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BUILDING ADDITION TO
JL NEWBERN MIDDLE SCHOOL
VALDOSTA, GEORGIA 31602

ADDENDUM NO. 1
February 23, 2021

GENERAL:

1. ATTENTION**:** When an addendum approves a manufacturer as "acceptable" or approved", that manufacturer is approved to submit product(s) that 100% meets or exceed the Contract Documents. No specific product has been approved by said manufacturer(s) unless specifically indicated. **It is the Contractor's and product manufacturer's responsibility to bid and supply products that completely meet of exceed the Contract Documents.** After the bidding process is completed, if a product is submitted for review and is not approved as an equal to the specifications, the Contractor shall provide an approved product at no additional cost to the Owner.

REVISIONS TO THE SPECIFICATIONS:

1. SECTION 001116 – INVITATION TO BID:
    a. Part 1.02 / A / 3:
        i. Delete in its entirety and replace with the following; "Location: Valdosta City Board of Education, 1204 Williams St. Valdosta GA 31601."

2. SECTION 042000 – MASONRY
    a. "Paragraph 3.6 CAVITY WALLS: Subparagraph 3.6 D." Delete in its entirety.
    b. "Paragraph 3.15 PARGING:" Delete in its entirety.
        i. NOTE: Parging is not required except as noted in 072726 DESIGN CRITERIA, Paragraph 2.04.D.1.
    c. "Paragraph 3.4 LAYING MASONRY WALLS: Paragraph 3.4 J" The specification reads build the walls to deck, unless otherwise indicated.
    d. "Paragraph 3.12 FLASHING, WEEP HOLES AND CAVITY VENTS: Subparagraph 3.12.E.3" NOTE: The specification reads build weeps at 24" on center, unless otherwise indicated.

3. SECTION 055000 – METAL FABRICATIONS
    a. "Paragraph 1.2 SUMMARY" Delete paragraph 1.2.A.6.
    b. "Paragraph 1.4 ACTION SUBMITTALS" Delete subparagraphs 14.A.4 and 1.4.B.6.
    c. "Paragraph 2.6 METAL LADDERS" Delete in its entirety.

4. SECTION 064113 – ARCHITECTURAL WOODWORK
    a. Include the attached Section 064113 – Architectural Woodwork – Revised February 23, 2021.

5. SECTION 072100 – THERMAL INSULATION
    a. Replace this section in its entirety with the attached Section 072100 – Thermal Insulation – Revised February 23, 2021.

6. SECTION 077200 – ROOFTOP ACCESSORIES
    a. Delete all references to “Roof Hatch”. None on this project.

7. SECTION 074113 – STANDING SEAM METAL ROOF PANELS
    a. Include the attached Section 074113 – Standing Seam Metal Roof Panels – Revised February 23, 2021.

8. SECTION 074293 – SOFFIT PANELS
    a. Include the attached Section 074293 – Soffit Panels – Revised February 23, 2021.

9. SECTION 096700 – QUARTZ FLOORING
    a. Include the attached Section 096700 – Quartz Flooring – Revised February 23, 2021.

10. SECTION 096813 – TILE CARPETING
    a. Remove Section 096813 – Tile Carpeting in its entirety.

11. SECTION 101000 – VISUAL DISPLAY UNITS
    a. Include the attached Section 101000 – Visual Display Units – Revised February 23, 2021.

12. SECTION 105300 – EXTRUDED ALUMINUM CANOPY
    a. Include the attached Section 105300 – Extruded Aluminum Canopy – Revised February 23, 2021.

13. SECTION 122413 – ROLLER WINDOW SHADES
    a. Include the attached Section 122413 – Roller Window Shades – Revised February 23, 2021.

REVISIONS TO THE DRAWINGS:

1. SHEET C2000:
    a. Replace this Sheet with the attached revised sheets as part of “Addendum 1”.

2. SHEET C3000:
    a. Replace this Sheet with the attached revised sheets as part of “Addendum 1”.

3. SHEET C4000:
    a. Replace this Sheet with the attached revised sheets as part of “Addendum 1”.

4. SHEET A1000:
    a. Revise Spaces 333, 334, and 339 as shown on attached Sheet A1000.

5. SHEET A2000:
    a. Revise ENLARGED FLOOR PLAN as shown on attached Sheet A2000.
    b. Revised REFLECTED CEILING PLAN as shown on attached Sheet A2000.

c. See attached drawing AD1-1 for enlarged floor plans of Spaces 334 and 339.

6. SHEET A3000:
   a. Revise EXTERIOR ALUMINUM WINDOW FRAME TYPES as shown on attached Sheet A3000.

7. SHEET S0002:
   a. The size and spacing of masonry verticals are called out on S0002. Details indicate that masonry dowels are to match the size and spacing of masonry verticals.

8. SHEET S0002:
   a. Replace this Sheet with the attached revised sheets as part of “Addendum 1”.

9. SHEET P0010:
   a. Revise PLUMBING NEW WORK PLAN – WATER as shown on attached Sheet P0010.

10. SHEET P1100:
    a. Revise PLUMBING NEW WORK PLAN – WASTE AND VENT as shown on attached Sheet P1100.
    b. Revise PLUMBING NEW WORK PLAN – WATER as shown on attached Sheet P1100
    c. Revise PLUMBING WASTE AND VENT RISER as shown on attached Sheet P1100.
    d. Revise PLUMBING WATER RISER as shown on attached Sheet P1100

11. SHEET E1001, E2000, AND E3000:
    a. Revise Spaces 333, 334, and 339 as shown on attached Sheets E1001, E2000, and E3000.

END

SECTION 064113

ARCHITECTURAL WOODWORK
Revised February 23, 2021

PART 1 - GENERAL

1.01 QUALITY ASSURANCE

A. AWI Quality Standard: Comply with requirements of "Architectural Woodwork Quality Standards" published by the Architectural Woodwork Institute (AWI), Seventh Edition (1997), except as otherwise indicated on the drawings.

1.02 SUBMITTALS

A. Product Data: Submit manufacturer's product data for each product and process specified as work of this section and incorporated into items of architectural woodwork during fabrication, finishing, and installation.

B. Shop Drawings: Submit shop drawings showing location of each item, dimensioned plans and elevations, large scale details, attachment devices and other components.

C. Samples: Submit the following samples:

1. Exposed cabinet hardware, one unit of each type and finish.

1.03 DELIVERY, STORAGE, AND HANDLING

A. Protect woodwork during transit, delivery, storage and handling to prevent damage, soiling and deterioration.

B. Do not deliver woodwork until painting, wet work, grinding operations which could damage, soil or deteriorate woodwork have been completed in installation areas. If, due to unforeseen circumstances, woodwork must be stored in other installation areas, store only in areas meeting requirements specified for installation areas.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Manufacturer: Subject to compliance with requirements, provide high pressure decorative laminates and solid surface of one of the following:

1. Formica Corp.
2. Nevamar Decorative Surfaces
3. Pioneer Plastics, Corp.
4. Wilson-Art International, Inc.

2.02 FABRICATION, GENERAL

A. Fabricate woodwork to dimensions, profiles, and details indicated on the drawings with openings and mortises precut to receive hardware and other items and work.

B. Complete fabrication, assembly, finishing, hardware application, and other work before shipment to project site to maximum extent possible. Disassemble components only for shipment and installation. For fitting at site, provide ample allowance for scribing, trimming, and fitting.

C. Pre-cut Openings: Fabricate architectural woodwork with pre-cut openings to receive hardware, appliances, plumbing fixtures, and electrical work. Locate openings and use templates or roughing in diagrams for size and shape. Smooth edges of cutoffs and, where located in countertops, seal edges of cutouts with a water-resist coating.

D. Measurements: Before proceeding with fabrication of woodwork to be fitted to

other construction, obtain field measurements and verify dimensions and shop drawings and details for accurate fit.

2.03 ARCHITECTURAL CABINETS, WOOD

A. Quality Standard: Comply with AWI Section 400 and its Division 400A "Wood Cabinets", plus the following requirements B and C.

B. All wood used in cabinet construction shall be plywood of solid wood veneers or solid wood. Particle and flake board products shall not be used.

C. Wood cabinets for transparent finish: Comply with the following requirements:

1. Grade: Custom.
2. Wood species for exposed surfaces: Plain Sliced White Maple.
3. Wood species for semi-exposed surfaces: Match species and cut indicated for exposed surfaces.

2.04 CABINET HARDWARE

A. Provide cabinet hardware and accessory materials associated with architectural cabinets, except for items which are specified in Division 8, Section 0870, "Finish Hardware".

B. Cabinet hardware schedule shall include, but is not limited to the following:

1. Typical Hardware: Approved Manufacturers: KV, Accurid, Grant
   a) Door and drawer pulls - Stanley 4484-1/2, US 26, KV, Grant
   b) Hinges - Self-closing, Blum 180^{o} , Stanley, KV
   c) Drawer slides - KV 6300, Stanley, Grant
   d) Adjustable standards and shelf supports - KV 255 x 256, Grant, Accurid
   e) Adjustable standards with brackets - KV 87ANO x 186,10", Accurid,Grant
   f) Door locks - See Finish Hardware Set 02.
   g) Base Cabinet Doors Locks: Knape & Vogt No. 986 lock each leaf, key each space alike, Stanley, Grant.
   h) Pocket door hinge: Knape & Vogt No. 8092P, Stanley, Grant.

2.05 ARCHITECTURAL CABINET TOPS

A. Quality Standard: Comply with AWI Section 400 and its Division 400C, plus the following requirement B through F.

B. Type of Top: High Pressure Decorative Laminate or Solid Surface. See drawings.

C. Grade: Custom

D. Laminate cladding for horizontal surface: high pressure decoration laminate complying with NEMA SL 3 matching selections indicated on drawings, grade GP-50 (0.050" nominal thickness).

E. Edge Treatment: Same as laminate cladding on horizontal surfaces. Solid Surface edge profile designated on drawings.

F. Colors: Exterior faces and edges; colors shown on the drawings.

PART 3 - EXECUTION

3.01 PREPARATION

A. Condition woodwork to average prevailing humidity conditions in installation areas prior to installing.

3.02 INSTALLATION

A. Install woodwork plumb, level, true and straight with no distortions. Shims using concealed shims. Install to a tolerance of 1/8" in 8'-0" for plumb and level (including tops); and with no variations in flushness of adjoining surfaces.

B. Scribe and cut woodwork to anchors or blocking built-in or attached to

substrates. Secure to grounds, stripping and blocking with countersunk, concealed fasteners and blind nailing.

C. Anchor woodwork to anchors or blocking built-in or attached to substrates. Secure to grounds, stripping and blocking with countersunk, concealed fasteners and blind nailing.

D. Cabinets: Install without distortion so that doors and drawers fit openings and are aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation.

E. Tops: Anchor to base units and other support systems as indicated on the drawings.

3.03 ADJUSTMENT, CLEANING, FINISHING, AND PROTECTION

A. Repair damaged and defective woodwork to eliminate defects or replace woodwork. Adjust joinery for uniform appearance.

B. Clean, lubricate and adjust hardware.

C. Clean woodwork on exposed and semi-exposed surfaces. Touch-up shop-applied finishes to restore damaged or soiled areas.

END.

SECTION 072100

THERMAL INSULATION
Revised February 23, 2021

PART 1 - GENERAL

1.01 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY
A. Section Includes:
1. Extruded polystyrene foam-plastic board
2. Polyisocyanurate foam-plastic board
3. Glass-fiber blanket.

1.03 ACTION SUBMITTALS
A. Product Data: For each type of product.

1.04 INFORMATIONAL SUBMITTALS
A. Product Test Reports: For each product, for tests performed by a qualified testing agency.
B. Evaluation Reports: For foam-plastic insulation, from ICC-ES.

1.05 DELIVERY, STORAGE, AND HANDLING
A. Protect insulation materials from physical damage and from deterioration due to moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.
B. Protect foam-plastic board insulation as follows:
1. Do not expose to sunlight except to necessary extent for period of installation and concealment.
2. Protect against ignition at all times. Do not deliver foam-plastic board materials to Project site until just before installation time.
3. Quickly complete installation and concealment of foam-plastic board insulation in each area of construction.

PART 2 - PRODUCTS

2.01 EXTRUDED POLYSTYRENE FOAM-PLASTIC BOARD
A. Extruded Polystyrene Board, Type IV (Cavity Walls): ASTM C578, Type IV, 25-psi (173-kPa) minimum compressive strength; unfaced; maximum flame-spread and smoke-developed indexes of 25 and 450, respectively, per ASTM E84.
1. Acceptable Products:
a) Kingspan Green Guard
b) Dupont CavityMate Plus
c) Owens Corning Foamular 250
2. Applications:
a) Exterior Concrete and Masonry Walls: (Applied to exterior face of masonry)
1) Thickness: 2”
2) R-Value: min. 10
b) Exterior Stud Walls with Cavity (Applied to exterior face of sheathing)
1) Thickness: 1” uno

2) R-Value: min. 5

3. Fire Propagation Characteristics: Passes NFPA 285 testing as part of an approved assembly.

2.02 POLYISOCYANURATE FOAM-PLASTIC BOARD

A. Acceptable Manufacturers:
1. GAF
2. Carlisle Construction Materials
3. Firestone Building Products
4. Johns Manville

B. Polyisocyanurate Board, (Roofing over Metal Deck): ASTM C1289, foil faced on exposed side, Type I, Class 1 or 2.
1. R-Value: min. 30
2. Thickness: (2) layers 2.25” each
3. Fire Propagation Characteristics: Passes NFPA 285 testing as part of an approved assembly.

2.03 GLASS-FIBER BLANKET

A. Acceptable Manufacturers:
1. Owens Corning
2. Certainteed
3. Johns Manville

B. Applications:
1. Exterior Stud Walls: Batt Type:
a) Thickness: As indicated on the drawings.
b) R-Value 3.50”=R-15, 6.25”=R-19
c) Vapor Retarder: Kraft facing.
2. Attic/Ceiling Rafters: Batt Type
a) Thickness: As required to achieve R-38.
b) Vapor Retarder: Separate

C. Glass-Fiber Blanket: ASTM C665, Type I; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively, per ASTM E84; passing ASTM E136 for combustion characteristics.
1. Application: Interior stud walls where indicated on drawings.
2. Thickness: 3.50”

D. Glass-Fiber Blanket, Polypropylene-Scrim-Kraft Faced: ASTM C665, Type II Class A (faced surface with a flame-spread index of 25 or less); Category 1 (membrane is a vapor barrier).
1. Application: Metal building insulation.
2. Thickness: Walls – 6”, Roof – 8”.

E. Glass-Fiber Blanket, Kraft Faced: ASTM C665, Type II (nonreflective faced), Class C (faced surface not rated for flame propagation); Category 1 (membrane is a vapor barrier).
1. All exterior stud walls.
2. Thickness: Math stud thickness (4” stud = 3.50” batt, 6” stud = 5.25” batt)

2.04 ACCESSORIES

A. Insulation for Miscellaneous Voids:
1. Glass-Fiber Insulation: ASTM C764, Type II, loose fill; with maximum flame-spread and smoke-developed indexes of 5, per ASTM E84.
2. Spray Polyurethane Foam Insulation: ASTM C1029, Type II, closed cell, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, per ASTM E84.

B. Adhesive for Bonding Insulation: Product compatible with insulation and air and water barrier materials, and with demonstrated capability to bond insulation securely to substrates without damaging insulation and substrates.

PART 3 - EXECUTION

3.01 PREPARATION

A. Clean substrates of substances that are harmful to insulation, including removing projections capable of puncturing insulation or vapor retarders, or that interfere with insulation attachment.

3.02 INSTALLATION, GENERAL

A. Comply with insulation manufacturer's written instructions applicable to products and applications.

B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.

C. Extend insulation to envelop entire area to be insulated. Fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

D. Provide sizes to fit applications and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units unless multiple layers are otherwise shown or required to make up total thickness or to achieve R-value.

3.03 INSTALLATION OF CAVITY-WALL INSULATION

A. Foam-Plastic Board Insulation: Install pads of adhesive spaced approximately 24 inches (610 mm) o.c. both ways on inside face and as recommended by manufacturer.

1. Fit courses of insulation between **wall ties and other** obstructions, with edges butted tightly in both directions, and with faces flush.
2. Press units firmly against inside substrates.

3.04 INSTALLATION OF INSULATION IN FRAMED CONSTRUCTION

A. Blanket Insulation: Install in cavities formed by framing members according to the following requirements:

1. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill the cavities, provide lengths that will produce a snug fit between ends.
2. Place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
3. Maintain 3-inch (76-mm) clearance of insulation around recessed lighting fixtures not rated for or protected from contact with insulation.
4. For metal-framed wall cavities where cavity heights exceed 96 inches (2438 mm), support unfaced blankets mechanically and support faced blankets by taping flanges of insulation to flanges of metal studs.
5. For wood-framed construction, install blankets according to ASTM C1320 and as follows:
   a) With faced blankets having stapling flanges, lap blanket flange over flange of adjacent blanket to maintain continuity of vapor retarder once finish material is installed over it.
6. Vapor-Retarder-Faced Blankets: Tape joints and ruptures in vapor-retarder facings, and seal each continuous area of insulation to ensure airtight installation.
   a) Exterior Walls: Set units with facing placed toward **exterior of construction**.

B. Miscellaneous Voids: Install insulation in miscellaneous voids and cavity spaces where required to prevent gaps in insulation using the following materials:

1. Glass-Fiber Insulation: Compact to approximately 40 percent of normal maximum volume equaling a density of approximately 2.5 lb/cu. ft. (40 kg/cu. m).
2. Spray Polyurethane Insulation: Apply according to manufacturer's written instructions.

3.05 PROTECTION

A. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION 072100

SECTION 074113

STANDING-SEAM METAL ROOF PANELS
Revised February 23, 2021

PART 1 - GENERAL

1.01 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY
A. Section includes standing-seam metal roof panels.
B. Related Sections:
1. Section 074293 "Soffit Panels" for metal panels used in horizontal soffit applications.

1.03 PREINSTALLATION MEETINGS
A. Preinstallation Conference: Conduct conference at **Project site**.
1. Meet with Owner, Architect, metal panel Installer, metal panel manufacturer's representative, structural-support Installer, and installers whose work interfaces with or affects metal panels, including installers of roof accessories and roof-mounted equipment.
2. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
3. Review methods and procedures related to metal panel installation, including manufacturer's written instructions.
4. Examine support conditions for compliance with requirements, including alignment between and attachment to structural members.
5. Review structural loading limitations of **deck, purlins, and rafters** during and after roofing.
6. Review flashings, special details, drainage, penetrations, equipment curbs, and condition of other construction that affect metal panels.
7. Review governing regulations and requirements for insurance, certificates, and tests and inspections if applicable.
8. Review temporary protection requirements for metal panel systems during and after installation.
9. Review procedures for repair of metal panels damaged after installation.
10. Document proceedings, including corrective measures and actions required, and furnish copy of record to each participant.

1.04 ACTION SUBMITTALS
A. Product Data: For each type of product.
1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of panel and accessory.
B. Shop Drawings:
1. Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.
2. Accessories: Include details of the flashing, trim, and anchorage systems, at a scale of not less than 1-1/2 inches per 12 inches (1:10).
C. Samples for Initial Selection: For each type of metal panel indicated with factory-applied color finishes.
1. Include similar Samples of trim and accessories involving color selection.

D. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below.
   1. Metal Panels: 12 inches (305 mm) long by actual panel width. Include clips, fasteners, closures, and other metal panel accessories.

1.05 INFORMATIONAL SUBMITTALS
A. Qualification Data: For Installer.
B. Product Test Reports: For each product, for tests performed by a qualified testing agency.
C. Field quality-control reports.
D. Sample Warranties: For special warranties.

1.06 CLOSEOUT SUBMITTALS
A. Maintenance Data: For metal panels to include in maintenance manuals.

1.07 QUALITY ASSURANCE
A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.
B. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.
   1. Build mockups for typical roof area only, including accessories.
      a) Size: **12 feet (3.5 m) long by 6 feet (1.75 m)**.
   2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
   3. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.08 DELIVERY, STORAGE, AND HANDLING
A. Deliver components, metal panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.
B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.
C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.
D. Retain strippable protective covering on metal panels during installation.
E. Copper Panels: Wear gloves when handling to prevent fingerprints and soiling of surface.

1.09 FIELD CONDITIONS
A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed according to manufacturers' written instructions and warranty requirements.

1.10 COORDINATION
A. Coordinate sizes and locations of roof curbs, equipment supports, and roof penetrations with actual equipment provided.
B. Coordinate metal panel installation with rain drainage work, flashing, trim, construction of soffits, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.11 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a) Structural failures including rupturing, cracking, or puncturing.
      b) Deterioration of metals and other materials beyond normal weathering.
   2. Warranty Period: **Two** years from date of Substantial Completion.

B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
   1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
      a) Color fading more than 5 Hunter units when tested according to ASTM D2244.
      b) Chalking in excess of a No. 8 rating when tested according to ASTM D4214.
      c) Cracking, checking, peeling, or failure of paint to adhere to bare metal.
   2. Finish Warranty Period: **20** years from date of Substantial Completion.

C. Special Weathertightness Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace standing-seam metal roof panel assemblies that fail to remain weathertight, including leaks, within specified warranty period.
   1. Warranty Period: **20** years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Energy Performance: Provide roof panels that are listed on the EPA/DOE's ENERGY STAR "Roof Product List" for **low and/or steep**-slope roof products.

B. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E1592:
   1. Wind Loads: As indicated on Drawings.
   2. Other Design Loads: As indicated on Drawings.
   3. Deflection Limits: For wind loads, no greater than **1/180** of the span.

C. Air Infiltration: Air leakage of not more than 0.06 cfm/sq. ft. (0.3 L/s per sq. m) when tested according to ASTM E1680[**or ASTM E283**] at the following test-pressure difference:
   1. Test-Pressure Difference: **1.57 lbf/sq. ft. (75 Pa)**.

D. Water Penetration under Static Pressure: No water penetration when tested according to ASTM E1646 **or ASTM E331** at the following test-pressure difference:

E. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
   1. Temperature Change (Range): **120 deg F (67 deg C)**, ambient; **180 deg F (100 deg C)**, material surfaces.

2.02 STANDING-SEAM METAL ROOF PANELS

A. General: Provide factory-formed metal roof panels designed to be installed by lapping and interconnecting raised side edges of adjacent panels with joint type indicated and mechanically attaching panels to supports using concealed clips in side laps. Include clips, cleats, pressure plates, and accessories required for weathertight installation.

1. Steel Panel Systems: Unless more stringent requirements are indicated, comply with ASTM E1514.
2. Aluminum Panel Systems: Unless more stringent requirements are indicated, comply with ASTM E1637.

B. Vertical-Rib, Seamed-Joint, Standing-Seam Metal Roof Panels: Formed with vertical ribs at panel edges and **intermediate stiffening ribs symmetrically spaced** between ribs; designed for sequential installation by mechanically attaching panels to supports using concealed clips located under one side of panels, engaging opposite edge of adjacent panels, and mechanically seaming panels together.
1. Approved Manufacturers:
   a) Firestone Metal Products
   b) MBCI
   c) Architectural Metal Systems
   d) PAC-CLAD, Peterson Aluminum Corporation
   e) Firestone Metal
2. Metallic-Coated Steel Sheet: Zinc-coated (galvanized) steel sheet complying with ASTM A653/A653M, G90 (Z275) coating designation, or aluminum-zinc alloy-coated steel sheet complying with ASTM A792/A792M, Class AZ50 (Class AZM150) coating designation; structural quality. Prepainted by the coil-coating process to comply with ASTM A755/A755M.
   a) Nominal Thickness: 0.024 inch (0.609 mm) (24 gauge)
   b) Exterior Finish:**Three-coat fluoropolymer**.
   c) Color: **As selected by Architect from manufacturer's full range**.
3. Clips: **Two-piece floating** to accommodate thermal movement.
   a) Material: **0.064-inch- (1.63-mm-)** nominal thickness, zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet.
4. Joint Type: Double folded.
5. Panel Coverage: **16 inches (406 mm)**.
6. Panel Height: **2.0 inches (51 mm)**.

2.03 UNDERLAYMENT MATERIALS

A. Self-Adhering, High-Temperature Underlayment: Provide self-adhering, cold-applied, sheet underlayment, a minimum of 30 mils (0.76 mm) thick, consisting of slip-resistant, polyethylene-film top surface laminated to a layer of butyl or SBS-modified asphalt adhesive, with release-paper backing. Provide primer when recommended by underlayment manufacturer.
1. Thermal Stability: Stable after testing at 240 deg F (116 deg C); ASTM D1970.
2. Low-Temperature Flexibility: Passes after testing at minus 20 deg F (29 deg C); ASTM D1970.

2.04 MISCELLANEOUS MATERIALS

A. Miscellaneous Metal Subframing and Furring: ASTM C645; cold-formed, metallic-coated steel sheet, ASTM A653/A653M, G90 (Z275 hot-dip galvanized) coating designation or ASTM A792/A792M, Class AZ50 (Class AZM150) coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.

B. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.
1. Closures: Provide closures at eaves and ridges, fabricated of same metal as metal panels.

2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
3. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- (25-mm-) thick, flexible closure strips; cut or premolded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.

C. Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.

D. Gutters: Formed from same material as roof panels, complete with end pieces, outlet tubes, and other special pieces as required. Fabricate in minimum 96-inch- (2400-mm-) long sections, of size and metal thickness according to SMACNA's "Architectural Sheet Metal Manual." Furnish gutter supports spaced a maximum of 36 inches (914 mm) o.c., fabricated from same metal as gutters. Provide wire ball strainers of compatible metal at outlets. Finish gutters to match **metal roof panels, roof fascia, and rake trim** unless noted otherwise.

E. Downspouts: Formed from same material as roof panels. Fabricate in 10-foot- (3-m-) long sections, complete with formed elbows and offsets, of size and metal thickness according to SMACNA's "Architectural Sheet Metal Manual." Finish downspouts to match gutters.

F. Roof Curbs: Fabricated from same material as roof panels, **0.048-inch (1.2-mm)** nominal thickness; with bottom of skirt profiled to match roof panel profiles and with welded top box and integral full-length cricket. Fabricate curb subframing of 0.060-inch- (1.52-mm-) nominal thickness, angle-, C-, or Z-shaped steel sheet. Fabricate curb and subframing to withstand indicated loads of size and height indicated. Finish roof curbs to match metal roof panels.
1. Insulate roof curb with 1-inch- (25-mm-) thick, rigid insulation.

G. Panel Fasteners: Self-tapping screws designed to withstand design loads.

H. Panel Sealants: Provide sealant type recommended by manufacturer that are compatible with panel materials, are nonstaining, and do not damage panel finish.
1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.
2. Joint Sealant: ASTM C920; elastomeric polyurethane or silicone sealant; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended in writing by metal panel manufacturer.
3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C1311.

2.05 FABRICATION

A. General: Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.

B. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.

C. Fabricate metal panel joints with factory-installed captive gaskets or separator strips that provide a weathertight seal and prevent metal-to-metal contact, and that minimize noise from movements.

D. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural

Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.

1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
2. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.
3. Seams for Other Than Aluminum: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.
4. Sealed Joints: Form nonexpansion, but movable, joints in metal to accommodate sealant and to comply with SMACNA standards.
5. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of accessories exposed to view.
6. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended in writing by metal panel manufacturer.
   a) Size: As recommended by SMACNA's "Architectural Sheet Metal Manual" or metal panel manufacturer for application, but not less than thickness of metal being secured.

2.06 FINISHES

A. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in same piece are unacceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

C. Steel Panels and Accessories:
   1. Three-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
   2. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil (0.013 mm).

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal panel supports, and other conditions affecting performance of the Work.
   1. Examine primary and secondary roof framing to verify that rafters, purlins, angles, channels, and other structural panel support members and anchorages have been installed within alignment tolerances required by metal roof panel manufacturer.
   2. Examine solid roof sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal roof panel manufacturer.
      a) Verify that air- or water-resistive barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.

B. Examine roughing-in for components and systems penetrating metal panels to verify actual locations of penetrations relative to seam locations of metal panels before installation.
C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION
A. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages according to ASTM C754 and metal panel manufacturer's written recommendations.

3.03 UNDERLAYMENT INSTALLATION
A. Self-Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation. Apply at locations indicated **below**, wrinkle free, in shingle fashion to shed water, and with end laps of not less than 6 inches (152 mm) staggered 24 inches (610 mm) between courses. Overlap side edges not less than 3-1/2 inches (90 mm) Roll laps with roller. Cover underlayment within 14 days.
1. Apply over the entire roof surface.
B. Flashings: Install flashings to cover underlayment to comply with requirements specified in Section 076200 "Sheet Metal Flashing and Trim."

3.04 METAL PANEL INSTALLATION
A. General: Install metal panels according to manufacturer's written instructions in orientation, sizes, and locations indicated. Install panels perpendicular to supports unless otherwise indicated. Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.
1. Shim or otherwise plumb substrates receiving metal panels.
2. Flash and seal metal panels at perimeter of all openings. Fasten with self-tapping screws. Do not begin installation until air- or water-resistive barriers and flashings that will be concealed by metal panels are installed.
3. Install screw fasteners in predrilled holes.
4. Locate and space fastenings in uniform vertical and horizontal alignment.
5. Install flashing and trim as metal panel work proceeds.
6. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four-panel lap splice condition.
7. Align bottoms of metal panels and fasten with blind rivets, bolts, or self-tapping screws. Fasten flashings and trim around openings and similar elements with self-tapping screws.
8. Provide weathertight escutcheons for pipe- and conduit-penetrating panels.
B. Fasteners:
1. Steel Panels: Use stainless-steel fasteners for surfaces exposed to the exterior; use galvanized-steel fasteners for surfaces exposed to the interior.
2. Aluminum Panels: Use aluminum or stainless-steel fasteners for surfaces exposed to the exterior; use aluminum or galvanized-steel fasteners for surfaces exposed to the interior.
3. Copper Panels: Use copper, stainless-steel, or hardware-bronze fasteners.
4. Stainless-Steel Panels: Use stainless-steel fasteners.
C. Anchor Clips: Anchor metal roof panels and other components of the Work securely in place, using manufacturer's approved fasteners according to manufacturers' written instructions.

D. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by metal panel manufacturer.

E. Standing-Seam Metal Roof Panel Installation: Fasten metal roof panels to supports with concealed clips at each standing-seam joint at location, spacing, and with fasteners recommended in writing by manufacturer.
   1. Install clips to supports with self-tapping fasteners.
   2. Install pressure plates at locations indicated in manufacturer's written installation instructions.
   3. Seamed Joint: Crimp standing seams with manufacturer-approved, motorized seamer tool so clip, metal roof panel, and factory-applied sealant are completely engaged.

F. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.
   1. Install components required for a complete metal panel system including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items. Provide types indicated by metal roof panel manufacturers; or, if not indicated, types recommended by metal roof panel manufacturer.

G. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.
   1. Install exposed flashing and trim that is without buckling and tool marks, and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and achieve waterproof and weather-resistant performance.
   2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet (3 m) with no joints allowed within 24 inches (610 mm) of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently weather resistant and waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with mastic sealant (concealed within joints).

H. Gutters: Join sections with riveted and soldered or lapped and sealed joints. Attach gutters to eave with gutter hangers spaced not more than 36 inches (914 mm) o.c. using manufacturer's standard fasteners. Provide end closures and seal watertight with sealant. Provide for thermal expansion.

I. Downspouts: Join sections with telescoping joints. Provide fasteners designed to hold downspouts securely 1 inch (25 mm) away from walls; locate fasteners at top and bottom and at approximately 60 inches (1524 mm) o.c. in between.
   1. Provide elbows at base of downspouts to direct water away from building.
   2. Connect downspouts to underground drainage system where indicated.

J. Roof Curbs: Install flashing around bases where they meet metal roof panels.

K. Pipe Flashing: Form flashing around pipe penetration and metal roof panels. Fasten and seal to metal roof panels as recommended by manufacturer.

3.05 ERECTION TOLERANCES

A. Installation Tolerances: Shim and align metal panel units within installed tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines as indicated and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

3.06 CLEANING AND PROTECTION

A. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.

B. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 074113

SECTION 074293

SOFFIT PANELS
Revised February 23, 2021

PART 1 - GENERAL

1.01 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY
A. Section includes metal soffit panels.
B. Related Sections:

1.03 ACTION SUBMITTALS
A. Product Data: For each type of product.
1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of panel and accessory.
B. Shop Drawings:
1. Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.
2. Accessories: Include details of flashing, trim, and anchorage systems, at a scale of not less than 1-1/2 inches per 12 inches (1:10).
C. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below:
1. Metal Panels: 12 inches (305 mm) long by actual panel width. Include fasteners, closures, and other metal panel accessories.

1.04 INFORMATIONAL SUBMITTALS
A. Qualification Data: For Installer.
B. Product Test Reports: For each product, tests performed by a qualified testing agency.
C. Sample Warranties: For special warranties.

1.05 CLOSEOUT SUBMITTALS
A. Maintenance Data: For metal panels to include in maintenance manuals.

1.06 QUALITY ASSURANCE
A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.
B. Manufacturer Qualifications: Minimum of 5 years experience in manufacturing metal panels similar to those specified.

1.07 DELIVERY, STORAGE, AND HANDLING
A. Deliver components, metal panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.
B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.
C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with

positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.

D. Retain strippable protective covering on metal panels during installation.

E. Copper Panels: Wear gloves when handling to prevent fingerprints and soiling of surface.

1.08 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed according to manufacturers' written instructions and warranty requirements.

1.09 COORDINATION

A. Coordinate metal panel installation with rain drainage work, flashing, trim, construction of walls, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.10 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:
   a) Structural failures including rupturing, cracking, or puncturing.
   b) Deterioration of metals and other materials beyond normal weathering.
2. Warranty Period: **Two** years from date of Substantial Completion.

B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
   a) Color fading more than 5 Hunter units when tested according to ASTM D2244.
   b) Chalking in excess of a No. 8 rating when tested according to ASTM D4214.
   c) Cracking, checking, peeling, or failure of paint to adhere to bare metal.
2. Finish Warranty Period: **20** years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E1592:

1. Wind Loads: As indicated on Drawings.
2. Other Design Loads: As indicated on Drawings.
3. Deflection Limits: For wind loads, no greater than **1/240** of the span.
4. Test-Pressure Difference: **1.57 lbf/sq. ft. (75 Pa)**.

B. Water Penetration under Static Pressure: No water penetration when tested according to ASTM E331 at the following test-pressure difference:

1. Test-Pressure Difference: **2.86 lbf/sq. ft. (137 Pa)**.

C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): **120 deg F (67 deg C)**, ambient; **180 deg F (100 deg C)**, material surfaces.

2.02 METAL SOFFIT PANELS

A. General: Provide metal soffit panels designed to be installed by lapping and interconnecting side edges of adjacent panels and mechanically attaching through panel to supports using concealed fasteners in side laps. Include accessories required for weathertight installation.

B. Flush-Profile Metal Soffit Panels **Solid** panels formed with vertical panel edges and **a flat pan** between panel edges; with flush joint between panels.

1. Acceptable Manufacturers:
   a) Firestone Metal Products, Inc.
   b) PAC-Clad, Peterson Aluminum Corporation
   c) Centria Architectural Systems, Inc.
2. Metallic-Coated Steel Sheet: Zinc-coated (galvanized) steel sheet complying with ASTM A653/A653M, G90 (Z275) coating designation, or aluminum-zinc alloy-coated steel sheet complying with ASTM A792/A792M, Class AZ50 (Class AZM150) coating designation; structural quality. Prepainted by the coil-coating process to comply with ASTM A755/A755M.
   a) Nominal Thickness: 24 gauge
   b) Exterior Finish: **Two-coat fluoropolymer**
   c) Color: **As selected by Architect from manufacturer's full range**.
3. Panel Coverage: **12 inches (305 mm)**.
4. Panel Height: **1.0 inch (25 mm)**.

2.03 MISCELLANEOUS MATERIALS

A. Miscellaneous Metal Subframing and Furring: ASTM C645, cold-formed, metallic-coated steel sheet, ASTM A653/A653M, G90 (Z275 hot-dip galvanized) coating designation or ASTM A792/A792M, Class AZ50 (Class AZM150) aluminum-zinc-alloy coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.

B. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.

1. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch-(25-mm-) thick, flexible closure strips; cut or premolded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.

C. Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Finish flashing and trim with same finish system as adjacent metal panels.

D. Panel Fasteners: Self-tapping screws designed to withstand design loads. Provide exposed fasteners with heads matching color of metal panels by means of plastic caps or factory-applied coating. Provide EPDM or PVC sealing washers for exposed fasteners.

E. Panel Sealants: Provide sealant types recommended by manufacturer that are compatible with panel materials, are nonstaining, and do not damage panel finish.

1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.

2. Joint Sealant: ASTM C920; elastomeric polyurethane or silicone sealant; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended in writing by metal panel manufacturer.
3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C1311.

2.04 FABRICATION

A. General: Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.
B. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.
C. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.
1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
2. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.
3. Seams for Other Than Aluminum: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.
4. Sealed Joints: Form nonexpansion, but movable, joints in metal to accommodate sealant and to comply with SMACNA standards.
5. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of accessories exposed to view.
6. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended in writing by metal panel manufacturer.

2.05 FINISHES

A. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
C. Steel Panels and Accessories:
1. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal panel supports, and other conditions affecting performance of the Work.

1. Examine framing to verify that girts, angles, channels, studs, and other structural panel support members and anchorage have been installed within alignment tolerances required by metal panel manufacturer.
2. Examine sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal panel manufacturer.
    a) Verify that air- or water-resistive barriers been installed over sheathing or backing substrate to prevent air infiltration or water penetration.

B. Examine roughing-in for components and systems penetrating metal panels to verify actual locations of penetrations relative to seam locations of metal panels before installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages according to ASTM C754 and metal panel manufacturer's written recommendations.

3.03 METAL PANEL INSTALLATION

A. General: Install metal panels according to manufacturer's written instructions in orientation, sizes, and locations indicated. Install panels perpendicular to supports unless otherwise indicated. Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.
1. Shim or otherwise plumb substrates receiving metal panels.
2. Flash and seal metal panels at perimeter of all openings. Fasten with self-tapping screws. Do not begin installation until air- or water-resistive barriers and flashings that will be concealed by metal panels are installed.
3. Install screw fasteners in predrilled holes.
4. Locate and space fastenings in uniform vertical and horizontal alignment.
5. Install flashing and trim as metal panel work proceeds.
6. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four-panel lap splice condition.
7. Provide weathertight escutcheons for pipe- and conduit-penetrating panels.

B. Fasteners:
1. Steel Panels: Use stainless-steel fasteners for surfaces exposed to the exterior; use galvanized-steel fasteners for surfaces exposed to the interior.
2. Aluminum Panels: Use aluminum or stainless-steel fasteners for surfaces exposed to the exterior; use aluminum or galvanized-steel fasteners for surfaces exposed to the interior.

C. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by metal panel manufacturer.

D. Lap-Seam Metal Panels: Fasten metal panels to supports with fasteners at each lapped joint at location and spacing recommended by manufacturer.
1. Apply panels and associated items true to line for neat and weathertight enclosure.
2. Provide metal-backed washers under heads of exposed fasteners bearing on weather side of metal panels.
3. Locate and space exposed fasteners in uniform vertical and horizontal alignment. Use proper tools to obtain controlled uniform compression for positive seal without rupture of washer.

4. Install screw fasteners with power tools having controlled torque adjusted to compress washer tightly without damage to washer, screw threads, or panels. Install screws in predrilled holes.

E. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.
   1. Install components required for a complete metal panel system including trim, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items. Provide types indicated by metal panel manufacturer; or, if not indicated, provide types recommended by metal panel manufacturer.

F. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that are permanently watertight.
   1. Install exposed flashing and trim that is without buckling, and tool marks, and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to achieve waterproof performance.
   2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet (3 m) with no joints allowed within 24 inches (610 mm) of corner or intersection. Where lapped expansion provisions cannot be used or would not be waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with mastic sealant (concealed within joints).

3.04 CLEANING AND PROTECTION

A. Remove temporary protective coverings and strippable films, if any, as metal panels are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.

B. After metal panel installation, clear weep holes and drainage channels of obstructions, dirt, and sealant.

C. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 074293

096700

QUARTZ FLOORING

Revised February 23, 2021

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Fluid applied seamless flooring with integral cove base.
2. Joint, edge, and termination strips.
3. Prior to installation of structural floor slab, advise General Contractor, in writing, of all requirements of concrete substrate regarding finish, level tolerance, and curing.
4. Locate all flexible joints required. See submittals below.
5. Accessories necessary for complete installation.

B. Related Sections:

1. Cast-in-Place Concrete: Section 033000.
   a) Concrete sub-floor to be level (maximum variation not to exceed ¼ inch in 10 feet) and to have a steel troweled finish. No curing agents or other additives which could prevent bonding should be used unless the mechanical surface preparation method completely removes the curing agent residue or sealer.
   b) Slabs on grade must have an efficient puncture resistant vapor barrier placed directly under the slab.
2. Sealants: Section 079200.
3. Gypsum Drywall: Section 092900.
4. Adjacent floor finishes: Division 9.

1.02 REFERENCE STANDARDS

The publications listed below from a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

A. American Society for Testing and Materials (ASTM) Publications:

1. C-307 Test Method for Tensile Strength of Chemical-Resistant Mortars.
2. C-501 Test Method for Relative Resistance to Wear Unglazed Ceramic Tile by the Taber Abraser.
3. C-531 Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts, and Monolithic Surfacing.
4. C-579 Test Methods for Compressive Strength of Chemical-Resistant Mortars and Monolithic Surfaces.
5. C-580 Test Method for Flexural Strength and Modulus of Elasticity of Chemical-Resistant Mortars, Grouts, and Monolithic Surfacing.
6. C-884 Test Method for Thermal Compatibility Between Concrete and an Epoxy Resin Overlay.
7. D-570 Water Absorption of Plastics.
8. D-695 Compression Properties of Rigid Plastic.

B. Military Specifications (Mil. Spec.)

1. MIL D-3 134 F (Impact Resistance) Section 4.7.3.
2. MIL D-3 134 F (Indentation Resistance) Section 4.7.4.
3. MIL D-3234 F (Resistance to Elevated Temperature) Section 4.7.5.

C. ACI 301 Specifications for Structural Concrete for Buildings (most recent edition). Committee in Concrete 403 bulletin 59-43, Bond Strength to Concrete.

1.03 DEFINITIONS

A. Epoxy Resin Flooring specified under this section is referenced on the drawings as Epoxy Flooring.

1.04 SYSTEM DESCRIPTION

A. System shall be 1/8 inch moisture vapor tolerant epoxy surfacing with broadcast colored quartz aggregate to form a decorative surface. Surface finish shall be a two component UV light resistant epoxy grout and water based aliphatic urethane sealer.

1.05 SUBMITTALS

A. Samples: Submit 6 by 6 inch cured samples of flooring system indicating color combination and non-skid properties. Approved samples will be used during installation for product match.

B. Certified Test: Submit two copies of suppliers/ manufacturers written certification that flooring system meets or exceeds required properties.

C. Manufacturers Application Instructions: Submit descriptive data and specific recommendations for mixing, application, curing including any precautions of special handling instructions required to comply with the Occupational Safety and Health Act.

D. Shop Drawings: Shop Drawings shall be furnished showing installation of cove base and termination details, and details at floor material transitions and where adjoining equipment.

1. Locate and provide detailing for flexible joints required for flooring in area of installation.

E. Maintenance Instructions: Submit current copies of the flooring manufacturer's printed recommendations on maintenance methods and products. Submit in accordance with Section 017823 - Operation and Maintenance Manuals.

1.06 QUALITY ASSURANCE

A. Materials used in the floor surfacing shall be the products of a single manufacturer.

B. Installation shall be performed by an applicator with minimum 5 years experience in work of similar nature and scope. Installer must be approved by the manufacturer of the floor surfacing materials. The contractor shall furnish a written statement from the manufacturer that the installer is acceptable.

C. Installer to verify locations of all flexible joints required by the provisions of this Section and by the recommendations of the related material manufacturers.

1. Joint locations may or may not be shown in drawings.
2. Refer to drawings required under SUBMITTALS above.

D. Installer to keep daily log of the date of installation, room number, type, color, and method of application of product being installed. Log must be available for inspection by the Architect upon request.

E. Contractor to have proven experience with specified system.

F. Portable mock-up: Prior to starting application of flooring, provide full scale portable mock-up to establish acceptable quality, durability, and appearance. Mock-up size must not be less than 4 square feet.

1. Acceptable mock-up to be standard of quality for installed work.

2. Unacceptable installed work to be removed and replaced until acceptable. Aesthetically unacceptable but well bonded work may be overlaid or recoated per Manufacturer's instructions if thickness clearances permit.

G. Qualifications:
1. Installer: Must be acceptable to Architect, and Manufacturer.

1.07 PROJECT CONDITIONS

A. Maintain the ambient room and the floor temperatures at 60 degrees Fahrenheit, or above, for a period extending from 72 hours before, during and after floor installation. Concrete to receive surfacing shall have cured for at least 5 days.

B. Dew Point: Substrate temperature must be minimum of 5 degrees above dew point prior to, during or up to 24 hours after application of flooring system.

C. Illumination: Apply flooring system only where a minimum of 30 footcandles exist when measured 3 feet from surface.

D. Advise other trades of fixtures and fittings not to be installed until flooring is cured and protected.

1.08 PROTECTION

A. Protect adjacent surfaces not scheduled to receive the flooring by masking, or by other means, to maintain these surfaces free of the flooring material.

B. Provide adequate ventilation and fire protection at all mixing and placing operations. Prohibit smoking or use of spark or flame producing devices within 50 feet of any mixing or placing operation.

C. Provide polyethylene or rubber gloves or protective creams for all workmen engaged in applying products containing epoxy.

1.09 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. All materials shall be delivered to project site in original manufacturer's sealed containers including type of material, batch numbers, date of manufacture, and pertinent labels intact and legible.

B. Store materials in dry protected area at a temperature between 60° F to 80° F.

C. Follow all manufacturer's specific instructions and prudent safety practices for storage and handling.

1.10 WARRANTY

A. Contractor to guarantee work under this Section to be free from defects of material and installation for the duration of the warranty period. Defects occurring during warranty period shall be repaired, in a manner satisfactory to the Owner and the Architect, at no additional cost to the Owner.
1. Warranty Period: One (1) Year.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Specifications and quality of design standard (basis of design) based on Key Resin Company: Key Epocon Quartz.
Key Resin Company: 888-943-4532, www.keyresin.com

B. Acceptable Manufacturers:
1. Key Resin Company

2. Plexi-Chemie Inc., Jacksonville, FL
3. Micor Co., Inc.
4. Florock, Inc. – www.florock.net

C. System description: Moisture vapor tolerant, two-component epoxy resin surfacing broadcast with colored quartz aggregate and sealed with clear epoxy and clear urethane.

D. Alternative manufacturers must have as a minimum the standards set forth in this specification and must be preapproved in accordance with project requirements.

2.02 MATERIALS

A. Prime Coat: Key Epocon scratch coat.

B. Matrix: Key Epocon, moisture vapor tolerant epoxy resin composition.

C. Grout and Topcoats:

1. Two component UV light resistant epoxy grout, Key #512.
2. Two component water based urethane sealer, Key #445.

2.03 MIXING

A. Apply flooring to specified physical properties.

B. Provide decorative finish matching approved sample. Sample to be approved by Owner and Architect.

2.04 FINISHES

A. Color as selected by Architect or Owner from the manufacturer's standard colors.

PART 3 EXECUTION

3.01 PREPARATION

A. Obtain Architect's approval of mock-up before installing flooring.

B. Preparation of Surface:

1. Inspect surfaces to receive flooring and verify that condition is smooth and free from conditions that will adversely affect execution, permanence, or quality of work.
   a) Remove all projections, all debris detrimental to flooring system, and dirt, oil contaminates, grease, and surface coatings affecting bond.
2. Notify Architect or Owner in writing prior to commencing work of any conditions deemed unsatisfactory for the installation; installation of flooring materials is understood as acceptance of the substrate as satisfactory.
3. Concrete: The General Contractor shall be responsible for hiring an independent testing service to test for moisture content and moisture vapor emission rate; install no flooring over concrete until the concrete has been cured and is sufficiently dry to achieve permanence with flooring as determined by material manufacturer's recommended bond and moisture tests.
   a) Effectively remove concrete laitance by steel shot blasting or other method approved by flooring manufacturer.
   b) Concrete slab shall have an efficient puncture-resistant moisture vapor barrier 10 mils thick minimum placed directly under the concrete slab (for slab on grade). Testing must be done to verify that the moisture vapor emission rate of the slab does not exceed that as

recommended by the manufacturer at time of installation of the flooring or at any future date. Moisture vapor emission and moisture content testing must conform with the requirements of ASTM F-1869-98 (Calcium Chloride Test) and ASTM F-2170-02 (Relative Humidity Probe Test). If test results show excessive levels of moisture content or vapor emission rate, apply Key Epocon at manufacturer's recommended thickness.

c) Treat cracks in concrete using manufacturer's recommended practice. Rout out crack and fill with rigid epoxy; Reinforce crack with fiberglass cloth.

3.02 INSTALLATION

A. Install all floor materials in strict conformance with manufacturer's instructions.

B. Route out all cracks (larger than hairline width) and fill with Key Crack Filler, Key Epocon or other material approved by Manufacturer of floor materials. Reinforce crack with fiberglass cloth using Key #502 Primer or the epoxy used to fill the crack.

C. Prime entire surface with Key Epocon as a scratch coat. Allow to cure.

D. Apply Key Epocon and broadcast colored quartz aggregate to excess to achieve a minimum thickness of 1/8 inch. Allow to cure a minimum of 48 hours before sweeping and vacuuming excess aggregate and proceeding with installation.

E. Apply UV light resistant epoxy grout Key #512 and allow to cure. Apply water based urethane sealer Key #445 and allow to cure. Top coats shall provide a uniform, dense surface.

F. Match finished work to approved sample, uniform in thickness, sheen, color, pattern and texture, and free from defects detrimental to appearance.

G. Integral Cove Base: Where scheduled, provide integral cove base formed from flooring over tile backerboard as specified under 092900 - Gypsum Drywall. Provide cove cap strip at top of base as recommended by flooring manufacturer and trowel material up wall to form smooth, integral transition and base 4 inches high unless otherwise indicated or scheduled.

H. Apply temporary protection until floor is fully cured. The General Contractor shall protect the finished floor from the time that the sub-contractor completes the work.

END

SECTION 101000

VISUAL DISPLAY UNITS
Revised February 23, 2021

PART 1 - GENERALSUMMARY

1.01 This Section includes the following:
A. Markerboards.
B. Tackboards.

1.02 DEFINITIONS
A. Visual Display Boards: markerboards, and tackboards.

1.03 SUBMITTALS
A. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
1. Show location of panel joints.
2. Include sections of typical trim members.
B. Samples for Verification: For each type of visual display surface indicated and as follows:
1. Visual Display Surface: Not less than 8-1/2 by 11 inches (215 by 280 mm), mounted on substrate indicated for final Work. Include one panel for each type, color, and texture required.
2. Trim: 6-inch- (152-mm-) long sections of each trim profile.
3. Rail Support System: 6-inch- (152-mm-) long sections.
4. Accessories: Full-size Sample of each type of accessory.
C. Maintenance Data: For visual display surfaces to include in maintenance manuals.
D. Warranties: Special warranties specified in this Section.

1.04 QUALITY ASSURANCE
A. Source Limitations: Obtain each type of visual display surface through one source from a single manufacturer.
B. Product Options: Drawings indicate size, profiles, and dimensional requirements of visual display surfaces and are based on the specific system indicated.

1.05 DELIVERY, STORAGE, AND HANDLING
A. Deliver factory-built visual display boards, including factory-applied trim where indicated, completely assembled in one piece without joints, where possible. If dimensions exceed maximum manufactured panel size, provide two or more pieces of equal length as acceptable to Architect. When overall dimensions require delivery in separate units, prefit components at the factory, disassemble for delivery, and make final joints at the site.
B. Store visual display units vertically with packing materials between each unit.

1.06 PROJECT CONDITIONS
A. Field Measurements: Verify dimensions by field measurements before fabrication and indicate measurements on Shop Drawings.
1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating visual display surfaces without field measurements. Coordinate wall construction to ensure that actual dimensions correspond to established dimensions.

2. Allow for trimming and fitting where taking field measurements before fabrication might delay the Work.

1.07 WARRANTY

A. Special Warranty for Porcelain-Enamel Face Sheets: Manufacturer's standard form in which manufacturer agrees to repair or replace porcelain-enamel face sheets that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:
   a Surfaces lose original writing and erasing qualities.
   b Surfaces become slick or shiny.
   c Surfaces exhibit crazing, cracking, or flaking.
2. Warranty Period: 50 years from date of Substantial Completion.Some manufacturers also offer warranties for painted-finish chalkboards and tackboards. See Evaluations.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.02 MATERIALS, GENERAL

A. Porcelain-Enamel Face Sheet: Manufacturer's standard steel sheet with porcelain-enamel coating fused to steel; uncoated thickness indicated.
1. Gloss Finish: Gloss as indicated; dry-erase markers wipe clean with dry cloth or standard eraser.

B. Hardboard: AHA A135.4, tempered.

C. Particleboard: ANSI A208.1, Grade 1-M-1.

D. Fiberboard: ANSI A208.2, Grade MD.

E. Cork Sheet: MS MIL-C-15116-C, Type II.

F. Plastic-Impregnated Cork Sheet: MS MIL-C-15116-C, Type I, seamless, homogeneous, self-sealing sheet consisting of granulated cork, linseed oil, resin binders, and dry pigments that are mixed and calendared onto burlap backing; with washable vinyl finish and integral color throughout.

G. Extruded Aluminum: ASTM B 221 (ASTM B 221M), Alloy 6063.

2.03 MARKERBOARD ASSEMBLIES

A. Porcelain-Enamel Markerboard Assembly: Balanced, high-pressure, factory-laminated markerboard assembly of 3-ply construction consisting of backing sheet, core material, and porcelain-enamel face sheet with high-gloss finish.
1. Available Manufacturers:
   a AARCO Products, Inc.
   b ADP/Lemco, Inc.
   c Bangor Cork Company, Inc.
   d Best-Rite Manufacturing.
   e Claridge Products & Equipment, Inc.
   f Egan Visual Inc.
   g Ghent Manufacturing Inc.
   h Marsh Industries, Inc.
   i Platinum Visual Systems; a division of ABC School Equipment, Inc.
   j PolyVision Corporation.
   k Newline Products Inc.
   l American Visual Display Products, LLC.
2. Markerboards: Provide prefab markerboards factory laminated and framed. Facing sheet, minimum 24 gauge, laminated to 1/2" core and

balanced with moisture-proof backing sheet bonded with special flexible adhesive. Extruded aluminum trim 6063-T5 alloy frame complete with 10T chalktray and 163T display rail with cork insert, 159T side trim, 67T mullion as required. Concealed hangers. Colors and trim finish shall be selected from manufacturers standards.

2.04 TACKBOARD ASSEMBLIES

A. Available Manufacturers:
1. A-1 Visual Systems.
2. AARCO Products, Inc.
3. ADP/Lemco, Inc.
4. Bangor Cork Company, Inc.
5. Best-Rite Manufacturing.
6. Claridge Products & Equipment, Inc.
7. Egan Visual Inc.
8. Ghent Manufacturing Inc.
9. Marsh Industries, Inc.
10. Platinum Visual Systems; a division of ABC School Equipment, Inc.
11. PolyVision Corporation.
12. Newline Products Inc.
13. American Visual Display Products, LLC.

B. Tackboards: Prefab tackboards shall be Tac-Tex vinyl factory laminated and framed as detailed. Tackable surface shall be Type 1, vinyl over 1/2" fiberboard. Extruded aluminum trim 6063-T5 alloy frame 159T all sides. Concealed hangers. Colors and trim finish shall be selected from manufacturers' standards.

2.05 MARKERBOARD AND TACKBOARD ACCESSORIES

A. Aluminum Frames and Trim: Fabricated from not less than 0.062-inch- (1.57-mm-) thick, extruded aluminum; of size and shape indicated.

1. Factory-Applied Trim: Manufacturer's standard.

B. Marker tray: At each marker board, manufacturer's standard, full length, and continuous.
1. Box Type: Extruded aluminum with slanted front, grooved tray, and cast-aluminum end closures.

C. Map Rail: At each marker board, manufacturer's standard, full length, and continuous:
1. Map Rail: Continuous map rail with integral insert tack strip; tack strip fabricated from cork, approximately 1 to 2 inches high.
2. End Stops: Located at each end of map rail.
3. Map Hooks and Clips: Two map hooks with flexible metal clips for every 48 inches (1220 mm) of map rail or fraction thereof.

2.06 FABRICATION

A. Visual Display Boards: Laminate porcelain-enamel face sheet and backing sheet to core material under heat and pressure with manufacturer's standard flexible, waterproof adhesive. Factory assemble visual display boards, unless otherwise indicated.
1. Where factory-applied trim is indicated, trim shall be assembled and attached to visual display boards at manufacturer's factory before shipment.

B. Aluminum Frames and Trim: Fabricate units straight and of single lengths, keeping joints to a minimum. Miter corners to neat, hairline closure.
1. Where factory-applied trim is indicated, trim shall be assembled and attached to visual display units at manufacturer's factory before

shipment.

2.07 ALUMINUM FINISHES

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.

D. Class II, Clear Anodic Finish: AA-M12C22A31 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class II, clear coating 0.010 mm or thicker) complying with AAMA 611.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances, surface conditions of wall, and other conditions affecting performance.

B. Examine walls and partitions for proper backing for visual display surfaces.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Remove dirt, scaling paint, projections, and depressions that will affect smooth, finished surfaces of visual display boards.

B. Prepare surfaces to achieve a smooth, dry, clean surface free of flaking, unsound coatings, cracks, defects, and substances that will impair bond between and surfaces.

3.03 INSTALLATION, GENERAL

A. General: Install items in locations and at mounting heights indicated on Drawings. Keep perimeter lines straight, level, and plumb. Provide grounds, clips, backing materials, adhesives, brackets, anchors, trim, and accessories necessary for complete installation.

3.04 INSTALLATION OF VISUAL DISPLAY BOARDS

A. Visual Display Boards: Attach concealed clips, hangers, and grounds to wall surfaces and to visual display boards with fasteners at not more than 16 inches (400 mm) o.c. Secure both top and bottom of boards to walls.

1. Field-Applied Aluminum Trim: Attach trim over edges of visual display boards and conceal grounds and clips. Attach trim to boards with fasteners at not more than 24 inches (600 mm) o.c.

a Attach chalk/marker trays to boards with fasteners at not more than 12 inches (300 mm) o.c.

END

SECTION 105300

EXTRUDED ALUMINUM CANOPY
Revised February 23, 2021

PART 1 GENERAL

1.01 GENERAL

A. Work in this section shall include design, fabrication and installation of complete welded extruded aluminum walkway cover system. All work shall be in complete accordance with the drawings and this specification.

1.02 REFERENCES

A. Specifications for Aluminum Structures, current edition.

B. The Aluminum Association (AA):

1. The Aluminum Design Manual 2000, Specifications and Guidelines for Aluminum Structures.

C. American Welding Society (AWS):

1. ANSI/AWS D1.2, Structural Welding Code – Aluminum.

1.03 SUBMITTALS

A. Product Data: Submit manufacturer's product information,specifications and installation instruction for building components and accessories.

B. Shop Drawings: Submit complete shop drawings including all necessary plan dimensions, elevations and details. General Contractor shall verify all dimensions and provide elevations at each column, finish floor, and related soffit before releasing to manufacturer for fabrication.

C. Certification: Submit design calculations signed by a registered Professional Engineer licensed in the state where the project is located. Design calculations shall state that the walkway system design complies with the wind requirements of ASCE 7, the stability criteria of applicable building code, and all other governing criteria. Engineer calculations shall include the footing design for all canopies.

1.04 QUALITY ASSURANCE

A. Walkway canopy shall be wholly produced by a recognized manufacturer with at least 10 years experience in the design and fabrication of extruded aluminum walkway canopy systems. Components shall be assembled in shop to greatest extend possible to minimize field assembly. Walkway canopy shall be installed by manufacturer. Third party installation is not acceptable. Walkway canopy system, including material and workmanship, shall be warranted from defects for a period of one year from substantial completion of canopy installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Subject to compliance with requirements, provide one of the following products:
Mitchell Metals, LLC
Perfection Architectural Systems, Inc.
Superior Metal Products, LLC
Tennessee Valley Metals, Inc.
Dittmer Architectural Aluminum

2.02 DESIGN

A. Walkway canopy shall be all welded extruded aluminum system complete with internal drainage. Non-welded systems are not acceptable. Roll form deck is not

acceptable. Expansion joints shall be included to accommodate temperature changes of 120 F. Expansion joints shall have no metal to metal contact.

B. Design walkways in accordance with The Aluminum Design Manual 2000.

C. Comply with the wind requirements of ASCE 7.

D. Canopy Manufacturer is responsible for securing a registered structural engineer in the project state for design of the footings.

2.03 MATERIALS

A. Aluminum Members: All sections shall be extruded aluminum 6063 alloy, heat treated to T-6 temper, meeting ASTM B 221.

B. Fasteners: Fasteners shall be aluminum of 18-8 stainless steel.

C. Protective Coating: Aluminum columns embedded in concrete shall be protected by clear acrylic.

D. Grout: Grout shall be 2000 psi compressive strength, 1 part Portland cement and 3 parts masonry sand. Add water to produce pouring consistency.

E. Gaskets: Dry seal santoprene pressure type.

F. Aluminum Flashing: ASTM B 209, Type 3003 H14, 0.040 inch, minimum.

2.04 COMPONENTS

A. Columns: Columns shall be radius-cornered tubular extrusion of size shown on drawings with cutout and internal diverter for drainage.

B. Beams: Beams shall be open-top tubular extrusion of size and shape shown on drawings, top edges thickened for strength and designed to receive deck members in self-flashing manner. Extruded structural ties shall be installed in tops of all beams.

C. Deck: Deck shall be extruded self-flashing sections interlocking into a composite unit with sufficient camber to offset dead load deflection and cause positive drainage. Welded plates shall be used as closures at deck ends.

D. Facia: Manufacturers standard shape. Provide fascia splices where continuous runs of fascia are jointed. Locate splices to be in line with bents and fasten in place on hidden or non-vertical surfaces.

E. Arches: For barrel vault protective covers, provide sharp-cornered tubular extrusions.

2.05 FABRICATION

A. Bent Construction: Beams and columns shall be factory welded with neatly mitered corners into one-piece rigid bents. All welds shall be smooth and uniform using an inert gas shielded arc. Suitable edge preparation shall be performed to assure 100% penetration. Field welding is not permitted. Mechanical joints shall be allowed only when shipping limitations require their use or when prior approval has been granted by the architect.

B. Deck Construction: Deck shall be manufactured of extruded modules that interlock in a self-flashing manner. Interlocking joints shall be positively fastened at 8" o.c. creating a monolithic structural unit capable of developing the full strength of the sections. The fastenings must have minimum shear strength of 350 pounds each. Deck shall be assembled with sufficient camber to offset dead load deflection.

C. Welding: In accordance with ANSI/AWS D1.2.

2.06 FACTORY FINISHING

A. Finish color shall be selected by the architect from the manufacturers standard colors. Provide factory painted baked acrylic enamel finish.

PART 3 EXECUTION

3.01 PREPARATION

A. Erection shall be performed after all concrete, masonry, and roofing work in the vicinity is complete and cleaned.

3.02 INSTALLATION

A. Install components in accordance with manufacturers drawings and specifications.

B. Column sleeves (styrofoam blockouts) or anchor bolts (if required) shall be furnished by the canopy manufacturer and installed by the General Contractor. Core drilling of in-place concrete is preferred over the use of Styrofoam blockouts.

C. Erection: Canopy shall be erected true to line, level and plumb. Aluminum columns embedded in concrete shall be protected by clear acrylic. Downspout columns shall be filled with grout to the discharge level to prevent standing water. Non-draining columns shall have weep holes installed at top of concrete to remove condensation. Provide hairline miters and fitted joints.

3.03 CLEANING

A. All canopy components shall be cleaned promptly after completion.

3.04 PROTECTION

A. Extreme care shall be taken to protect canopy materials during and after installation.

END.

SECTION 122413

ROLLER WINDOW SHADES
Revised February 23, 2021

PART 1 GENERAL

1.01 SUMMARY
A. Section Includes:
1. Manually operated roller shades with single rollers.
2. Provide shades where indicated within drawings.

1.02 ACTION SUBMITTALS
A. Product Data: For each type of product.
1. Include styles, material descriptions, construction details, dimensions of individual components and profiles, features, finishes, and operating instructions for roller shades.
B. Shop Drawings: Show fabrication and installation details for roller shades, including fabric panel materials, their orientation to rollers, and their seam and batten locations.
C. Samples for Initial Selection: For each type and color of fabric panel material.
1. Include Samples of accessories involving color selection.
D. Samples for Verification: For each type of roller shade.
1. Fabric Panel Material: Not less than [10 inches (250 mm)] square. Mark inside face of material if applicable.
2. Roller Shade: Full-size operating unit, not less than 16 inches (400 mm) wide by 36 inches (900 mm) long for each type of roller shade indicated.
3. Installation Accessories: Full-size unit, not less than 10 inches (250 mm) long.

1.03 INFORMATIONAL SUBMITTALS
A. Qualification Data: For Installer.
B. Product Certificates: For each type of fabric panel material, signed by product manufacturer.

1.04 CLOSEOUT SUBMITTALS
A. Maintenance Data: For roller shades to include in maintenance manuals.

1.05 MAINTENANCE MATERIAL SUBMITTALS
A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
1. Roller Shades: Full-size units equal to 5 percent of quantity installed for each size, color, and fabric panel material indicated, but no fewer than two units.

1.06 QUALITY ASSURANCE
A. Manufacturer Qualifications:
1. A firm with at least 20 years of demonstrated experience in United States-based manufacture of the products required in this Section.
2. A firm with the capability to use both knife cutting and ultrasonic cutting in the manufacture of the products required in this Section.
3. A firm with the capability to digitally print on shade panels.
B. Installer Qualifications: Fabricator of products.

C. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
   1. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
   2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver roller shades in factory packages, marked with manufacturer, product name, and location of installation using same designations indicated on Drawings.

1.08 FIELD CONDITIONS

A. Environmental Limitations: Do not install roller shades until construction and finish work in spaces, including painting, is complete and dry and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

B. Field Measurements: Where roller shades are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Allow clearances for operating hardware of operable glazed units through entire operating range. Notify Architect of installation conditions that vary from Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

PART 2 PRODUCTS

2.01 Manufacturers: Subject to compliance with requirements

A. Basis-of-Design Product: Subject to compliance with requirements, provide Insolroll, Inc.; Insolroll Window Shading Systems or comparable product by one of the following:
   1. Insolroll, Inc.
   2. Roll-A-Shade Manufacturer
   3. Solar Screen Co., Inc.
   4. Draper, Inc.

B. Source Limitations: Obtain roller shades from single source from single manufacturer.

2.02 MANUALLY OPERATED SHADES WITH SINGLE ROLLERS

A. Crank-and-Gear Operating Mechanisms: Sealed gearbox drive system controlled by crank handle.
   1. Crank-Handle Type: Detachable.
   2. Crank-Handle Length: 8 feet

B. Spring Operating Mechanisms: Roller contains spring sized to accommodate shade size indicated. Provide with positive locking mechanism that can stop shade movement at each half-turn of roller and with manufacturer's standard pull.

C. Rollers: Corrosion-resistant steel or extruded-aluminum tubes of diameters and wall thicknesses required to accommodate operating mechanisms and weights and widths of fabric panels indicated without deflection. Provide with permanently lubricated drive-end assemblies and idle-end assemblies designed to facilitate removal of fabric panels for service.
   1. Roller Drive-End Location: Right side of inside face of shade
   2. Direction of Fabric Panel Roll: Regular, from back of roller

3. Fabric Panel-to-Roller Attachment: Manufacturer's standard method
    a Provide fabric panels not less than 12 inches (300 mm) longer than desired shade height to assure solid attachment to roller tube and ability to adjust panels in field without removing mounting brackets.

D. Mounting Hardware: Brackets or endcaps, corrosion resistant and compatible with roller assembly, operating mechanism, installation accessories, and mounting location and conditions indicated.

E. Roller-Coupling Assemblies: As required

F. Fabric Panels:
1. Fabric Panel Material: Light-filtering fabric
2. Fabric Panel Bottom (Hem) Bar: Enclosed in hem pocket of fabric panel material, thermally sealed, not sewn.
    a Color and Finish: As selected by Architect from manufacturer's full range

G. Installation Accessories:
1. Front Fascia: Aluminum extrusion that conceals front and underside of roller and operating mechanism and attaches to roller endcaps without exposed fasteners.
    a Shape: L-shaped
    b Height: Manufacturer's standard height required to conceal roller and fabric panel when shade is fully open.
    c Color: painted finish selected from manufacturers full range.
2. Endcap Covers: To cover exposed endcaps
3. Closure-Panel Width: As indicated on Drawings

2.03 FABRIC PANEL MATERIALS

A. Fabric Panel Material Flame-Resistance Rating: Comply with NFPA 701. Testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

B. Light Filtering Fabric: Woven fabric, stain and fade resistant.
1. Basis-of-Design Product: Insolroll Aurora.
2. Opacity: 5 percent openness.
3. Composition: Vinyl-coated polyester yarns woven in basket-weave configuration.
4. Certification:
    a GreenGuard Indoor Air Quality Certified.
    b GreenGuard Indoor Air Quality Certified for Children and Schools.

2.04 ROLLER-SHADE FABRICATION

A. Product Safety Standard: Fabricate roller shades to comply with WCMA A 100.1, including requirements for flexible, chain-loop devices; lead content of components; and warning labels.

B. Unit Sizes: Fabricate units in sizes to fill window and other openings as follows, measured at 74 deg F (23 deg C):
1. Between (Inside) Jamb Installation: Width equal to jamb-to-jamb dimension of opening in which shade is installed less 1/4 inch (6 mm) per side or 1/2-inch (13-mm) total, plus or minus 1/8 inch (3.1 mm). Length equal to head-to-sill or -floor dimension of opening in which shade is installed less 1/4 inch (6 mm), plus or minus 1/8 inch (3.1 mm).

C. Fabric Panel Fabrication: Fabricate fabric panels without battens or seams to extent possible except as follows:
1. Vertical Shades: Where width-to-length ratio of fabric panel is equal to or greater than 1:4 , provide battens and seams at uniform spacings along fabric panel length to ensure fabric panel tracking and alignment through its full range of movement without distortion of the material.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, operational clearances, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 ROLLER-SHADE INSTALLATION

A. Install roller shades level, plumb, and aligned with adjacent units according to manufacturer's written instructions.

1. Opaque Fabric Panels: Located so fabric panel is not closer than 2 inches to interior face of glass. Allow clearances for window operation hardware.

3.03 ADJUSTING

A. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.

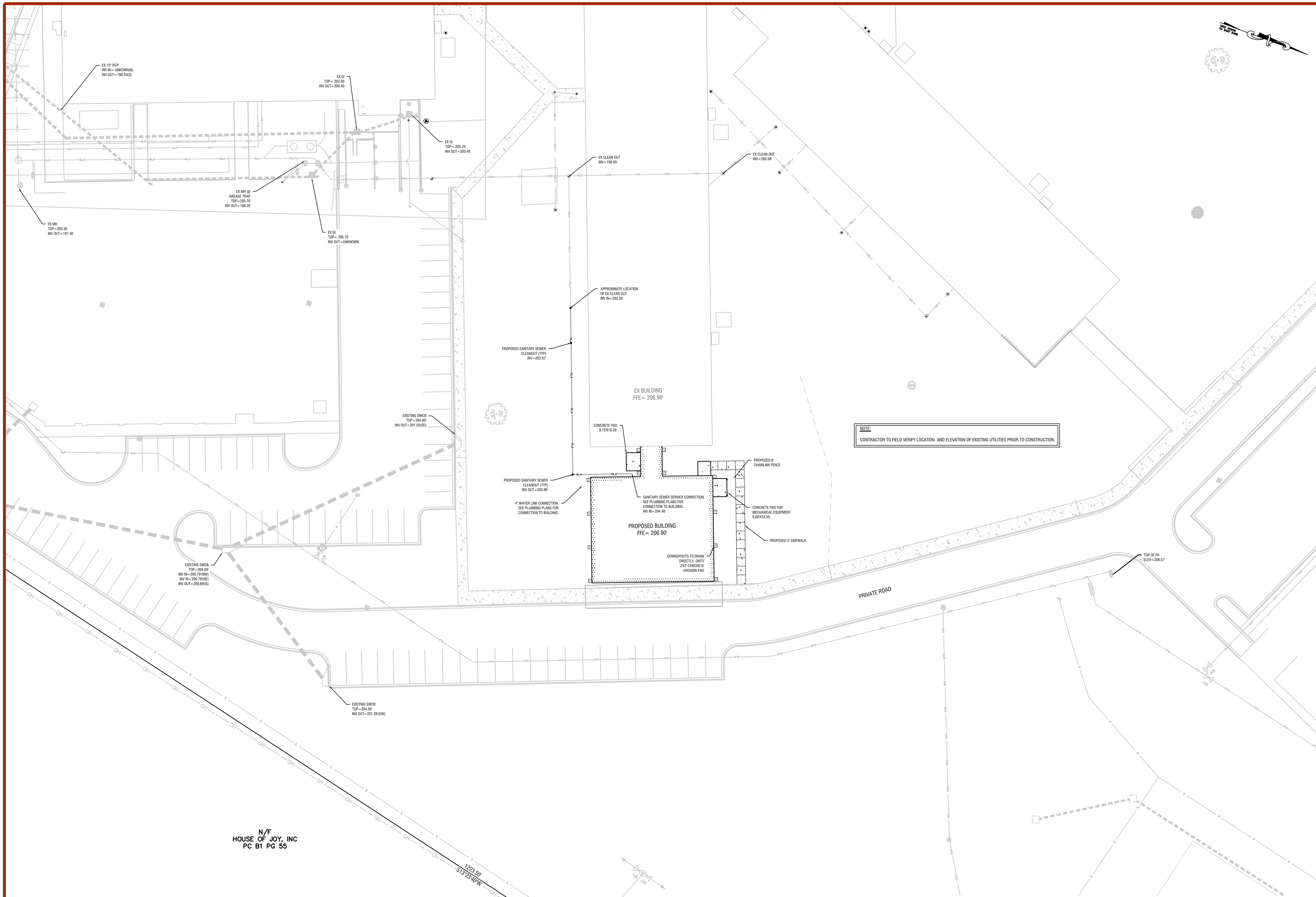
3.04 CLEANING AND PROTECTION

A. Clean roller-shade surfaces after installation, according to manufacturer's written instructions.

B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure that roller shades are without damage or deterioration at time of Substantial Completion.

C. Replace damaged roller shades that cannot be repaired, in a manner approved by Architect, before time of Substantial Completion.

END.



SITE/UTILITY PLAN

MES No. 2020-83

NOTES:

PVC SEWER SERVICES TO HAVE CLEANOUT AT EVERY 75' AND AT ALL CHANGES IN GRADE AND/OR DIRECTION. SLOPE TO BE AT MINIMUM OF 1.25%. ALL CLEANOUTS TO BE TRAFFIC RATED BRASS W/COUNTER SUNK SQUARE HEAD. SEE PLUMBING PLANS FOR CONNECTIONS AT BUILDING.

SCALE BAR: 1"= 20'

20 0 10 20 40 80

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GEORGIA REGISTERED PROFESSIONAL ENGINEER MARCUS E. SACK
DATE: 2/23/2021

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DATE: JANUARY 14, 2021
DRAWN: L. GESTAL
CHECKED: M. SACK
REVISIONS: 02/23/2021
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Building Addition to JL Newbern Middle School
Valdosta City School System
2015 East Park Ave. Valdosta, GA 31602

C2000

PROJECT NO: 20031

Tuesday, February 23, 2021

GRADING PLAN

MES No. 2020-83

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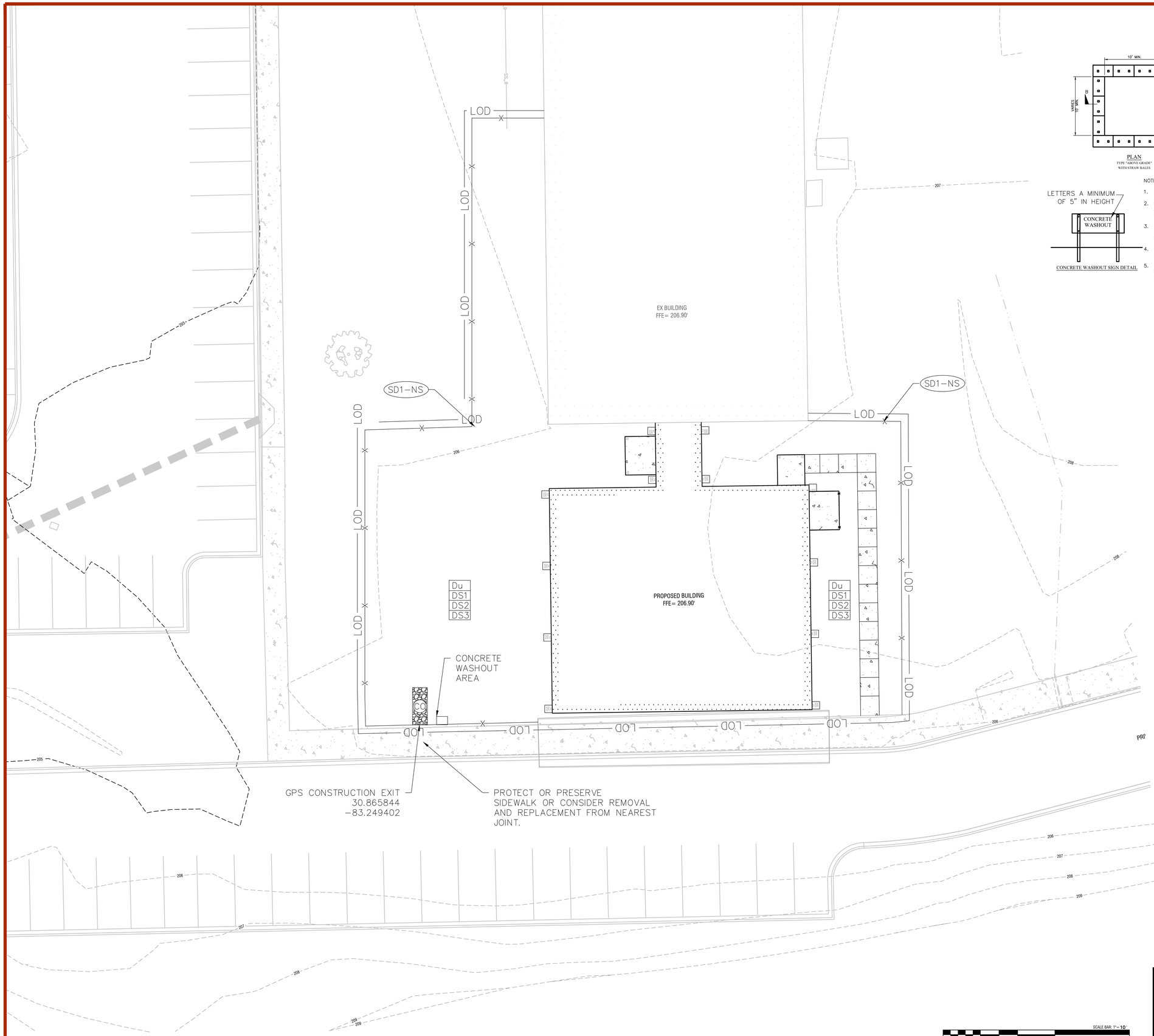
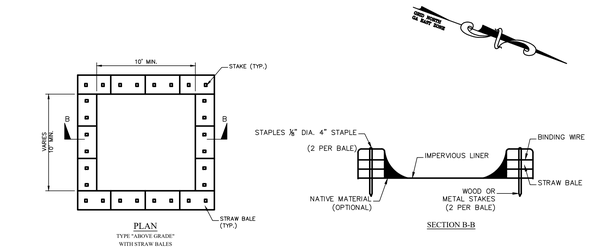
C3000

PROJECT NO: 20031

Tuesday, February 23, 2021





CONCRETE WASHOUT SIGN DETAIL

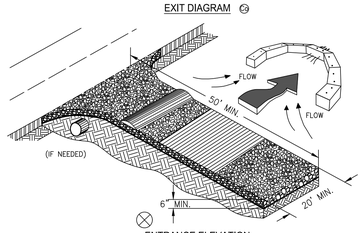
NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. INSTALL CONCRETE WASHOUT SIGN (24"X24", MINIMUM) WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. TEMPORARY WASHOUT AREA MUST BE AT LEAST 50' FROM A STORM DRAIN, CREEK BANK OR PERIMETER CONTROL.
4. CLEAN OUT CONCRETE WASHOUT AREA WHEN 50% FULL.
5. THE KEY TO FUNCTIONAL CONCRETE WASHOUTS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR CLEAN OUT.
6. SILT FENCE SHALL BE INSTALLED AROUND PERIMETER OF CONCRETE WASHOUT AREA EXCEPT FOR THE SIDE UTILIZED FOR ACCESSING THE WASHOUT.
7. A ROCK CONSTRUCTION ENTRANCE MAY BE NECESSARY ALONG ONE SIDE OF THE WASHOUT TO PROVIDE VEHICLE ACCESS.

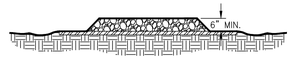
STRAW BALE BARRIER CONCRETE WASHOUT
N.T.S.

CRUSHED STONE CONSTRUCTION EXIT

EXIT DIAGRAM



ENTRANCE ELEVATION



NOTES:

1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

EROSION CONTROL PLAN

MES No. 2020-83

SCALE BAR: 1"= 10'
10 0 5 10 20 40

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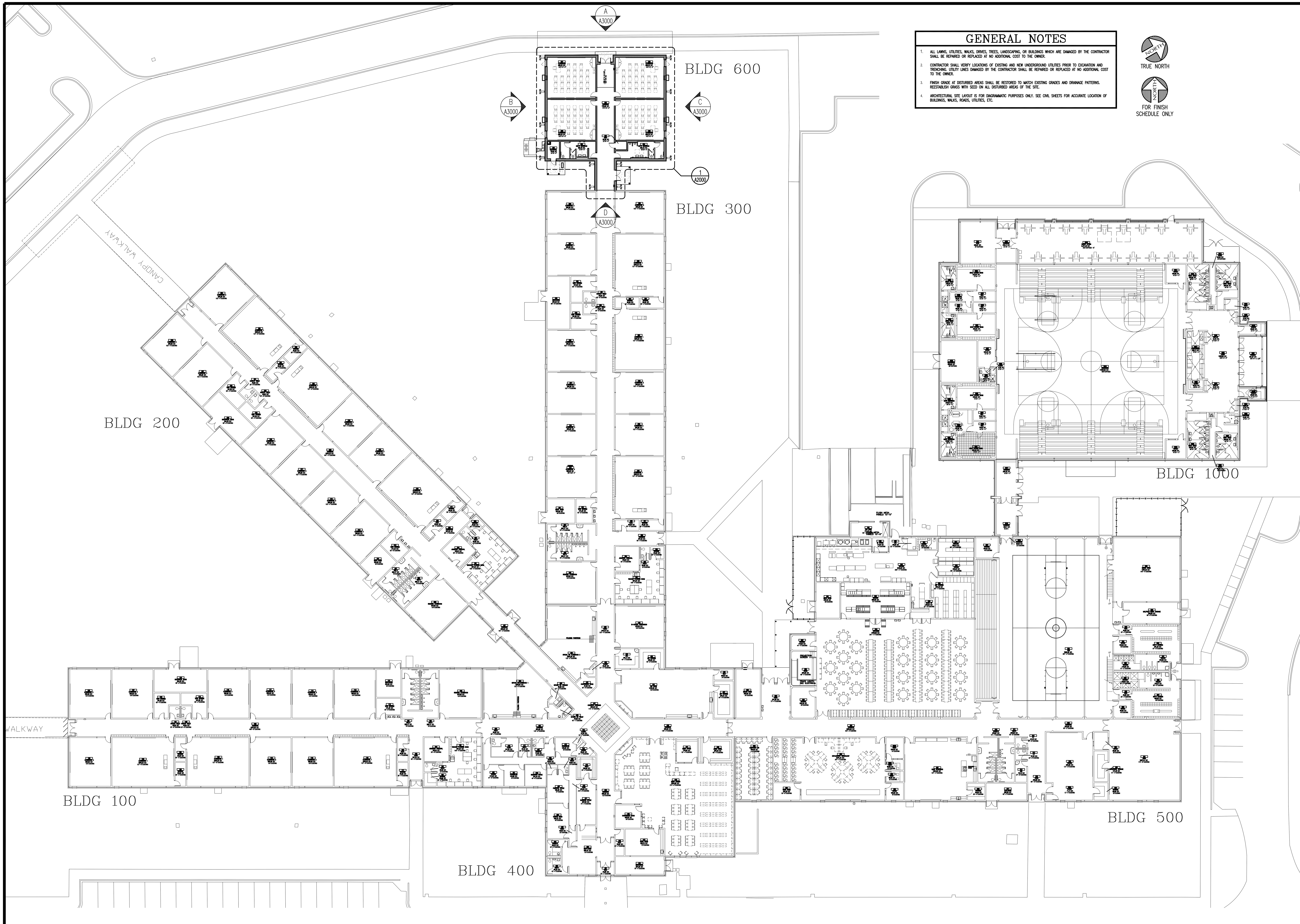
C4000

PROJECT NO: 20031

Tuesday, February 23, 2021



GENERAL NOTES

1. ALL LAWNS, UTILITIES, WALKS, DRIVES, TREES, LANDSCAPING, OR BUILDINGS WHICH ARE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
2. CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING AND NEW UNDERGROUND UTILITIES PRIOR TO EXCAVATION AND TRENCHING. UTILITY LINES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
3. FINISH GRADE AT DISTURBED AREAS SHALL BE RESTORED TO MATCH EXISTING GRADES AND DRAINAGE PATTERNS. REESTABLISH GRASS WITH SEED ON ALL DISTURBED AREAS OF THE SITE.
4. ARCHITECTURAL SITE LAYOUT IS FOR DIAGRAMMATIC PURPOSES ONLY. SEE CIVIL SHEETS FOR ACCURATE LOCATION OF BUILDINGS, WALKS, ROADS, UTILITIES, ETC.

OVERALL FLOOR PLAN

SCALE: 1"=20'-0"

Altman + Barrett

STATE OF GEORGIA
AUSTIN KYLE WILKERSON
REGISTERED ARCHITECT
01/14/2021

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A1000

FACILITY NO: 792-0195

PROJECT NO: 20031

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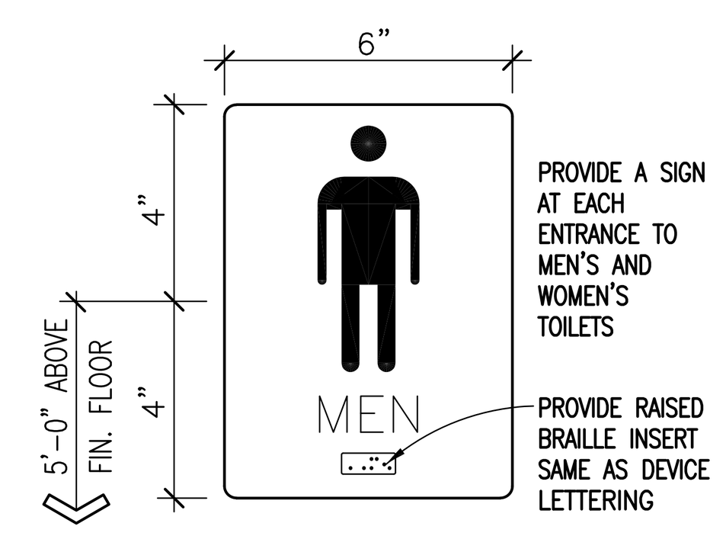
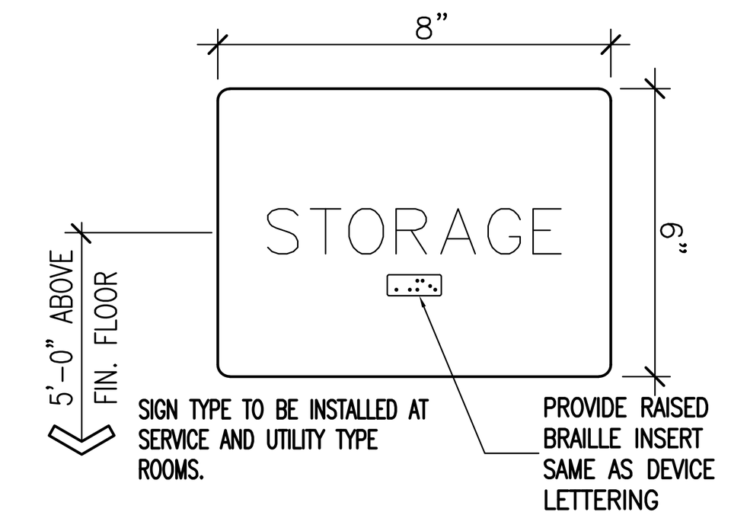
D O O R S C H E D U L E

ROOM NUMBER	DOOR NUMBER	LOCATION	WIDTH	HEIGHT	THICK	DOOR TYPE	FRAME TYPE	REMARKS (REFER TO REFLECTED CEILING PLANS FOR WALL RATINGS. WHERE WALL IS 1-HR RATED PROVIDE A 1-HR B-LABEL DOOR.)	IDENTIFICATION
332	332A	CORRIDOR	PR. 3'-0"	7'-0"	1 3/4"	HMG	HM-1	CARD READER/AUTO DOOR OPERATOR	
332	332B	CORRIDOR	PR. 3'-0"	7'-0"	1 3/4"	HMG	HM-1	CARD READER	
333	333A	DATA	4'-0"	7'-0"	1 3/4"	WDF	HM-2	B-LABEL (1 HR)	DATA
334	334A	BOY'S RESTROOM	3'-0"	7'-0"	1 3/4"	WDF	HM-2	B-LABEL (1 HR)	BOY'S RESTROOM
335	335A	CLASSROOM	3'-0"	7'-0"	1 3/4"	WDG	HM-2	B-LABEL (1 HR)	CLASSROOM
336	336A	CLASSROOM	3'-0"	7'-0"	1 3/4"	WDG	HM-2	B-LABEL (1 HR)	CLASSROOM
337	337A	CLASSROOM	3'-0"	7'-0"	1 3/4"	WDG	HM-2	B-LABEL (1 HR)	CLASSROOM
338	338A	CLASSROOM	3'-0"	7'-0"	1 3/4"	WDG	HM-2	B-LABEL (1 HR)	CLASSROOM
339	339A	GIRL'S RESTROOM	4'-0"	7'-0"	1 3/4"	WDF	HM-2	B-LABEL (1 HR)	GIRL'S RESTROOM
340	340A	ELECTRICAL	3'-0"	7'-0"	1 3/4"	HMF	HM-2		



IDENTIFICATION DEVICE

SCALE: 3"=1'-0"



IDENTIFICATION DEVICE

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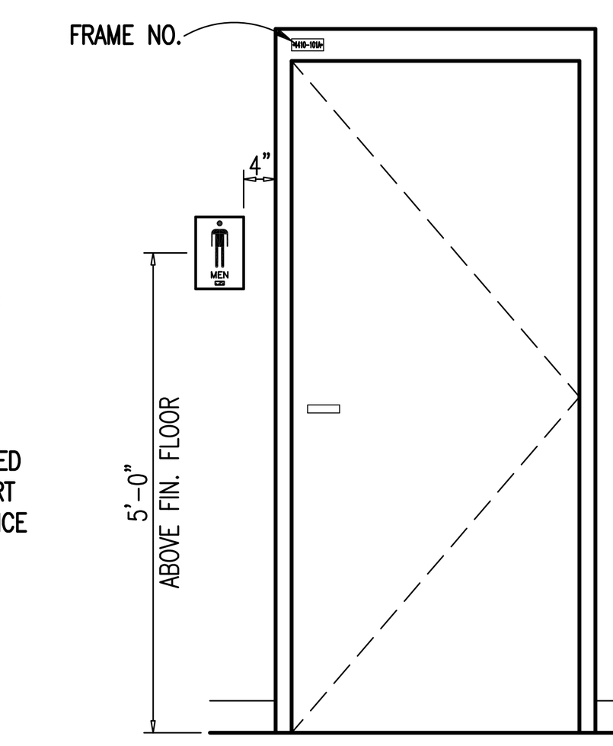


TYPICAL DOOR

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

TYPICAL NOTES:

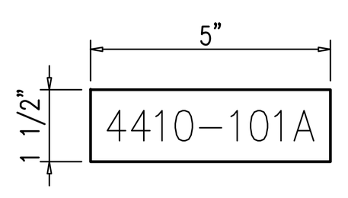
LETTERING AND GRAPHICS TO BE WHITE AND RAISED TO ADA TACTILE FEATURE REQUIREMENTS ON ACRYLIC BACKGROUND

LETTERING TO BE 72 POINT HELVETICA REGULAR – UPPER CASE

ONLY ONE WORD PER LINE

ATTACH ALL SIGNAGE USING ADHESIVE IN LIEU OF FASTENERS

PROVIDE PRE-PERFORATED PAPER PRINTED INSERTS

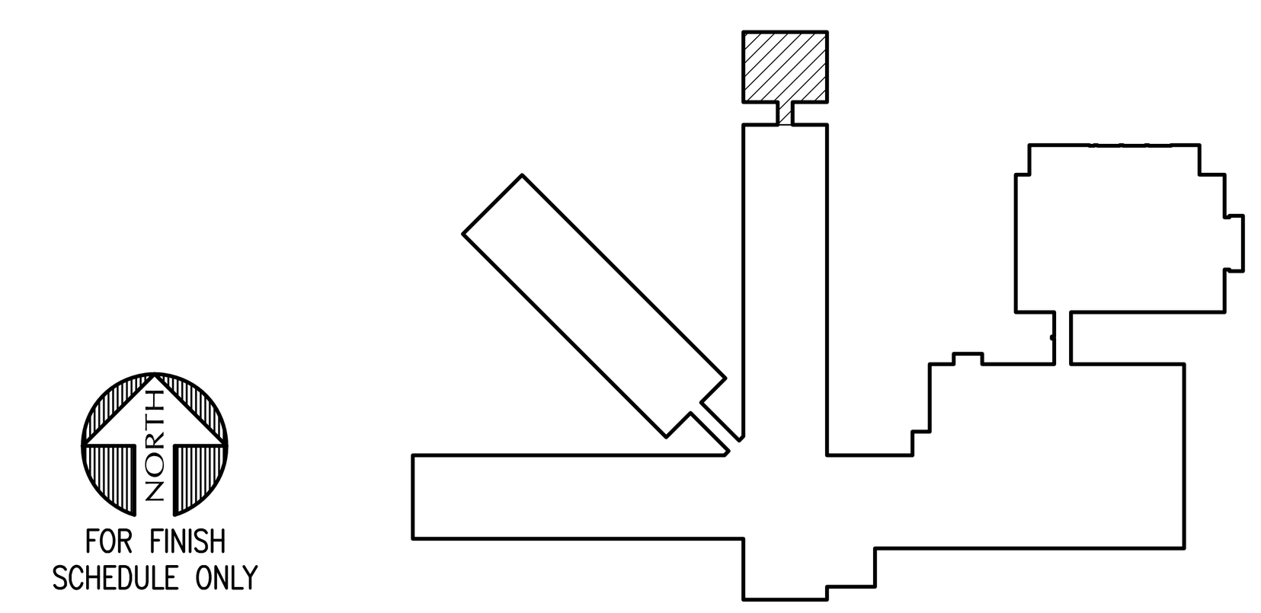


FRAME NO.

SCALE: 3"=1'-0"

IDENTIFICATION DEVICE DETAILS

SCALE: AS SHOWN



KEY PLAN

INDICATES AREA NOT IN CONTRACT

RCP LEGEND

- 2' x 4' LAY-IN LED LIGHT FIXTURE
- 2' x 4' SURFACE LED LIGHT FIXTURE
- 1' x 4' WRAP AROUND LED LIGHT FIXTURE
- CAN LIGHT
- SURFACE MOUNTED LIGHT
- 4' LED LIGHT FIXTURE
- 2' x 2' HVAC DIFFUSER
- 2' x 2' HVAC RETURN AIR GRILLE
- 2' x 2' SUSPENDED LAY-IN ACOUSTICAL TILE CEILING
- GYPSUM WALLBOARD CEILING. 1 LAYER 5/8"
- GYPSUM WALLBOARD CEILING, 1-HR RATED. 1 LAYER 5/8" TYPE "X" GWB EACH SIDE
- 6" WIDE LINEAR WOOD PLANKS
- METAL SOFFIT PANELS – FLUSH
- METAL SOFFIT PANELS – WALL PANEL PROFILE

WALL RATING LEGEND

1 – HOUR FIRE (HORIZONTAL RATED ASSEMBLY WITH RATED WALLS BELOW)

WALL RATING NOTES

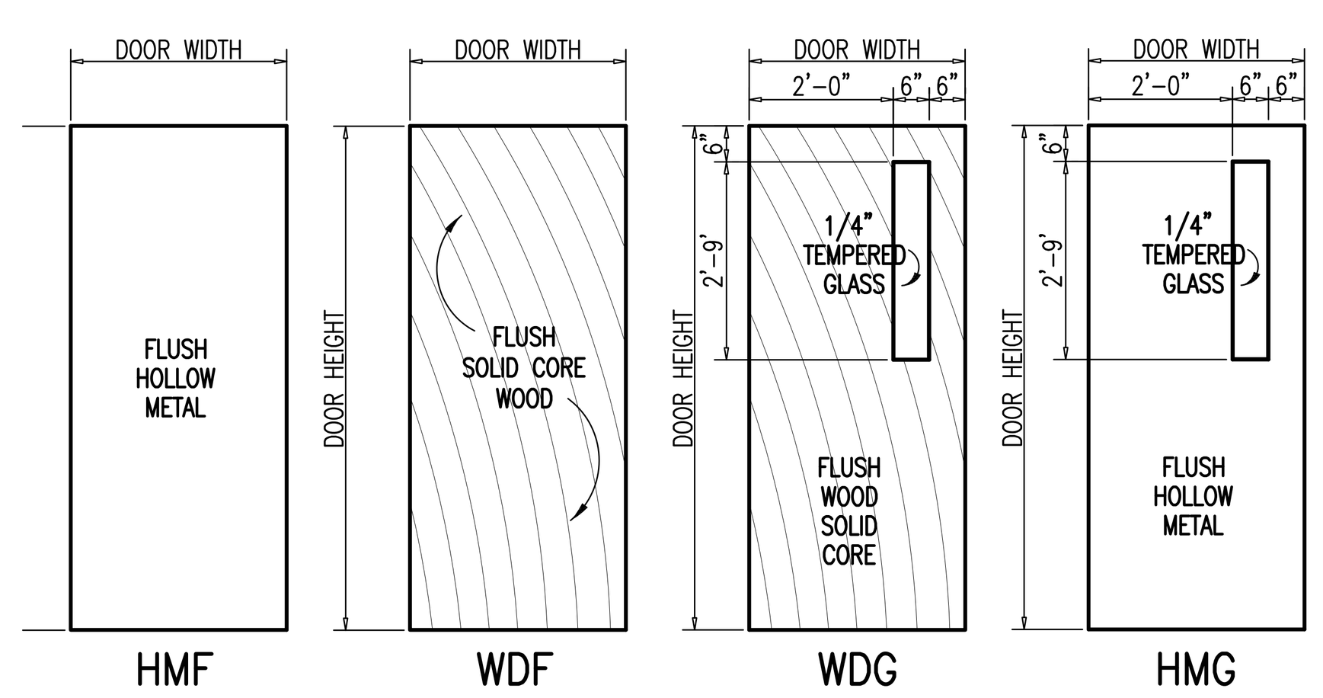
1. IDENTIFY ALL FIRE PARTITIONS BY STENCILING WALL ABOVE CEILING IN ACCORDANCE WITH VERBIAGE "FIRE BARRIER – PROTECT ALL OPENINGS". THE STENCILING SHALL BE 8" HIGH LETTERS AND AT 10' O.C. MAX BOTH SIDES.
2. EXTEND FIRE PARTITIONS TIGHT TO DECK ABOVE IF DRAWINGS DO NOT CALL FOR A HORIZONTALLY RATED STRUCTURE WITHIN THE SPACE. FIRE PARTITION SHALL CONSIST OF MIN. 6" STEEL STUDS WITH 5/8" TYPE "X" GWB EACH SIDE. FIRE/SOUND WALLS SHALL CONTAIN ACOUSTICAL BATT INSULATION BETWEEN STUDS.
3. EXTEND SMOKE PARTITION TIGHT TO DECK ABOVE USING MIN. 4" STEEL STUDS WITH ONE LAYER OF 5/8" GWB ONE SIDE ONLY. SMOKE/SOUND WALLS SHALL CONTAIN ACOUSTICAL BATT INSULATION BETWEEN STUDS.
4. EXTEND SOUND WALLS TIGHT TO DECK ABOVE USING MIN. 6" STEEL STUDS AT 16" O.C. WITH 5/8" GWB ONE SIDE WITH ACOUSTICAL BATT INSULATION BETWEEN STUDS.
5. HORIZONTAL RATED CEILINGS SHALL MEET UL-465: ONE LAYER TYPE "X" GWB BOTTOM SIDE AND ONE LAYER 5/8" TYPE "X" GWB TOP SIDE OF MIN. 6" STEEL STUD FRAMING.

GENERAL DEMOLITION NOTES

1) ○ INDICATES DEMOLITION NOTES
2) CONTRACTORS SHALL PROPERLY SAND AND REMOVE RUST FROM METAL SURFACES BEFORE PAINTING
3) DURING BUILDING CONSTRUCTION AND DEMOLITION OPERATIONS OF THIS PROJECT, ALL PARTIES SHALL COMPLY WITH REQUIREMENTS OF N.F.P.A. 241 "BUILDING CONSTRUCTION AND DEMOLITION OPERATIONS".
4) ALL REQUIRED MEANS OF EGRESS AND ALL REQUIRED FIRE PROTECTION FEATURES ARE IN PLACE AND CONTINUOUSLY MAINTAINED FOR THE PORTION MAINTAINED IN AREAS OCCUPIED.
5) PROTECT ALL THE ABOVE CEILING ELECTRICAL, DATA, AND TELEPHONE WIRING ABOVE CEILING WHERE NOT INDICATED TO BE REMOVED.
6) PROTECT EXISTING TO REMAIN FINISHES DURING CONSTRUCTION.

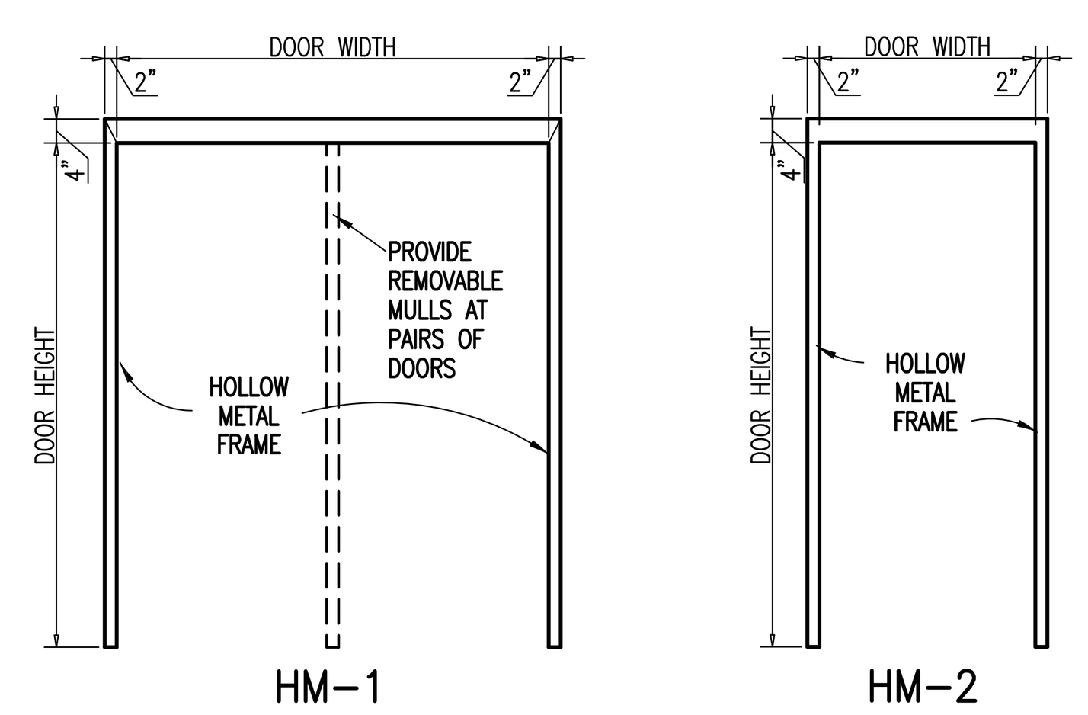
DEMOLITION LEGEND – FLOOR PLAN

1. DEMO EXISTING CONCRETE SIDEWALK & PREPARE AREA FOR NEW CONCRETE FOOTING, WALLS, & SLAB.
2. DEMO PORTION OF EXISTING ALUMINUM CANOPY SYSTEM.
3. REMOVE EXISTING DOORS, FRAME, HARDWARE, AND CMU WALL.
4. DEMO EXISTING BRICK VENEER FACE. CMU WALLS ARE TO REMAIN. CMU WALLS ARE TO BE CLEANED AND PREPPED TO RECEIVE NEW PAINT & BASE IF EXPOSED. SEE DEMO PLAN FOR WALL LOCATIONS.



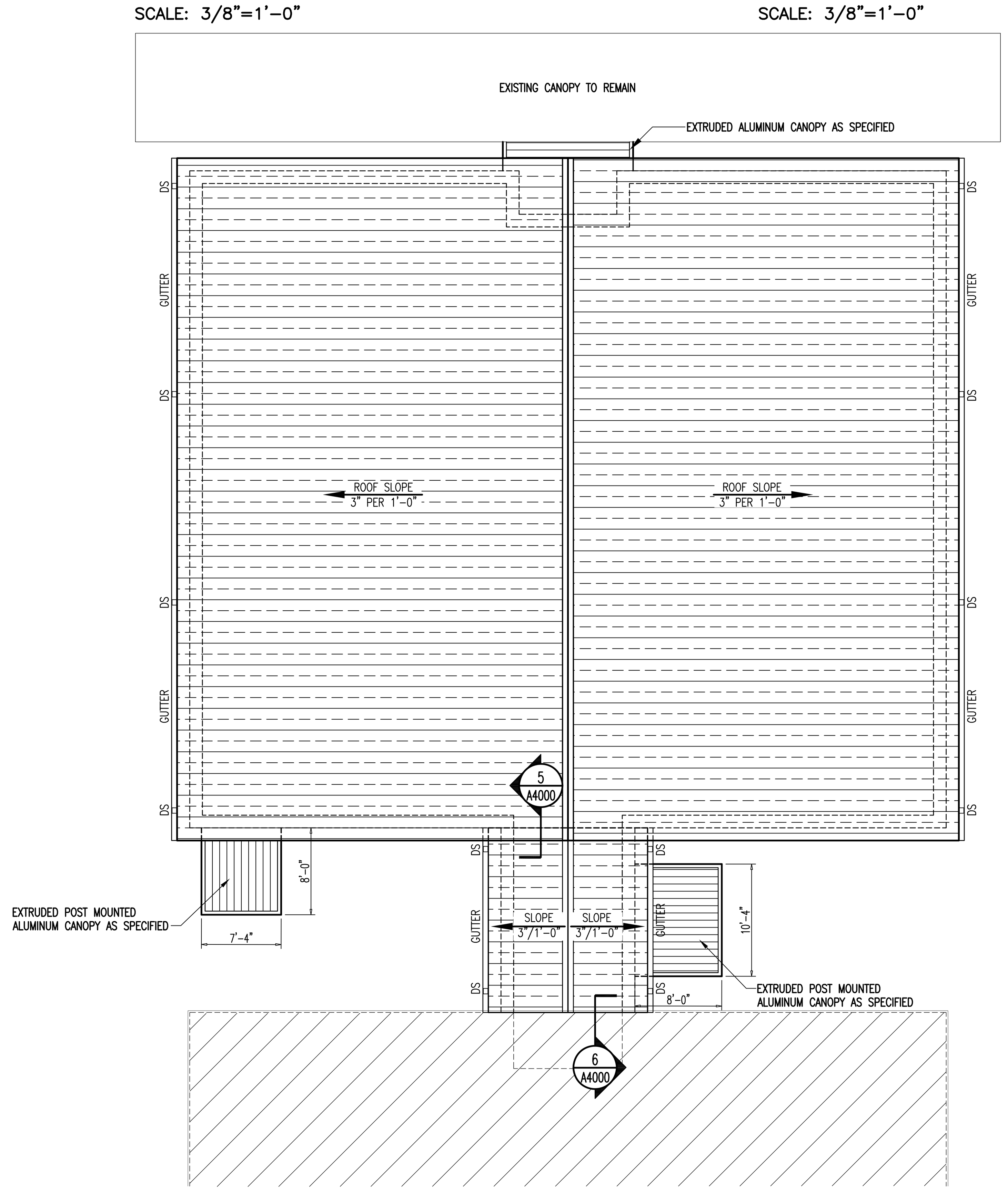
DOOR TYPES

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



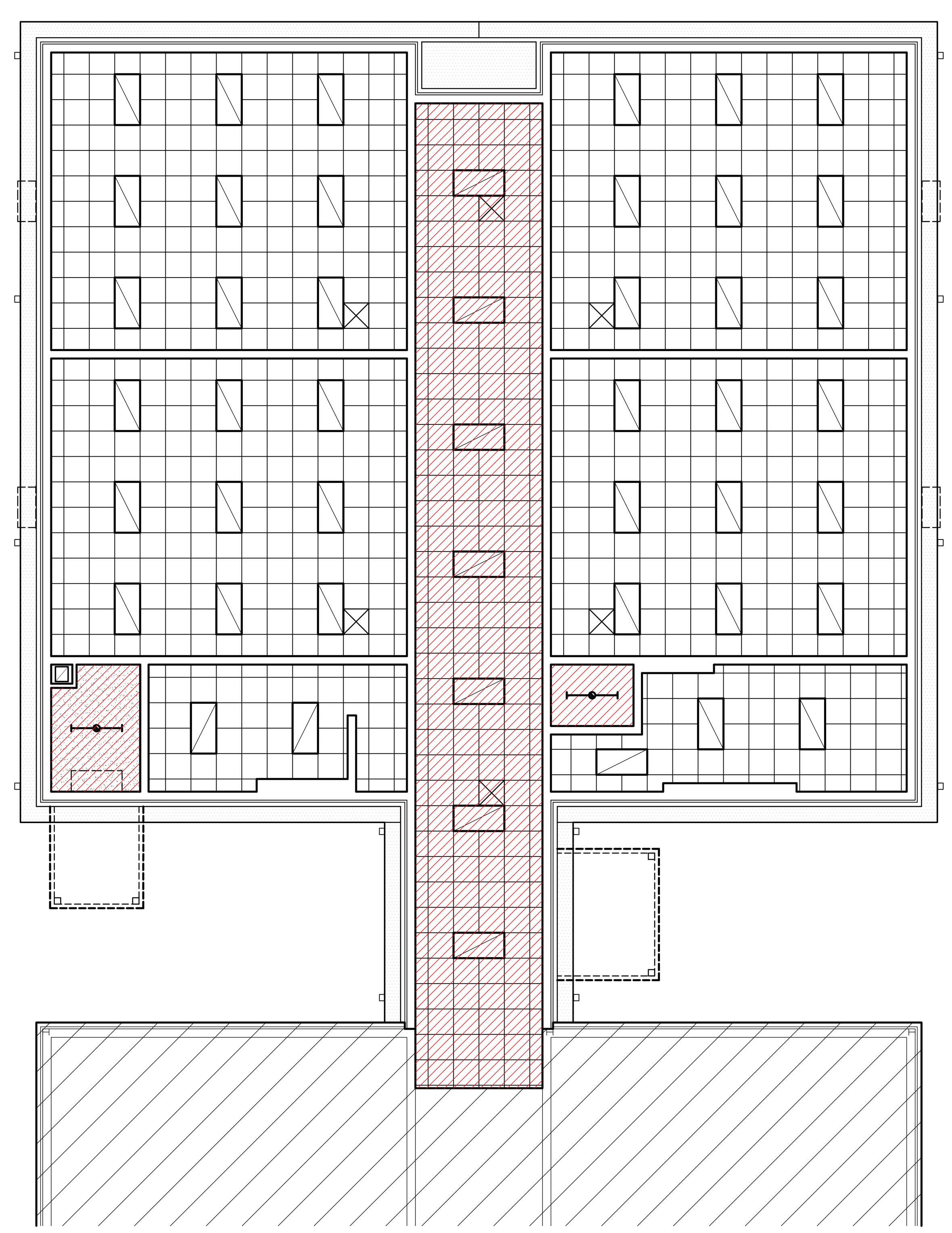
HOLLOW METAL FRAMES

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



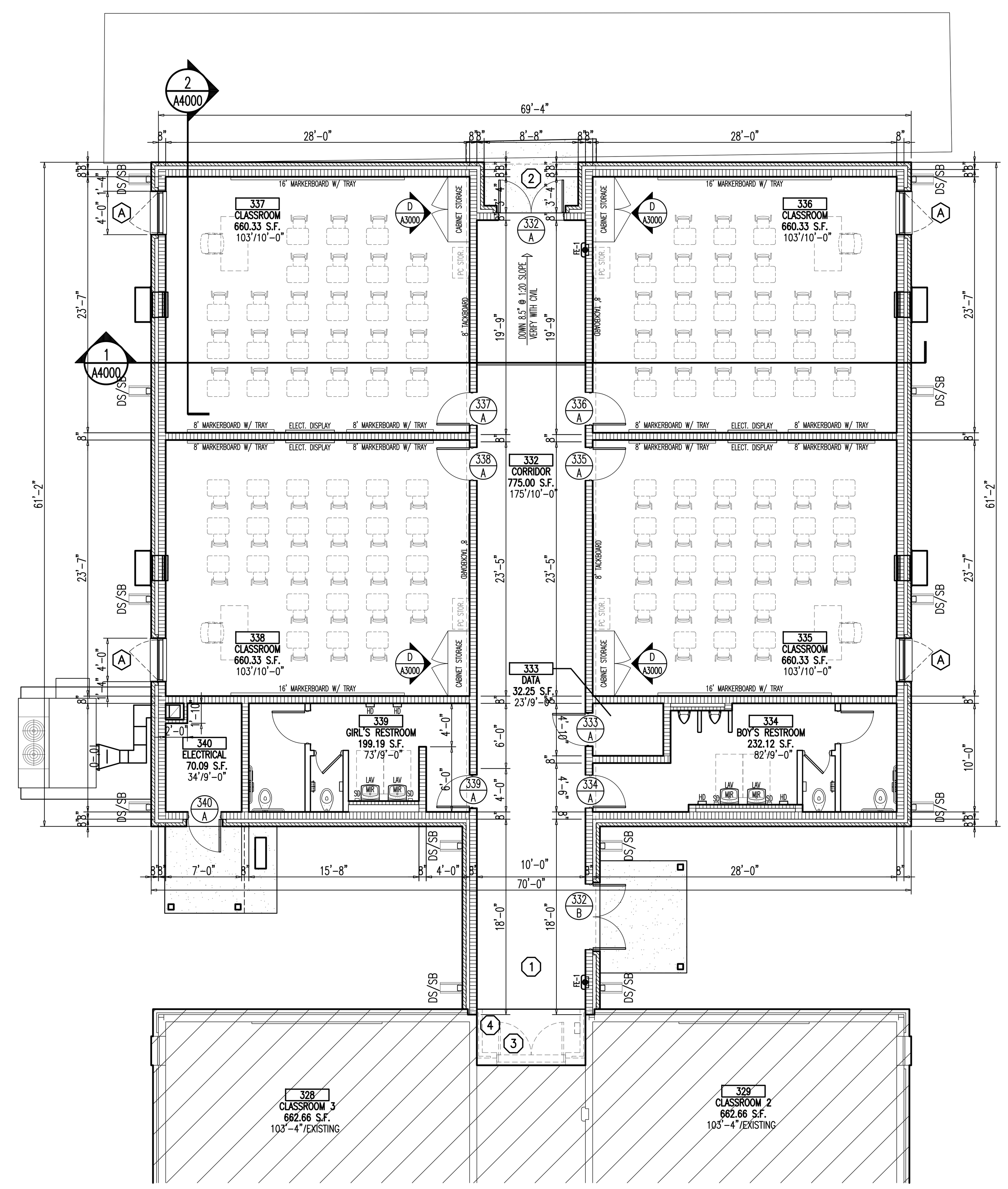
PARTIAL ROOF PLAN

SCALE 1/8"=1'0"



REFLECTED CEILING PLAN

SCALE 1/8"=1'0"



ENLARGED FLOOR PLAN

SCALE 1/8"=1'0"

1 A2000

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STATE OF GEORGIA – AUSTIN KYLE WILKERSON – REGISTERED ARCHITECT – 01/14/2021

DATE: JANUARY 14, 2021
DRAWN: K. WILKERSON
CHECKED: K. WILKERSON
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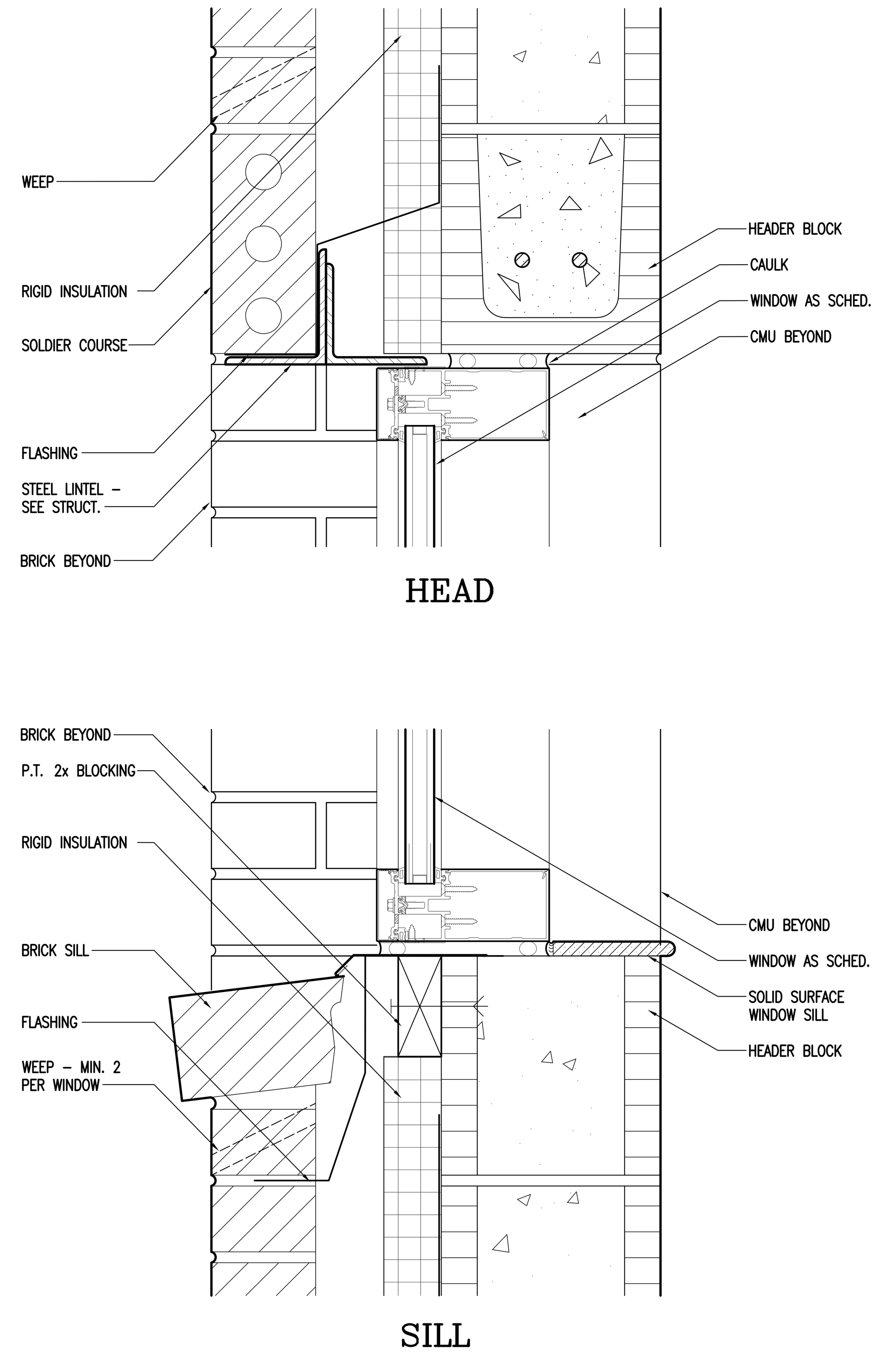
A2000

FACILITY NO: 792-0195

PROJECT NO: 20031



WINDOW DETAIL

SCALE: 3"=1'-0"

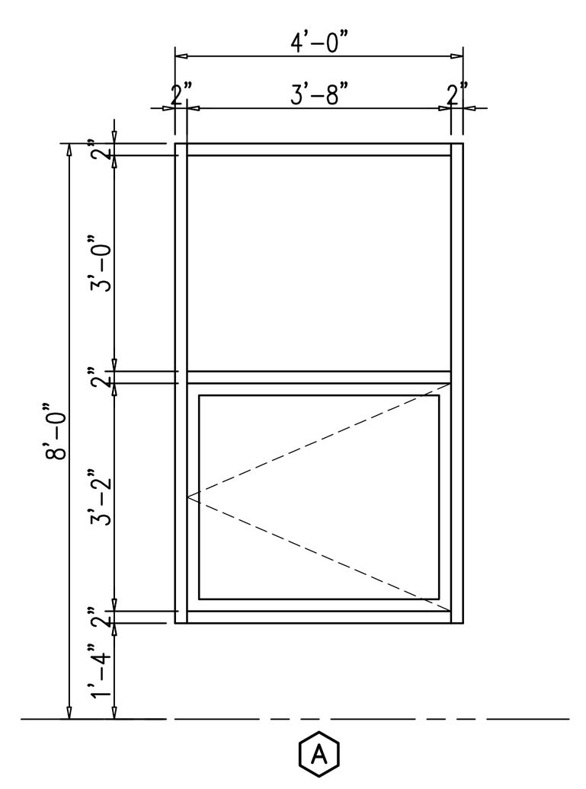
GLAZING NOTES

GLAZING AT HOLLOW METAL DOORS AND FRAMES IN FIRE-RATED WALLS SHALL BE 3/16" FIRE RATED GLAZING (F-1).

GLAZING AT HOLLOW METAL DOORS AND FRAMES IN NON-RATED WALLS SHALL BE 1/4" TEMPERED GLASS (GL-1) UNLESS NOTED OTHERWISE.

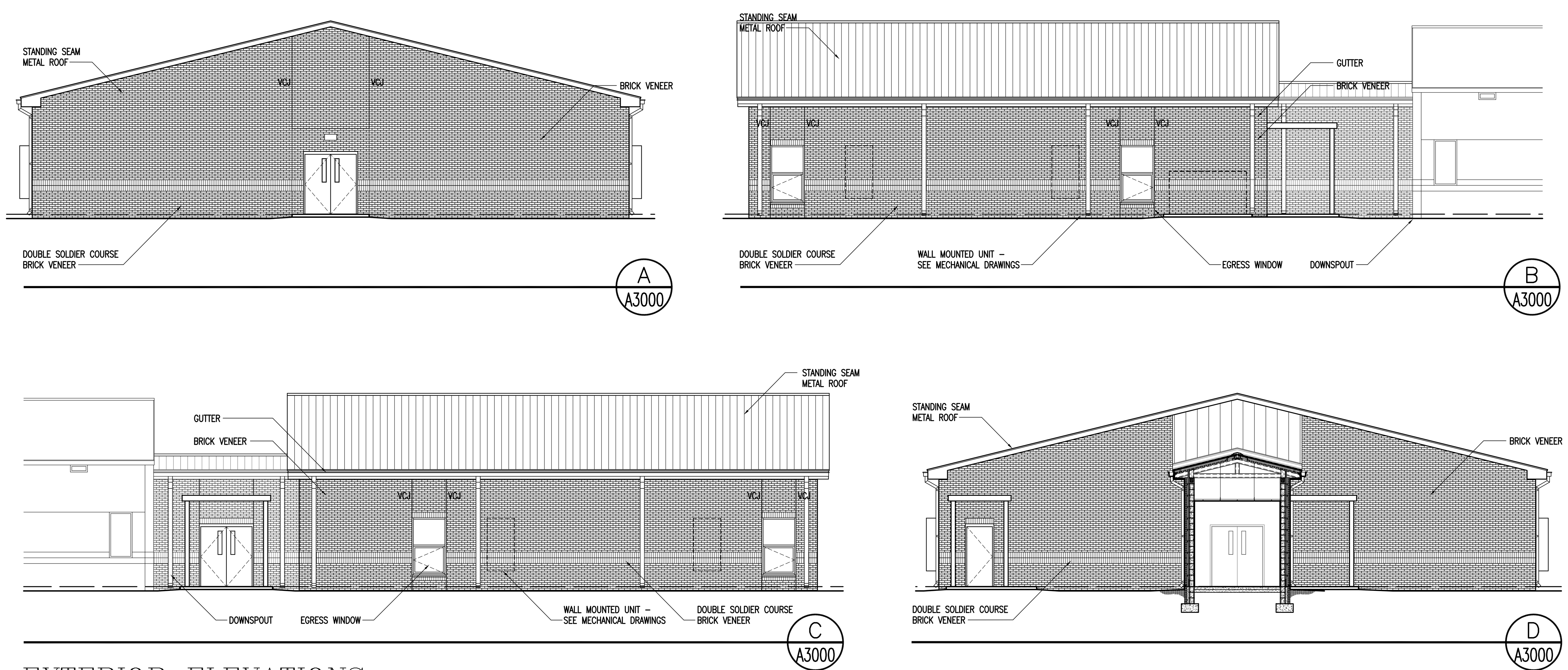
REFER TO REFLECTED CEILING PLANS FOR LOCATIONS OF FIRE-RATED WALLS.

EXTERIOR GLAZING SHALL BE 1" INSULATING-LAMINATED (IG-1L) GLASS.



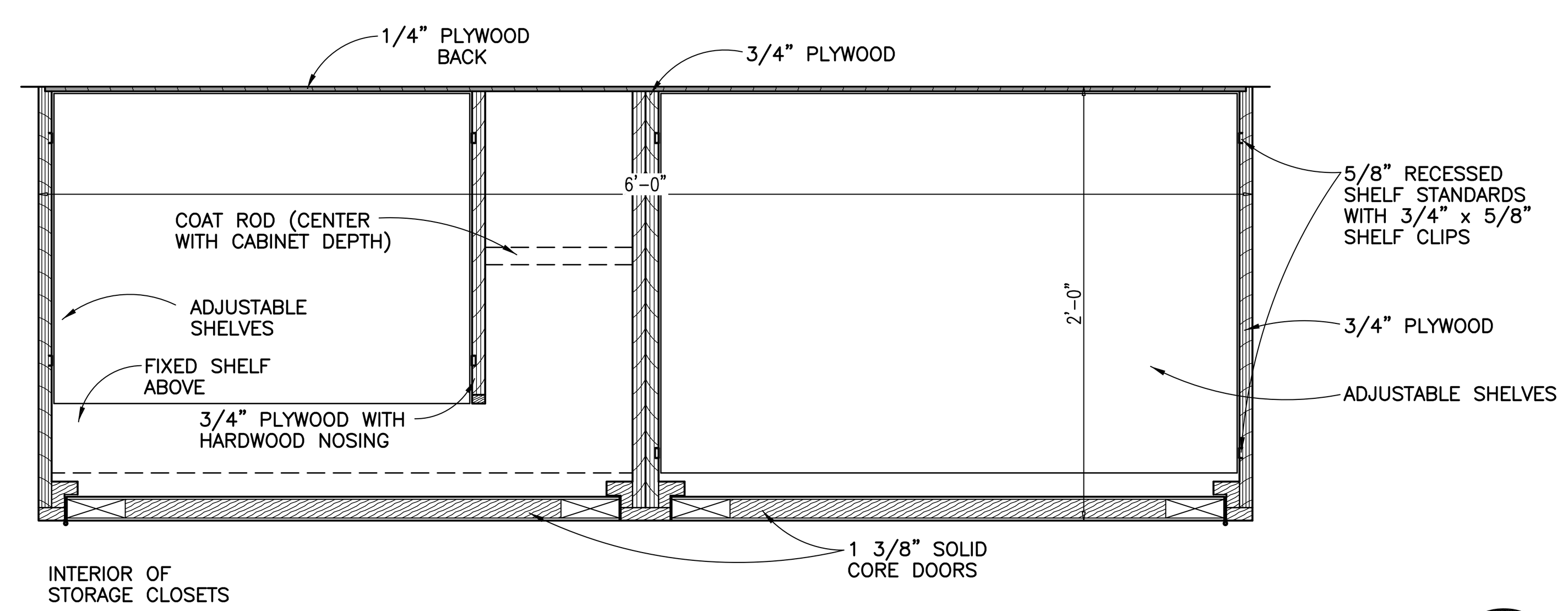
EXTERIOR ALUMINUM WINDOW FRAME TYPES

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



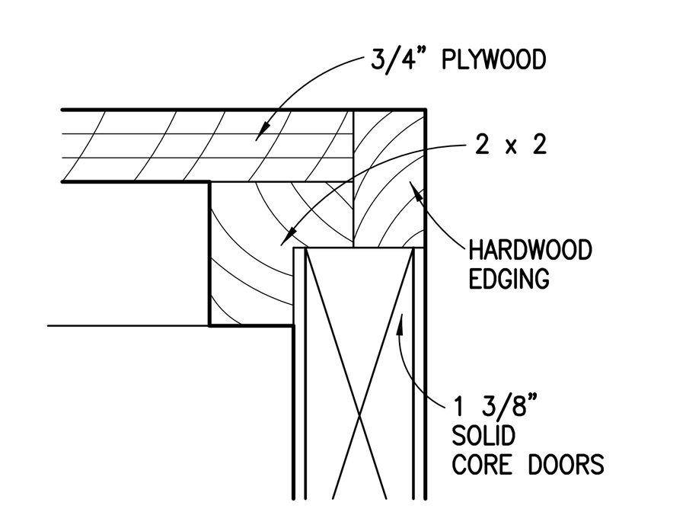
EXTERIOR ELEVATIONS

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



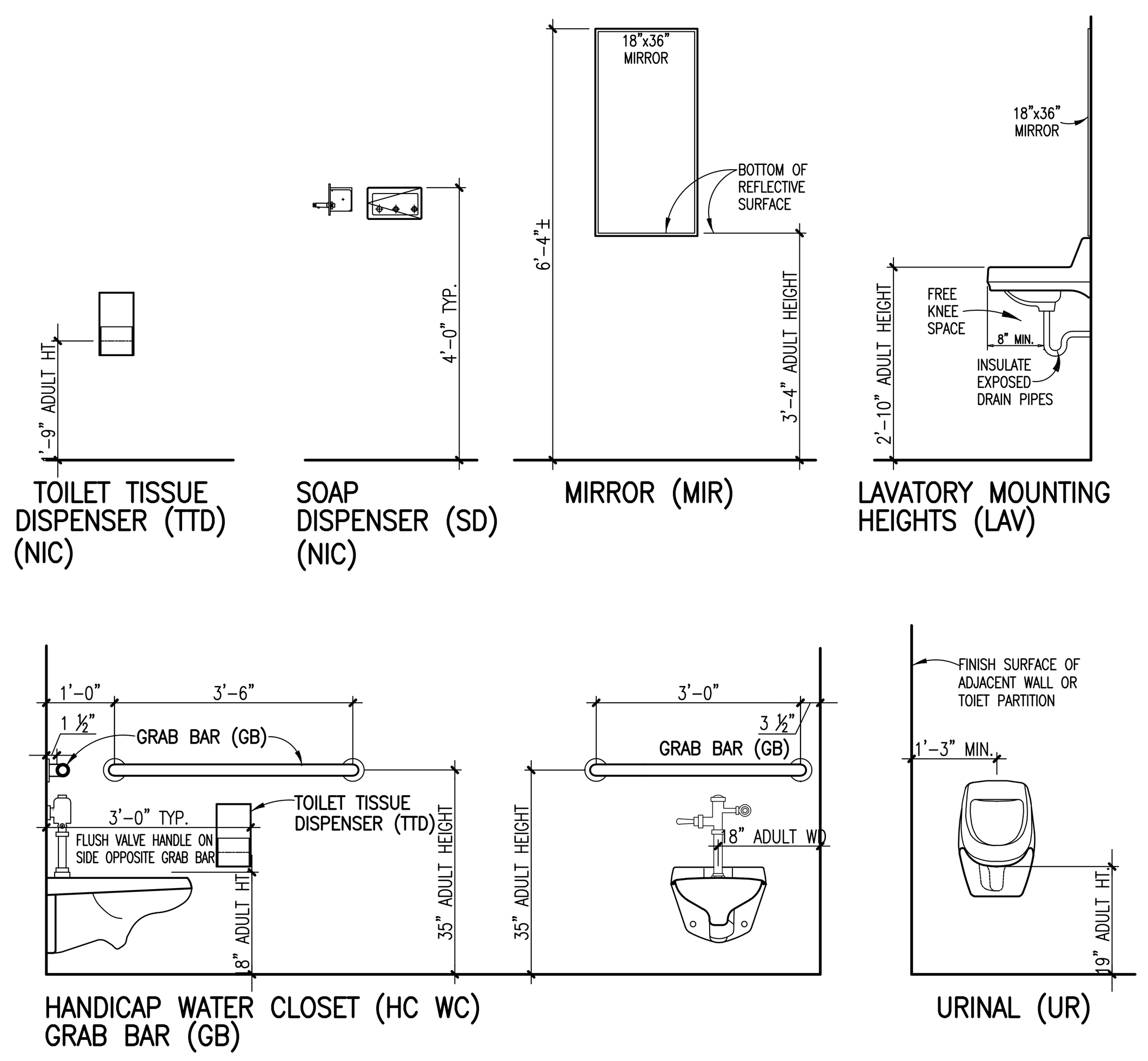
PLAN VIEW 2 A3000

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



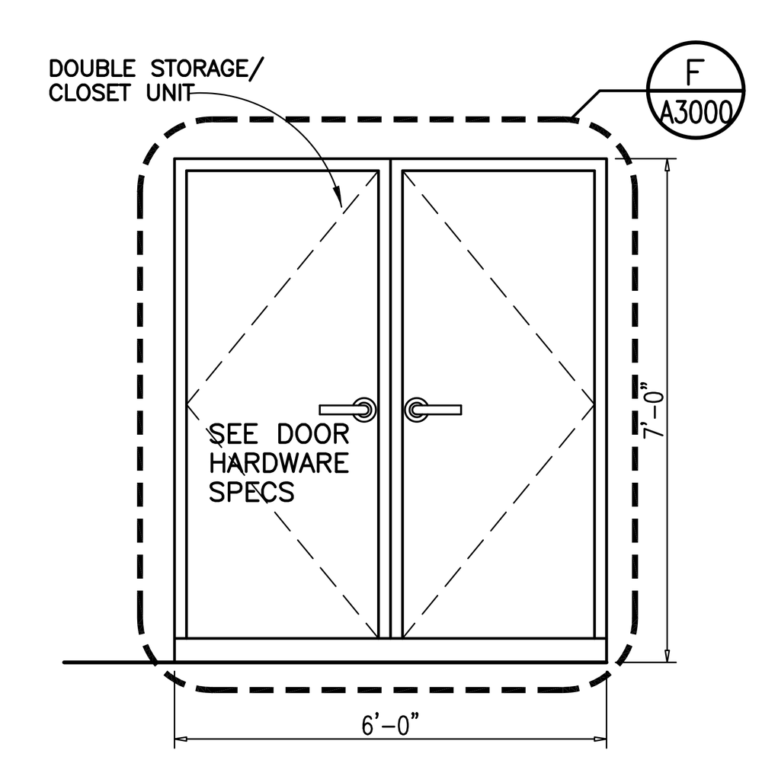
DETAIL 3 A3000

HALF SCALE



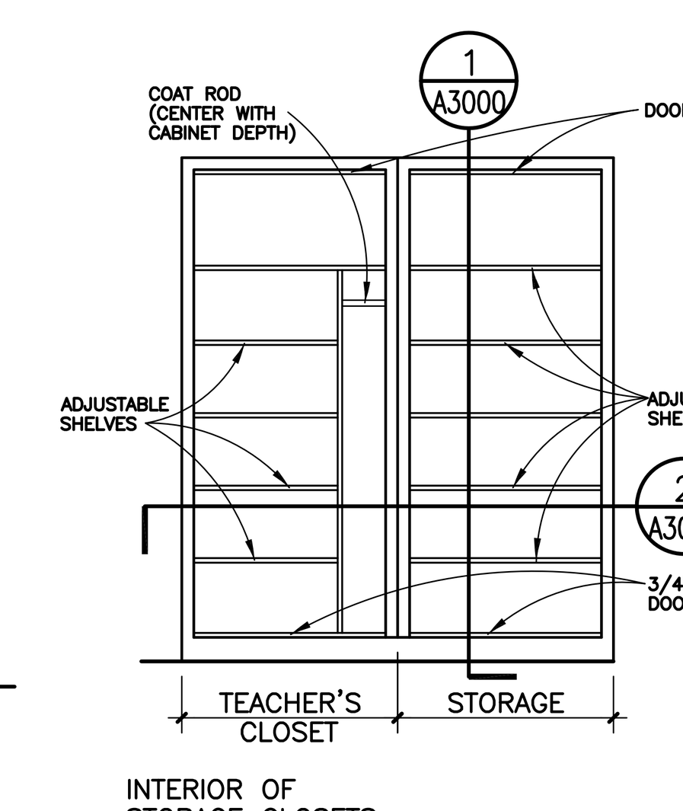
TOILET ACCESSORY MOUNTING HEIGHTS

SCALE: NTS



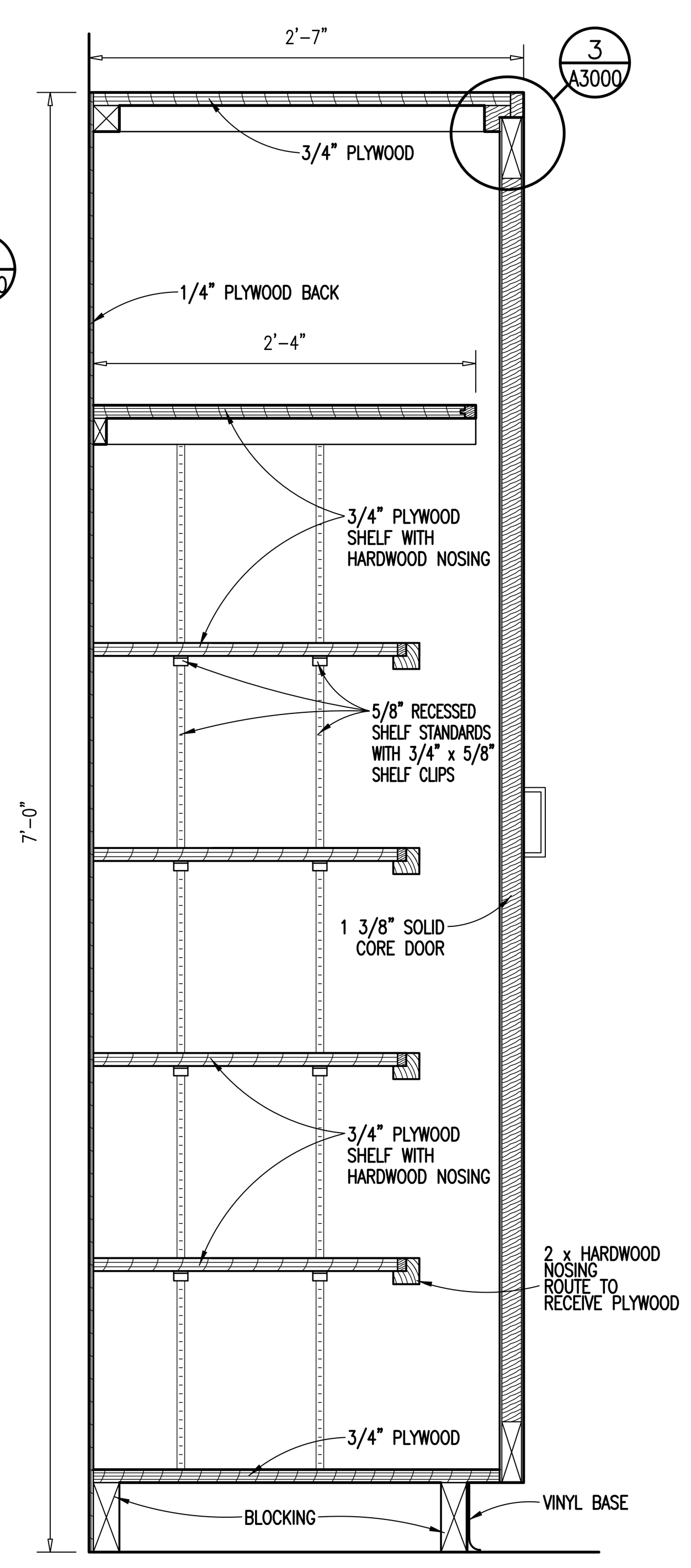
ELEVATION E A3000

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



ELEVATION F A3000

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



SECTION 1 A3000

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

FINISH SCHEDULE

SPACE NO.	SPACE NAME	FLOOR	BASE	WALLS								CEILINGS			SPACE NO.
				SOUTH		EAST		NORTH		WEST					
				MAT.	FIN.	MAT.	FIN.	MAT.	FIN.	MAT.	FIN.	MAT.	FIN.	HT.	
BUILDING 300															
332	CORRIDOR	VCT	RC	---	---	CMU	P	CMU	P	CMU	P	AP	---	10'-0"	332
333	DATA	VCT	RC	CMU	P	CMU	P	CMU	P	CMU	P	FRGB	P	9'-0"	333
334	BOY'S RESTROOM	EPOXY	EPOXY	CMU	P	CMU	P	CMU	P	CMU	P	AP	---	9'-0"	334
335	CLASSROOM	MCT	RC	CMU	P	CMU	P	CMU	P	CMU	P	AP	---	10'-0"	335
336	CLASSROOM	MCT	RC	CMU	P	CMU	P	CMU	P	CMU	P	AP	---	10'-0"	336
337	CLASSROOM	MCT	RC	CMU	P	CMU	P	CMU	P	CMU	P	AP	---	10'-0"	337
338	CLASSROOM	MCT	RC	CMU	P	CMU	P	CMU	P	CMU	P	AP	---	10'-0"	338
339	GIRL'S RESTROOM	EPOXY	EPOXY	CMU	P	CMU	P	CMU	P	CMU	P	AP	---	9'-0"	339
340	ELECTRICAL	SEALED CONCRETE	---	CMU	P	CMU	P	CMU	P	CMU	P	FRGB	P	9'-0"	340

FINISH SCHEDULE LEGEND

MATERIAL

FLOORING
VCT VINYL COMPOSITION TILE
MCT MARMOLEUM COMPOSITION TILE

BASE
RC 4" HIGH RESILIENT COVE BASE

WALLS
CMU CONCRETE MASONRY UNITS

CEILING
AP ACOUSTICAL CEILING & SUSPENSION SYSTEM
FRGB FIRE RATED GYPSUM BOARD

FINISHES
P PAINTED

Altman + Barrett
STATE OF GEORGIA — AUSTIN KYLE WILKERSON — REGISTERED ARCHITECT
01/14/2021
Altman + Barrett architects
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DATE: JANUARY 14, 2021
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REVISIONS: 02/23/2021
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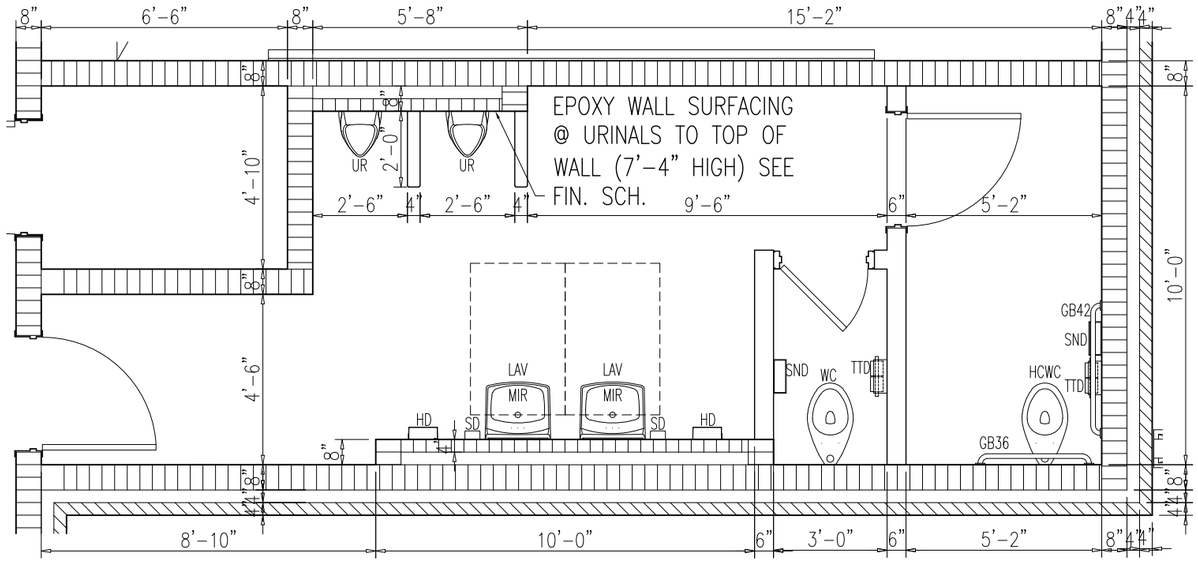
Building Addition to
JL Newbern Middle School
Valdosta City School System
2015 East Park Ave. Valdosta, GA 31602

A3000
FACILITY NO: 792-0195

PROJECT NO: 20031

Tuesday, February 23, 2021



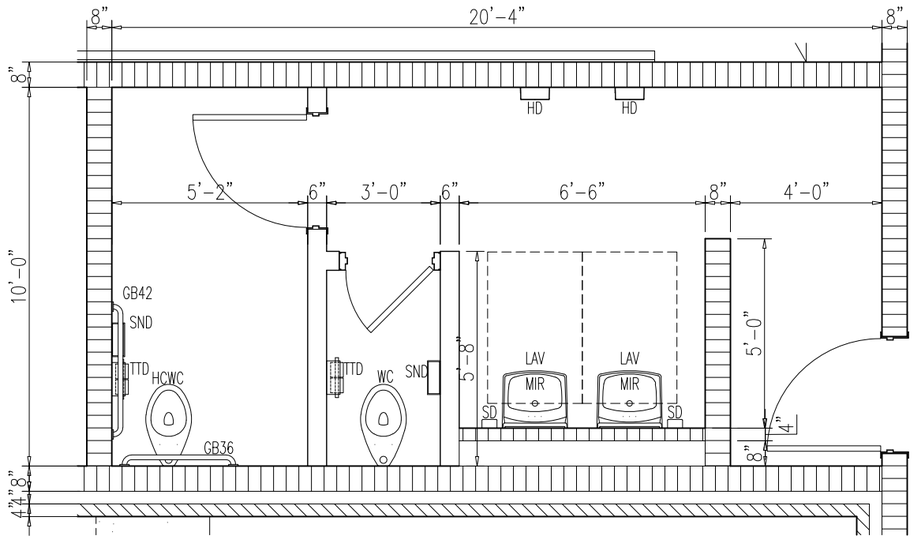
334 BOYS RESTROOM

ENLARGED PLAN

1/4"=1'-0"

1
AD1-1

REFER TO 3/AD1-1 FOR CMU PARTITION WALL DETAILS

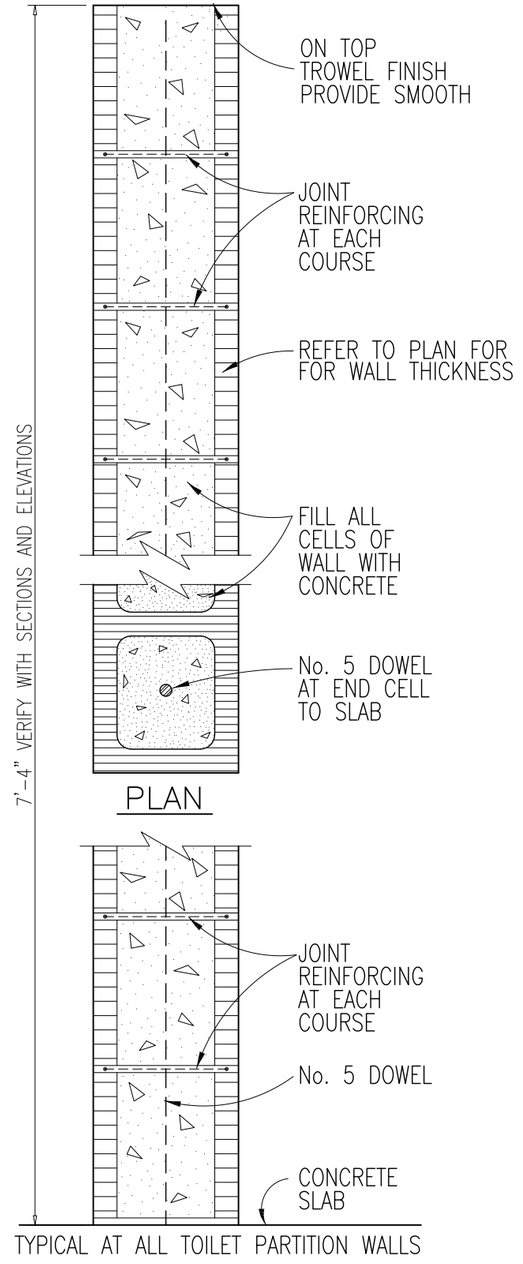


339 GIRLS RESTROOM

ENLARGED PLAN

1/4"=1'-0"

2
AD1-1



PARTITION WALL DETAIL

SCALE: N.T.S.

3
AD1-1

Altman + Barrett
architects
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a+b architects

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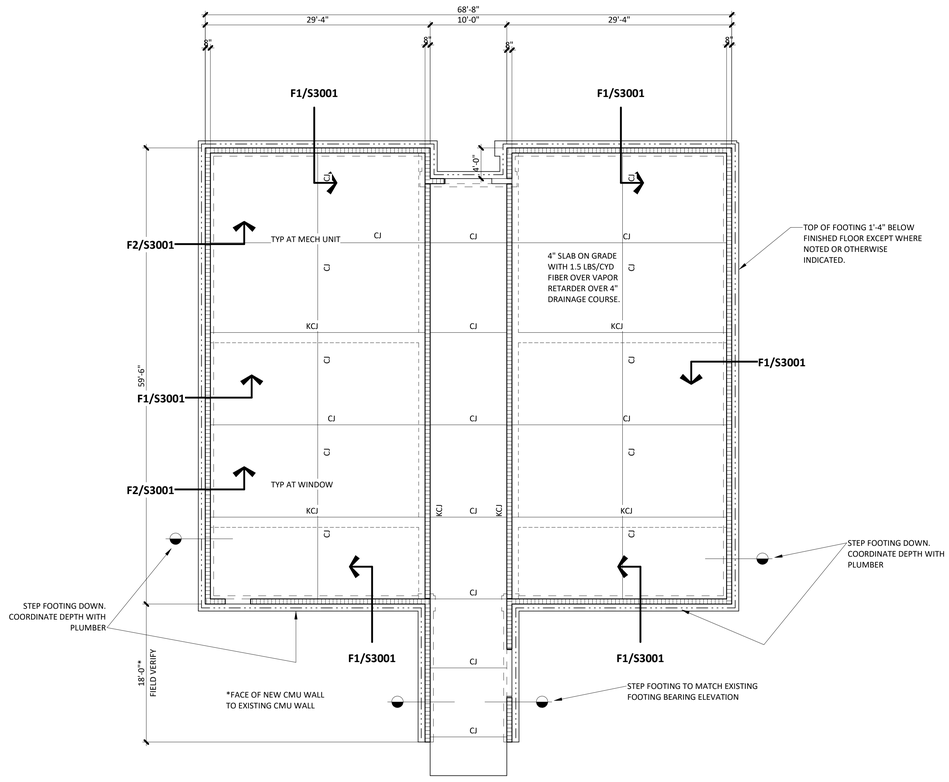
Building Addition to
JL Newbern Middle School
Valdosta City School System
2015 E. Park Ave. Valdosta, GA 31602

AD1-1

PROJECT NO: 20031

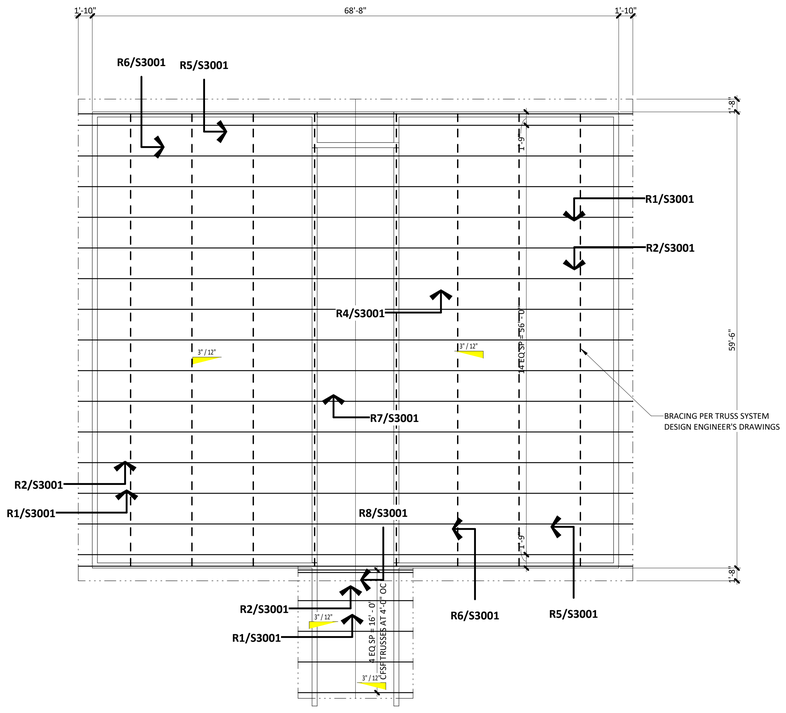
Tuesday, February 23, 2021

Altman + Barrett architects



1 FOUNDATIONS AND GROUND FLOOR PLAN

1/8" = 1'-0"



2 ROOF FRAMING PLAN

1/8" = 1'-0"

Altman + Barrett

Lindsey & Ritter, Inc.
401 East Jane Street, Valdosta, GA 31601
GA COA # PEF000415 EXP 6/30/2022

GEORGIA REGISTERED No. SE000439 STRUCTURAL ENGINEER JOHN L. SMART 2.18.2021

GEORGIA REGISTERED No. 20968 PROFESSIONAL ENGINEER JOHN L. SMART

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ab architects

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Building Addition to JL Newbern Middle School

Valdosta City School System
2015 East Park Ave. Valdosta, GA 31602

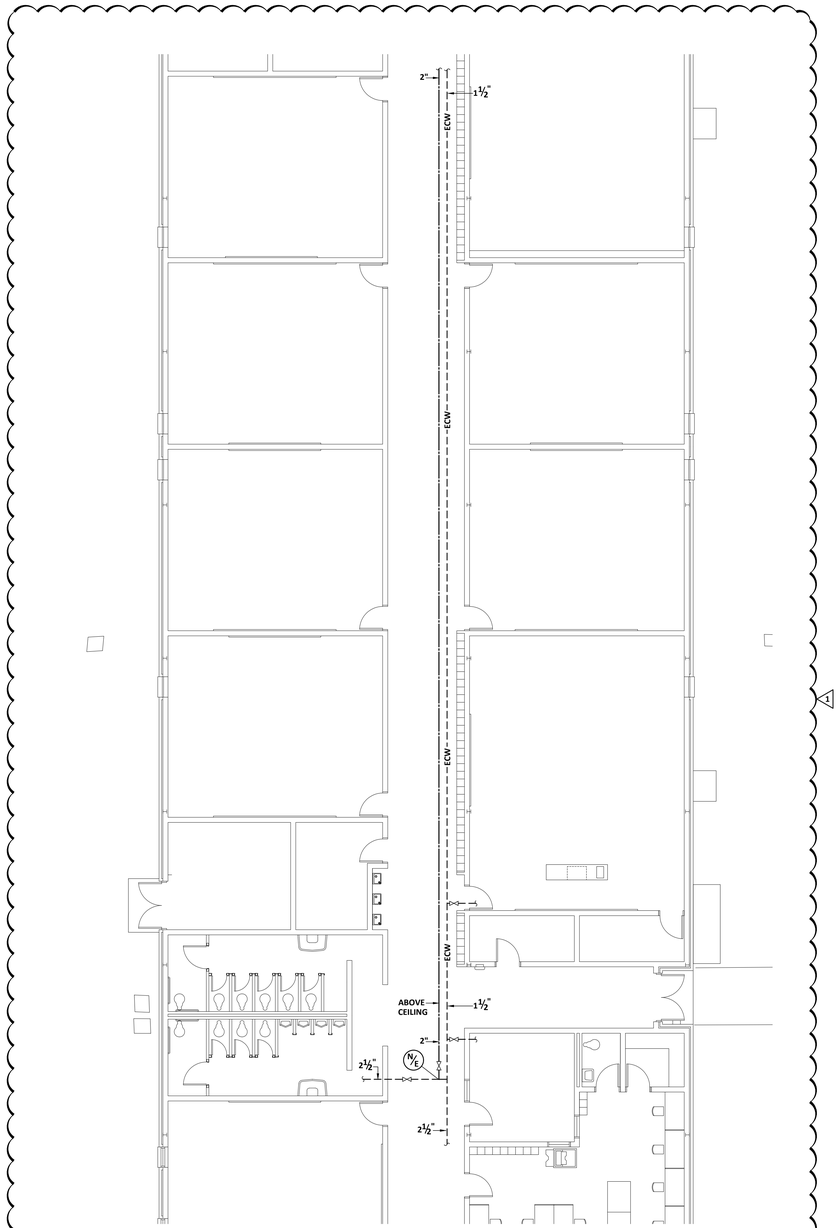
FACILITY CODE: 792-0195

S2001

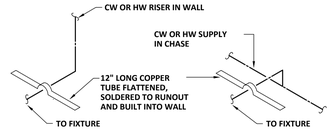
PROJECT NO: 20031

2/18/2021 2:50:18 PM

Altman + Barrett Architects

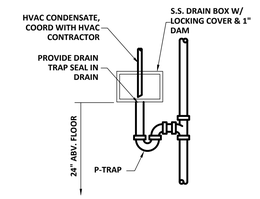


7 P0010 **PLUMBING NEW WORK PLAN - WATER**
SCALE: 1/8" = 1'-0"

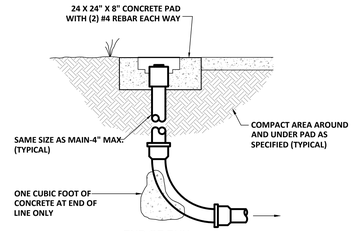


RUNOUT ANCHOR REQUIRED FOR FLUSH VALVES, HOSE BIBBS AND WALL HYDRANTS.

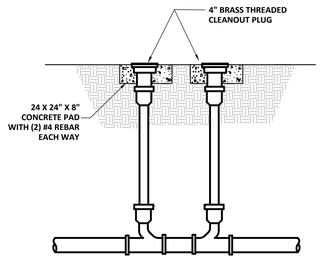
2 P0010 **RUNOUT ANCHOR DETAILS**



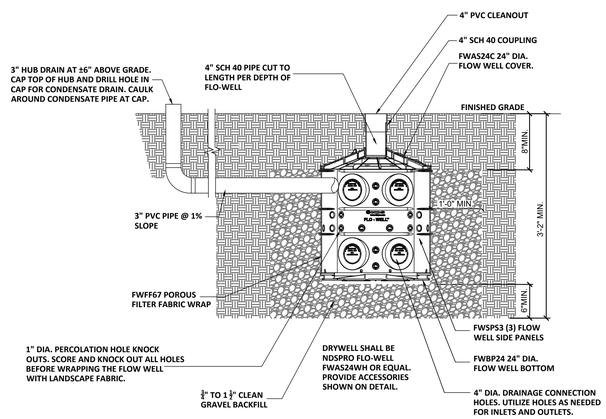
3 P0010 **CONDENSATE DRAIN BOX DETAIL**
SCHEMATIC ONLY



4 P0010 **CLEANOUT DETAIL**
SCHEMATIC ONLY



5 P0010 **EXTERIOR TWO-WAY CLEANOUT DETAIL**
SCALE: 1/4" = 1'-0"



6 P0010 **DRY WELL DETAIL**
SCHEMATIC

PLUMBING FIXTURE SCHEDULE

SYMBOL	FIXTURE	WASTE CONN. BRANCH	VENT	COLD WATER	HOT WATER	RIM HGT.	BASIS OF DESIGN
P-1	WATER CLOSET	4" / 4"	2"	1"	-	15"	SLOAN ST-2009-A-1.28 W.C. & 111 SMOOTH -1.28-HW-YJ FLUSH VALVE, BENEKE 527-SS WHITE SEAT (4)
P-2	WATER CLOSET (A.D.A. ADULT)	4" / 4"	2"	1"	-	18"	SLOAN ST-2029-A-1.28 W.C. & 111 SMOOTH -1.28-HW-YJ FLUSH VALVE, BENEKE 527-SS WHITE SEAT (4)
P-3	URINAL (A.D.A. ADULT)	2" / 2"	1-1/2"	3/4"	-	17"	SLOAN SU-7019-A URINAL & 186 SMOOTH-0.5 -HW -YJ FLUSH VALVE (4)
P-4	LAVATORY (WALL HUNG ADA)	1-1/4" / 2"	1-1/2"	1/2"	-		SLOAN SS-3003 LAVATORY & ETF-600-BOX-TEE -CP-0.5GPM-MLM-IR-BT-FCT FAUCET MCGUIRE 155WC DRAIN SMITH 710Z CARRIER (1) (5)
P-5	CONDENSATE DRAIN BOX	2" / 2"	1-1/2"	-	-	-	ACORN M8200-ES10 BOX WITH 1" DAM, LOCKING COVER & 2" DRAIN (3)
CO-1	CLEANOUT	-	-	-	-	-	SMITH 4031
CO-2	CLEANOUT (PLUG TYPE)	-	-	-	-	-	SMITH 4292
FD-1	FLOOR DRAIN (GENERAL)	-	-	-	-	-	SMITH 2005L (2) (3)
HB	HOSE BIBB	-	-	3/4"	-	-	SMITH 5609QT-SAP
WH	WALL HYDRANT	-	-	3/4"	-	-	SMITH 5609QT

PLUMBING FIXTURE SCHEDULE KEYNOTES

1. PROVIDE "TRUEBRO LAV GUARD" PROTECTIVE PIPE COVERS ON WASTE AND SUPPLY PIPING.
2. PROVIDE 7" STRAINER ON 3" DRAINS AND 9" STRAINER ON 4" DRAINS. PROVIDE ROUND TOP FOR ALL FLOOR DRAINS.
3. PROVIDE DRAIN TRAP SEAL DEVICE EQUAL TO MIFAB MI-GARD.
4. PROVIDE SLOAN EL-451 TRANSFORMER FOR EACH GROUP OF FLUSH VALVES, INSTALL ABOVE CEILING. PROVIDE SEPARATE TRANSFORMER FOR GIRLS AND BOYS RESTROOM. COORDINATE WIRING WITH ELECTRICAL DIVISION.
5. PROVIDE SLOAN EL-154 TRANSFORMER FOR EVERY TWO FAUCETS, INSTALL ABOVE CEILING. PROVIDE SEPARATE TRANSFORMER FOR GIRLS AND BOYS RESTROOM. COORDINATE WIRING WITH ELECTRICAL DIVISION.

GENERAL PLUMBING NOTES

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NOT ALL EXISTING WORK IS SHOWN AND THAT SHOWN IS IN ITS APPROXIMATE LOCATION AND ARRANGEMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATIONS, ARRANGEMENTS, SIZES AND CONDITIONS AND IN CASE OF DISCREPANCY TO CONTACT THE ARCHITECT FOR RELOCATION AND REMOVAL OF SAID ELEMENTS IN ACCORDANCE WITH THE BASIC INTENTIONS INDICATED BY THE DRAWINGS AND DETAILS. NOT ALL EXISTING WORK IS SHOWN AND THAT SHOWN IS IN ITS APPROXIMATE LOCATION AND ARRANGEMENT. EXACT LOCATION, ARRANGEMENT, AND SIZES SHALL BE VERIFIED ON THE JOB BEFORE PROCEEDING WITH ANY NEW WORK. EXACT LOCATIONS AND ROUGHING REQUIREMENTS FOR ALL FIXTURES AND EQUIPMENT SHALL BE DETERMINED FROM ARCHITECTURAL DRAWINGS, LARGE SCALE ARCHITECTURAL DETAILS AND APPROVED MANUFACTURER'S SHOP DRAWINGS. PARTICULAR ATTENTION SHALL BE DIRECTED TO FIXTURES OR EQUIPMENT FURNISHED UNDER OTHER DIVISIONS.

EXERCISE CARE SO AS NOT TO CUT ANY EXISTING UTILITIES OR SERVICES. WHERE AN EXISTING UTILITY LINE OR SERVICE LINE IS CUT IT SHALL BE REPAIRED TO "LIKE-NEW" CONDITION. INTERRUPTION OF SERVICE SHALL NOT BE MADE WITHOUT PRIOR WRITTEN PERMISSION OF THE OWNER.

EXACT LOCATIONS AND ROUGHING REQUIREMENTS FOR ALL FIXTURES AND EQUIPMENT SHALL BE DETERMINED FROM ARCHITECTURAL DRAWINGS, LARGE SCALE ARCHITECTURAL DETAILS AND APPROVED MANUFACTURER'S SHOP DRAWINGS. INVERT ELEVATIONS SHOWN SHALL BE VERIFIED ON THE JOB BEFORE INSTALLING ANY NEW PIPE. INSTALL TEST-TEES WHEN THE SANITARY SEWER SYSTEM IS TO BE TESTED IN SECTIONS. PIPING IS SHOWN IN ITS GENERAL LOCATION (UNLESS DIMENSIONED).

RISERS FOR FIXTURES, UNLESS OTHERWISE NOTED, SHALL BE CONCEALED IN WALLS OR PIPE CHASES.

REFER TO ARCHITECTURAL FINISH SCHEDULE AND ELEVATIONS FOR DETAILS OF FLOORS WHERE FLOOR DRAINS AND CLEANOUTS ARE LOCATED.

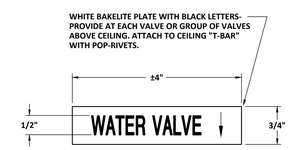
PROVIDE SLEEVES FOR PIPES PASSING THRU FLOORS, MASONRY WALLS AND FIRE OR SMOKE PARTITIONS. PACK ANNULAR SPACE BETWEEN PIPE WITH MATERIAL APPROVED IN U.L. BUILDING DIRECTORY.

PROVIDE DRAIN TRAP SEALS FOR ALL HUB DRAINS, FLOOR DRAINS & FLOOR SINKS.

VENT TERMINALS SHALL NOT BE LOCATED WITHIN 10' OF FRESH AIR INTAKE. COORDINATE WITH APPROPRIATE TRADE.

PLUMBING LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	WASTE OR SANITARY SEWER		SHUTOFF VALVE
	VENT		COLD WATER
ECO	EXISTING CLEANOUT	CO	CLEANOUT
N/E	NEW WORK CONNECTION TO EXISTING WORK	FD	FLOOR DRAIN
-ESS-	EXISTING WASTE OR SANITARY SEWER	PDI'X'	WATER HAMMER ARRESTOR
-ECW-	EXISTING COLD WATER		



1 P0010 **WATER VALVE LOCATOR TAG**
NOT TO SCALE

PFA ENGINEERING
PRUETT, FORD & ASSOCIATES, INC.
LIC. NO. PEF000760 EXP. 06/30/2022
1201 BROAD STREET, SUITE 3A
AUGUSTA, GEORGIA 30901
706/722-3959*FAX 706/724-5127

1/4 1/2 3/4 1" REFERENCE SCALE

PLOT DATE: 02/19/21
FILENAME: 20098PLBG
PLOT SCALE: 1 = 96
MFJ

Altman + Barrett

GEORGIA REGISTERED No. 22583 PROFESSIONAL ENGINEER LEE C. POWELL 2/19/2021

a+b architects

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DATE: January 14, 2021
DRAWN: MFJ
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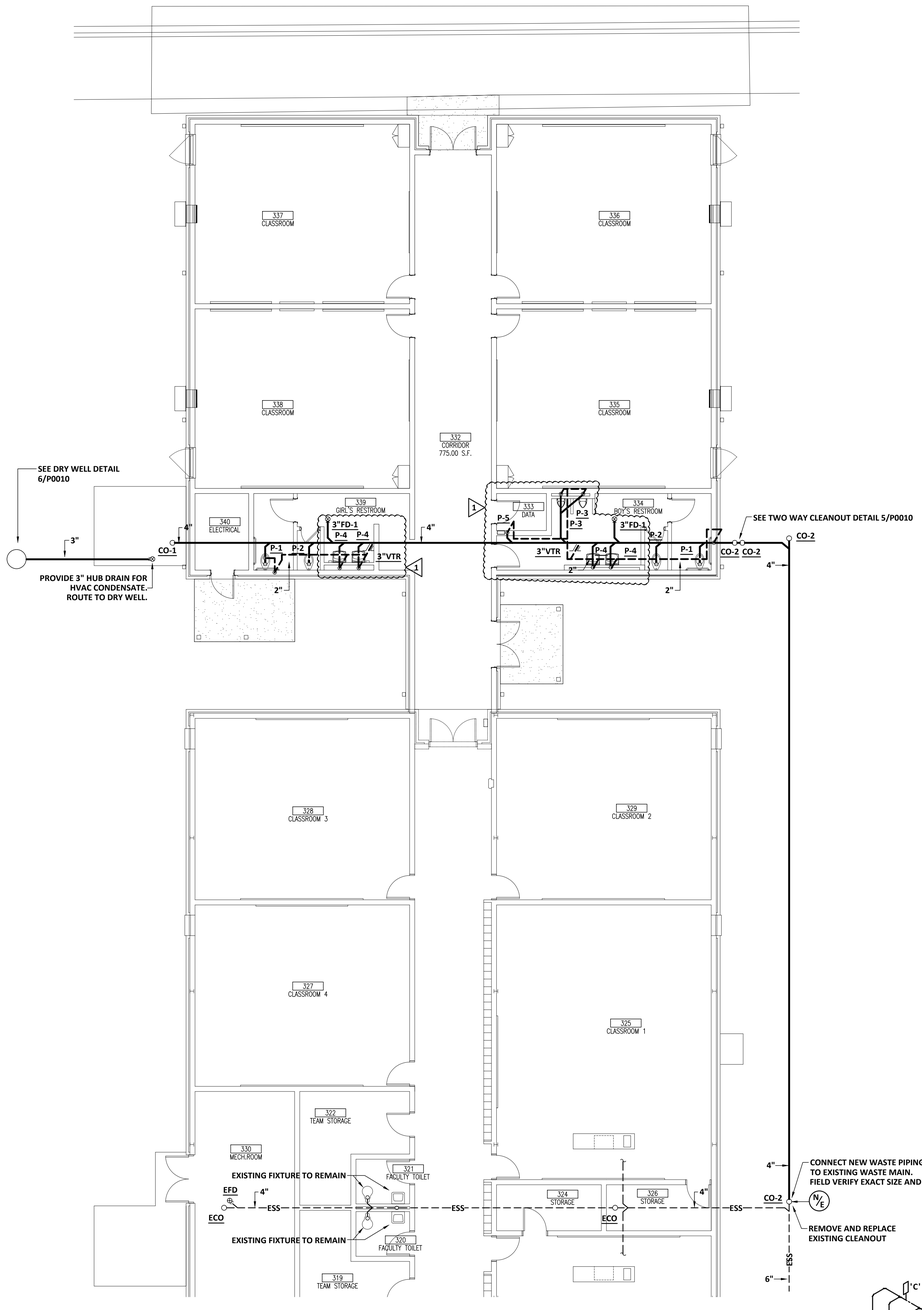
Building Addition to JL Newbern Middle School

Valdosta City School System
2015 East Park Ave. Valdosta, GA 31602

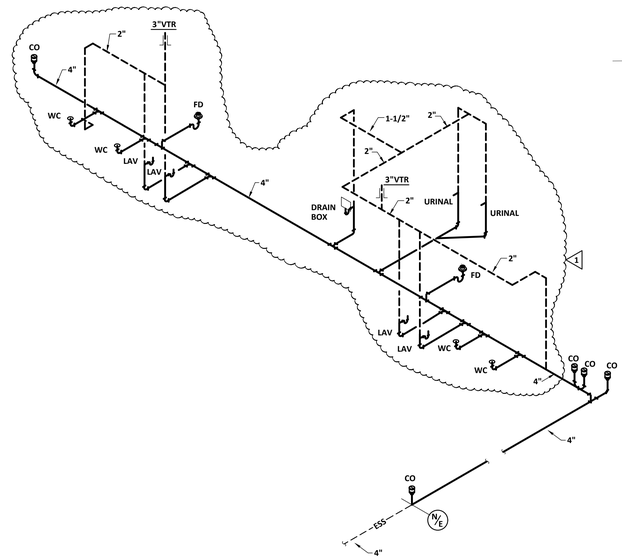
P0010

PROJECT NO: 20031

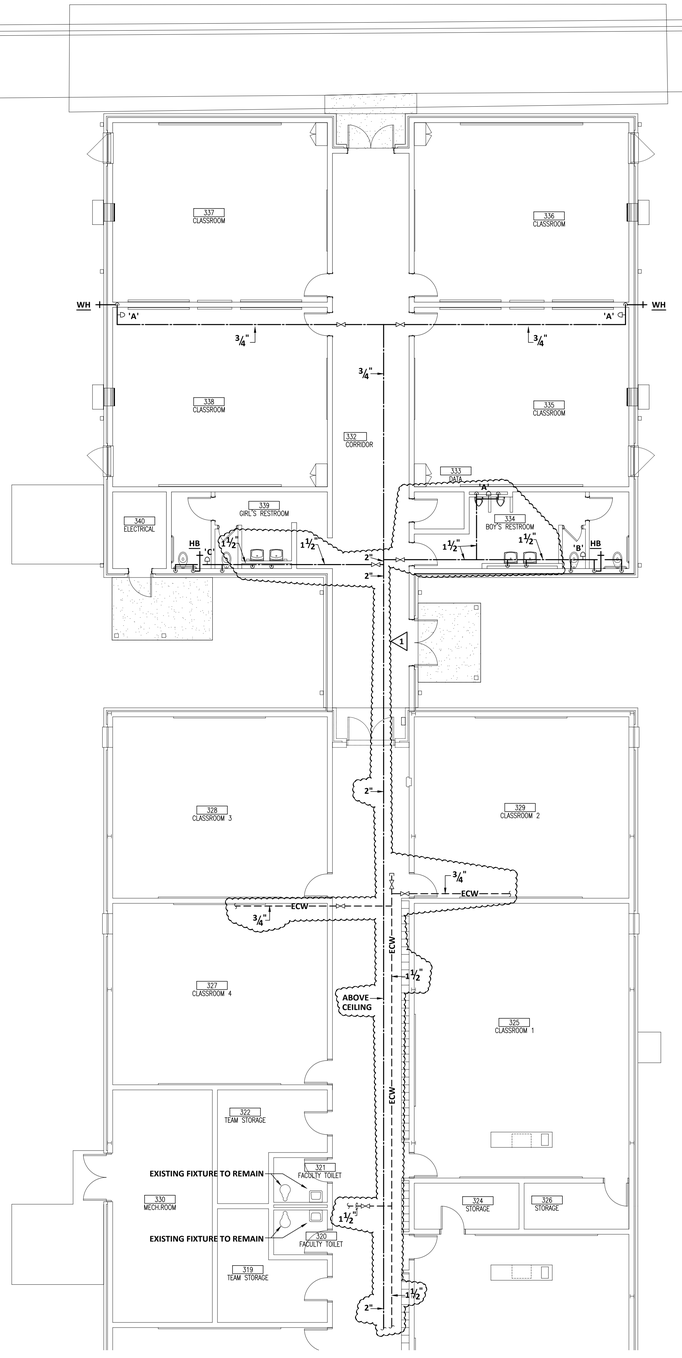
Altman + Barrett architects



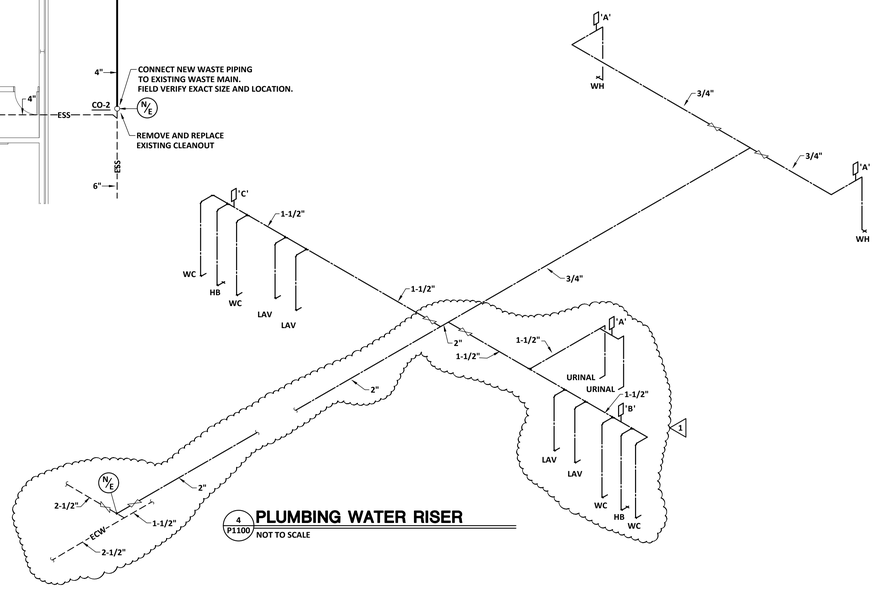
1 P1100 **PLUMBING NEW WORK PLAN - WASTE & VENT**
SCALE: 1/8" = 1'-0"



3 P1100 **PLUMBING WASTE & VENT RISER**
NOT TO SCALE



2 P1100 **PLUMBING NEW WORK PLAN - WATER**
SCALE: 1/8" = 1'-0"



4 P1100 **PLUMBING WATER RISER**
NOT TO SCALE

GENERAL PIPING NOTE
PROVIDE BRAZED JOINTS ON ALL COPPER PIPE FITTINGS.
SEE SPECIFICATIONS FOR BRAZING REQUIREMENTS.
PROVIDE THREADED CONNECTIONS AT BALL VALVES.

PFA ENGINEERING
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PLOT DATE: 02/19/21
FILENAME: 20098P1BG
PLOT SCALE: 1 = 96
MFJ

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ab architects

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P1100

PROJECT NO: 20031

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GENERAL NOTES:

1. DO NOT SCALE DRAWINGS TO LOCATE EQUIPMENT.
2. ALL SYSTEM HEAD END EQUIPMENT SHOWN PER THIS SHEET ARE APPROXIMATE LOCATIONS. CONTRACTOR IS TO FIELD CONFIRM EXACT LOCATIONS, FIELD LOCATIONS SHALL GOVERN.
3. ALL CONDUIT SHOWN TO RUN INSIDE OF EXISTING BUILDING SHALL BE INSTALLED ABOVE CEILING. COORDINATE ROUTING WITH EXISTING CONDITIONS AND PROVIDE PROPER SUPPORT FOR CONDUITS. PROVIDE ALL REQUIRED JUNCTION BOXES AND MISCELLANEOUS MATERIAL FOR A COMPLETE INSTALLATION. ROUTING SHOWN IS APPROXIMATE. CONTRACTOR IS TO CONFIRM ROUTING WITH EXISTING CONDITIONS PRIOR TO INSTALLATION.
4. CONTRACTOR IS TO COORDINATE WITH OWNER FOR DATES AND TIMES TO INSTALL CONDUITS AND CONNECTIONS TO EXISTING EQUIPMENT. IF REQUIRED BY OWNER TO PERFORM THESE TASK ON NIGHTS, WEEKENDS, HOLIDAYS, ETC., CONTRACTOR IS TO INCLUDE SUCH COST IN BASE BID.

KEYED NOTES:

1. DEMOLISH EXISTING 112.5 KVA TRANSFORMER FEEDING PORTABLES, REMOVE CONDUIT/ WIRE FROM PANEL HC TO TRANSFORMER. REMOVE ALL WIRE FROM TRANSFORMER TO PORTABLES. REMOVE DISCONNECTS AND CONDUIT ON INSIDE OF EXTERIOR WALL FROM DISCONNECT TO 90° ELBOW. ALL CONDUIT AND JUNCTION BOX FROM 90° ELBOW TO OUTSIDE OF PORTABLES ARE TO BE LEFT IN PLACE FOR OWNER'S FUTURE USE. FIELD CONFIRM EXACT LOCATION OF EXISTING PORTABLES
2. PROPOSED OVERHEAD ROUTING OF POWER TO FEED PANEL HCA. FIELD CONFIRM EXACT ROUTING.
3. PROPOSED OVERHEAD ROUTING OF FIBER TO FEED NEW DATA RACK. FIELD CONFIRM EXACT ROUTING.
4. PROPOSED OVERHEAD ROUTING OF LOW VOLTAGE SYSTEMS TO FEED DEVICES IN NEW ADDITION. FIELD CONFIRM EXACT ROUTING.
5. INTERCEPT EXISTING 2" FEED GOING TO TRACK DISCONNECT ON CONCRETE BASE. SPLICE AND EXTEND NEW CONDUIT AND WIRE FROM NEW PULL BOX TO PANEL LCA.
6. EXISTING TOSHIBA "IP" CAMERA SYSTEM TO BE EXPANDED WITH OPEN-EYE SERVER HARD DRIVE (NO EQUALS) TO FULLY INTERCONNECT TO VALDOSTA CITY SCHOOLS SCS MONITORING NETWORK.

2"C.,4#6,1#10G

LCA-32

NEW ADDITION.

CANOPY WALKWAY

EXISTING PANEL HC

EXISTING T.V. DISTRIBUTION HEAD END EQUIPMENT

EXISTING MDF

EXISTING OPEN EYE CCTV HEAD END

EXISTING TELCOR SOUND RACK

EXISTING NOTIFIER FIRE ALARM CONTROL PANEL

EXISTING DSC INTRUSION ALARM CONTROL PANEL

EXISTING TELEPHONE BACKBOARD

1 E1001 ELECTRICAL COMPOSITE PLAN
SCALE: 1"=20'-0"

NORTH
TRUE NORTH
KEY PLAN

GEORGIA REGISTERED NO. PE32693 PROFESSIONAL ENGINEER JAMES E. FLEMINGTON

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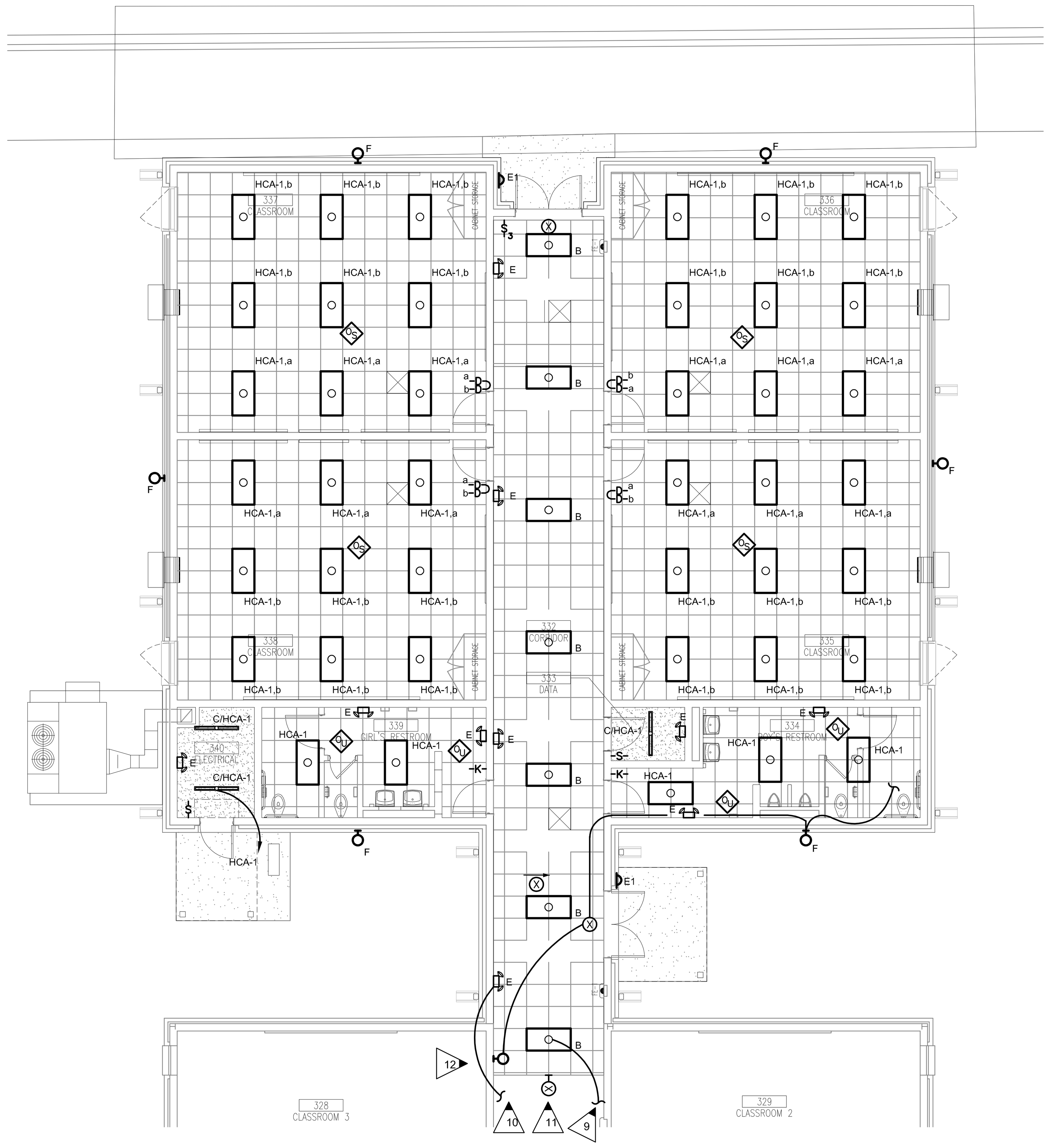
Valdosta City School System
2015 East Park Ave. Valdosta, GA 31602

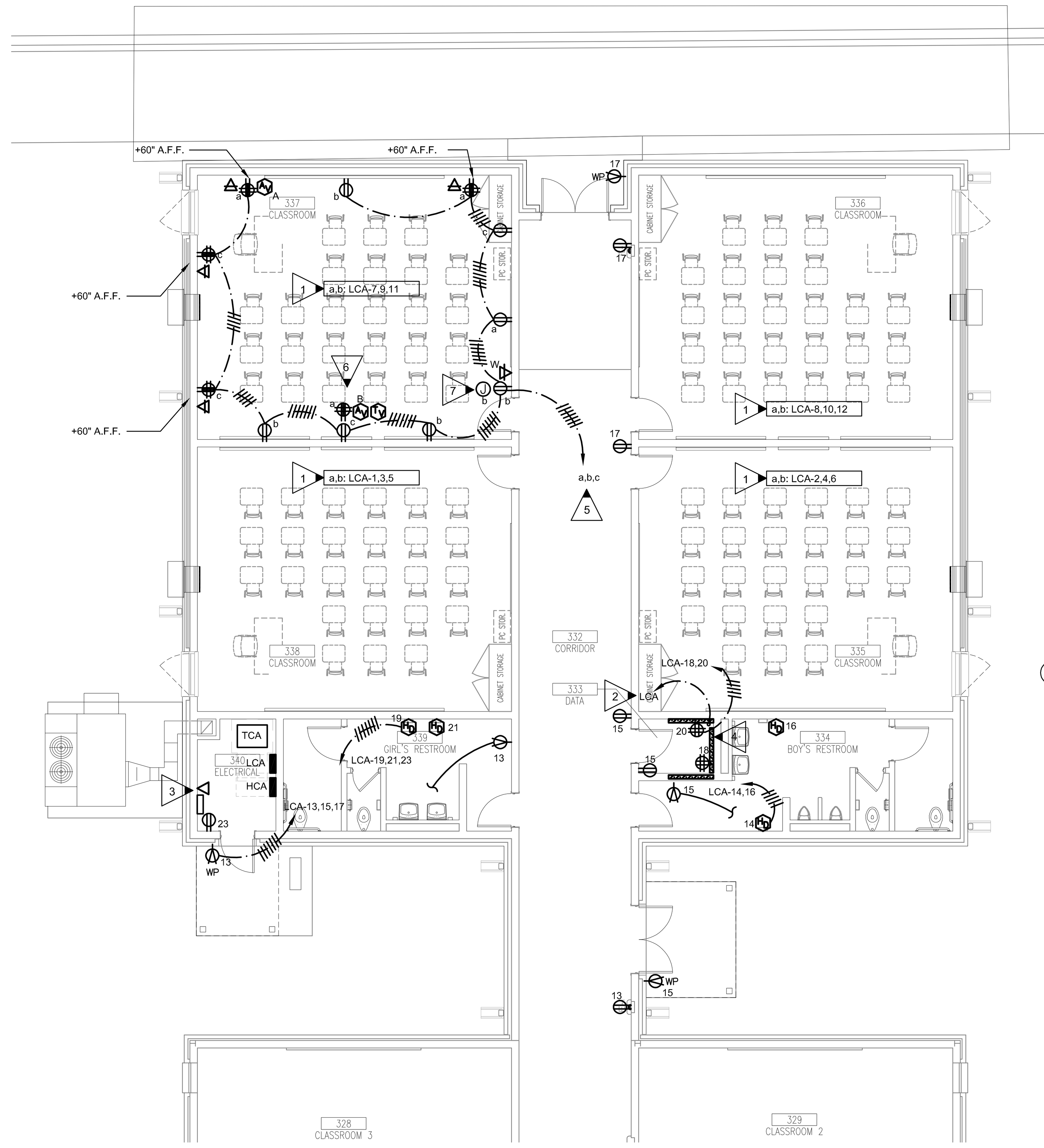
E1001

FACILITY NO: 792-0195

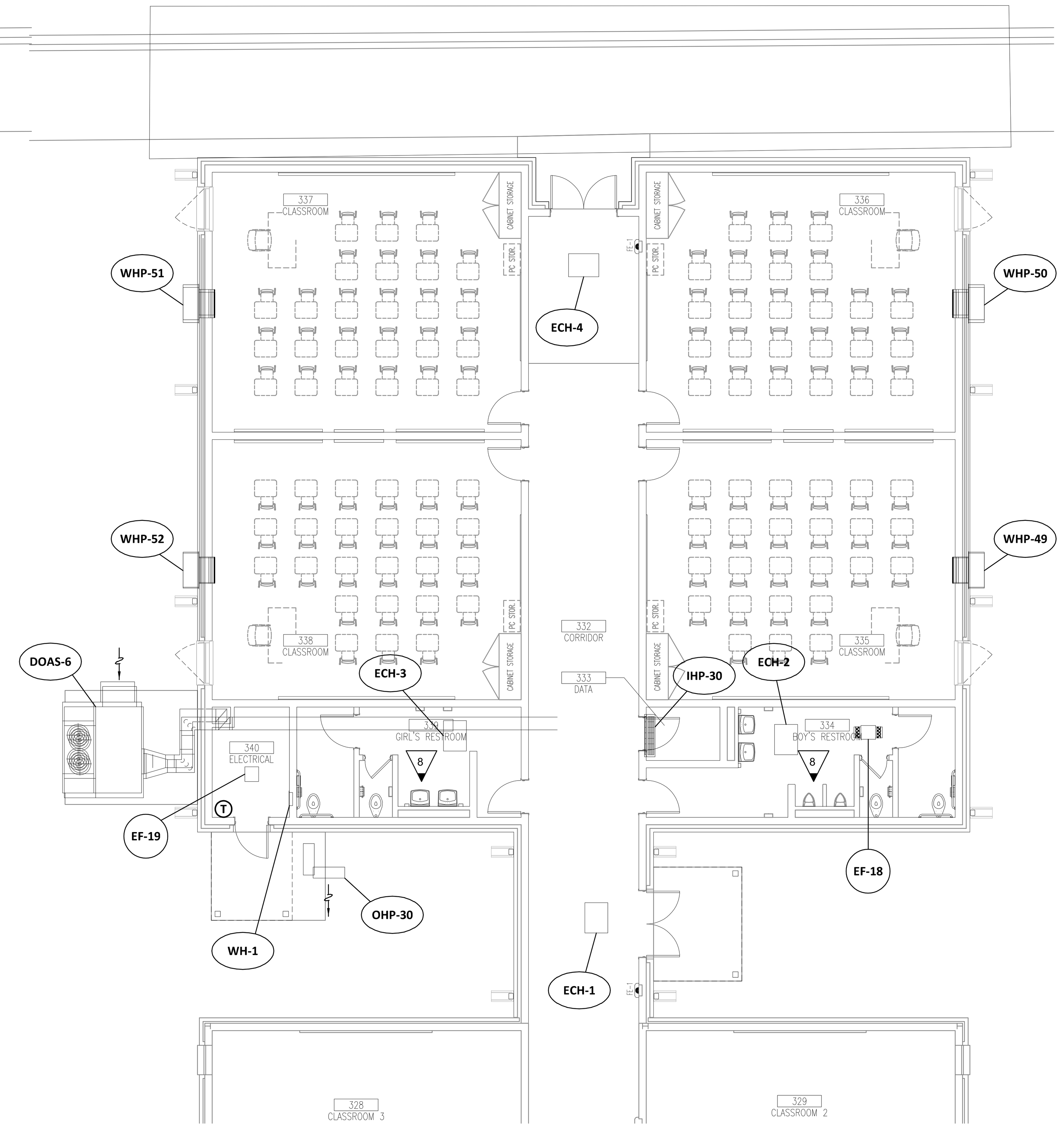
PROJECT NO: 20031



1 / E2000 LIGHTING PLAN
SCALE: 1/8"=1'-0"



2 / E2000 POWER PLAN
SCALE: 1/8"=1'-0"



3 / E2000 MECHANICAL POWER PLAN
SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. ALL FIXTURES ARE TYPE "A" UNLESS OTHERWISE NOTED.
2. OCCUPANCY SENSOR SHALL BE LOCATED TO PROVIDE MAXIMUM COVERAGE FOR ROOM. REFER TO DETAILS AND MANUFACTURER LAYOUT FOR CONNECTIONS.
3. IN ALL INSTRUCTIONAL SPACES, SWITCH ROW OF LIGHTS NEAREST MARKER BOARD/INTERACTIVE WHITE BOARD SEPARATELY FROM OTHER FIXTURES IN THIS SPACE. COORDINATE MARKER BOARD/INTERACTIVE WHITE BOARD LOCATION WITH ARCHITECTURAL DRAWINGS.
4. PROVIDE UNSWITCHED "HOT" CONDUCTOR TO ALL TYPE E, TYPE E1, AND EXIT LIGHTS.
5. LOWER CASE LETTERS AT SWITCHES AND LIGHT FIXTURES ON THIS SHEET ARE SHOWN TO CLARIFY THE FIXTURES BEING CONTROLLED BY THE ASSOCIATED SWITCHES. SEE LIGHT FIXTURE DESIGNATION DESCRIPTION ON THIS SHEET.
6. CONTRACTOR SHALL PROVIDE CLASS 2 600 VOLT RATED, 0-10 VOLT CONTROL WIRING FOR ALL L.E.D. FIXTURES WHERE CONTROLLED BY LOW-VOLTAGE CONTROLLER OR WALLBOX DIMMER. **CONTROL WIRING SHALL BE ROUTED IN SAME CONDUIT AS LINE-VOLTAGE CONDUCTORS.** CONTROL WIRING SHALL BE A MINIMUM #18 AWG COPPER TWISTED PAIR (PURPLE AND GRAY), JACKETED CABLE (TYPE 1TPJ) AND INSTALLED IN CONDUIT AND FLEX WHIPS TO FIXTURES. CONTRACTOR TO NOTE THAT THESE CONDUCTORS ARE **NOT** SHOWN IN THE LINE VOLTAGE CONDUCTOR COUNT.
7. HOMERUN CIRCUITS ARE SHOWN AS NOTED. PROVIDE ALL BRANCH CIRCUIT CONDUIT/CONDUCTORS/TRAVELERS AS NECESSARY TO CONNECT ALL DEVICES SHOWN ON THE CIRCUIT. PROVIDE DEDICATED NEUTRALS FOR ALL CIRCUITS.
8. REFER TO MECHANICAL CONNECTION SCHEDULES FOR CIRCUIT DESIGNATIONS; WIRE AND CONDUIT SIZE; DISCONNECT MEANS; AND OTHER ELECTRICAL REQUIREMENTS FOR MECHANICAL, PLUMBING AND FIRE PROTECTION EQUIPMENT. SEE SHEET E4000.
9. COORDINATE EXACT LOCATIONS OF ALL EQUIPMENT WITH MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS.
10. SEE MECHANICAL DRAWINGS FOR LOCATIONS OF SWITCHES FOR FANS.
11. PROVIDE 120V CONTROL POWER TO ALL HVAC CONTROL PANELS. SEE MECHANICAL DRAWINGS FOR EXACT LOCATION AND POWER PLANS FOR CIRCUITING.
12. SEE DETAILS ON SHEET E4000 FOR APPLICABLE HVAC ROUGH-IN DETAILS.
13. LOCATE DISCONNECT AT UNIT AS REQUIRED TO MAINTAIN PROPER CLEARANCES PER NEC.
14. ALL EXTERIOR DISCONNECTS SHALL BE RATED NEMA 3R RATED.

KEYED NOTES:

1 TYPICAL CLASSROOM. REFER TO ROOM 337 FOR DEVICES AND ROOM LAYOUT.

2 PROVIDE 1"C.,1#6 GROUND ROUTED TO GROUND BAR IN PANEL INDICATED. PROVIDE GROUND BAR AND GROUND ALL RACKS IN THIS SPACE.

3 DATA OUTLET FOR HVAC CONTROL PANEL. COORDINATE WITH DIVISION 23 FOR EXACT ROUGH IN CONNECTION AND LOCATION.

4 3/4" X 8' FIRE RATED PLYWOOD BACKBOARD SPANNING BACK WALL. PAINT FLACK BLACK.

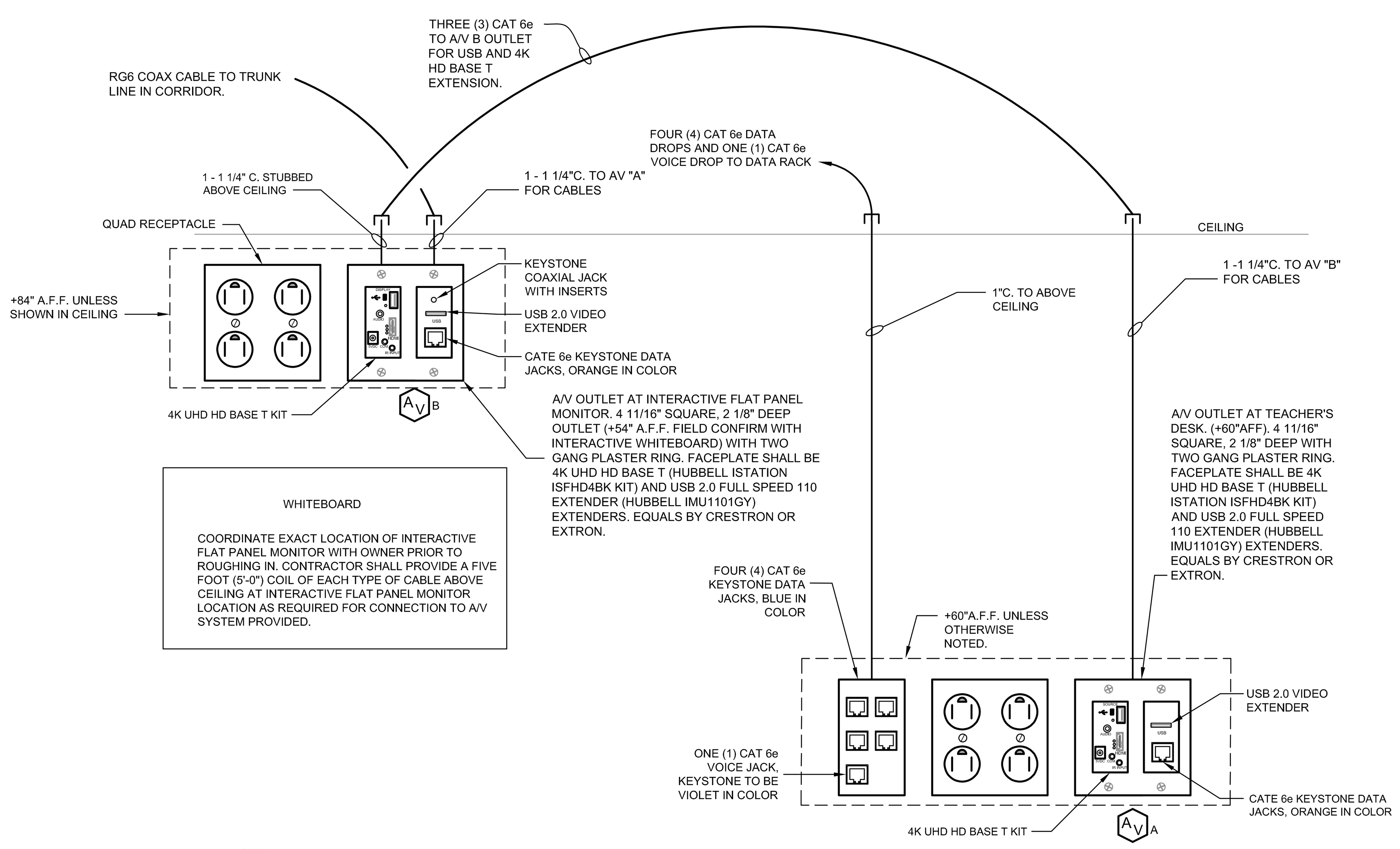
5 CIRCUIT SHALL BE AS DESIGNATED IN EACH ROOM.

6 SEE DETAIL 4/E2000 FOR BOX ROUGH IN REQUIREMENTS.

7 JUNCTION BOX LOCATED ABOVE DROP TILE CEILING. CAP OFF 120 VOLT CONDUCTORS AND LABEL BOX COVER AS "SPARE 120 VOLT POWER".

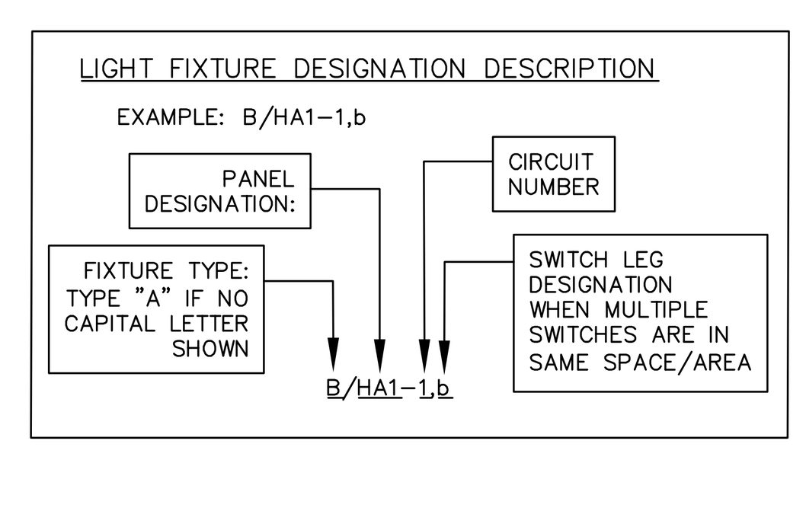
8 PROVIDE 120V CONNECTION TO ELECTRIC FLUSH VALVE TRANSFORMER LOCATED ABOVE CEILING. REFER TO DETAIL 5/E2000 FOR ALL REQUIREMENTS FOR BACKBOXES AND CONDUIT FOR A COMPLETE SYSTEM.

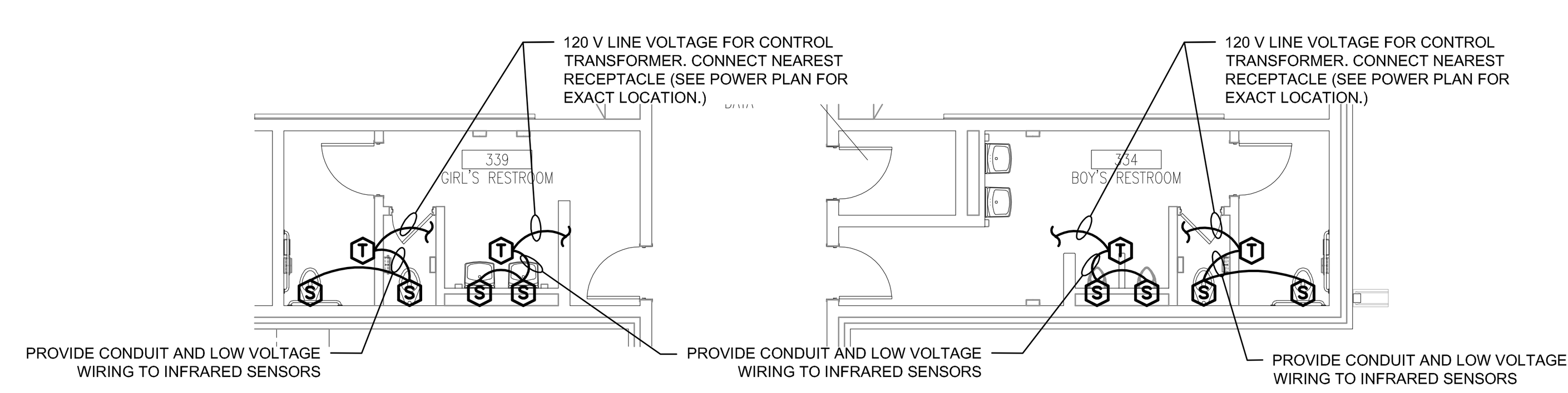
9 INTERCEPT EXISTING CIRCUIT [TRAVELER #1, TRAVELER #2, GROUND, NEUTRAL, AND SWITCH LEG] AND EXTEND TO NEW TYPE B FIXTURES IN CORRIDOR. DEMOLISH EXISTING 3 WAY SWITCH ON EXISTING EXTERIOR WALL. INSTALL NEW 3 WAY SWITCH ON NEW EXTERIOR WALL.



NOTE:
1. PRIOR TO PURCHASE OF ANY A/V INFRASTRUCTURE EQUIPMENT. CONTRACTOR SHALL INSTALL ONE CLASSROOM AS MOCK UP FOR THE OWNER TO REVIEW AND APPROVE PRIOR TO PURCHASE OR INSTALLATION OF ADDITIONAL CLASSROOMS.
2. TYPICAL FOR ALL INSTRUCTIONAL SPACES AND IN OTHER AREAS SHOWN ON THE PLANS REFER TO SPECIFICATIONS FOR ALL REQUIRED CLASSROOM/ INSTRUCTIONAL SPACE A/V EQUIPMENT.

4 / E2000 AUDIO / VISUAL OUTLET DETAIL
SCALE: NONE





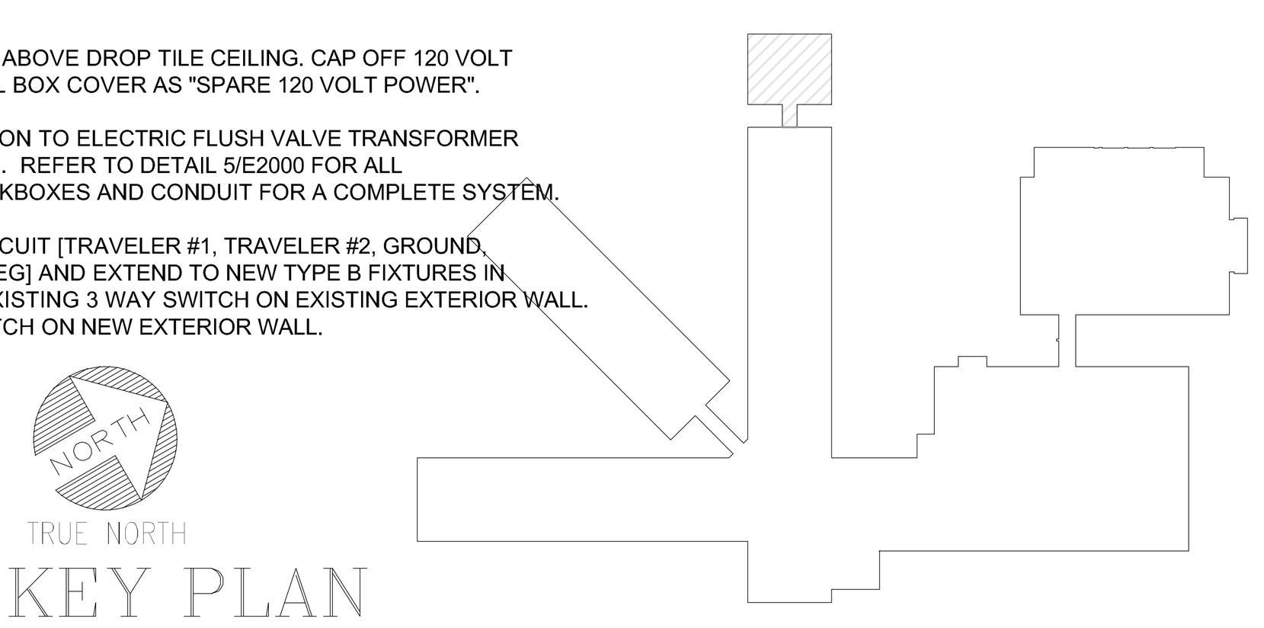
5 / E2000 GANG RESTROOM ELECTRIC FLUSH VALVES DETAIL
SCALE: NONE

KEYED NOTES:

10 INTERCEPT EXISTING CIRCUIT (UNSWITCHED HOT, GROUND, AND NEUTRAL) AND EXTEND TO ALL EXIT LIGHTS, TYPE E LIGHTS, AND TYPE E1 LIGHTS.

11 DEMOLISH EXISTING EXIT SIGN ON EXISTING EXTERIOR WALL.

12 DEMOLISH EXISTING EXTERIOR WALL PACK. INTERCEPT CIRCUIT IN 1/2"C., 3#12 AND EXTEND TO NEW TYPE F LIGHT FIXTURES.



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2015 East Park Ave. Valdosta, GA 31602

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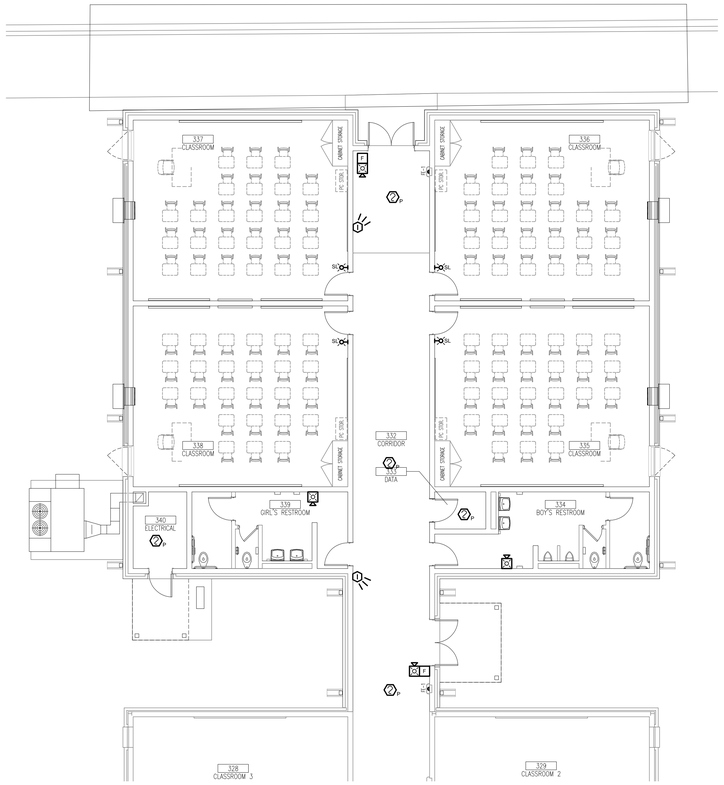
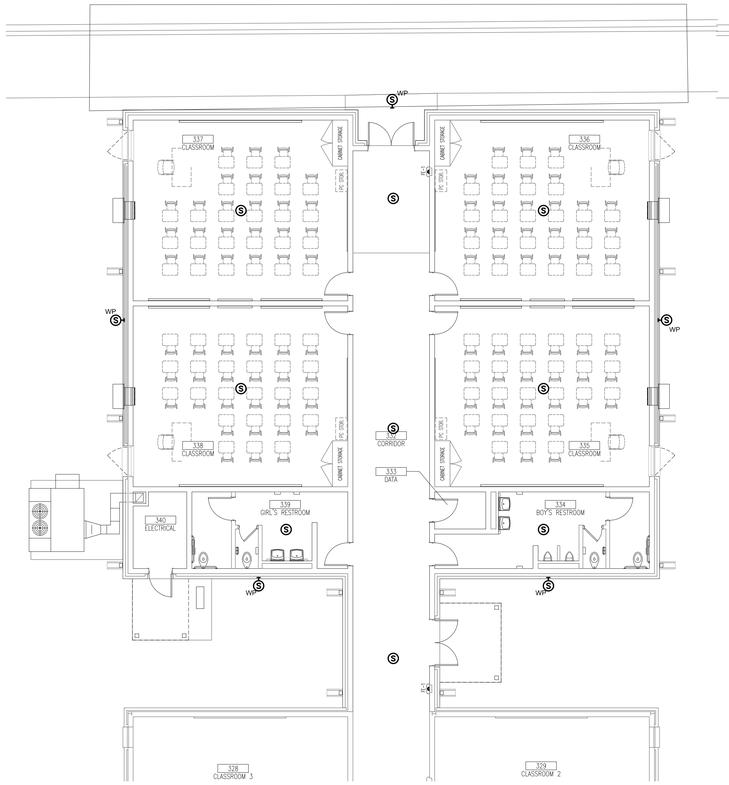
FACILITY NO: 792-0195

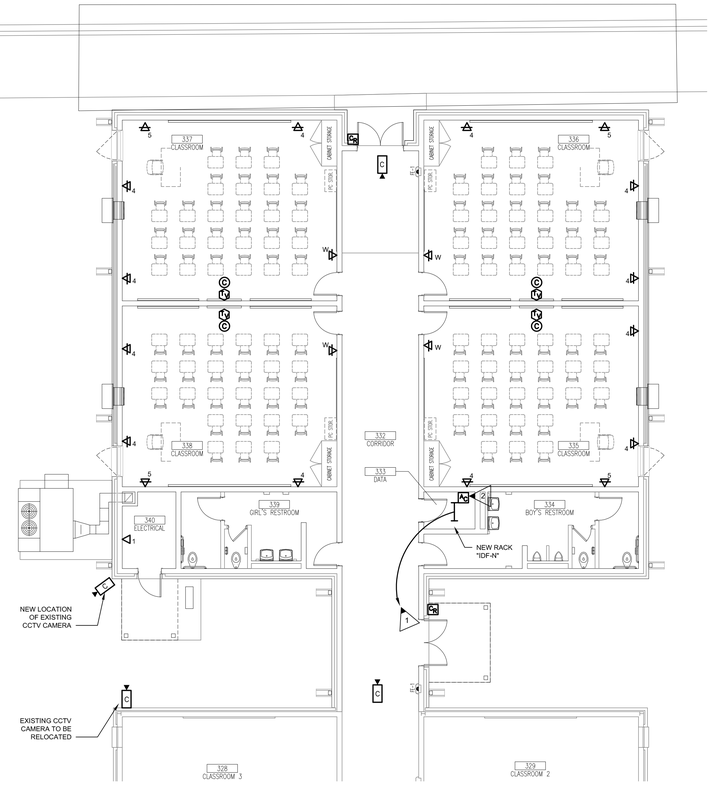
PROJECT NO: 20031



1 E3000 FIRE/INTRUSION ALARM SYSTEMS PLAN
SCALE: 1/8"=1'-0"



2 E3000 INTERCOM SYSTEM PLAN
SCALE: 1/8"=1'-0"



3 E3000 DATA NETWORKING, ACCESS CONTROL, CATV AND CCTV SYSTEM PLAN
SCALE: 1/8"=1'-0"

DATA/VOICE CABLING LEGEND

- WALL MOUNTED (UNLESS NOTED OTHERWISE ON DRAWINGS) DATA OUTLET. TWO (2) CATEGORY 6e CABLE DROPS, TWO (2) CATEGORY 6e JACKS, NUMBER DESIGNATES QUANTITY OF DROPS.
- WALL MOUNTED (UNLESS NOTED OTHERWISE ON DRAWINGS) DATA OUTLET. TWO (2) CATEGORY 6e CABLE DROPS, TWO (2) CATEGORY 6e JACKS. NUMBER DESIGNATES QUANTITY OF DROPS.
- E — EMPTY BOX WITH ONE (1) GANG STAINLESS STEEL BLANK PLATE. PROVIDE PULL STRING IN EMPTY CONDUIT TO ABOVE ACCESSIBLE CEILING.
- W — "W" WHERE SHOWN, INDICATES TWO (2) CAT 6A (AUGMENTED) DATA DROPS 6" ABOVE DROP TILE CEILING OR AT STRUCTURE TO SERVE OWNER PROVIDED WIRELESS ACCESS POINT, PROVIDE TWO (2) 20' - PURPLE PATCH CORDS AT EACH "W" LOCATION SHOWN.
- ONE(1) VOICE DROP, HARD WIRED, NON VOIP
- C — CCTV CAMERA, ONE(1) CAT 6e DATA DROP PER CAMERA.

GENERAL NOTES: (DATA/VOICE CABLING)

1. ADDITIONAL WALL SLEEVES AND WALL PENETRATIONS, WILL BE REQUIRED FOR NETWORK CABLING. PROVIDE AS NECESSARY AND FIRESTOP ALL PENETRATIONS THROUGH RATED WALLS.
2. ALL CABLING SHALL BE BUNDLED AND SUPPORTED BY STRUCTURE ABOVE OR BY WALL AT EVERY 4-5 FEET. SUPPORT OF CABLING BY CEILING GRID OR GRID SUPPORT WIRES IS NOT ACCEPTABLE. PROVIDE D-RINGS, J-HOOKS OR OTHER SUPPORT MEANS AS PER EIA/TIA STANDARDS. ROUTE IN CABLE TRAY WHERE TRAY IS SHOWN.
3. ALL CABLING SHALL BE PLENUM RATED. OUTER JACKET ON ENHANCED CAT, 6e DATA CABLING SHALL BE BLUE, VOICE / VOIP SHALL BE WHITE, CCTV CABLING SHALL BE PINK AND WIRELESS CABLING SHALL BE PURPLE.
4. ALL DATA OUTLET JACKS SHALL BE PROVIDED WITH THE FOLLOWING LABELING NOMENCLATURE:

   X XXX
   - SEQUENTIAL NUMBER LEFT TO RIGHT BEGINNING WITH TOP PATCH PANEL TO LAST PATCH PANEL IN RACK, IE, 1-223, 1-224
   - "M" FOR MDF OR "X" FOR IDF-X DESIGNATION FROM WHICH JACK IS SERVED.

   ALL PATCH PANELS AND 110 BLOCKS SHALL BE CORRESPONDINGLY LABELED.
5. PROVIDE METAL D-RING OR RING RUNS AS NECESSARY TO PROPERLY LACE AND SUPPORT ALL VOICE CABLING AT TELEPHONE BACKBOARDS.
6. PROVIDE BRUSHED STAINLESS STEEL, TYPE 302 COVER PLATES, WITH KEYSTONE JACKS, COLOR AS NOTED. DATA = BLUE, VOICE = WHITE, CCTV = PINK, WIRELESS DROPS = PURPLE.
7. GROUND ALL RACKS WITH #6 COPPER LOCATED AT EACH BACKBOARD. SEE DRAWINGS FOR PANEL DESIGNATIONS, LOCATE RACKS A MINIMUM OF 2.5' OFF OF WALL. PROVIDE 12" CABLE RUNWAY SPANNING FROM TOP OF RACK TO WALL AND TURNED UP TO ABOVE DROP TILE CEILING IN ORDER TO ROUTE CABLE TO RACK. AT EACH RACK LOCATION PROVIDE A 3/4"x4'x8' PLYWOOD BACKBOARD PAINTED WITH TWO COATS OF BLACK FIRE RETARDANT PAINT. LOCATE 110 BLOCKS ON BACKBOARD. "IDF" RACK WITH ALL ELECTRONIC SHALL BE 4 POST.
8. TY-WRAPS SHALL NOT BE CINCHED DOWN TIGHT ENOUGH TO DEFORM CABLES. MAINTAIN MINIMUM BEND RADIUS ON FIBER, TIE CABLES, STATION WIRES, AND PATCH CORDS.
9. ALL DATA / VOICE / CCTV CABLING SHALL BE ENHANCED CAT, 6e AS NOTED IN SPECIFICATIONS. (NO EXCEPTIONS). WAP (W) CABLING SHALL BE CAT.6A (AUGMENTED), (NO EXCEPTIONS).
10. INCLUDE IN BASE BID TWELVE (12) ADDITIONAL TELECOMMUNICATIONS DROPS TO BE LOCATED BY OWNER/ENGINEER. INCLUDE ALL LABOR AND TESTING FOR A COMPLETE INSTALLATION.
11. TIE CABLE SHALL BE CAT-3, IF ROUTED UNDERGROUND, PROVIDE UNDERGROUND DUCT RATED CABLE.
12. ALL DATA / VOICE / CCTV / WAP CABLING SHALL BE LANDED ON DEDICATED PATCH PANELS IN DATA RACK INDICATED, SEE DETAILS ON THIS SHEET.
13. ANY DATA DROPS ROUTED IN UNDERGROUND CONDUIT SHALL BE UNDERGROUND DUCT RATED.
14. SEE CCTV PLAN FOR CAMERA LOCATIONS, PULL CAT 6E TO EACH CAMERA.
15. PROVIDE PATCH CORDS AT STATION END AND RACK END. PATCH CORDS SHALL BE COLOR CODED TO MATCH CABLE. SEE SPECIFICATIONS FOR PATCH CORD INFORMATION. PROVIDE 3', 5', OR 7' PATCH CORDS AT RACK END, LENGTH AS REQUIRED FOR PROPER CORD LACING. PROVIDE 10' CORDS AT STATION END OR 25' AS REQUIRED FOR COMPUTER ROOMS.
16. ALL DATA ELECTRONICS, WAPS, AND VOIP SYSTEM COMPONENTS ARE NIC AND PROVIDE BY OWNER.
17. PRIOR TO ROUGH IN AND INSTALL OF ANY PATCH PANELS OR EQUIPMENT, COORDINATE AN ON-SITE MEETING WITH OWNER (VCSS IT DEPARTMENT), ADJUST SPACING OF EQUIPMENT AND MOUNTING AS DIRECTED BY OWNER
18. DURING SUBMITTAL PHASE, DATA/VOICE CABLING CONTRACTOR SHALL SUBMIT A CABLE ROUTING PLAN SHOWING PROPOSED CABLE ROUTING AND NOTE CABLE DISTANCES (DISTANCE TO INCLUDE SERVICE LOOPS). CABLING DISTANCES SHALL NOT EXCEED 300 FEET. ANY DISCREPANCES SHALL BE BROUGHT TO THE ENGINEERS ATTENTION.

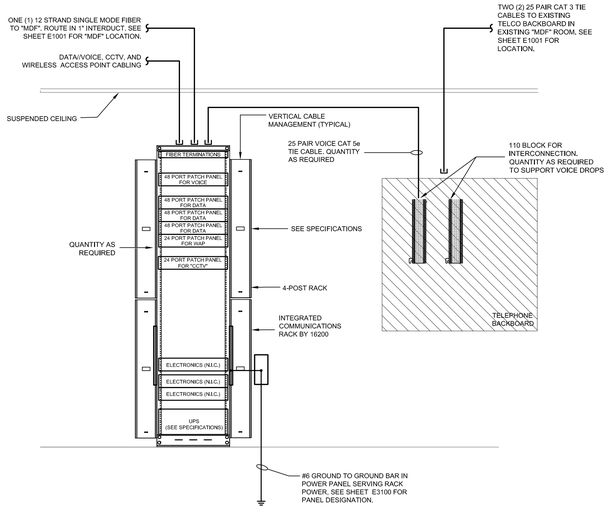
GENERAL NOTES:

1. TELECOMMUNICATIONS SHALL BE USED TO REFER TO ALL DATA/VOICE CABLING.
2. SEE INDIVIDUAL 1/8" POWER PLANS FOR EXACT TELECOMMUNICATIONS LOCATIONS.
3. ALL DATA DROPS LOCATED IN AREAS WITH EXPOSED STRUCTURE SHALL BE ROUTED IN CONDUITS.
4. COORDINATE ALL FIBER TERMINATION REQUIREMENTS WITH OWNER AND PROVIDE FIBER CONNECTOR TYPE AS REQUIRED.
5. ALL LOW VOLTAGE SYSTEM STUB UP CONDUITS SHALL HAVE A 90 DEG. ELBOW TURNED OUT ABOVE CEILING AND TERMINATED WITH AN ARLINGTON BUSHING.
6. LOW VOLTAGE SYSTEMS CONDUIT REQUIREMENTS;
   A) FIRE ALARM SYSTEM CABLING SHALL BE IN CONDUIT, ALL CONDUIT, BACKBOXES, AND COVERS SHALL BE PAINTED RED (ENTIRELY).
   B) ALL DATA/VOICE BACKBOXES AND STUB UP CONDUIT SHALL BE PAINTED BLUE (ENTIRELY).
   C) ALL A/V BACKBOXES AND STUB UP CONDUIT SHALL BE PAINTED GREEN (ENTIRELY).
   D) ALL LOW VOLTAGE CABLING FREE AIRED ABOVE ACOUSTICAL TILE IN CORRIDOR ONLY SHALL BE PLENUM RATED AND J-HOOKED TO DATA RACK, WHERE CABLE IS ROUTED CONCEALED DOWN IN WALLS, ABOVE INACCESSIBLE CEILINGS OR IN AREAS WITH EXPOSED STRUCTURE (NO ACOUSTICAL TILE CEILING), LOW VOLTAGE CABLING SHALL BE INSTALLED IN CONDUIT.
8. REFER TO SPECIFICATIONS FOR RACK MOUNTED UPS REQUIRED FOR LOW VOLTAGE SYSTEMS. UPS SHALL BE RATED AT THE VA NOTED, PROVIDE UPS MANUFACTURED BY APC, SMARTUPS PROVIDED WITH SMART SLOT NETWORK CARDS, PROVIDE WITH APC NETWORK MANAGEMENT CARD 2 WITH ENVIRONMENTAL MONITORING.
9. CCTV SURVEILLANCE, ACCESS CONTROL, CATV AND DATA\VOICE SYSTEMS SHALL BE INSTALLED IN CONDUIT WHERE EXPOSED STRUCTURE OR NON ACCESSIBLE CEILINGS ARE PRESENT. CONDUIT SHALL BE ROUTED TO NEAREST IDF ROOM OR CABLE TRAY.
10. EXACT CAMERA LOCATION AND MOUNTING HEIGHT SHALL BE FIELD COORDINATED PRIOR TO ROUGH-IN. CONTRACTOR SHALL PROVIDE A FIELD POWERED CAMERA CONNECTED TO PORTABLE MONITOR. OWNER/ARCHITECT SHALL VIEW PROPOSED LOCATION OF EACH CAMERA UTILIZING THIS PORTABLE CAMERA/MONITOR AS A "MOCK UP" PRIOR TO APPROVING EACH LOCATION. EXACT CAMERA LOCATION AND ADJUSTMENTS SHALL BE MADE BASED UPON SUCH COORDINATION.
11. INDIVIDUAL INTERCOM ZONES SHALL BE AS FOLLOWS:
    1) ALL CALL
    2) EXTERIOR
    3) INDIVIDUAL INSTRUCTIONAL SPACES
    4) INDIVIDUAL OFFICES
    5) CONFERENCE ROOMS

    PULL STATION CABLE ACCORDINGLY. SUBMIT SHOP DRAWINGS SHOWING CALL ZONES.
12. ALL DATA/VOICE STUB UP CONDUITS SHALL BE ROUTED TO CABLE TRAY.

LOW VOLTAGE SYSTEMS ATTIC STOCK NOTES:

1. PROVIDE ATTIC STOCK FOR THE FOLLOWING DEVICES:
   - F — 2 UNITS
   - 2 UNITS
   - 2 UNITS
   - S — 2 UNITS
   - 2 UNITS
   - 2 UNITS
   - 2 UNITS
   - 2 UNITS
   - 2 UNITS
   - C — 2 UNITS
2. IF SUCH UNITS ARE NOT UTILIZED DURING CONSTRUCTION, TURN OVER SUCH IN ORIGINAL PACKAGING TO OWNER AT PROJECT CLOSEOUT.



4 E3000 "IDF" DATA/VOICE AND INTEGRATED COMMUNICATIONS CABLING RISER
SCALE: NOT TO SCALE

GENERAL NOTES:

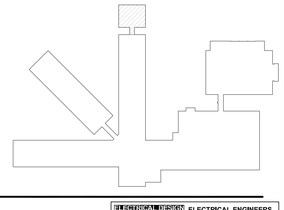
1. SEE GENERAL NOTES SHEET E3000 FOR ALL LOW VOLTAGE CONDUIT REQUIREMENTS.
2. NEW FIRE ALARM DEVICES AS SHOWN WILL CONNECT TO EXISTING FIRE ALARM CONTROL PANEL. SEE SHEET E1001 FOR LOCATION OF PANEL. PROVIDE POWER EXTENDERS AS REQUIRED TO LINK NEW DEVICES TO EXISTING SYSTEM. POWER EXTENDERS TO BE LOCATED IN ELECTRICAL ROOMS. COORDINATE LOCATIONS WITH ELECTRICAL PANELS SHOWN ON POWER PLANS.
3. NEW INTERCOM DEVICES AS SHOWN WILL CONNECT TO EXISTING TELECOR II INTERCOM SYSTEM. SEE SHEET E1001 FOR LOCATION OF RACK. PROVIDE POWER EXTENDERS AS REQUIRED TO LINK NEW DEVICES TO EXISTING SYSTEM. POWER EXTENDERS TO BE LOCATED IN ELECTRICAL ROOMS. COORDINATE LOCATIONS WITH ELECTRICAL PANELS SHOWN ON POWER PLANS.
4. NEW INTRUSION ALARM DEVICES AS SHOWN WILL CONNECT TO EXISTING DSC INTRUSION ALARM CONTROL PANEL. SEE SHEET E1001 FOR LOCATION OF PANEL. PROVIDE POWER EXTENDERS AS REQUIRED TO LINK NEW DEVICES TO EXISTING SYSTEM. POWER EXTENDERS TO BE LOCATED IN ELECTRICAL ROOMS. COORDINATE LOCATIONS WITH ELECTRICAL PANELS SHOWN ON POWER PLANS.
5. NEW CCTV CAMERAS AS SHOWN WILL CONNECT TO EXISTING OPEN EYE CCTV HEAD END SERVERS. SEE SHEET E1001 FOR LOCATION OF HEAD END. CAMERAS ARE TO BE IP BASED AND CONNECT TO SYSTEM IN DATA RACK. PROVIDE ONE NEW 8TB WESTERN DIGITAL PURPLE HARD DRIVE AT OPEN EYE SERVER WITH ADDITIONAL REQUIRED LICENSES. PROVIDE ALL PROGRAMMING AND LICENSES TO CONNECT TO EXISTING SYSTEM. COORDINATE LOCATIONS WITH ELECTRICAL PANELS SHOWN ON POWER PLANS. SEE KEYED NOTE #6 ON SHEET E1001.
6. NEW CATV DEVICES AS SHOWN WILL CONNECT TO EXISTING CATV TRUNK LINE IN CORRIDOR. SEE DETAIL 4/E2000 FOR ADDITIONAL INFORMATION.
7. NEW ACCESS CONTROLS DEVICES AS SHOWN WILL CONNECT TO EXISTING S2 ACCESS CONTROLS PANEL. PROVIDE NEW IP NODES AS REQUIRED. SEE SHEET E1001 FOR LOCATION OF PANEL. PROVIDE POWER EXTENDERS AS REQUIRED TO LINK NEW DEVICES TO EXISTING SYSTEM. POWER EXTENDERS TO BE LOCATED IN ELECTRICAL ROOMS. COORDINATE LOCATIONS WITH ELECTRICAL PANELS SHOWN ON POWER PLANS.
8. ALL DATA DROPS ON THIS PLAN SHALL BE ROUTED TO THE IDF RACK LOCATED IN DATA ROOM 220. ALL DATA CONDUIT SHALL BE RUN FROM DATA OUTLET LOCATION TO DATA RACK IN J HOOKS. PROVIDE BUSHINGS AT ENDS OF ALL CONDUITS.
9. SEE DETAIL 4/E2000 FOR TEACHER DESK/SMART BOARD ROUGH IN AND CABLING REQUIREMENTS.

CATV SYSTEM GENERAL NOTES:

1. SEE SHEET E1001 FOR EXISTING TV HEAD END EQUIPMENT LOCATION.
2. PROVIDE/EXTEND RG11 MAIN TRUNK LINE FROM EXISTING TV HEAD END EQUIPMENT TO NEW ADDITION.
3. PROVIDE ALL SPLITTERS, SIGNAL BOOSTERS AND MISCELLANEOUS MATERIAL FOR A COMPLETE OPERATING SYSTEM.
4. SEE DETAIL 4/E2000 FOR ROUGH IN REQUIREMENTS.

KEYED NOTES:

1. ROUTE SINGLE MODE TWELVE STRAND FIBER OVERHEAD IN 1" INTERDUCT TO MDF. SEE E1001 FOR LOCATION OF MDF IN RADIO ROOM 506. FIELD CONFIRM EXACT ROUTING.
2. ACCESS CONTROL PANEL AS MANUFACTURED BY S2 NETWORKS. SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS.



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ab architects

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