROOF HATCH
02B	EXISTING METAL JOIST AND ROOF SYSTEM (TYP)
02C	EXISTING PIPE COLUMN
02G	STEEL BEAM (SEE STRUCTURAL PLANS)
02H	EXISTING CHU WALL
02J	EXISTING STEEL BEAM
02K	EXISTING STEEL COLUMN
02L	DIAGONAL BRACE (SEE STRUCTURAL PLANS)
02M	EXISTING METAL DECK TO REMAIN
10P	WALL MOUNTED TV. 6' HGT FROM FF. (BY OWNER)
10Q	WALL MOUNTED TV. ABOVE WINDOW (BY OWNER)



2 TRANSVERSAL BUILDING SECTION - 2
3/16" = 1'-0"



1 TRANSVERSAL BUILDING SECTION - 1
3/16" = 1'-0"

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MARK.	DATE	DESCRIPTION

DESIGN

JOB NAME
SHEET NAME

SUPERVISOR OF ELECTIONS BUILDING TI
365 E. Burleigh Blvd., Tavares, FL 32778.

BUILDING SECTION

JOB # 25-11111
DATE 04/22/2025

SHEET NUMBER
A-301

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KEYNOTES	
NO.	KEY
09H	5/8" ALUMINUM U-CHANNEL
09K	PAINTED GYPSUM
09L	BASEBOARD, REAL WOODS, RWBA, 03 (9/16" x 5-1/4") OR EQUAL



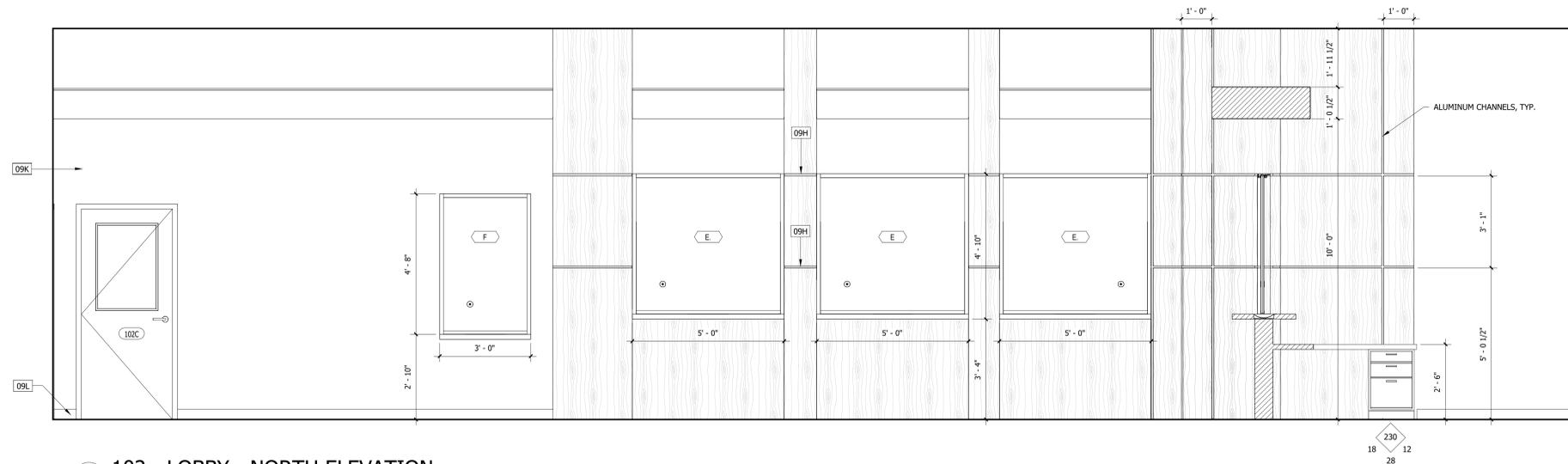
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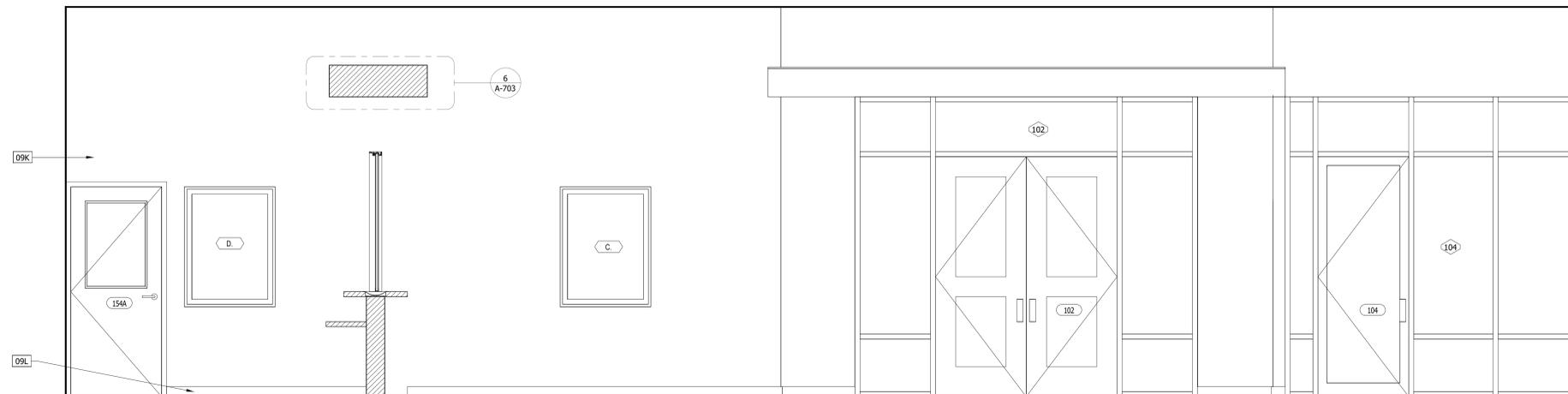
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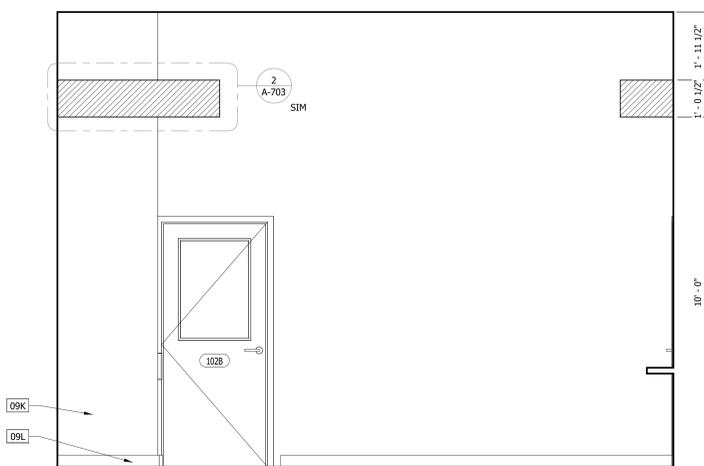
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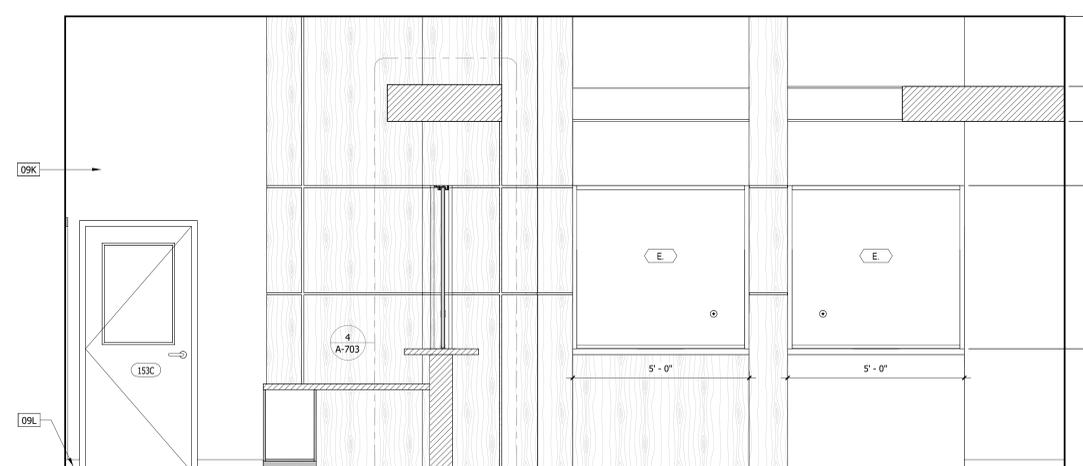
D 102 - LOBBY - NORTH ELEVATION
1/2" = 1'-0"



B 102 - LOBBY - SOUTH ELEVATION
1/2" = 1'-0"



C 102 - LOBBY - WEST ELEVATION
1/2" = 1'-0"



A 102 - LOBBY - EAST ELEVATION
1/2" = 1'-0"

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ENLARGED PLAN AND INTERIOR ELEVATIONS 102

JOB NAME
SHEET NAME

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JOB # 25-11111
DATE 04/22/2025

SHEET NUMBER
A-502

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KEYNOTES	
NO.	KEY
09K	PAINTED GYPSUM
09L	BASEBOARD, REAL WOODS, RWBA, 03 (9/16" x 5-1/4") OR EQUAL



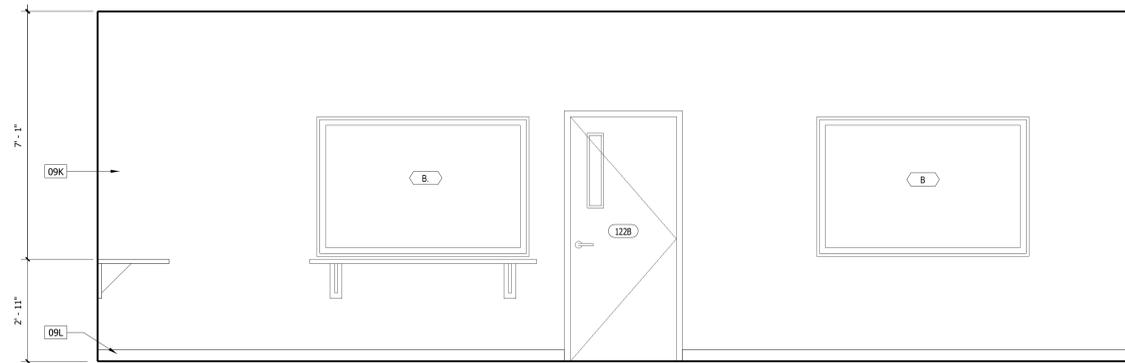
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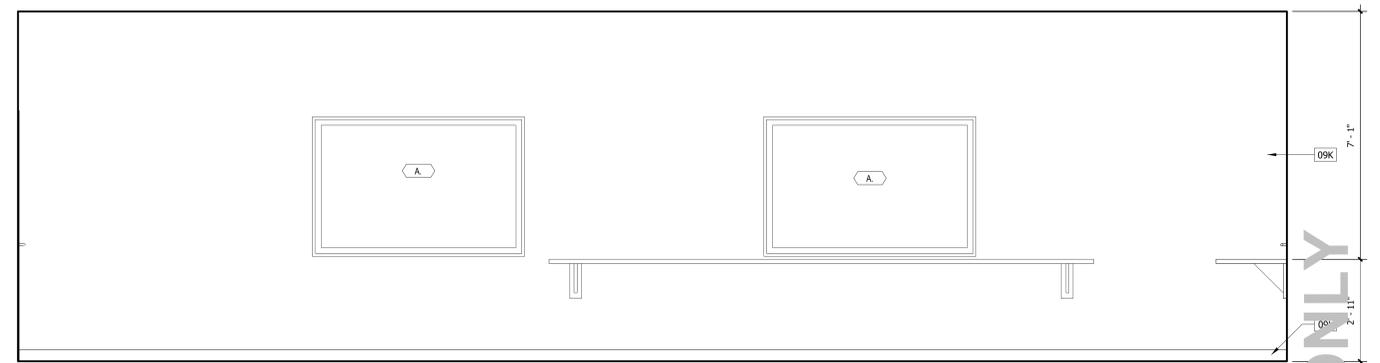
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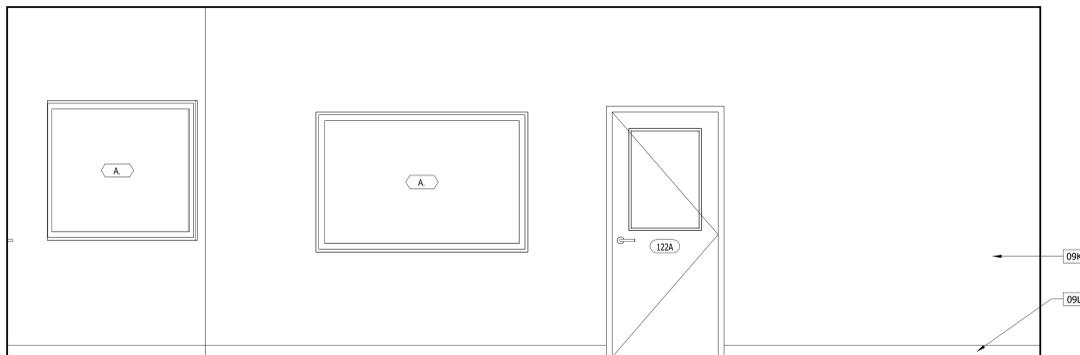
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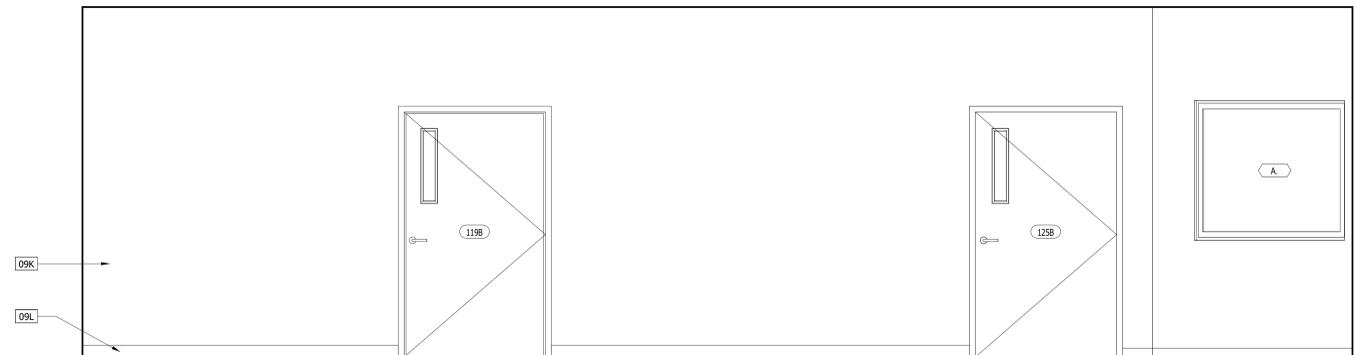
D 122-TABULATION - WEST ELEVATION
1/2" = 1'-0"



C 122-TABULATION - SOUTH ELEVATION
1/2" = 1'-0"



B 122-TABULATION - EAST ELEVATION
1/2" = 1'-0"



A 122-TABULATION - NORTH ELEVATION
1/2" = 1'-0"

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ENLARGED PLAN AND INTERIOR ELEVATIONS 122

JOB NAME SHEET NAME

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JOB # 25-11111
DATE 04/22/2025

SHEET NUMBER
A-508

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KEYNOTES	
NO.	KEY
09K	PAINTED GYPSUM
09L	BASEBOARD, REAL WOODS, RWBA: 03 (9/16" x 5-1/4") OR EQUAL

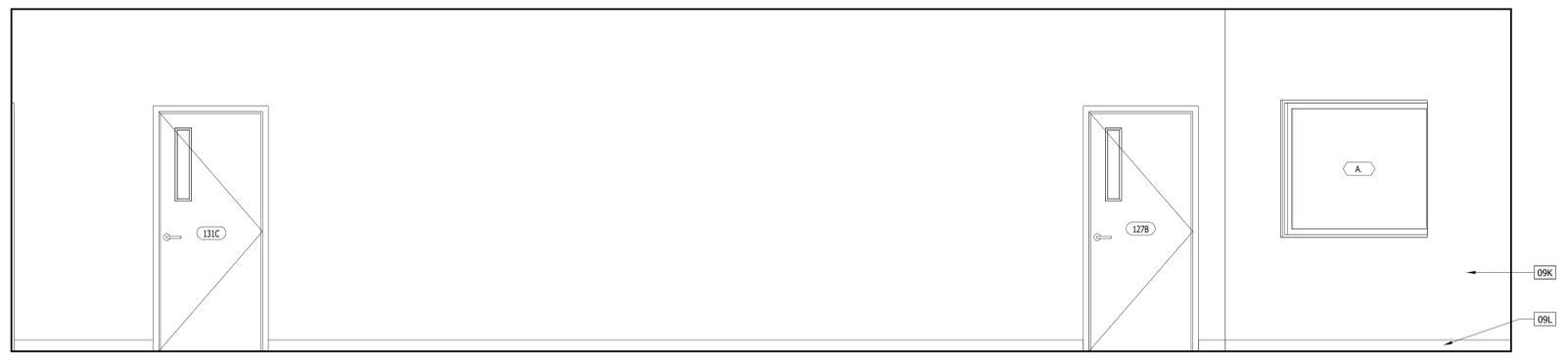
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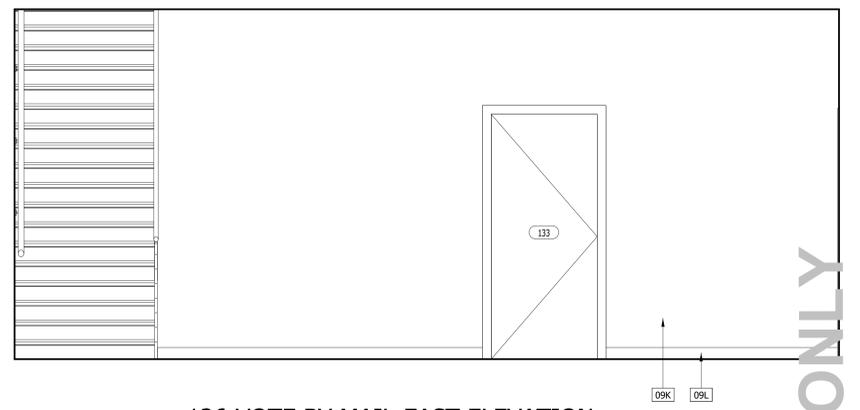
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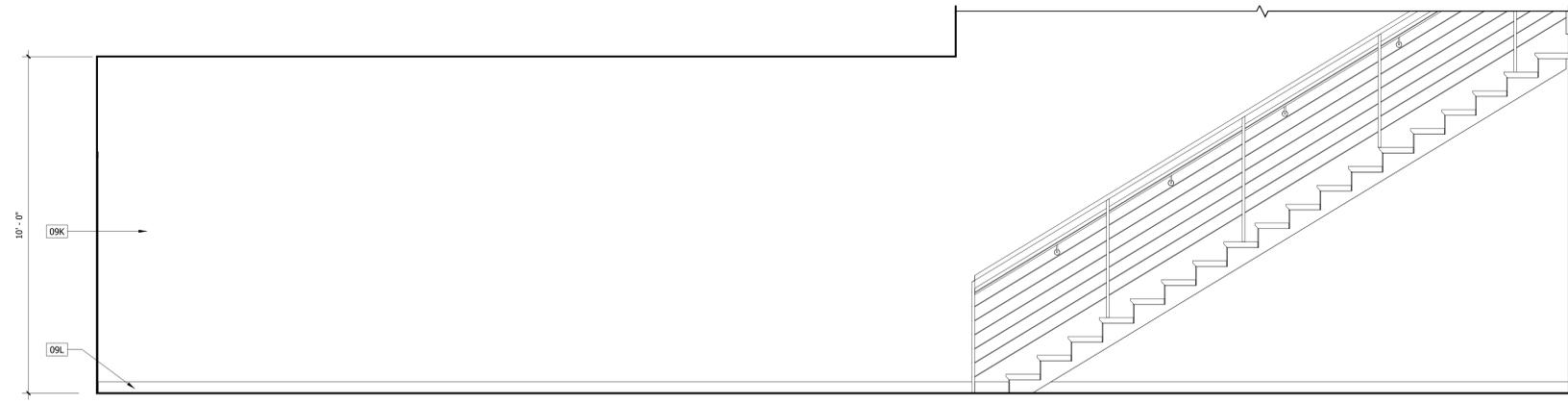
H 126-VOTE BY MAIL-WEST ELEVATION
1/2" = 1'-0"



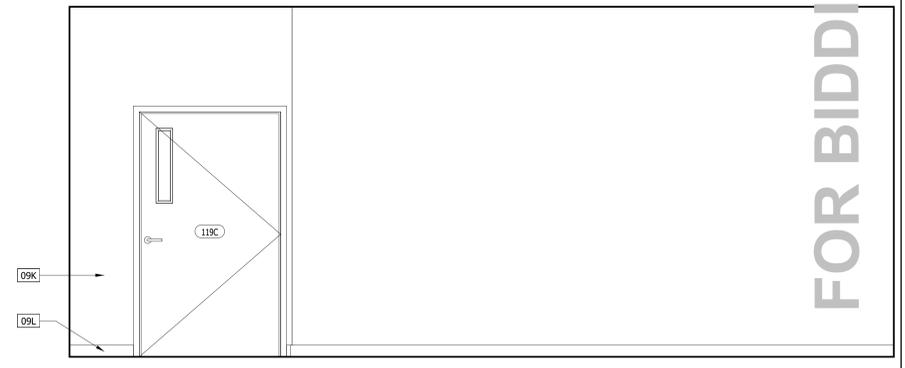
G 126-VOTE BY MAIL-SOUTH ELEVATION
1/2" = 1'-0"



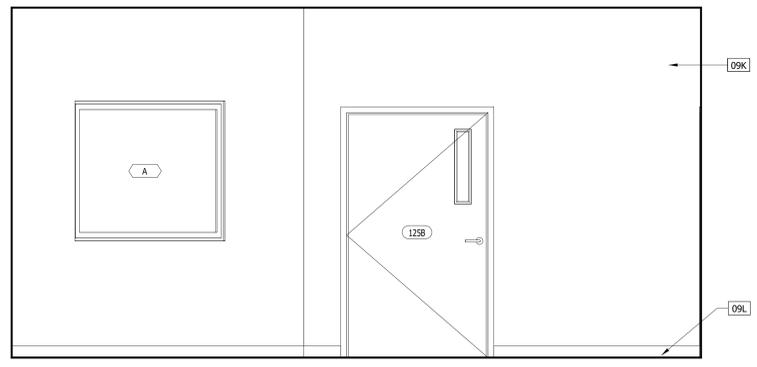
F 126-VOTE BY MAIL-EAST ELEVATION
1/2" = 1'-0"



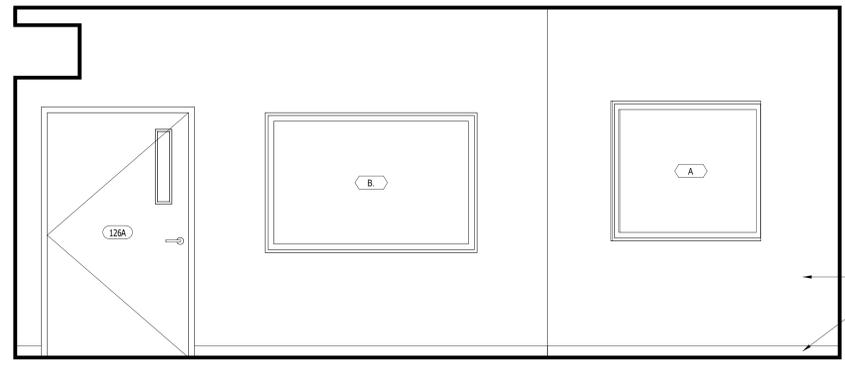
E 126-VOTE BY MAIL-NORTH ELEVATION
1/2" = 1'-0"



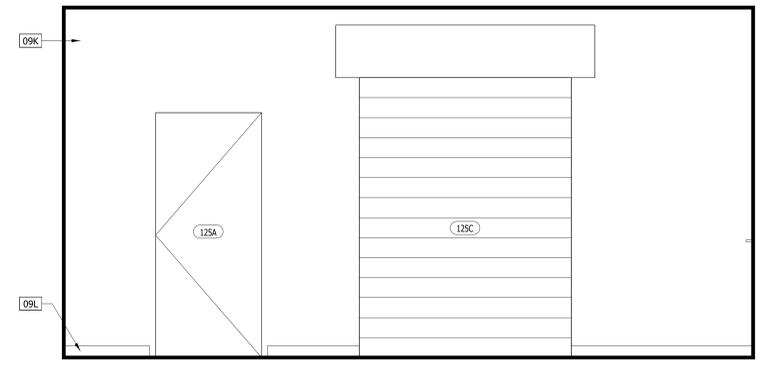
D 125-RETURNED ENVELOPES OPENING-WEST ELEVATION
1/2" = 1'-0"



C 125-RETURNED ENVELOPES OPENING-SOUTH ELEVATION
1/2" = 1'-0"



B 125-RETURNED ENVELOPES OPENING-EAST ELEVATION
1/2" = 1'-0"



A 125-RETURNED ENVELOPES OPENING-NORTH ELEVATION
1/2" = 1'-0"

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ENLARGED PLAN AND INTERIOR ELEVATIONS 125 AND 126

JOB NAME SHEET NAME

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JOB # 25-11111
DATE 04/22/2025

SHEET NUMBER
A-509

KEYNOTES	
NO.	KEY
09K	PAINTED GYPSUM
09L	BASEBOARD, REAL WOODS, RWBA, 03 (9/16" x 5-1/4") OR EQUAL



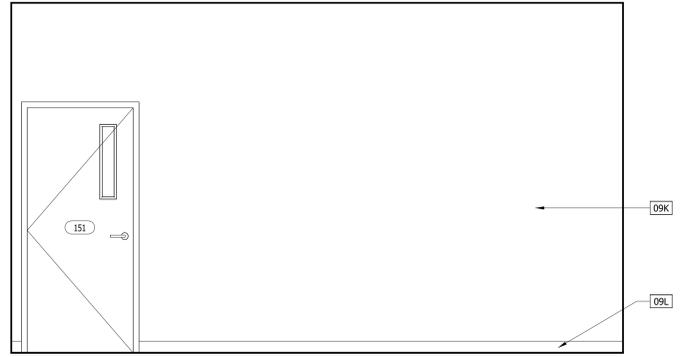
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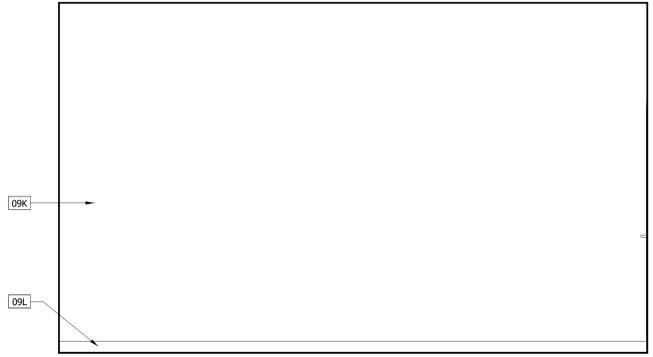
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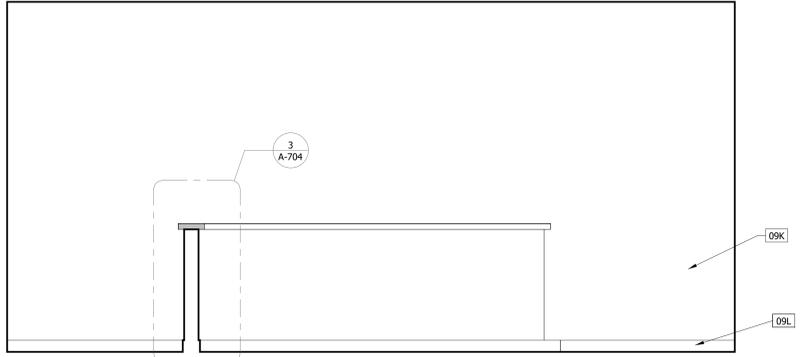
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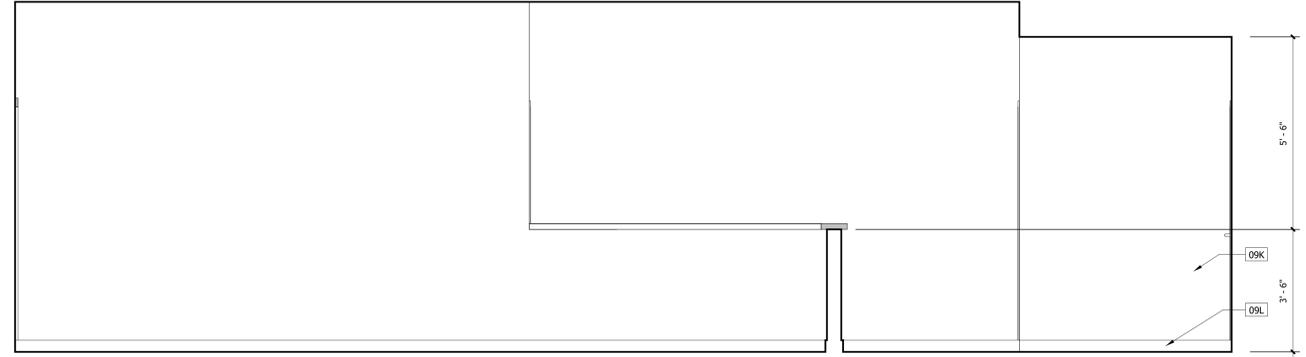
I 151 - FINANCIAL MANAGER - EAST ELEVATION
1/2" = 1'-0"



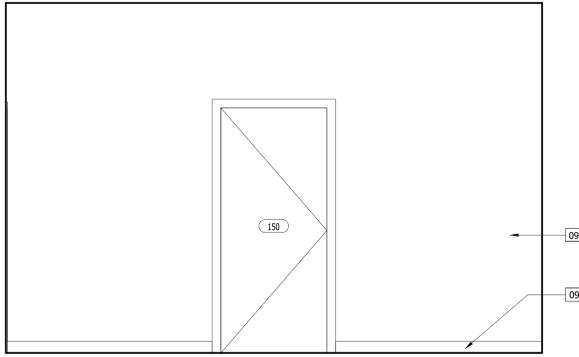
H 151 - FINANCIAL MANAGER - NORTH ELEVATION
1/2" = 1'-0"



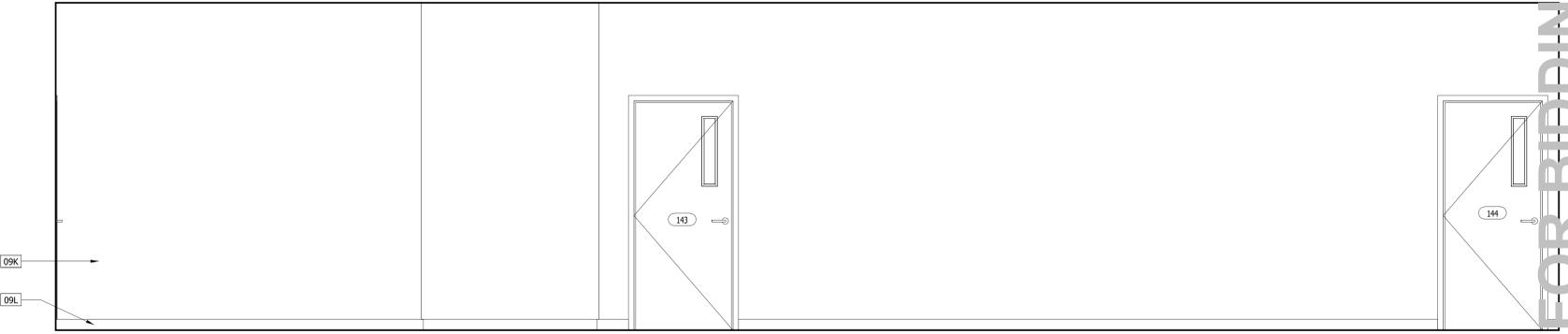
G 149 - WORK ROOM - WEST ELEVATION
1/2" = 1'-0"



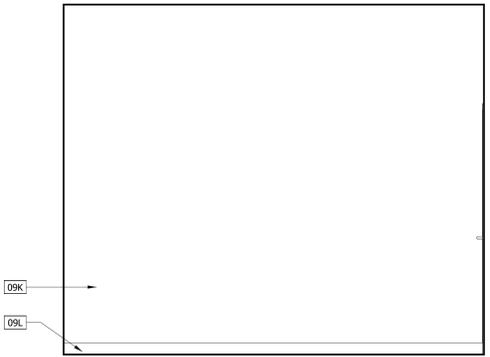
F 149 - WORK ROOM - SOUTH ELEVATION
1/2" = 1'-0"



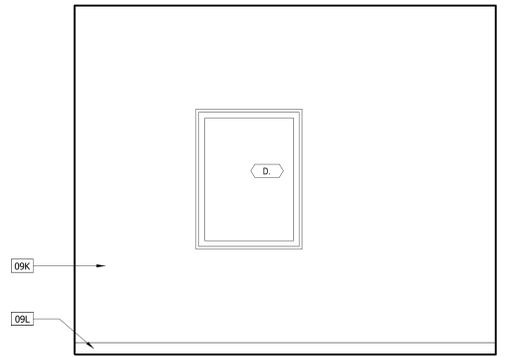
E 149 - WORK ROOM - EAST ELEVATION
1/2" = 1'-0"



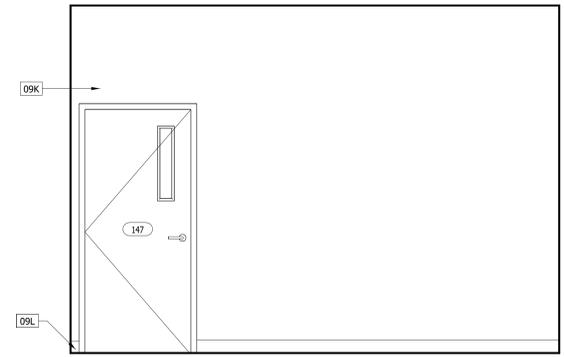
D 149 - WORK ROOM - NORTH ELEVATION
1/2" = 1'-0"



C 147 - ADMIN. ASST. - WEST ELEVATION
1/2" = 1'-0"



B 147 - ADMIN. ASST. - EAST ELEVATION
1/2" = 1'-0"



A 147 - ADMIN. ASST. - NORTH ELEVATION
1/2" = 1'-0"

FOR BIDDING ONLY

SUPERVISOR OF ELECTIONS BUILDING TI
365 E. Burleigh Blvd., Tavares, FL 32778.

ENLARGED PLAN AND INTERIOR ELEVATIONS 147, 149 AND 151

JOB NAME SHEET NAME

ANY DISCREPANCY OR ERROR IN DIMENSIONS OR NOTES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN PROFESSIONAL FOR CLARIFICATION PRIOR TO COMMENCEMENT OF CONSTRUCTION.

JOB # 25-11111

DATE 04/22/2025

SHEET NUMBER

A-512

MARK	DATE	DESCRIPTION

MARK	DATE	DESCRIPTION

MARK	DATE	DESCRIPTION

MARK	DATE	DESCRIPTION

SUPERVISOR OF ELECTIONS BUILDING TI
365 E. Burleigh Blvd., Tallahassee, FL 32378.

ENLARGED PLAN AND INTERIOR ELEVATIONS 152, 153 AND 155

JOB NAME
SHEET NAME

ANY DISCREPANCY OR ERROR IN DIMENSIONS OR NOTES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN PROFESSIONAL FOR CLARIFICATION PRIOR TO COMMENCEMENT OF CONSTRUCTION.

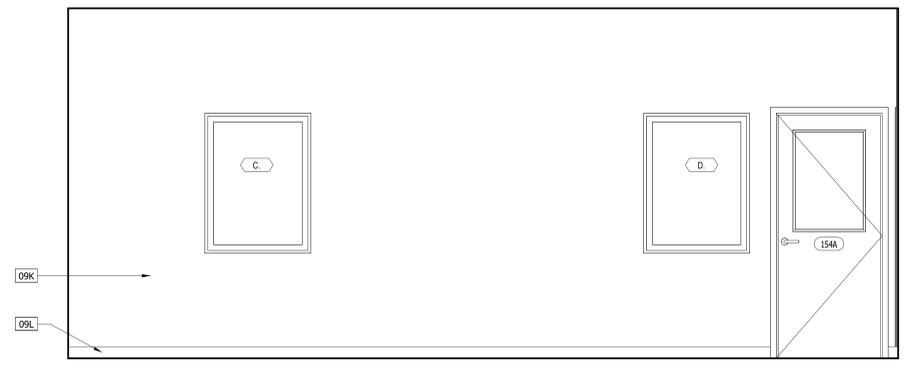
JOB # 25-11111
DATE 04/22/2025

SHEET NUMBER
A-513

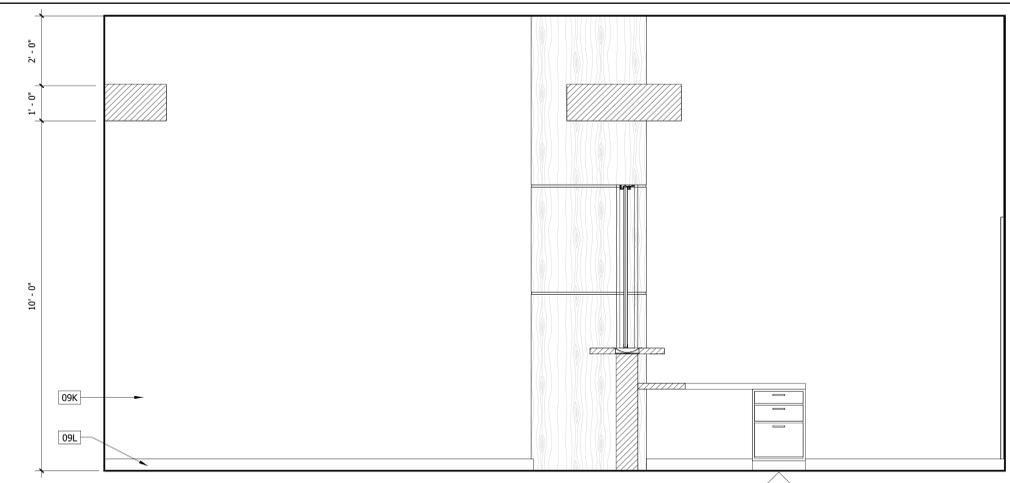
FOR BIDDING ONLY

KEYNOTES	
NO.	KEY
09K	PAINTED GYPSUM
09L	BASEBOARD, REAL WOODS, RWBA. 03 (9/16" x 5-1/4") OR EQUAL

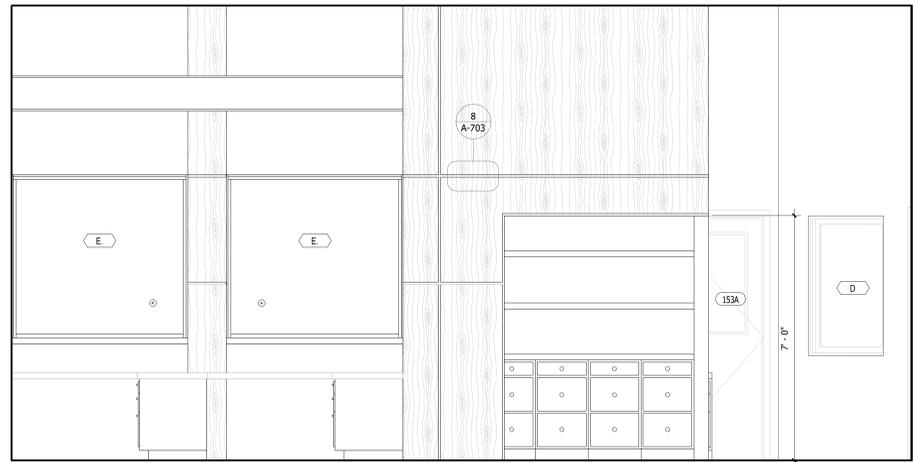
CABINET LEGEND	
142	WIC NUMBER
XX	CABINET WIDTH IN INCHES
YY	CABINET HEIGHT IN INCHES
ZZ	CABINET DEPTH IN INCHES



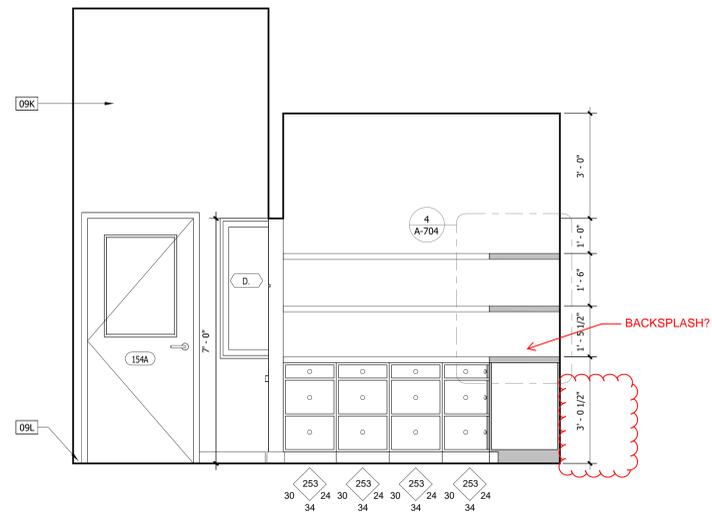
H 155-VR OFFICE-NORTH ELEVATION
1/2" = 1'-0"



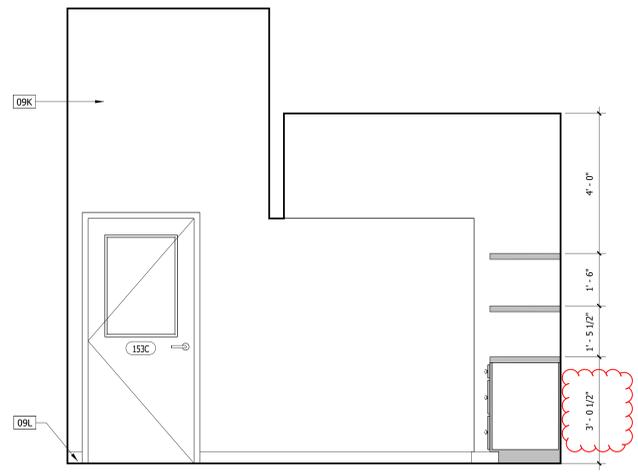
G 153- VOTER REGISTRATION- WEST ELEVATION
1/2" = 1'-0"



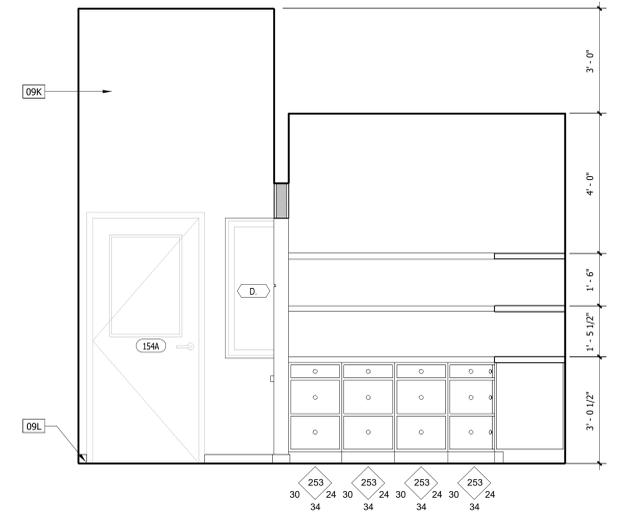
F 152-CALL CENTER-WEST ELEVATION 2
1/2" = 1'-0"



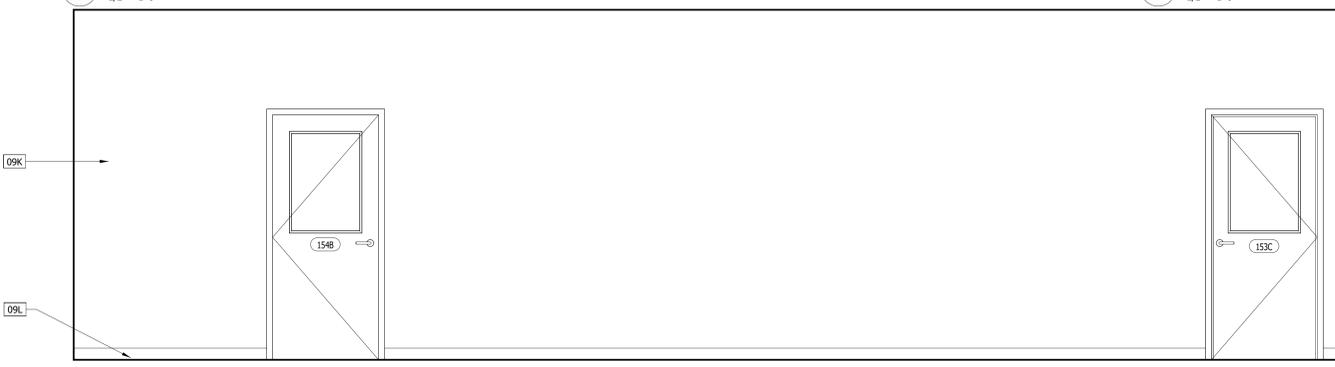
D 153- VOTER REGISTRATION- SOUTH ELEVATION
1/2" = 1'-0"



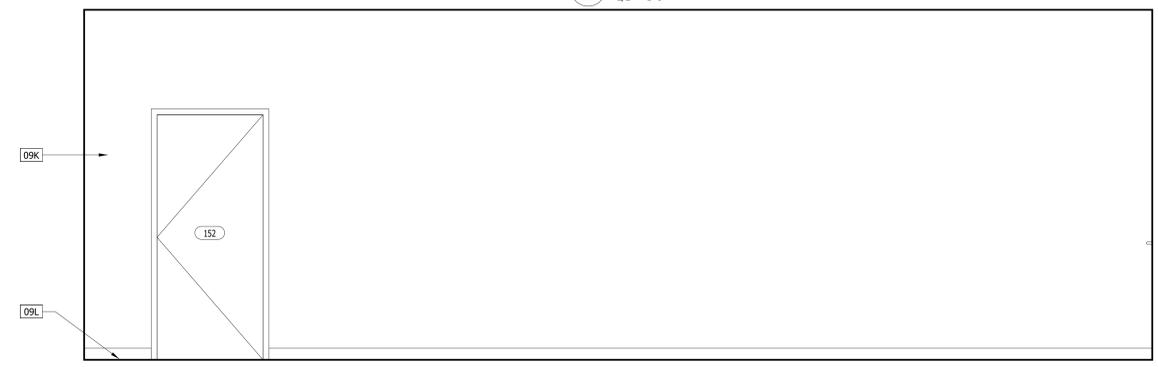
C 153- VOTER REGISTRATION- EAST ELEVATION
1/2" = 1'-0"



E 153- VOTER REGISTRATION SOUTH ELEVATION
1/2" = 1'-0"



B 152-CALL CENTER-WEST ELEVATION 1
1/2" = 1'-0"



A 152-CALL CENTER-SOUTH ELEVATION
1/2" = 1'-0"

WINDOW SCHEDULE XXX

NUMBER	TYPE	SIZE		HEIGHT		DETAIL		SILL
		WIDTH	HEIGHT	HEAD	JAMB	HEAD	JAMB	
FIRST LEVEL F. F.								
A	WA	6'-0"	4'-0"	7'-4"	3'-4"	7/A701		6/A701
B	WA	6'-0"	4'-0"	7'-0"	3'-0"	7/A701		6/A701
C	WB	3'-0"	4'-0"	8'-6"	4'-6"	7/A701		5/A701
D	WB	3'-0"	4'-0"	7'-0"	3'-0"	7/A701		6/A701
E	WC	5'-0"	4'-8"	8'-0"	3'-4"			Amortec, Inc. Bullet Resistant Aluminum Transaction Window Frames With Speak Thru
F	WC	3'-0"	4'-8"	7'-4"	2'-8"			Amortec, Inc. Bullet Resistant Aluminum Transaction Window Frames With Speak Thru
G	WD	4'-4"	7'-2"	9'-10"	2'-8"	3/A701		2/A701

WINDOW SCHEDULE NOTE:
1) REPLACE EXISTING GLAZING WITH BALLISTIC RESISTANT GLAZING LEVEL 3
2) MODERNFOLK ACCOUTI-SEAL LEGACY 900

DOOR SCHEDULE XXX

TYPE	DOOR PANEL			HEAD HEIGHT	FRAME TYPE	DETAIL			RATING	HARDWARE SET #	COMMENTS
	WIDTH	HEIGHT	THICKNESS			HEAD	JAMB	THRESHOLD			
FIRST LEVEL F. F.											
100A	-	6'-8"	7'-8"	10"	7'-8"	DFA	11/A701	10/A701	9/A701		EXISTING AUTOMATIC SLIDING DOOR
100B	-	6'-8"	7'-8"	10"	7'-8"	DFA	11/A701	10/A701	9/A701		EXISTING AUTOMATIC SLIDING DOOR
102	DA	6'-0"	8'-0"	2"	7'-0"	DFA	11/A701	10/A701	9/A701	1.0	DOOR HAS SECURITY HARDWARE AND BULLET RESISTANCE
102B	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	8.0	DOOR HAS SECURITY HARDWARE AND BULLET RESISTANCE
102C	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	7.0	DOOR HAS SECURITY HARDWARE AND BULLET RESISTANCE
104	-	3'-0"	8'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	17.0	
105	DE	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	22.0	
106	DE	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	22.0	
107	DD	6'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	18.0	
108A	DC	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	2.0	
108B	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	2.0	
109A	DC	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	8/A702	4/A702	-	3.0	
109B	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	5.0	
110	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	13.0	
111	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	13.0	
112	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	13.0	
113	DC	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	8/A702	4/A702	-	4.0	
114	DE	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	10.0	
115	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	6.0	
116	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	12.0	
117	DE	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	12.0	
118	DE	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	12.0	
119A	DC	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	8/A702	4/A702	-	4.0	EXISTING FIRE RISER DOOR
119B	DA	4'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	16.0	
119C	DA	4'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	15.0	
120	DE	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	15.0	
121	DE	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	15.0	
122A	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	8.0	DOOR HAS SECURITY HARDWARE AND BULLET RESISTANCE
122B	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	20.0	
123	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	6.0	
124	-	3'-0"	8'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	9.0	
125A	DC	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	8/A702	4/A702	-	4.0	
125B	DA	4'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	16.0	
125C	DF	6'-0"	8'-0"	2"	8'-0"	DFB	7/A702	6/A702	5/A702	23.0	
126A	DA	4'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	15.0	
127A	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	8.0	DOOR HAS SECURITY HARDWARE AND BULLET RESISTANCE
127B	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	16.0	
128	DE	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	21.0	
129	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	15.0	
130	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	12.0	
131A	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	6.0	
131B	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	19.0	
131C	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	6.0	
132	DE	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	10.0	
133	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	12.0	
134	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	13.0	
135	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	13.0	
136A	DE	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	11.0	
136B	DE	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	10.0	
138	DC	3'-0"	7'-0"	1 3/4"	7'-0"	DFB	8/A702	4/A702	-	4.0	
139	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	6.0	
140	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	13.0	
141	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	13.0	
142	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	13.0	
143	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	13.0	
144	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	13.0	
145A	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	13.0	
145B	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	13.0	
146	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	13.0	
147	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	13.0	
150	DE	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	11.0	
151	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	13.0	
152	DC	3'-0"	7'-0"	1 3/4"	7'-0"	DFB	8/A702	4/A702	-	2.0	
153A	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	7.0	DOOR HAS SECURITY HARDWARE AND BULLET RESISTANCE
153B	DE	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	11.0	
153C	DB	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	5.0	
154A	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	13.0	
154B	DB	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	14.0	
MEZZANINE											
200A	DA	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	15.0	
200B	DE	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	10.0	
201	DE	3'-0"	7'-0"	1 3/4"	7'-0"	DFA	11/A701	10/A701	9/A701	12.0	

STOREFRONT SCHEDULE XXX

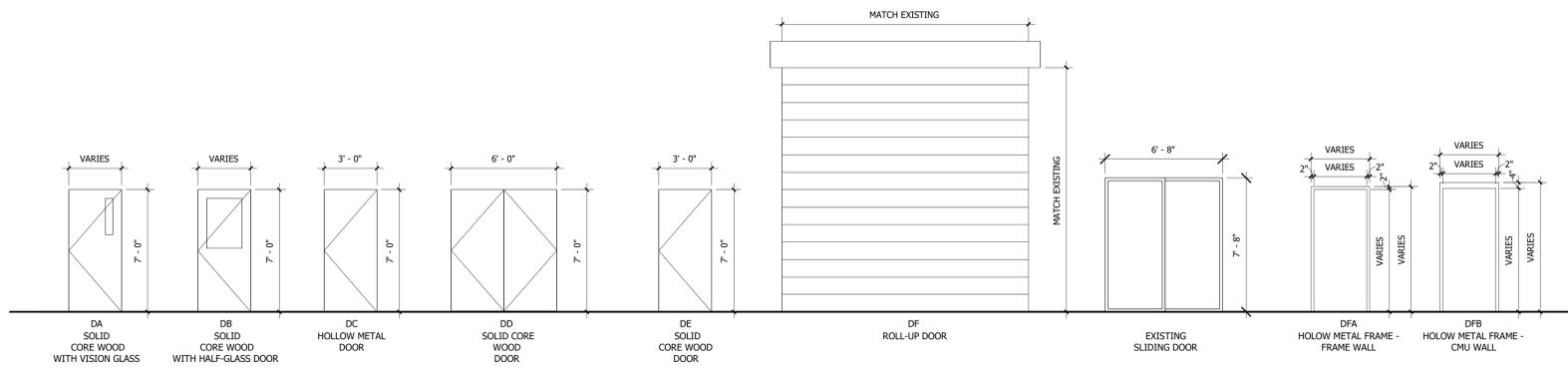
NUMBER	TYPE	WIDTH	HEIGHT	DETAIL				FIRE RATING
				HEAD	JAMB	SILL	THRESHOLD	
FIRST LEVEL F. F.								
102		11'-4"	10'-0"	15/A701	14/A701	1/A701	12/A701	-
104		9'-10"	10'-0"	15/A701	14/A701	1/A701	12/A701	-
124		5'-2 3/8"	10'-0"	15/A701	14/A701	1/A701	12/A701	-

GENERAL DOOR NOTES:

- GENERAL CONTRACTOR TO SUBMIT TYPE-WRITTEN SHOP DRAWINGS AND PRODUCT LITERATURE FOR ALL DOORS AND HARDWARE SPECIFIED (PREPARED BY A LICENSED AND CERTIFIED CONSULTANT)
- THE CONTRACTORS WILL INSTALL ALL DOORS, FRAMES, HARDWARE, LOCK SETS, AND ENTRANCE DOORS.
- G.C. TO VERIFY OPENING DIMENSIONS IN FIELD PRIOR TO FABRICATION AND INSTALLATION.
- SEE STOREFRONT ELEVATIONS AND NOTICES OF ACCEPTANCE FOR TEMPERED GLASS LOCATIONS.
- ALL STOREFRONT WINDOWS AND DOORS ARE REQUIRED TO BE TESTED IN ACCORDANCE WITH ANS/AMMA/NWWDA 101/152 STANDARDS AND BEAR AN ANMA OR WDMA LABEL IDENTIFYING THE MANUFACTURER, PERFORMANCE CHARACTERISTICS AND APPROVED PRODUCT TESTING ENTITY.
- ALL STOREFRONT WINDOWS AND DOORS SHALL BE ANCHORED PER NOTICE OF ACCEPTANCE AND PUBLISHED MANUFACTURERS RECOMMENDATIONS TO ACHIEVE THE DESIGN PRESSURE SPECIFIED.
- ALL STOREFRONT WINDOWS AND DOORS SHALL BE ANCHORED AS PER APPLICABLE CODE - ANY STOREFRONT WINDOWS OR DOORS WITH A BUCK THICKNESS LESS THAN 1-1/2" SHALL BE ANCHORED THROUGH THE JAMB INTO THE ADJACENT STRUCTURAL SUBSTRATE.
- STOREFRONT MULLIONS AND ADJACENT DOOR ASSEMBLIES ARE REQUIRED TO BE TESTED OR ENGINEERED TO TRANSFER MIN 1.5 TIMES THE DESIGNED LOADS TO THE ROUGH OPENING SUBSTRATE (OR AS PER CODE).
- PROVIDE INFORMATION SIGN ON INTERIOR PUSH SIDE OF EXIT DOORS @ 52" H IN 1" HIGH RED VINYL LETTERS TO READ "THIS EXIT TO REMAIN UNLOCKED AT ALL TIMES THE BUILDING IS OCCUPIED."

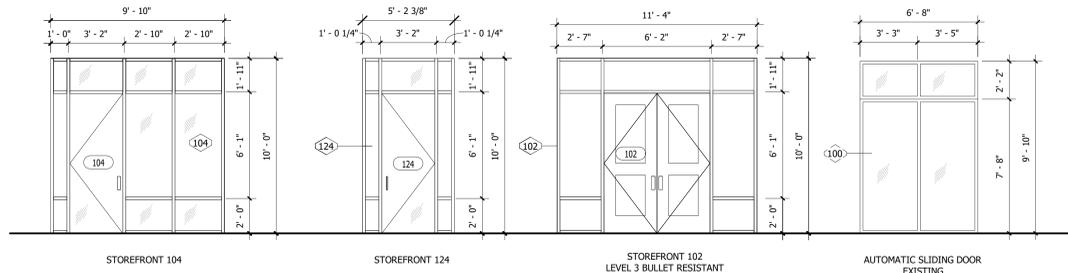
HARDWARE NOTES:

- ADJUST ALL CLOSERS TO A 5 LB. MAX. OPENING FORCE
- ALL EXTERIOR HOLLOW CORE METAL DOORS ARE TO BE INSULATED
- ALL HOLLOW CORE METAL DOORS AND FRAMES TO BE SHOP PRIMED AND PAINTED
- DOOR EGRESS/PANIC SYSTEMS MUST BE IN COMPLIANCE WITH SPECIAL EGRESS CONTROL DEVICES LISTED IN LOCAL CODES
- SUBMIT DETAILED HARDWARE SCHEDULE FOR ARCHITECT AND/OR OWNER REVIEW PRIOR PURCHASE AND INSTALLATION
- ALL DOORS AND HARDWARE TO COMPLY WITH ADA AND CODE OF FEDERAL REGULATION, UTILIZING A LEVER LATCH OR LOCKSET
- ALL DOORS AND HARDWARE SHALL COMPLY WITH N.F.P.A. 101-5.2.1.5

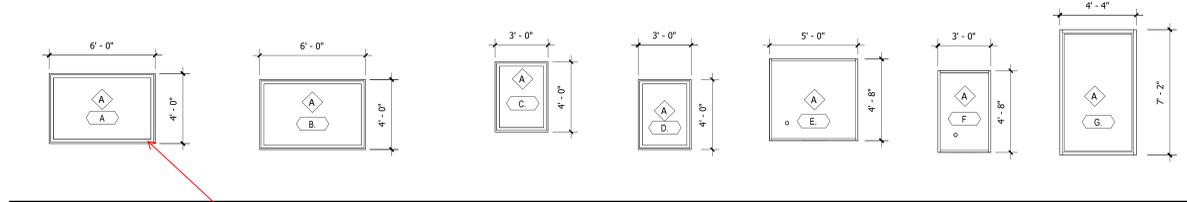


DOOR TYPE

DOOR FRAME TYPE



STOREFRONT TYPES



WINDOW TYPES

WHAT ARE THE SILL HEIGHTS OF THESE WINDOWS?

- WA FIXED WINDOW WITH LEVEL 3 BULLET RESISTANT GLAZING
- WB FIXED WINDOW WITH LEVEL 3 BULLET RESISTANT GLAZING
- WC FIXED WINDOW WITH LEVEL 3 BULLET RESISTANT GLAZING
- WD FIXED WINDOW WITH LEVEL 3 BULLET RESISTANT GLAZING

FOR BIDDING ONLY

SUPERVISOR OF ELECTIONS BUILDING TI
365 E. Burlingame Blvd., Tallahassee, FL 32310
DOOR & WINDOW TYPES & SCHEDULE

NO.	DESCRIPTION	DATE

MARK	DATE	DESCRIPTION

NO.	DATE	DESCRIPTION

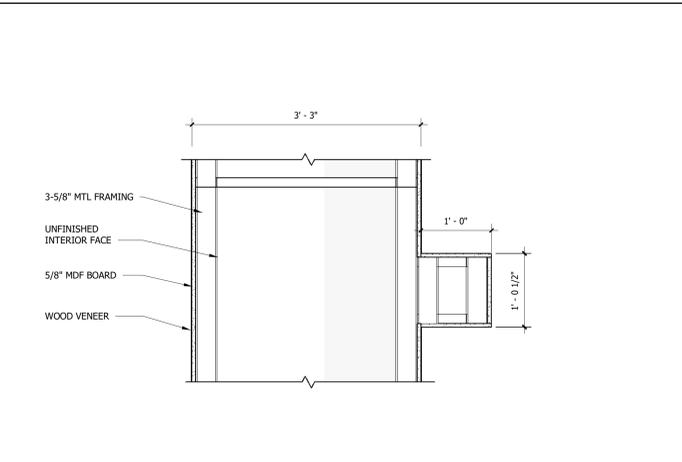
NO.	DATE	DESCRIPTION

JOB NAME: SUPERVISOR OF ELECTIONS BUILDING TI
365 E. Burrell Blvd., Tavares, FL 32778.

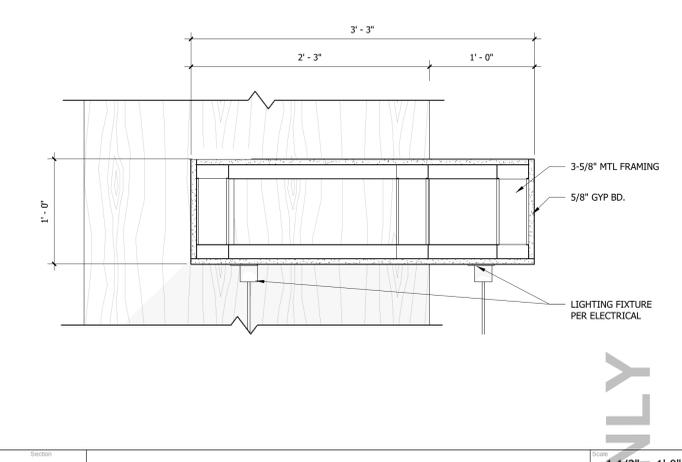
ARCHITECTURAL DETAILS - FINISHES

JOB NAME: SHEET NAME: A-703

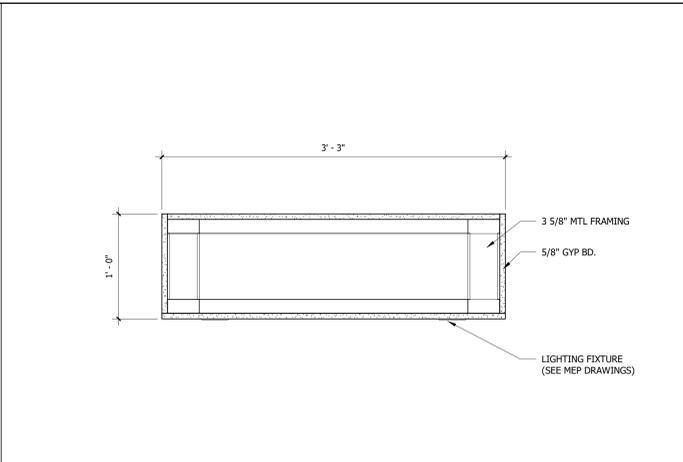
DATE: 04/22/2025



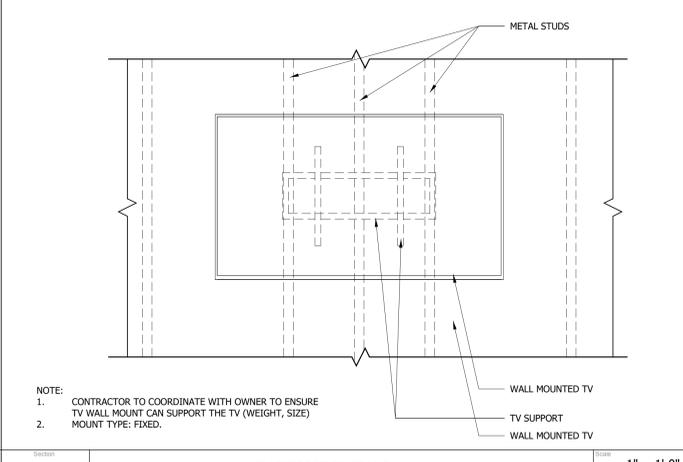
Section 3 ARCHITECTURAL COLUMN W/ CEILING DETAIL Scale: 1" = 1'-0" File Name: N/A



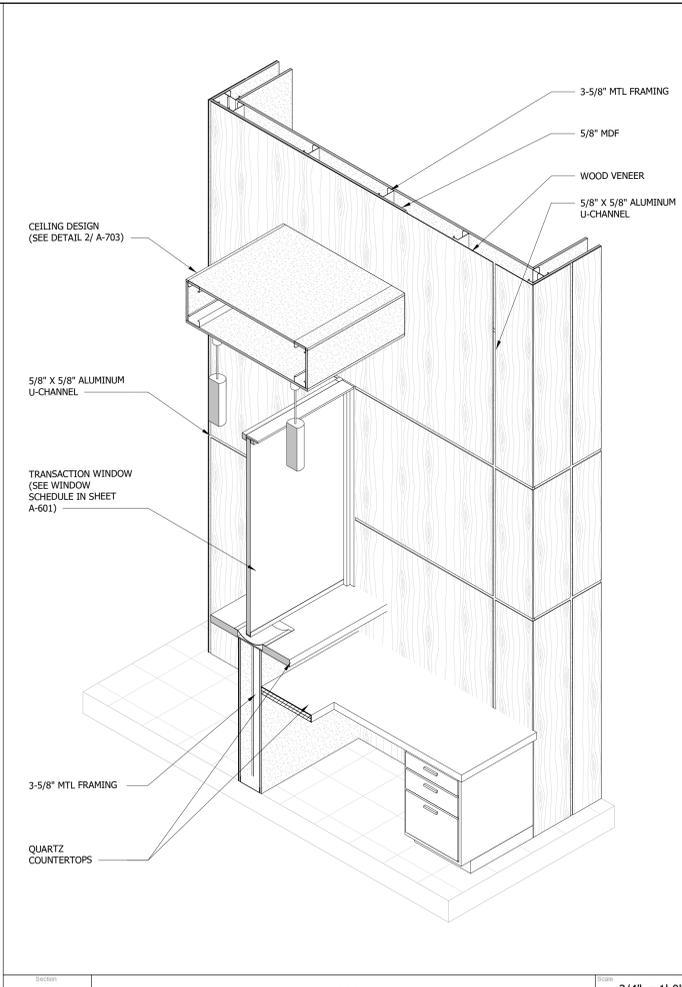
Section 2 CEILING DESIGN Scale: 1 1/2" = 1'-0" File Name: N/A



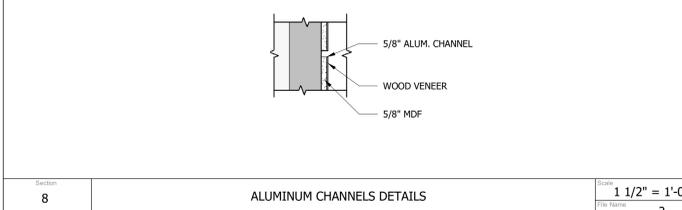
Section 6 CEILING DESIGN Scale: 1 1/2" = 1'-0" File Name: ?



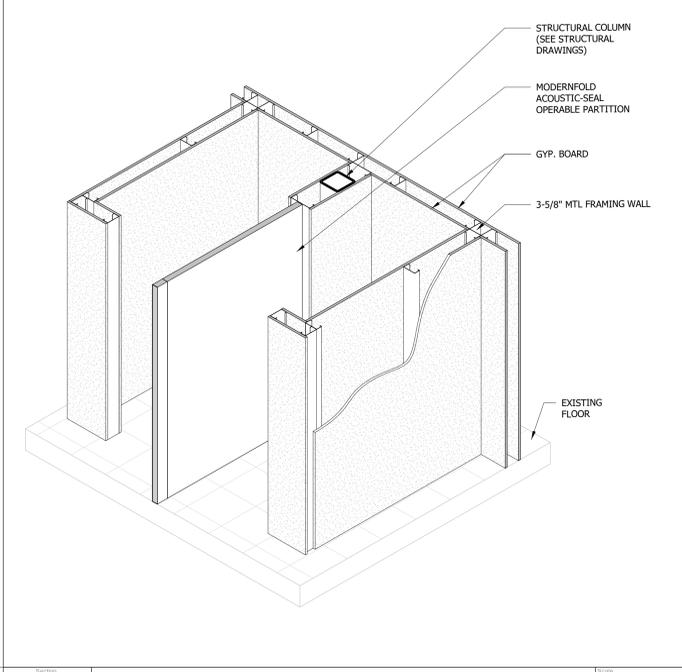
Section 5 TV SUPPORT ON FRAME WALL Scale: 1" = 1'-0" File Name: N/A



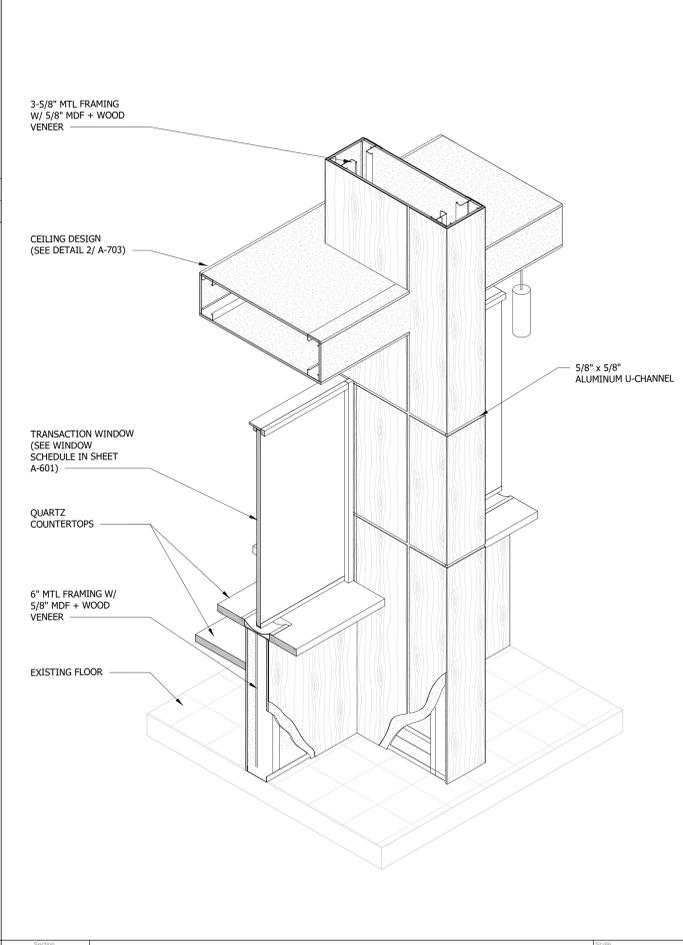
Section 9 3D LOBBY Scale: 3/4" = 1'-0" File Name: ?



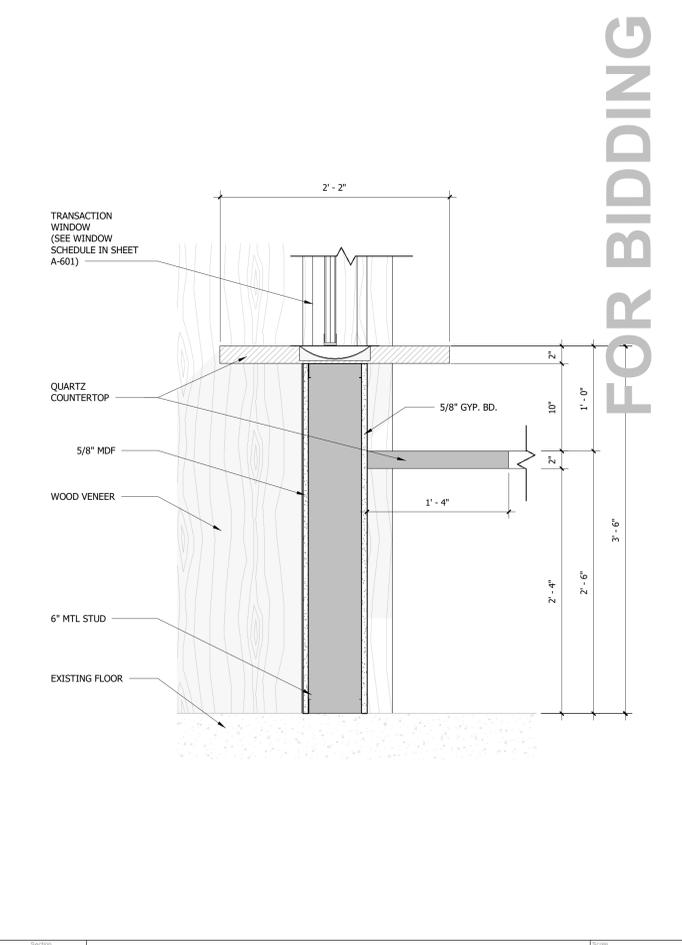
Section 8 ALUMINUM CHANNELS DETAILS Scale: 1 1/2" = 1'-0" File Name: ?



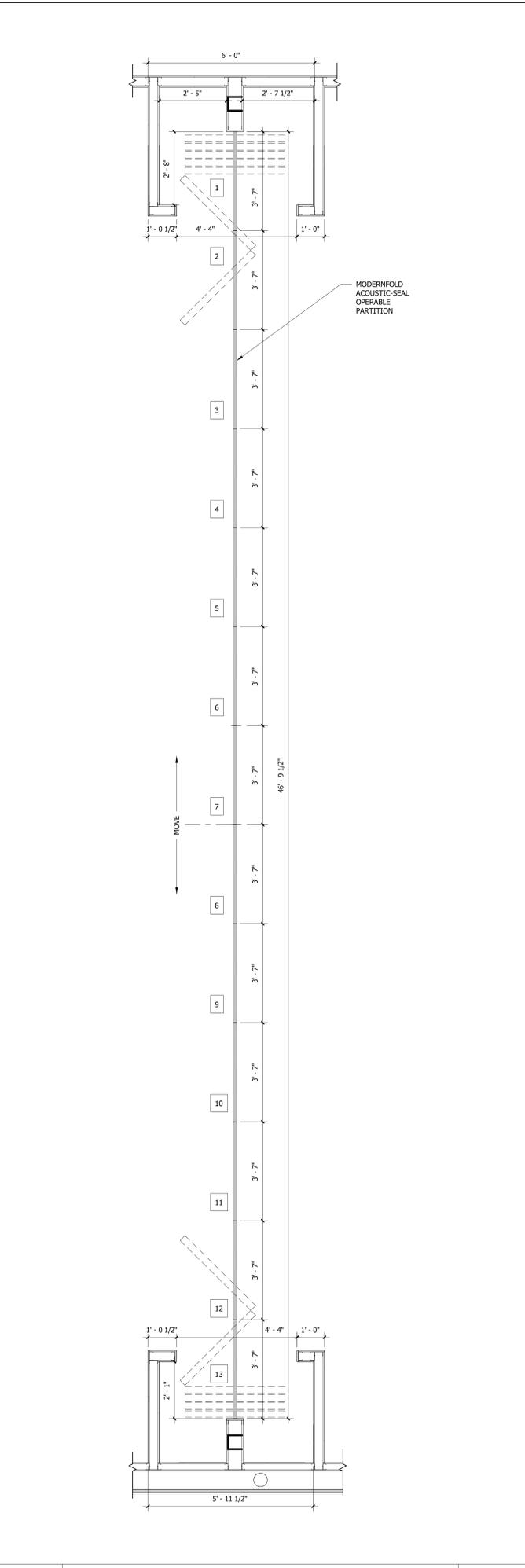
Section 7 PANEL CHASE Scale: 3/4" = 1'-0" File Name: ?



Section 4 3D LOBBY Scale: 3/4" = 1'-0" File Name: ?



Section 1 TRANSACTION DESK DETAIL Scale: 1 1/2" = 1'-0" File Name: N/A



Section 10 PANEL CHASE Scale: 1/2" = 1'-0" File Name: N/A

FOR BIDDING ONLY

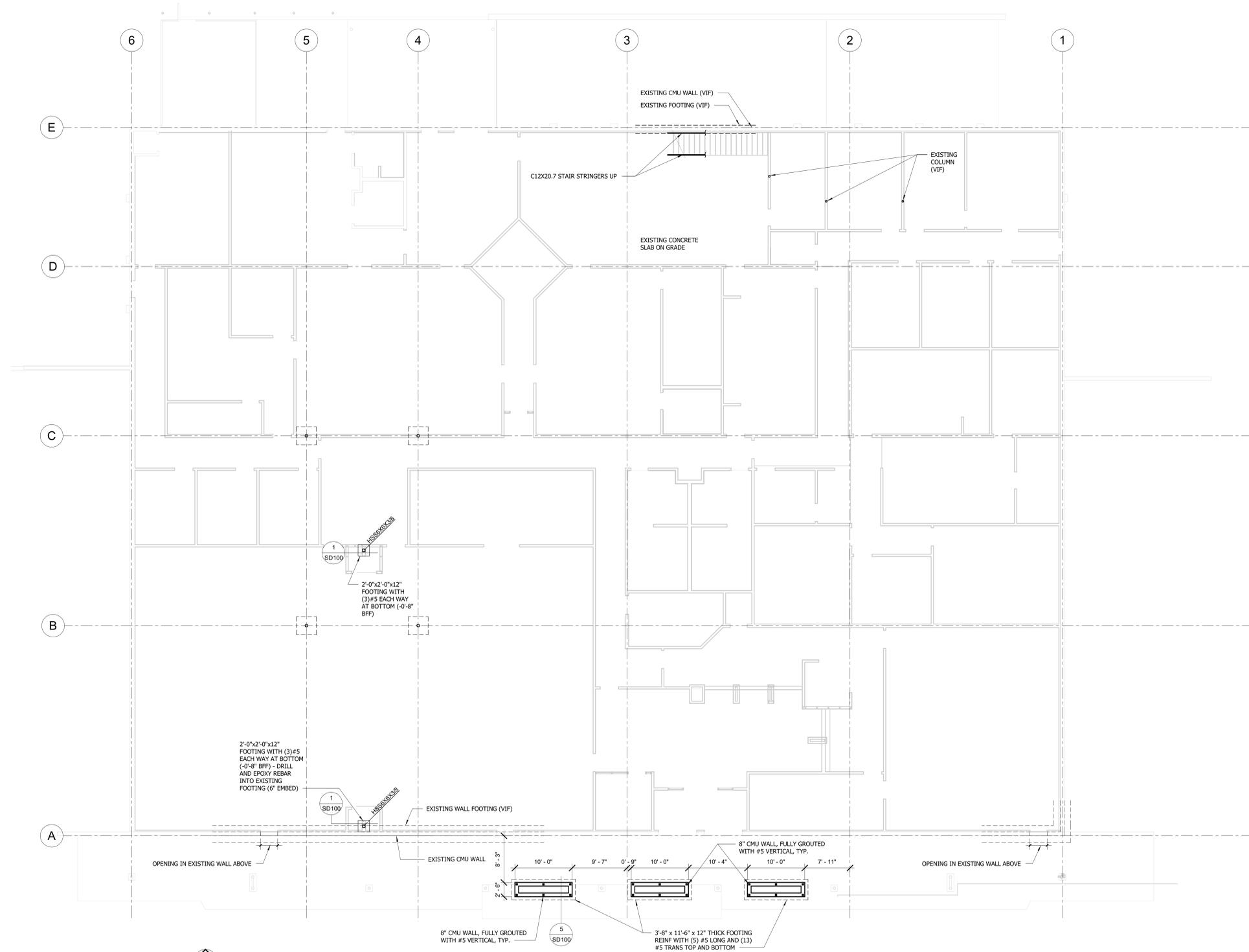
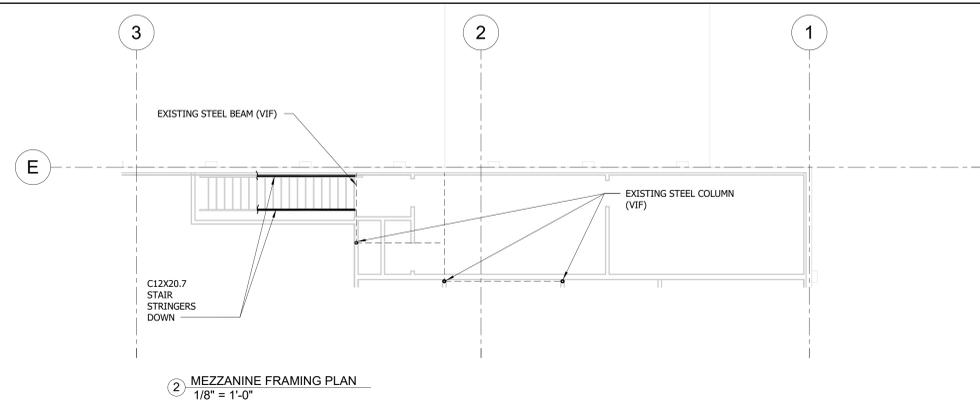
MARK	DATE	DESCRIPTION

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--	--	--

JOB NAME

SHEET NAME



- NOTES:
1. ALL EXISTING CONDITIONS MUST BE FIELD VERIFIED
 2. COORDINATE LOCATIONS OF COLUMNS WITH ARCHITECTURAL PLANS AND OPERABLE PARTITION SUBMITTAL

FOR BIDDING ONLY

SUPERVISOR OF ELECTION BUILDING TI
365 E. Burrell Blvd., Tavares, FL 32778.

FOUNDATION AND MEZZANINE PLAN

25-11111

04/22/2025

S101

MARK	DATE	DESCRIPTION



Francisco Galan, P.E. #87110
LICENSED PROFESSIONAL ENGINEER

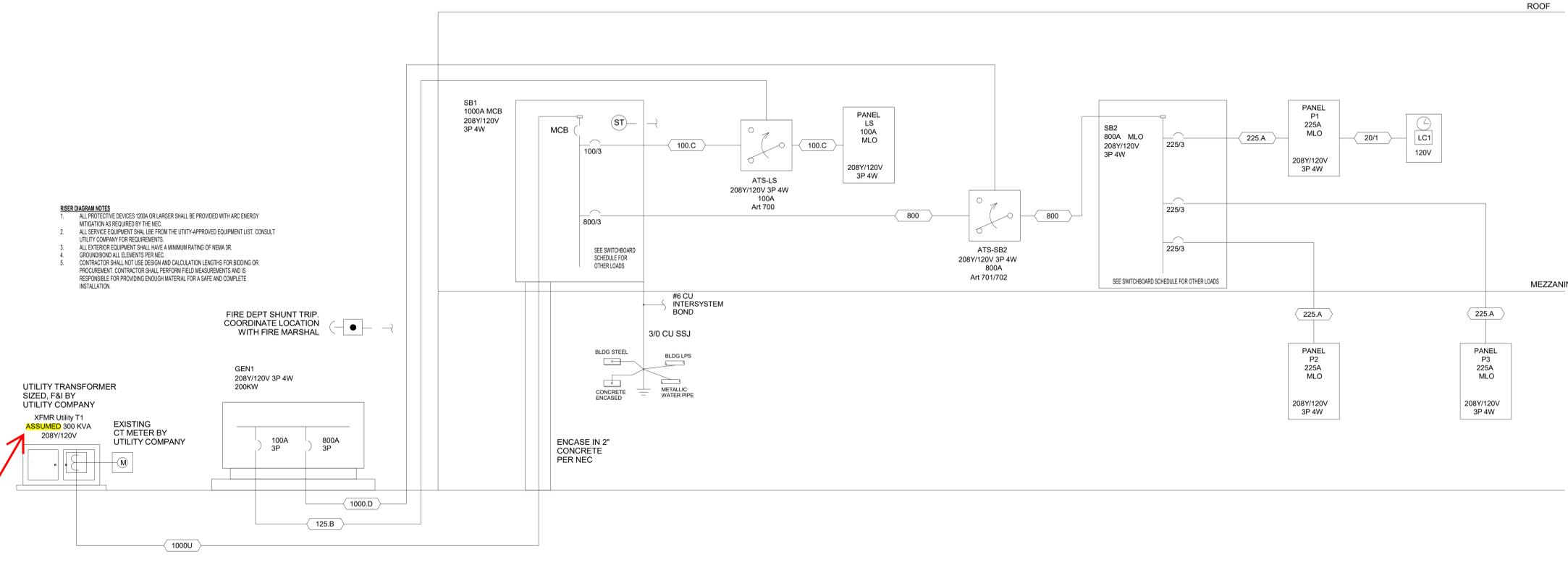
SUPERVISOR OF ELECTIONS BUILDING T1
 365 E. Burrell Blvd., Tavares, FL 32778
ELECTRICAL SCHEDULES AND DIAGRAMS

JOB NAME: _____
 SHEET NAME: _____
 SHEET NUMBER: _____

BID SET ONLY
NOT FOR CONSTRUCTION

DATE: 25-1111
 DATE: 10/27/2025
 SHEET NUMBER: **E801**

- RISER DIAGRAM NOTES**
- ALL PROTECTIVE DEVICES 100A OR LARGER SHALL BE PROVIDED WITH ARC ENERGY MITIGATION AS REQUIRED BY THE NEC.
 - ALL SERVICE EQUIPMENT SHALL BE FROM THE UTILITY-APPROVED EQUIPMENT LIST. CONSULT UTILITY COMPANY FOR REQUIREMENTS.
 - ALL EXTERIOR EQUIPMENT SHALL HAVE A MINIMUM RATING OF NEMA 3R.
 - GROUNDING ALL ELEMENTS PER NEC.
 - CONTRACTOR SHALL NOT USE DESIGN AND CALCULATION LENGTHS FOR BIDDING OR PROCUREMENT. CONTRACTOR SHALL PERFORM FIELD MEASUREMENTS AND IS RESPONSIBLE FOR PROVIDING ENOUGH MATERIAL FOR A SAFE AND COMPLETE INSTALLATION.



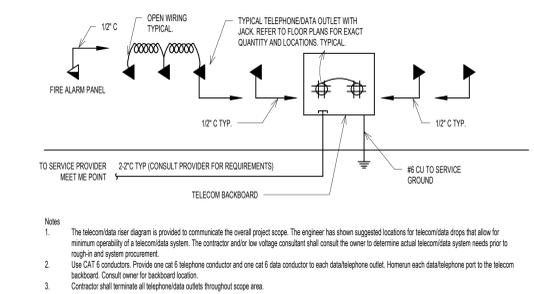
Assumed ???,
 please delete.
 This should be confirmed.

ID	CONDUIT AND FEEDER
20/1	1#12,#12N,#12G,1/2" C
100.C	3#1,#1N,#8G,2" C
125.B	3#1/0,#1/0N,#6G,2" C
225.A	3#4/0,#4/0N,#4G,2-1/2" C
800	(3)3#300kcmil,#300kcmil N,#1/0G,3" C
1000.D	(3)3#400kcmil,#400kcmil N,#3/0G,3-1/2" C
1000.U	(3)3#400kcmil,#400kcmil N,3-1/2" C

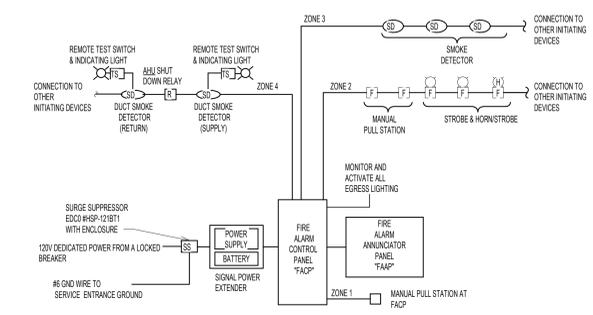
USE CU GROUNDS

DEVICE	FEEDER		
	VOLTAGE DROP	WIRE SIZE	LENGTH
GEN1	-	-	-
SB1	0.55%	(3)#400kcmil	50'
ATS-LS	0.75% / 0.42%	#1 / #1/0	20' / 50'
LS	0.95%	#1	20'
ATS-SB2	0.76% / 0.44%	(3)#300kcmil / (3)#400kcmil	20' / 50'
SB2	0.91%	(3)#300kcmil	15'
P1	1.14%	#4/0	20'
LC1	1.37%	#12	5'
P2	2.03%	#4/0	100'
P3	2.92%	#4/0	180'

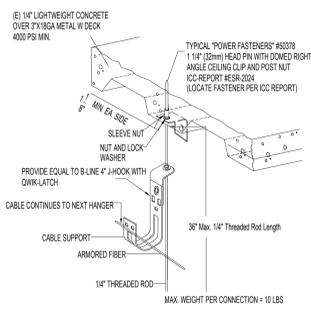
DEVICE	FAULT	AIC RATING	L-L VOLTS	TRANSFORMER		
				KVA	2%	FAULT AT PRIMARY
GEN1	5,800		208V			
Utility T1	41,659	65,000	208V	300	2	UTILITY
SB1	32,744	35,000	208V			
ATS-LS	19,893	35,000	208V			
LS	13,497	35,000	208V			
ATS-SB2	29,856	35,000	208V			
SB2	27,969	35,000	208V			
P1	21,495	35,000	208V			
LC1	8,678	35,000	120V			
P2	10,674	35,000	208V			
P3	7,018	35,000	208V			



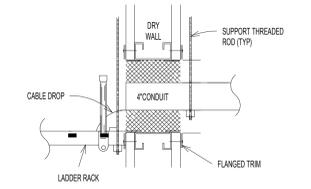
② TYPICAL TELECOM/DATA RISER DIAGRAM
N.T.S.



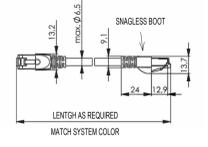
① TYPICAL FIRE ALARM DIAGRAM
N.T.S.



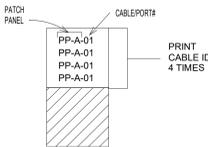
14 J-HOOK MOUNTING DETAIL
N.T.S.



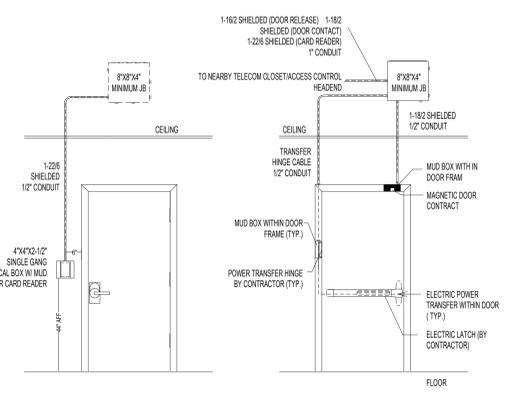
15 DATA ROOM WALL PENETRATION
N.T.S.



12 DATA PATCH CORD
N.T.S.

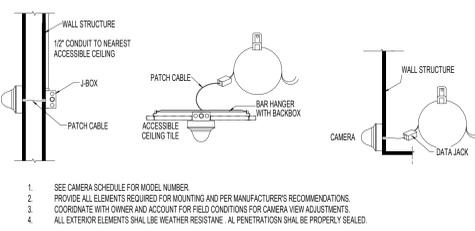


13 TYPICAL CABLE AND SYSTEM LABELING
N.T.S.



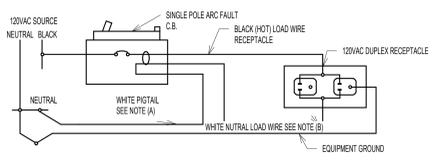
1. ALL DOOR LOCK HARDWARE SHALL BE PROVIDED BY CONTRACTOR.
2. ALL WIRING SHOWN IS DIAGRAMMATICAL. VERIFY ALL REQUIREMENTS AND FOLLOW INSTRUCTIONS FROM ACCESS CONTROL VENDOR.

9 SINGLE DOOR ELECTRIC LATCH
N.T.S.



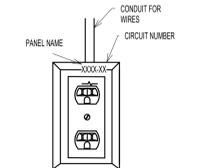
1. SEE CAMERA SCHEDULE FOR MODEL NUMBER.
2. PROVIDE ALL ELEMENTS REQUIRED FOR MOUNTING AND PER MANUFACTURER'S RECOMMENDATIONS.
3. COORDINATE WITH OWNER AND ACCOUNT FOR FIELD CONDITIONS FOR CAMERA VIEW ADJUSTMENTS.
4. ALL EXTERIOR ELEMENTS SHALL BE WEATHER RESISTANT. ALL PENETRATIONS SHALL BE PROPERLY SEALED.

10 CAMERA INSTALLATION DETAILS
N.T.S.

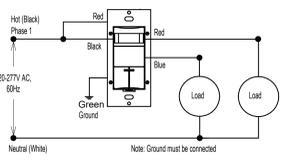


NOTES:
1. CONNECT THE COOLED, WHITE METAL FROM THE C.B. TO THE PANEL OR ENCLOSURE NEUTRAL BUS TERMINAL SECURELY TIGHTLY.
2. CONNECT THE WHITE (NEUTRAL) LOAD WIRE TO THE TERMINAL SIDE OF THE C.B. IDENTIFIED WITH A WHITE MARK.
3. CONNECT THE BLACK (HOT) LOAD WIRE TO THE REMAINING C.B. TERMINAL MARKED LOAD.
*BREAKER IS INTENDED FOR USE WITH 120 VAC APPLICATIONS. USE ONLY CABLE HAVING 2 CONDUCTORS PLUS GROUND IS. NMB CABLE DO NOT USE CABLE HAVING 3 CONDUCTORS PLUS GROUND. DO NOT USE BREAKER ON SHARED NEUTRAL CIRCUIT.

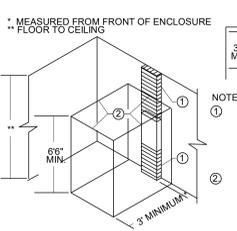
5 WIRING DIAGRAM FOR ARC FAULT CIRCUIT BREAKER
N.T.S.



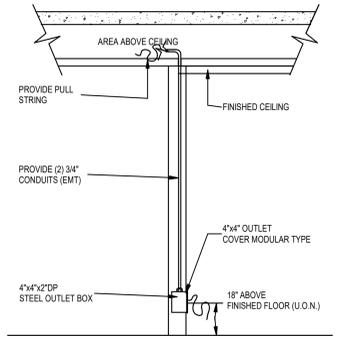
6 POWER OUTLET DETAIL
N.T.S.



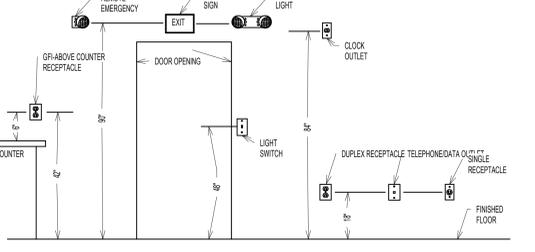
7 WALL SWITCH OCCUPANCY SENSORS
N.T.S.



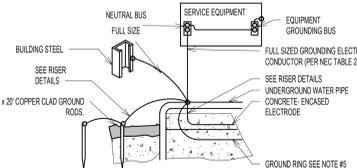
8 PANEL CLEARANCE DETAIL
N.T.S.



1 DATA/PHONE JACK DETAIL
N.T.S.

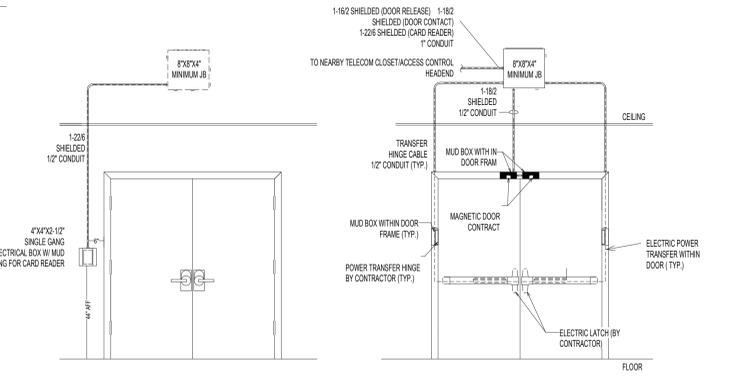


2 MOUNTING HEIGHT
N.T.S.



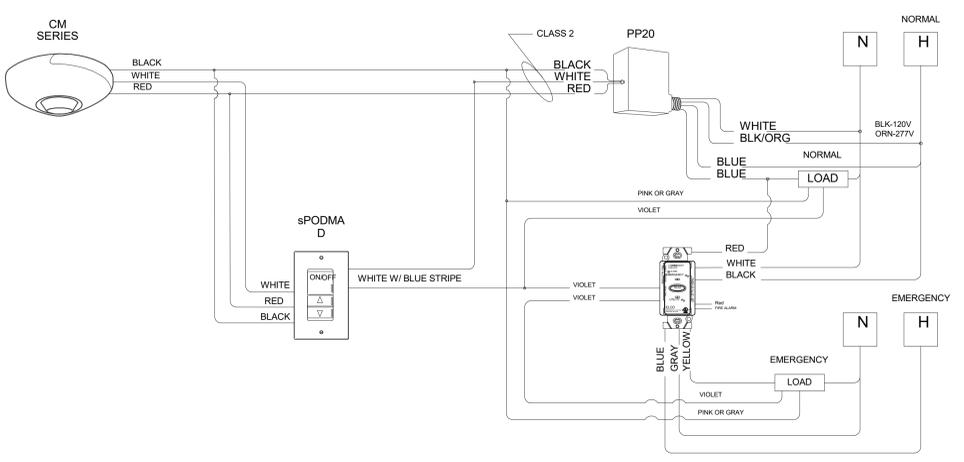
NOTES:
1. FULL SIZE GROUND MEANS THAT GROUND CONDUCTOR SIZE SHALL BE AS SHOWN ON SERVICE EQUIPMENT ON THE POWER RISER DIAGRAM.
2. AFTER GROUNDING SYSTEM IS INSTALLED, GROUND RESISTANCE SHALL BE MEASURED, TO ASSURE THAT GROUND VALUE OHM VALUE OF RESISTANCE IS CHECKED. IF NOT, ADDITIONAL GROUNDING SHALL BE PROVIDED TO MEET THE SPECIFIED VALUE.
3. ALL CONNECTIONS TO GROUND RODS SHALL BE EXOTHERMIC WELD CONNECTIONS.
4. GROUND CONDUCTOR SHALL BE LOCATED WITHIN OR NEAR BOTTOM OF CONCRETE FOUNDATION OR FOOTING THAT IS IN DIRECT CONTACT WITH THE EARTH, AND SHALL CONSIST OF AT LEAST 20 FEET OF ONE OR MORE STEEL REINFORCING BEARS OR RODS OF NOT LESS THAN 1/2 INCH DIAMETER, OR OF AT LEAST 2 FEET OF BARE COPPER CONDUCTOR.
5. A GROUND RING ENCLING THE BUILDING OR STRUCTURE, IN DIRECT CONTACT WITH EARTH, CONSISTING OF AT LEAST (20 FT.) OF BARE COPPER CONDUCTOR NOT SMALLER THAN 2 AWG SHALL BE INSTALLED PER ARTICLE 250.54(A) NEC.
6. ONE OF THE GROUNDING METHODS SHOWN MUST BE USED.

3 GROUNDING DETAIL
N.T.S.



1. ALL DOOR LOCK HARDWARE SHALL BE PROVIDED BY CONTRACTOR.
2. ALL WIRING SHOWN IS DIAGRAMMATICAL. VERIFY ALL REQUIREMENTS AND FOLLOW INSTRUCTIONS FROM ACCESS CONTROL VENDOR.

4 DOUBLE DOOR ELECTRIC LATCH
N.T.S.



NOTE: CONTRACTOR SHALL CONSULT LIGHTING CONTROL PROVIDER FOR WIRING DIAGRAM OF SPECIFIC ELEMENTS PROCURED.

11 TYPICAL LIGHTING CONTROL WIRING DIAGRAMS - GENERATOR PROJECT
N.T.S.

MARK	DATE	DESCRIPTION	MARK	DATE	DESCRIPTION

MARK	DATE	DESCRIPTION

MARK	DATE	DESCRIPTION

MARK	DATE	DESCRIPTION

FOR BIDDING ONLY NOT FOR CONSTRUCTION - 10-3

SUPERVISOR OF ELECTIONS BUILDING TI
365 E. Burlingame Blvd., Tallahassee, FL 32378.

MECHANICAL FLOOR PLAN - PIPING

ANY DISCREPANCY OR ERROR IN DIMENSIONS OR NOTES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN PROFESSIONAL FOR CLARIFICATION PRIOR TO COMMENCEMENT OF CONSTRUCTION.

AR, JOB #:
ENG, JOB #:
DATE:
SHEET NUMBER
M-201

MECHANICAL REFERENCE NOTES
(ALL NOTES SHOWN ARE NOT NECESSARILY USED IN THE DRAWINGS)

1 PROVIDE CONDENSATE DRAIN PUMP PER MANUFACTURER'S RECOMMENDATION.

2 3/4" CONDENSATE DRAIN FROM PUMP TO ROOF FIELD TO VERIFY THE EXISTING ROOF DRAIN FOR PROPER DISCHARGE OF CONDENSATE WATER TO OVERFLOW.

Eliminate.

Instead discharge to floor sink at Break Room #131 or run condensate drain pipe to the outside through the back wall of building down to a location above the ground.



MECHANICAL FLOOR PLAN - PIPING
SCALE: 1/8"=1'-0"

This form has been electronically signed & sealed by Forthard Archibald, P.E., on the date and/or time stamp shown using a digital signature. Printed copies of this document are not considered signed & sealed and the signature must be verified by the project participant. Authority in any electronic copies, Ingenertech Consulting Engineers, Inc. AR98800-000.

Ingenertech Consulting Engineers, PLLC
MECHANICAL ELECTRICAL PLUMBING (MEP) DIVISION
11000 South Orange Avenue, Suite 200
Orlando, Florida 32837
Tel: (407) 304-6500 | Fax: (407) 536-6666
CA # 56647
forthard@ingenertech.net
www.ingenertech.net
Member Office: 400 Orange Avenue, Suite 110
Orlando, Florida, FL 32801

OUTDOOR UNIT SCHEDULE

SYSTEM TAG	TAG REFERENCE	M-NET ADDRESS	MODEL NUMBER	MODULES	NOMINAL COOLING CAPACITY (BTUH)	NOMINAL HEATING CAPACITY (BTUH)	COOLING EFFICIENCY (EER)	EER2 (SEER2)	HEATING COP @ 47°F (HSPF)	NOM SYSTEM CONNECTED CAPACITY (% OF NOM)	DESIGN COOLING OUTDOOR TEMP DB (°F)	DESIGN HEATING OUTDOOR TEMP WB (°F)	REFRIG PIPE DIM HIGH/LOW PRESSURE (INCH) (SEE NOTE 4)	CORRECTED COOLING TOTAL CAPACITY (BTUH)	CORRECTED HEATING CAPACITY (BTUH)	INVERTER DRIVEN COMPRESSOR TYPE / QUANTITY	PRELIMINARY ADDED FIELD CHARGE (SEE NOTE 5)	VOLTAGE / PHASE	ELECTRICAL-PER MODULE			NOTES / OPTIONS
																			MCA 208/230 OR (480V)	RFS	MOCPS	
ODU-1	ODU-1	51	TUHYE143AN41AN	EP44	144,000	160,000	22.2 / 10.6	11	3.845	100.0 %	94.0	32.0	1/2 / 1-1/8	140,742.2	116,750.0	SCROLL1	14.9	208/230V / 3-PHASE 3-WIRE	60/60	60/60	100/100	1, 2, 3, 4, 5, 6, 7, 8, 9
CU-1 / 2 / 3	CU-1 / 2 / 3	N/A	PKA-AK24NL	-	24,000		0	13.2 (22.6)	0 (CLG ONLY)	100.0 %	94.0	32.0	3/8 / 5/8	21,889.4	0.0		0.0	208/230V / 1-PHASE	22	25	37	1, 2, 3, 4, 5, 6, 7, 8, 9

NOTES & OPTIONS:

- 1 NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB)
- 2 NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°F (WB)
- 3 EFFICIENCY VALUES FOR EER, IEER, COP ARE BASED ON AHRI 1230 TEST METHOD FOR MIXTURE OF DUCTED & NON-DUCTED INDOOR UNITS.
- 4 FOR SYSTEMS WITH MULTIPLE MODULES, REFRIGERANT PIPE DIMENSIONS INDICATE TOTAL SYSTEM COMBINED PIPING DOWNSTREAM OF MODULE TWINNING.
- 5 ADDED FIELD CHARGE LISTED IS IN ADDITION TO FACTORY CHARGE. THIS MUST BE UPDATED BASED UPON FINAL AS-BUILT PIPING LAYOUT.
- 6 FACTORY REPRESENTATIVES SHALL REVIEW THE PROJECT PRIOR TO AND THROUGHOUT THE INSTALLATION OF CITY MULTI EQUIPMENT
- 7 FACTORY REPRESENTATIVES SHALL STARTUP AND COMMISSION CITY MULTI EQUIPMENT UPON COMPLETION OF EQUIPMENT INSTALLATIONS
- 8 FACTORY REPRESENTATIVES SHALL PROVIDE ON-SITE ASSISTANCE FOR THE BMS INTEGRATION OF THE CITY MULTI EQUIPMENT
- 9 FACTORY REPRESENTATIVES SHALL PROVIDE END-USER TRAINING ON THE CITY MULTI EQUIPMENT UPON COMPLETION OF THE INSTALLATION OF EQUIPMENT
- 10 PROVIDE E-COAT PROTECTION FOR CONDENSING UNITS, COILS AND BODY OR ANY ALTERNATIVE FOR SEA COAST PROTECTION. CERTIFICATE SHALL BE PROVIDED TO OWNER.

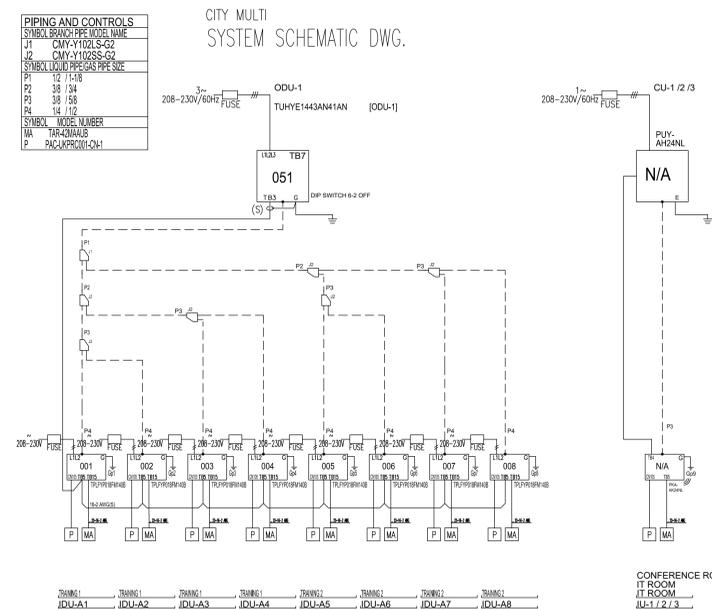
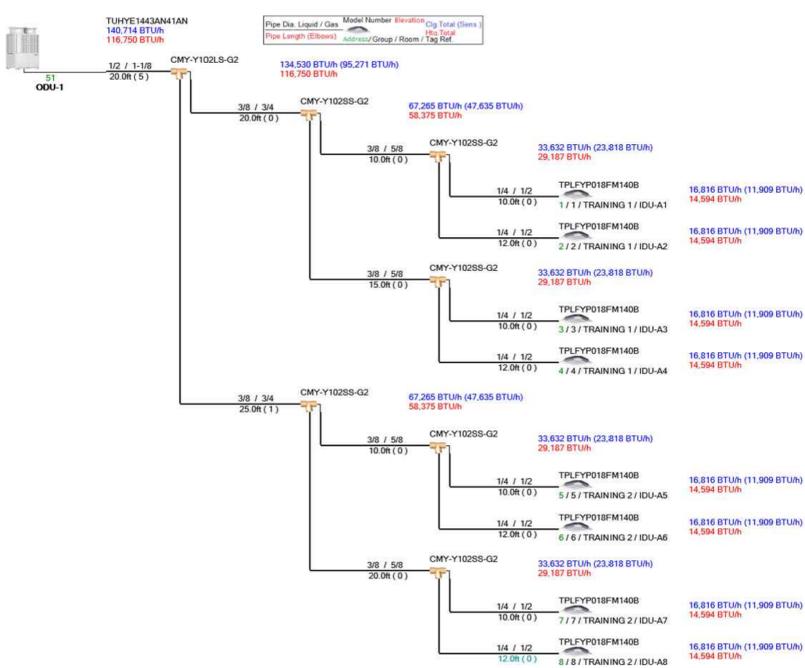
VRF INDOOR UNIT SCHEDULE

TAG REFERENCE	ROOM NAME	SYSTEM TAG	MODEL	TYPE	NOMINAL COOLING CAPACITY (BTUH)	NOMINAL HEATING CAPACITY (BTUH)	COOLING DESIGN ENTERING TEMP DB/WB (°F)	HEATING DESIGN ENTERING TEMP DB/WB (°F)	COOLING DIVERSITY FULL/PARTIAL (SEE NOTE 5, 6)	COOLING TOTAL CAPACITY (BTUH)	COOLING SENSIBLE CAPACITY CORRECTED CAPACITY	HEATING DIVERSITY FULL/PARTIAL (SEE NOTE 5, 6)	HEATING CAPACITY (BTUH)	REFRIG PIPE DIM LIQUID/SUCTION (INCH)	FAN SPEED SETTING	PEAK FAN AIRFLOW (CFM)	VOLTAGE / PHASE	ELECTRICAL MCA / MFS	NOTES / OPTIONS
IDU-A1	TRAINING 1	ODU-1	TPLFY018FM140B	CEILING-CASSETTE (FOUR-WAY)	18,000	20,000	75.0/62.5	70	FULL DEMAND	16,816.2	11,908.9	FULL DEMAND	14,593.7	1/4 / 1/2	HIGH	460	208/230V/1-PHASE	0.50/5/15	1, 2, 3, 4, 5
IDU-A2	TRAINING 1	ODU-1	TPLFY018FM140B	CEILING-CASSETTE (FOUR-WAY)	18,000	20,000	75.0/62.5	70	FULL DEMAND	16,816.2	11,908.9	FULL DEMAND	14,593.7	1/4 / 1/2	HIGH	460	208/230V/1-PHASE	0.50/5/15	1, 2, 3, 4, 5
IDU-A3	TRAINING 1	ODU-1	TPLFY018FM140B	CEILING-CASSETTE (FOUR-WAY)	18,000	20,000	75.0/62.5	70	FULL DEMAND	16,816.2	11,908.9	FULL DEMAND	14,593.7	1/4 / 1/2	HIGH	460	208/230V/1-PHASE	0.50/5/15	1, 2, 3, 4, 5
IDU-A4	TRAINING 1	ODU-1	TPLFY018FM140B	CEILING-CASSETTE (FOUR-WAY)	18,000	20,000	75.0/62.5	70	FULL DEMAND	16,816.2	11,908.9	FULL DEMAND	14,593.7	1/4 / 1/2	HIGH	460	208/230V/1-PHASE	0.50/5/15	1, 2, 3, 4, 5
IDU-A5	TRAINING 2	ODU-1	TPLFY018FM140B	CEILING-CASSETTE (FOUR-WAY)	18,000	20,000	75.0/62.5	70	FULL DEMAND	16,816.2	11,908.9	FULL DEMAND	14,593.7	1/4 / 1/2	HIGH	460	208/230V/1-PHASE	0.50/5/15	1, 2, 3, 4, 5
IDU-A6	TRAINING 2	ODU-1	TPLFY018FM140B	CEILING-CASSETTE (FOUR-WAY)	18,000	20,000	75.0/62.5	70	FULL DEMAND	16,816.2	11,908.9	FULL DEMAND	14,593.7	1/4 / 1/2	HIGH	460	208/230V/1-PHASE	0.50/5/15	1, 2, 3, 4, 5
IDU-A7	TRAINING 2	ODU-1	TPLFY018FM140B	CEILING-CASSETTE (FOUR-WAY)	18,000	20,000	75.0/62.5	70	FULL DEMAND	16,816.2	11,908.9	FULL DEMAND	14,593.7	1/4 / 1/2	HIGH	460	208/230V/1-PHASE	0.50/5/15	1, 2, 3, 4, 5
IDU-A8	TRAINING 2	ODU-1	TPLFY018FM140B	CEILING-CASSETTE (FOUR-WAY)	18,000	20,000	75.0/62.5	70	FULL DEMAND	16,816.2	11,908.9	FULL DEMAND	14,593.7	1/4 / 1/2	HIGH	460	208/230V/1-PHASE	0.50/5/15	1, 2, 3, 4, 5
IT / 2 / 3	IT ROOM / ELEC. ROOM / CONFERENCE ROOM	CU-1 / 2 / 3	PKA-AK24NL	WALL MOUNTED	24,000	26,000	75.0/62.5	70	FULL DEMAND	21,889.4	16,194.1	FULL DEMAND	0.0	3/8 / 5/8	HIGH	775	208/230V/1-PHASE	POWERED BY OUTDOOR	1, 2, 3, 4, 5

NOTES & OPTIONS:

- 1 NOMINAL COOLING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 80/67°F (DB/WB), OUTDOOR OF 95°F (DB)
- 2 NOMINAL HEATING CAPACITIES ARE BASED ON INDOOR COIL EAT OF 70°F (DB), OUTDOOR OF 43°F (WB)
- 3 SEE OUTDOOR UNIT SCHEDULE FOR OUTDOOR AMBIENT CONDITIONS, CONNECTED CAPACITY, AND OTHER FACTORS ASSOCIATED WITH CORRECTED CAPACITIES
- 4 SEE SCHEMATIC PIPING/CONTROL DIAGRAM FOR INDICATION OF REQUIRED INDOOR UNIT REMOTE CONTROLLERS, SYSTEM CONTROLLERS, AND INTEGRATION DEVICES.
- 5 FULL DEMAND CORRECTED CAPACITY INCLUDES DE-RATE ASSOCIATED WITH INDOOR VS. OUTDOOR CONNECTED CAPACITY INDICATED ON OUTDOOR UNIT SCHEDULE FOR ASSOCIATED SYSTEM. PARTIAL CORRECTED CAPACITY ASSUMES SUFFICIENT DIVERSITY EXISTS SUCH THAT THE CONNECTED CAPACITY DE-RATE DOES NOT APPLY. IT IS THE DESIGNER'S RESPONSIBILITY TO ENSURE "DIAMOND SYSTEM BUILDERS" IS SET IN THE APPROPRIATE OUTPUT CAPACITY SETTING (FULL DEMAND/PARTIAL DEMAND) PRIOR TO GENERATING THIS SCHEDULE.
- 6 IT IS RECOMMENDED TO ALWAYS BASE HEATING CORRECTED CAPACITY ON FULL DEMAND.
- 7 PROVIDE BLUE DIAMOND MAXIBLUE CONDENSATE PUMP WITH RESEVOIR & SENSOR - 208/230V
- 9 PROVIDE E-COAT PROTECTION FOR CONDENSING UNITS, COILS AND BODY OR ANY ALTERNATIVE FOR SEA COAST PROTECTION. CERTIFICATE SHALL BE PROVIDED TO OWNER.
- 10 PROVIDE CONDENSATE DRAIN PUMP AND DISCHARGE CONDENSATE DRAIN TO THE ROOF.

FOR BIDDING ONLY NOT FOR CONSTRUCTION - 10-30-25



MECHANICAL EQUIPMENT SCHEDULE - VRF SYSTEM

N.T.S.

SUPERVISOR OF ELECTIONS BUILDING T1
365 E. Burleigh Blvd., Tallahassee, FL 32378
MECHANICAL EQUIPMENT SCHEDULE

JOB #:
JOB #:
DATE:
SHEET NUMBER

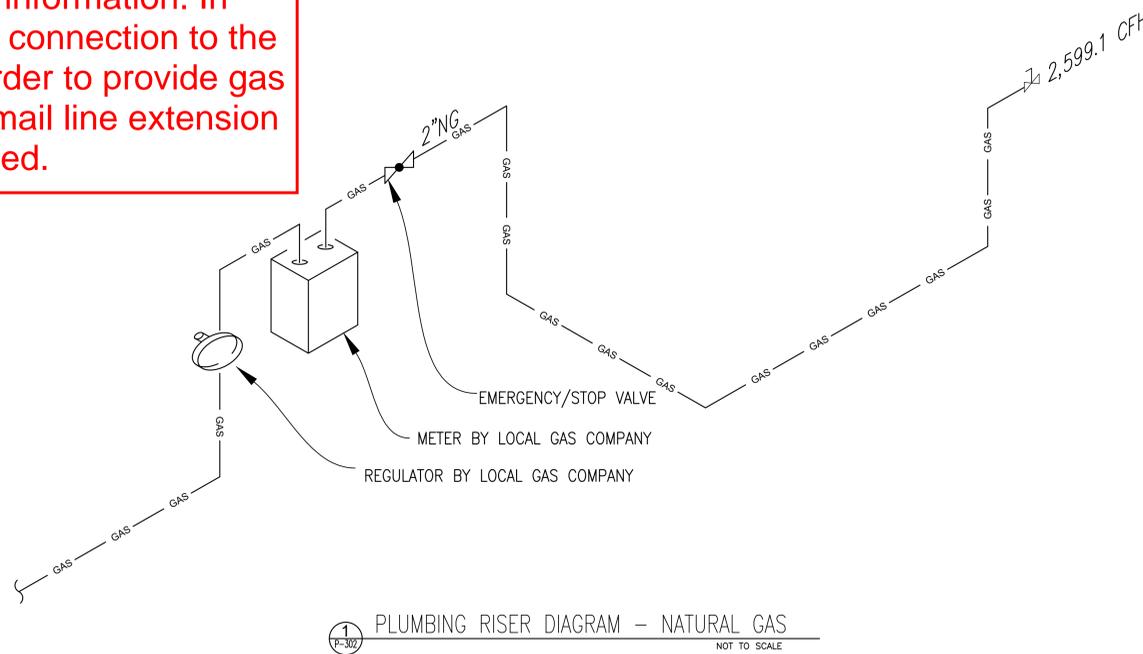
Ingenotech Consulting Engineers, PLLC
MECHANICAL ELECTRICAL PLUMBING DIVISION
1100 N. W. 107th Street, Suite 100
Coral Gables, FL 33156
Tel: 305.441.1234
Fax: 305.441.1235
www.ingenotech.com

Please add Gas Company Name and contact information. In addition, please show in the drawings point of connection to the existing gas line. We need to ensure that in order to provide gas line connection, no additional work (new gas mail line extension and/or asphalt pavement cutting, etc.) is needed.

2" NATURAL GAS SIZED BASED ON TABLE 402.4(2) SCHEDULE 40 METALLIC PIPE ON FBC-FG (8TH EDITION).

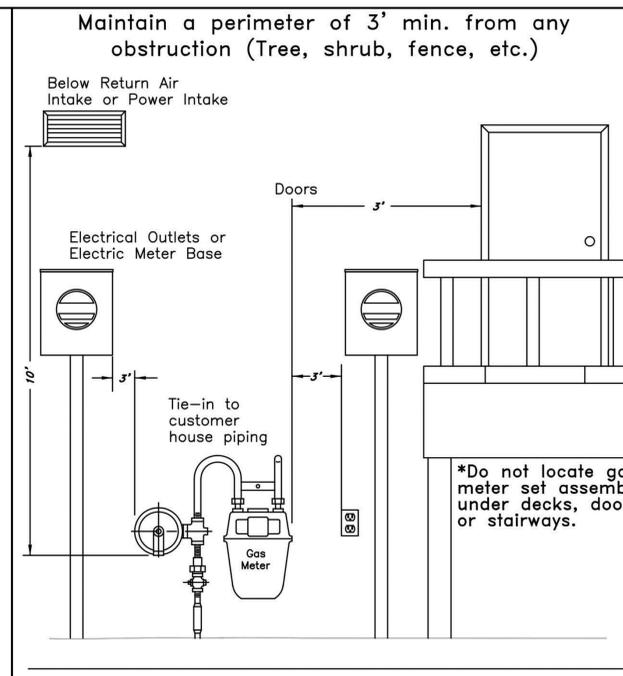
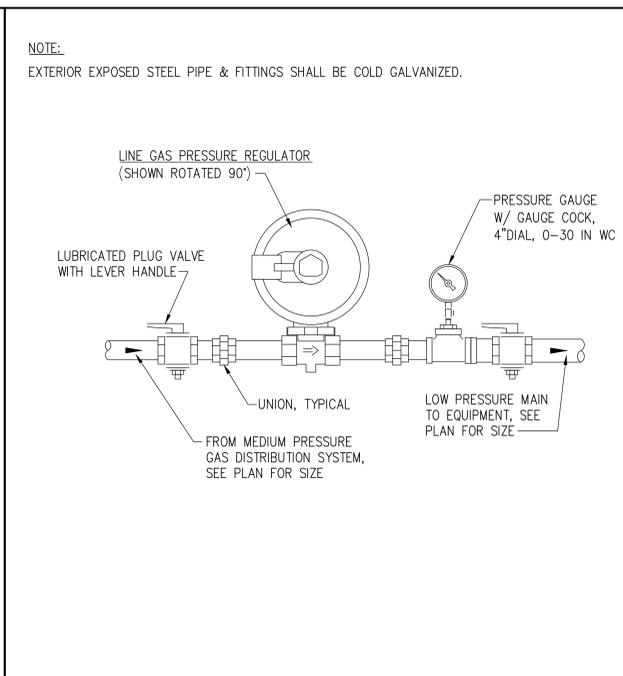
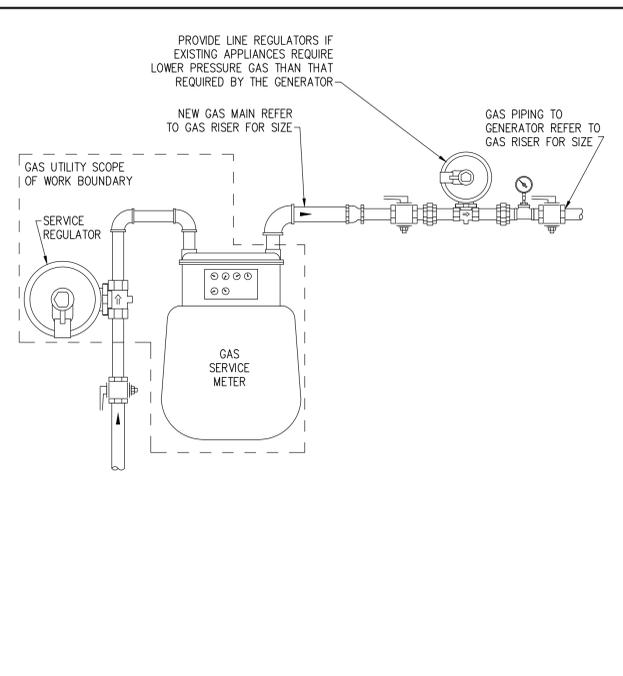
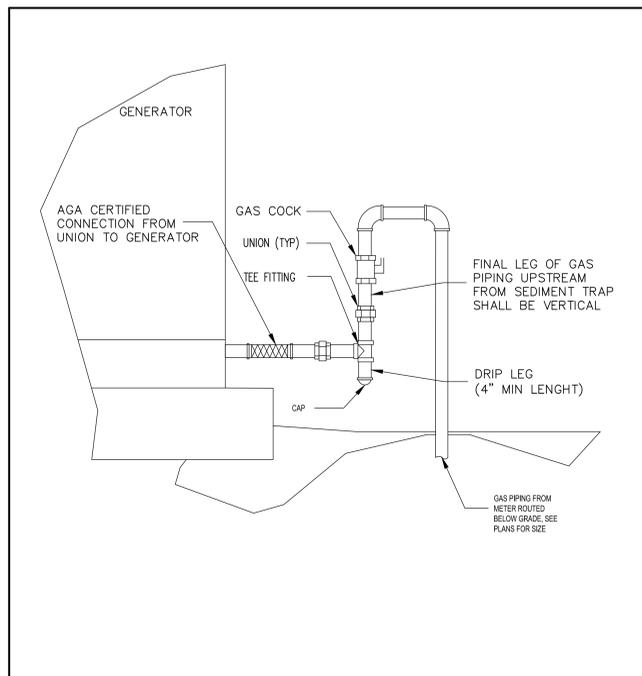
FINAL CONNECTION BY LOCAL GAS COMPANY
 TOTAL CONNECTION LOAD: 2,599.1 CFH
 PRESSURE DROP LESS THAN 0.5" PSI
 INLET PRESSURE LESS THAN 2.0" PSI
 SPECIFIC GRAVITY 0.60
 TOTAL 20 FT
 SECOND REGULATOR SHALL BE USED BASED ON EQUIPMENT WORKING PRESSURE.
 SEE GAS NOTES IN THIS SHEET

COORDINATE WITH ENGINEER OF RECORD IF PRESSURE PROVIDED BY GAS COMPANY IS DIFFERENT FROM INFORMATION IN GAS PIPING PLAN.



GAS NOTES

- ALL GAS PIPING SHALL BE LOCATED IN THE WALL CAVITY SPACE. COORDINATE LOCATION W/ PLUMBER, LIGHTING & FIRE PROTECTION TO AVOID CONFLICTS.
- ALL GAS PIPING IS SIZED BASED ON TABLE 402.4(2) SCHEDULE 40 METALLIC PIPE ON FBC-FG (8TH EDITION).
- PROVIDE SHUT-OFF VALVES AT ALL EQUIPMENT SUPPLIED WITH NATURAL GAS.
- ALL GAS INSTALLATIONS WILL COMPLY WITH:
 - (1) AMERICAN GAS ASSOCIATION (A.G.A.) STANDARDS,
 - (2) 8TH EDITION 2023 FLORIDA BUILDING CODE - FUEL GAS
 - (3) REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION, AND
 - (4) EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS RECOMMENDATIONS.
- SUPPORT ALL PIPING SYSTEMS IN ACCORDANCE WITH APPLICABLE CODES AND WITH INDUSTRY STANDARDS FOR HANGER AND WALL MOUNTED SUPPORT SYSTEMS.
- ALL SUPPORTS SHALL BE PROVIDED WITH SUPPORT IN ACCORDANCE WITH SECTION 407 AND 415 FLORIDA BUILDING CODE 8TH EDITION 2023 F.G..
- EACH ABOVE-GROUND PORTION OF A GAS PIPING SYSTEM THAT IS LIKELY TO BECOME ENERGIZED SHALL BE ELECTRICALLY CONTINUOUS AND BONDED TO AN EFFECTIVE GROUND-FULT CURRENT PATH. GAS PIPING SHALL BE CONSIDERED TO BE BONDED WHERE IT IS CONNECTED TO APPLIANCES THAT ARE CONNECTED TO THE EQUIPMENT GROUNDING CONDUCTOR OF THE CIRCUIT SUPPLYING THAT APPLIANCE.
- 403.6 PLASTIC PIPE, TUBING AND FITTINGS: POLYETHYLENE PLASTIC PIPE, TUBING AND FITTINGS USED TO SUPPLY FUEL GAS SHALL CONFORM TO ASTM D2513. SUCH PIPE SHALL BE MARKED "GAS" AND "ASTM D2513". POLYAMIDE PIPE, TUBING AND FITTINGS SHALL BE IDENTIFIED AND CONFORM TO ASTM F2945. SUCH PIPE SHALL BE MARKED "GAS" AND "ASTM F2945."
- POLYVINYL CHLORIDE (PVC) AND CHLORINATED POLYVINYL CHLORIDE (CPVC) PLASTIC PIPE, TUBING AND FITTINGS SHALL NOT BE USED TO SUPPLY FUEL GAS.
- 404.14 PIPING UNDERGROUND BENEATH BUILDINGS: PIPING INSTALLED UNDERGROUND BENEATH BUILDINGS IS PROHIBITED EXCEPT WHERE THE PIPING IS ENCASED IN A CONDUIT OF WROUGHT IRON, PLASTIC PIPE, STEEL PIPE, A PIPING OR ENCASEMENT SYSTEM LISTED FOR INSTALLATION BENEATH BUILDINGS OR OTHER APPROVED CONDUIT MATERIAL DESIGNED TO WITHSTAND THE SUPERIMPOSED LOADS. THE CONDUIT SHALL BE PROTECTED FROM CORROSION IN ACCORDANCE WITH SECTION 404.11 AND SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 404.14.1 OR 404.14.2.



2 GENERATOR GASS CONNECTION NOT TO SCALE

3 GAS SERVICE CONNECTION DETAIL NOT TO SCALE

4 GAS PRESSURE REGULATOR ASSEMBLY DETAIL NOT TO SCALE

5 GAS METER AND REGULATOR CLEARANCE NOT TO SCALE

FOR BIDDING ONLY NOT FOR CONSTRUCTION - 10/30/25

ISSUE - REVISION LOG

MARK.	DATE	DESCRIPTION

MARK.	DATE	DESCRIPTION

SUPERVISOR OF ELECTIONS BUILDING TI
 365 E. Bufileigh Blvd., Tavares, FL 32778.
 PLUMBING RISER DIAGRAM - NATURAL GAS

JOB NAME
 SHEET NAME

ANY DISCREPANCY OR ERROR IN DIMENSIONS OR NOTES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN PROFESSIONAL FOR CLARIFICATION PRIOR TO COMMENCEMENT OF CONSTRUCTION.

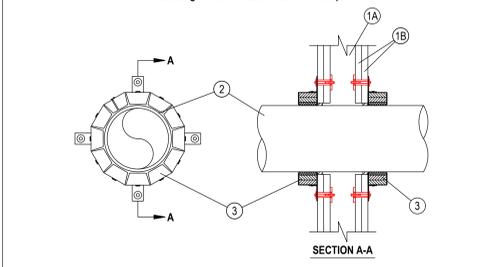
Ingenotech Consulting Engineers, PLLC
 MECHANICAL/ELECTRICAL/PLUMBING/PIPE PROTECTION
 1000 W. Main Street, Suite 100
 Tavares, FL 32770
 Tel: (877) 358-6860 / Fax: (877) 538-6869
 C.A. # 35547

Project: Supervisor of Elections Building TI
 Job #: ICE25066
 Date: 06/30/2025

AR JOB # 25-11111
 ENCL. JOB # ICE25066
 DATE: 06/30/2025

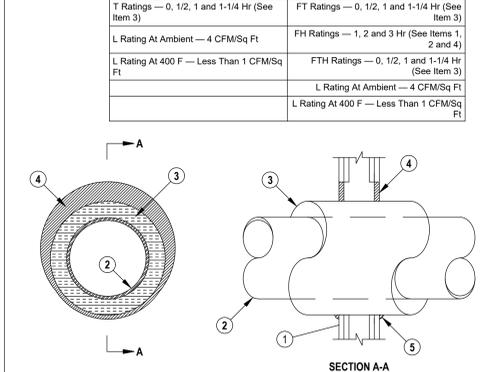
SHEET NUMBER
P-302

System No. W-L-2078
F Ratings — 1 and 2 Hr (See Item 1)
T Ratings — 0, 1 and 2 Hr (See Items 2 and 3)
L Rating at Ambient — 3 CFM/Sq Ft
L Rating at 400 F — Less Than 1 CFM/Sq Ft



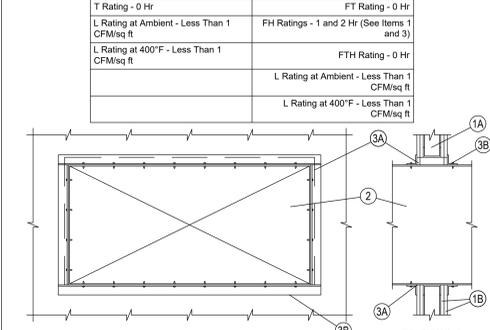
- Wall Assembly — The fire-rated gypsum board wall assembly shall be constructed of the materials and in the manner specified in the individual U400, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the construction features noted below:
 - Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced max 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.
 - Gypsum Board* — Nom 5/8 in. (16 mm) thick gypsum board, as specified in the individual Wall and Partition Design. Max diam of opening is 11-1/2 in. (292 mm).
- The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
- Through-Penetrants — One nonmetallic pipe, conduit or tubing to be installed within the firestop system. The annular space between pipe and periphery of opening shall be min 0 in. (point contact) to max 1/2 in. (13 mm) Pipe or conduit to be rigidly supported on both sides of the wall assembly. The following types and sizes of nonmetallic pipes may be used:
 - Polyvinyl Chloride (PVC) Pipe — Nom 10 in. (254 mm) diam (or smaller) Schedule 40 solid-core or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.
 - Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 10 in. (254 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.
 - Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 solid-core or cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - Polyethylene Fluoride (PVDF) Pipe — Nom 4 in. (102 mm) diam (or smaller) PVDF pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.
- When max 6 in. diam pipe is used, T Rating is equal to the hourly fire rating of the wall. When nom 8 in. or 10 in. (203 or 254 mm) diam pipe is used, T Rating is 0 Hr.
- Firestop Device* — Firestop collar shall be installed in accordance with the accompanying installation instructions. Collar to be installed and latched around the pipe and secured to both sides of the wall using the anchor hooks provided with the collar. (Minimum two anchor hooks for 1-1/2 and 2 in. (38 and 51 mm) diam pipes, three anchor hooks for 3 and 4 in. (76 and 102 mm) diam pipes, four anchor hooks for 6 in. (152 mm) diam pipes, ten anchor hooks for 8 in. (203 mm) diam pipes and twelve anchor hooks for 10 in. (254 mm) diam pipes. The anchor hooks are to be secured to the surface of wall with 3/16 in. (4.8 mm) diam and 1/2 in. (12.7 mm) long steel toggle bolts along with washers. As an alternate for pipe sizes of nom 4 in. diam or less, min No. 10 by 1/2 in. (25.4 by 38 mm) long drywall or laminate screws with min 3/4 in. (19 mm) steel washers may be used. When the drywall or laminate screws is used, T Rating shall not exceed 1 Hr.

System No. W-L-5029
F Ratings — 1, 2 and 3 Hr (See Items 1, 3 and 4)
T Ratings — 0, 1/2, 1 and 1-1/4 Hr (See Item 3)
L Rating at Ambient — 4 CFM/Sq Ft
L Rating at 400 F — Less Than 1 CFM/Sq Ft



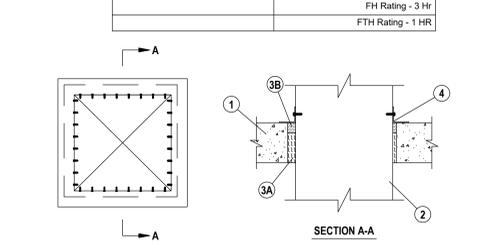
- Wall Assembly — The 1 or 2 or 3 fire-rated gypsum board wall assembly shall be constructed of the materials and in the manner specified in the individual U400, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide for 1 and 2 hr F and FH ratings and 3-1/2 in. (89 mm) wide for 3 hr F and FH rating and max 2 in. (51 mm) OC.
 - Gypsum Board* — Min 5/8 in. (16 mm) thick with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and steel orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 18-5/8 in. (473 mm). The hourly F and FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.
 - Through-Penetrants — One metallic pipe or tubing to be installed within the firestop system. Pipe or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes or tubing may be used:
 - Steel Pipe — Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - Iron Pipe — Nom 2 in. (51 mm) diam (or smaller) cast or ductile iron pipe.
 - Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing. When the hourly F or FH Rating of the firestop system is 3 hr, the nom diam of copper tube shall not exceed 4 in. (102 mm).
 - Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe. When the hourly F or FH Rating of the firestop system is 3 hr, the nom diam of copper pipe shall not exceed 4 in. (102 mm).
 - Pipe Covering* — Nom 1/2 in. (12.7 mm) or 2 in. (51 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56 kg/m³) glass fiber units jacketed on the outside with an all-service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing top tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. For 1 and 2 hr F and FH Ratings, the annular space between insulated penetrant and periphery of opening shall be min 0 in. (point contact) to max 1/8 in. (48 mm). For 3 hr F and FH Ratings, the annular space shall be min 0 in. (point contact) to max 1-1/4 in. (32 mm). See Pipe and Equipment Covering — Materials (BRG) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
 - Fill, Void or Cavity Material* — Sealant — For 1 and 2 hr F and FH Rating, min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. For 3 hr F and FH Rating, min 1 in. (25 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the joint contact location between pipe covering and gypsum board, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe covering/gypsum board interface on both surfaces of wall.
- Hourly T, FT, FTH Ratings of the firestop system are 1/2 hr for 1 hr rated walls and 1 hr for 2 hr rated walls, the hourly T, FT and FTH Ratings when steel and non pipe sizes are used are 1 Hr. For 3 hr rated walls, the hourly T, FT and FTH Ratings when copper penetrants are used are 1-1/4 hr for 2 in. (51 mm) thick pipe covering and 0 hr for pipe covering thickness less than 2 in. (51 mm).
- Pipe Covering* — As an alternate to Item 3, max 2 in. (51 mm) thick cylindrical calcium silicate (min 14 pcf) units sized to the outside diam of the pipe or tube may be used. Pipe insulation secured with stainless steel bands or min 18 AWG stainless steel wire spaced max 12 in. (305 mm) OC. When the alternate pipe covering is used, the T and FT Rating shall be as specified in Item 3 above.
- See Pipe and Equipment Covering — Materials (BRG) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
- Fill, Void or Cavity Material* — Sealant — For 1 and 2 hr F and FH Rating, min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. For 3 hr F and FH Rating, min 1 in. (25 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the joint contact location between pipe covering and gypsum board, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe covering/gypsum board interface on both surfaces of wall.

System No. W-L-7040
F Ratings — 1 and 2 Hr (See Items 1 and 3)
T Rating — 0 Hr
L Rating at Ambient - Less Than 1 CFM/Sq Ft
L Rating at 400 F - Less Than 1 CFM/Sq Ft

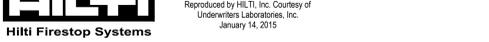


- Wall Assembly — The fire-rated gypsum board wall assembly shall be constructed of the materials and in the manner specified in the individual U400, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC. Additional framing members shall be used to completely frame around opening.
 - Gypsum Board* — Nom 5/8 in. (16 mm) thick with square or tapered edges. The gypsum wallboard type, number of layers and steel orientation shall be as specified in the individual Wall and Partition Design. Max area of opening is 130 in. (3304 mm) with the dimension of 50 in. (127 mm). The hourly F and FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.
 - Steel Duct — Nom 24 in. by 48 in. (610 by 1219 mm) (or smaller) No. 24 gauge (or heavier) galv steel duct to be installed within the firestop system. The annular space shall be min 0 (point contact) in. to a max 2 in. (51 mm) Duct to be rigidly supported on both sides of the wall assembly.
 - Firestop System — The firestop system shall consist of the following:
 - Fill, Void or Cavity Material* — Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within annulus flush with both surfaces of wall. At joint contact location, a min 1/2 in. (13 mm) diam bead of fill material shall be applied to the wall/interior on both surfaces of wall.
 - Iron Pipe — Nom 2 in. (51 mm) diam (or smaller) cast or ductile iron pipe.
 - Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing. When the hourly F or FH Rating of the firestop system is 3 hr, the nom diam of copper tube shall not exceed 4 in. (102 mm).
 - Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe. When the hourly F or FH Rating of the firestop system is 3 hr, the nom diam of copper pipe shall not exceed 4 in. (102 mm).
 - Pipe Covering* — Nom 1/2 in. (12.7 mm) or 2 in. (51 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56 kg/m³) glass fiber units jacketed on the outside with an all-service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing top tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. For 1 and 2 hr F and FH Ratings, the annular space between insulated penetrant and periphery of opening shall be min 0 in. (point contact) to max 1/8 in. (48 mm). For 3 hr F and FH Ratings, the annular space shall be min 0 in. (point contact) to max 1-1/4 in. (32 mm). See Pipe and Equipment Covering — Materials (BRG) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
 - Hourly T, FT, FTH Ratings of the firestop system are 1/2 hr for 1 hr rated walls and 1 hr for 2 hr rated walls, the hourly T, FT and FTH Ratings when steel and non pipe sizes are used are 1 Hr. For 3 hr rated walls, the hourly T, FT and FTH Ratings when copper penetrants are used are 1-1/4 hr for 2 in. (51 mm) thick pipe covering and 0 hr for pipe covering thickness less than 2 in. (51 mm).
 - Pipe Covering* — As an alternate to Item 3, max 2 in. (51 mm) thick cylindrical calcium silicate (min 14 pcf) units sized to the outside diam of the pipe or tube may be used. Pipe insulation secured with stainless steel bands or min 18 AWG stainless steel wire spaced max 12 in. (305 mm) OC. When the alternate pipe covering is used, the T and FT Rating shall be as specified in Item 3 above.
 - See Pipe and Equipment Covering — Materials (BRG) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
 - Fill, Void or Cavity Material* — Sealant — For 1 and 2 hr F and FH Rating, min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. For 3 hr F and FH Rating, min 1 in. (25 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the joint contact location between pipe covering and gypsum board, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe covering/gypsum board interface on both surfaces of wall.
- Hourly T, FT, FTH Ratings of the firestop system are 1/2 hr for 1 hr rated walls and 1 hr for 2 hr rated walls, the hourly T, FT and FTH Ratings when steel and non pipe sizes are used are 1 Hr. For 3 hr rated walls, the hourly T, FT and FTH Ratings when copper penetrants are used are 1-1/4 hr for 2 in. (51 mm) thick pipe covering and 0 hr for pipe covering thickness less than 2 in. (51 mm).
- Pipe Covering* — As an alternate to Item 3, max 2 in. (51 mm) thick cylindrical calcium silicate (min 14 pcf) units sized to the outside diam of the pipe or tube may be used. Pipe insulation secured with stainless steel bands or min 18 AWG stainless steel wire spaced max 12 in. (305 mm) OC. When the alternate pipe covering is used, the T and FT Rating shall be as specified in Item 3 above.
- See Pipe and Equipment Covering — Materials (BRG) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
- Fill, Void or Cavity Material* — Sealant — For 1 and 2 hr F and FH Rating, min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. For 3 hr F and FH Rating, min 1 in. (25 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the joint contact location between pipe covering and gypsum board, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe covering/gypsum board interface on both surfaces of wall.

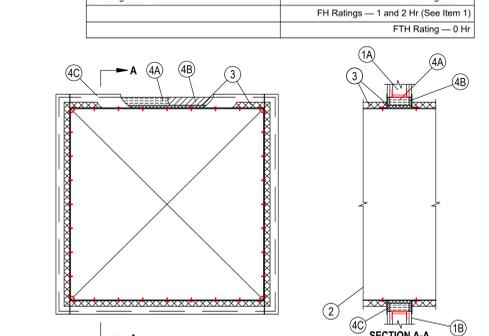
System No. C-AJ-7051
F Rating — 3 Hr
T Rating — 1 Hr



- Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete floor or min 5-1/2 in. (140 mm) thick lightweight on normal weight concrete wall. Wall may also be constructed of any UL Classified Concrete Blocks*. Max area of opening is 1024 in. sq (6606 cm²) with a max dimension of 32 in. (813 mm). See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- Steel Duct — Nom 30 by 30 in. (762 by 762 mm) by No. 24 gauge (or heavier) galv steel duct. One steel duct to be positioned within the firestop system. The annular space shall be min 1/4 in. (6 mm) to max 1-3/4 in. (44 mm). Duct to be rigidly supported on both sides of floor or wall assembly.
- Firestop System — The firestop system shall consist of the following:
 - Packing Material* — Min 3-1/2 in. (89 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a permanent form between the bare steel duct and the periphery of the opening. Packing material to be recessed from top surface of floor or both surfaces of wall as required to accommodate the required thickness of fill material.
 - Fill, Void or Cavity Material* — Sealant — Min 1 in. (25 mm) thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall.
- Steel Retaining Angle* — Nom 2 in. by 2 in. (51 by 51 mm) by No. 16 gauge (or heavier) steel angles attached to all four sides of the steel duct on the top surface and both surfaces of the wall. The angles shall be attached with No. 8 (or larger) steel sheet metal screws spaced max of 1 in. (25 mm) from each end and a max of 3 in. (76 mm) OC.



System No. W-L-7156
F Ratings — 1 and 2 Hr (See Item 1)
T Rating — 0 Hr



- Wall Assembly — The 1 or 2 hr fire-rated gypsum board wall assembly shall be constructed of the materials and in the manner specified in the individual U400, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs — Wall framing shall consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced max 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC. Additional framing members shall be used to completely frame around opening.
 - Gypsum Board* — Min 5/8 in. (16 mm) thick, 4 ft (12 m) wide with square or tapered edges. The gypsum board type, thickness, number of layers and orientation shall be as specified in the individual Wall and Partition Design. Max size of opening is 210 sq in. (1355 cm²) with a max width of 14-1/2 in. (368 mm) for wood studs. Max size of opening is 76.2 sq ft, (7 m²) with a max width of 105-1/2 in. (27 m) for steel studs.
 - The hourly F and FH Ratings of the firestop system are equal to the hourly fire rating of the wall in which it is installed.
 - Steel Duct — Max 100 by 100 in. (2539 by 2539 mm) steel duct to be installed within the framed opening. The duct shall be constructed and reinforced in accordance with SMACNA construction standards. Steel duct to be rigidly supported on both sides of wall assembly.
 - Batts and Blankets* — Nom 1-1/2 or 2 in. (38 or 51 mm) thick glass batt or blanket (min 3/4 pcf or 12 kg/m³) jacketed on the outside with a foil-cum-wet facing. Longitudinal and transverse joints sealed with aluminum foil tape. During the installation of the fill material, the batt or blanket shall be compressed minimum 50% such that the annular space within the firestop system shall be min 1/2 in. (13 mm) to max 2 in. (51 mm). See Batts and Blankets (BNV) category in the Building Materials Directory for names of manufacturers. Any batt or blanket meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
 - Firestop System — The firestop system shall consist of the following:
 - Packing Material* — Min 3-5/8 in. (92 mm) or 4-7/8 in. (124 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a permanent form for 1 or 2 hr fire-rated walls, respectively. Packing material to be recessed from both surfaces of wall to accommodate the required thickness of fill material.
 - Fill, Void or Cavity Material* — Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with both surfaces of wall.
 - Steel Retaining Angles* — Min No. 16 gauge (0.059 in. or 1.5 mm) galv steel angles sized to lap steel duct at min 2 in. (51 mm) and lap wall surfaces a min of 1 in. (25 mm). Angles attached to steel duct on both sides of wall with min No. 10 steel sheet metal screws spaced a max of 1 in. (25 mm) from each end of steel duct and spaced a max of 6 in. (152 mm) OC. When max 1-1/2 in. (38 mm) duct diameter does not exceed 48 in. (122 cm) and duct area does not exceed 1500 sq in. (9687 cm²), angles may be min No. 10 gauge galv steel. Angles attached to steel duct on both sides of wall with min No. 10 by 1/2 in. (13 mm) long steel sheet metal screws located a max of 1 in. (25 mm) from each end of steel duct and spaced a max of 6 in. (152 mm) OC. When max 1-1/2 in. (38 mm) duct diameter does not exceed 48 in. (122 cm) and duct area does not exceed 1500 sq in. (9687 cm²), angles may be min No. 10 gauge galv steel. 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