ADDENDUM NO. 1
to
CONTRACT DOCUMENTS

for
TOILET ROOM, CLASSROOM RENOVATIONS, DOORS- PHASE 1 ANTHEIL ELEMENTARY SCHOOL & LORE ELEMENTARY SCHOOL

for the
EWING PUBLIC SCHOOL DISTRICT
EWING, MERCER COUNTY, NEW JERSEY

Issued: March 1, 2019

FVHD PROJECT #5015A2A / NJDOE# 1430-140-18-2000
Antheil Elementary School, 339 Ewingville Road, Ewing, NJ 08638

FVHD PROJECT #5015L2 / NJDOE# 1430-105-18-1000
Lore Elementary School, 13 Westwood Drive, Ewing, NJ 08628

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INTENT

This Document supersedes all conflicting and contrary information in said Contract Documents. Said documents are hereby amended in certain particulars as described herein after. Unless specifically noted or specified hereinafter all work shall conform to the applicable provisions of the Contract Documents. Bidders shall acknowledge receiving this document on the Bid Proposal Form.

This Addendum includes six (6) pages and the following:

1. Pre-Bid Meeting Sign-In Sheet (1-page).

2. New Specification Sections: 08211, 08415.

3. Revised Drawings:

   a. Antheil ES - FVHD-5015A2A:
      1) Architectural: G002, G003, A100, A101, A102, A103, A104, A105.
      2) Mechanical: M001, M101, M102.
      3) Electrical: E001, E101, E103, E104.
      4) Plumbing: P001, P101, P102, P200, P201, P300.

   b. Lore ES - FVHD-5015L2:
      1) Architectural: G002, A100, A101.
      2) Mechanical: M001, M101.
      3) Electrical: E001, E101.
      4) Plumbing: P001, P101, P200.

CLARIFICATIONS

1. **Contractors shall participate in an apprenticeship training program and shall submit evidence of same and/or a description of the contractor's apprenticeship training program prior to the award of the contract.**

REFER TO DRAWINGS

The following Drawings and/or Sketches are attached to this Addendum:

5015A2A Antheil Elementary School

DRAWING NO.	TITLE
G002	ROOM FINISH SCHEDULE, DETAILS AND GENERAL DOOR INFORMATION
G003	DOOR SCHEDULES
A100	FIRST AND SECOND FLOOR PLANS
A101	FIRST FLOOR ENLARGED TOILET PLANS, DEMOLITION AND NEW FLOOR PLANS
A102	SECOND FLOOR ENLARGED TOILET PLANS, DEMOLITION AND NEW FLOOR PLANS
A103	TYPICAL CLASSROOM FLOOR PLANS, REFLECTED CEILING PLANS AND NOTES
A104	ENLARGED PLANS AND DETAILS
A105	INTERIOR ELEVATIONS
M001	MECHANICAL INDEX SHEET
M101	MECHANICAL PARTIAL PLANS
M102	MECHANICAL PARTIAL PLANS
E001	ELECTRICAL INDEX SHEET
E101	ELECTRICAL PARTIAL PLANS
E103	ELECTRICAL PARTIAL PLANS
E104	ELECTRICAL PARTIAL PLANS & SCHEDULES
P001	PLUMBING INDEX SHEET
P101	PLUMBING PARTIAL PLANS

The following Drawings and/or Sketches are attached to this Addendum:

DRAWING NO.	TITLE
P102	PLUMBING PARTIAL PLANS
P200	PLUMBING RISER DIAGRAMS
P201	PLUMBING RISER DIAGRAMS
P300	PLUMBING DETAILS

5015L2 Lore Elementary School

DRAWING NO.	TITLE
G002	
A100	FIRST FLOOR PLAN
A101	ENLARGED FLOOR PLANS, DEMOLITION, NEW RCP, INTERIOR ELEVATIONS AND NOTES
M001	MECHANICAL INDEX SHEET
M101	MECHANICAL PARTIAL PLAN
E001	ELECTRICAL INDEX SHEET
E101	ELECTRICAL PARTIAL PLANS & SCHEDULES
P001	PLUMBING INDEX SHEET
P101	PLUMBING PARTIAL PLANS
P200	PLUMBING RISER DIAGRAMS

The following Drawings to be revised or corrected as follows:

DRAWING NO.	CHANGES AND CORRECTIONS
5015A2A	**Antheil Elementary School**
G002	Delete drawing G002 in its entirety and substitute with revised drawing G002, attached to this Addendum.
G003	Delete drawing G003 in its entirety and substitute with revised drawing G003, attached to this Addendum.
A100	Delete drawing A100 in its entirety and substitute with revised drawing A100, attached to this Addendum.
A101	Delete drawing A101 in its entirety and substitute with revised drawing A101, attached to this Addendum.
A102	Delete drawing A102 in its entirety and substitute with revised drawing A102, attached to this Addendum.
A103	Delete drawing A103 in its entirety and substitute with revised drawing A103, attached to this Addendum.
A104	Delete drawing A104 in its entirety and substitute with revised drawing A104, attached to this Addendum.
A105	Delete drawing A105 in its entirety and substitute with revised drawing A105, attached to this Addendum.

DRAWING NO.	CHANGES AND CORRECTIONS
M001	Delete drawing M001 in its entirety and substitute with revised drawing M001, attached to this Addendum.
M101	Delete drawing M101 in its entirety and substitute with revised drawing M101, attached to this Addendum.
M102	Delete drawing M102 in its entirety and substitute with revised drawing M102, attached to this Addendum.
E001	Delete drawing E001 in its entirety and substitute with revised drawing E001, attached to this Addendum.
E101	Delete drawing E101 in its entirety and substitute with revised drawing E101, attached to this Addendum.
E103	Delete drawing E103 in its entirety and substitute with revised drawing E103, attached to this Addendum.
E104	Delete drawing E104 in its entirety and substitute with revised drawing E104, attached to this Addendum.
P001	Delete drawing P001 in its entirety and substitute with revised drawing P001, attached to this Addendum.
P101	Delete drawing P101 in its entirety and substitute with revised drawing P101, attached to this Addendum.
P102	Delete drawing P102 in its entirety and substitute with revised drawing P102, attached to this Addendum.
P200	Delete drawing P200 in its entirety and substitute with revised drawing P200, attached to this Addendum.
P201	Delete drawing P201 in its entirety and substitute with revised drawing P201, attached to this Addendum.
P300	Delete drawing P300 in its entirety and substitute with revised drawing P300, attached to this Addendum.

5015L2 Lore Elementary School

G002	Delete drawing G002 in its entirety and substitute with revised drawing G002, attached to this Addendum.
A100	Delete drawing A100 in its entirety and substitute with revised drawing A100, attached to this Addendum.
A101	Delete drawing A101 in its entirety and substitute with revised drawing A101, attached to this Addendum.
M001	Delete drawing M001 in its entirety and substitute with revised drawing M001, attached to this Addendum.

DRAWING NO.	CHANGES AND CORRECTIONS
M101	Delete drawing M101 in its entirety and substitute with revised drawing M101, attached to this Addendum.
E001	Delete drawing E001 in its entirety and substitute with revised drawing E001, attached to this Addendum.
E101	Delete drawing E101 in its entirety and substitute with revised drawing E101, attached to this Addendum.
P001	Delete drawing P001 in its entirety and substitute with revised drawing P001, attached to this Addendum.
P101	Delete drawing P101 in its entirety and substitute with revised drawing P101, attached to this Addendum.
P200	Delete drawing P200 in its entirety and substitute with revised drawing P200, attached to this Addendum.

REFER TO SPECIFICATIONS

INDEX

Under Part 1 - Contract Conditions and General Requirements, delete the following:

00701 Project Labor Agreement.

Under Part - 2 General Construction Work, add the following new section which is attached to this Addendum:

08211 Wood Doors, 8-pages.
08415 Aluminum Storefronts, 11-pages.

AIA DOCUMENT A201 - 2017, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

Page	Paragraph	
6	2.3	Delete "Refer to Section 00800 - Supplementary General Conditions" in its entirety.
11	3.5.1	In the 10th and 17th lines, change "**one (1) year**", to read "**two (2) years**".

PART 1 - SECTION 00701 - PROJECT LABOR AGREEMENT

Delete the Project Labor Agreement in its entirety.

PART 2 - SECTION 08211 - WOOD DOORS

Add new Section 08211 as attached to this Addendum.

PART 2 - SECTION 08410 - ALUMINUM/FRP DOORS AND FRAMES

Add new Section 08410 as attached to this Addendum.

PART 2 - SECTION 08800 - GLASS AND GLAZING

Page	Paragraph	
08800-1	1.1, B.3	Change "Section 08410 - Aluminum/FRP Doors and Aluminum Framing Systems", to read "Section 08415 - Aluminum Storefronts".

END OF ADDENDUM NO. 1

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PROJECT NAME: Toilet Room, Classroom Renovations & Doors, Phase 1 at Antheil & Lore Elementary Schools for Ewing Twp. S.D.

DATE: Thurs, Feb 21, 2019 at 4:00 PM

FVHD PROJECT#: 5015 A2A/L2

PRE-BID MEETING SIGN-IN SHEET

REPRESENTATIVE NAME (Please Print)	COMPANY NAME & ADDRESS	CONTRACT NUMBER	TELEPHONE#	FAX#	E-MAIL
Dave Porrette	Joseph Porrette Builders	609-561-6391	Same		dave.porrettebuilders@comcast.net
JOHNNIE WHITTINGTON	SMW LOCAL 27	(609) 495-4090	"		JOHNW@SMWLU27.ORG
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BRYAN KEESHEN	SHORELANDS CONSTRUCTION 175 WASHINGTON ST. LONG BRANCH, NJ 07740	732-229-4064	"	732-272-1720	BRYAN@SHORELANDSMBTS.com
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GEORGE DUTHIE	FVHD				

SECTION 08211 - WOOD DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

B. Related Sections:

1. Section 01800 - Time of Completion and Liquidated Damages
2. Section 04200 - Unit Masonry
3. Section 08110 - Hollow Metalwork
4. Section 08700 - Finish Hardware
5. Section 08800 - Glass and Glazing
6. Section 08870 - Security Window Film
7. Section 09900 - Field Painting of metal lites

1.2 SUMMARY

A. Extent and location of each type of flush wood door is indicated on drawings and in the door schedule.

B. Construction: Five plies with stiles and rails bonded to core, then entire unit abrasive plained before veneering. Assembly of face veneer and crossband to core in accordance with WDMA.

1. Solid core wood doors with solid hardwood edging.
2. Solid core 20 min. labeled flush wood doors with solid hardwood edging.

C. Shop-priming of wood doors is included in this Section.

D. Factory-finishing of wood doors is included in this Section.

E. Factory-prefitting to frames and factory-premachining for hardware for wood doors is included in this Section.

1.3 QUALITY ASSURANCE

A. Construction per WDMA I.S. 1A - 11.

B. Fire-Rated Wood Doors: Provide wood doors which are identical in materials and construction to units tested in door and frame assemblies per ASTM 2074-00 Fire Test (Category A Positive Pressure). For mineral core doors, provide composite blocking with improved screw holding capability as needed to eliminate through-bolting of hardware. They are to be labeled and listed for ratings indicated by UL, Warnock Hersey or other testing and inspection agency acceptable to authorities having jurisdiction. Fire labels shall be affixed at the factory of the door manufacturer, and shall be from the Underwriter's or Warnock Hersey Testing Laboratories. Each label shall show the testing time of the label, and no approval will be given to "Construction Type" labels.

1. All “Category A” doors shall have concealed intumescent seals.

C. Door Construction Field Examination: Upon direction of the Architect, the Contractor may be instructed to destroy a randomly selected wood door or panel by sawing it in half, vertically and horizontally, to verify conformance of the contract requirements. If the door(s) do not meet the specifications, all of the doors delivered for the project will be rejected, and the doors shall be replaced at the Contractor' expense. Further door inspection, to insure conformity to specifications, shall also be at the expense of the Contractor.

1. All such delays as a result of the fabrication and delivery of non-compliant doors which vary from the processed shop drawing submittal will be the responsibility of the Contractor (refer to Section 01800 for Liquidated Damages).

1.4 REFERENCE STANDARDS

A. Comply with the applicable requirements of the following standards unless otherwise indicated.

1. Window & Door Manufacturers Association (WDMA)

   a. I.S. 1A - 11 Architectural Wood Flush Doors (WDMA).
   b. Standard Procedures and Recommendations for Factory Machining Flush Wood Doors for Hardware.

2. American National Standards Institute

   a. ANSI A115. W Series, Wood Door Hardware Standards.

3. Underwriter's Laboratories, Inc. (UL)

   a. UL 10C Fire Test

4. American Society for Testing and Materials:

   a. ASTM 2074-00 (Category A Positive Pressure) Fire Tests of Door Assemblies.

1.5 SUBMITTALS

A. **The shop drawing submittal will not be reviewed by the Architect unless a complete shop drawing submittal (technical data, details of core and edge construction, location and extent of hardware blocking, fire ratings, factory finish samples, 8" x 10" minimum for finish and 4" x 5" minimum for construction assembly) are made as one complete submittal, by the Contractor, and will be returned to the Contractor if incomplete.**

1. Subsequent delays as a result of an incomplete submittal will be the responsibility of the Contractor (refer to Section 01800 for Liquidated Damages).

B. Product Data: Door manufacturer's technical data for each type of door, including details of core and edge construction, trim for openings and louvers, and factory-finishing specifications.

1. Include certifications as may be required to show compliance with specifications.

2. **The door manufacturer's shop drawing literature which may include language for the substitution of door construction at the option of the manufacturer is not permitted. Doors which are switched will be rejected and all costs associated with the manufacturing of the door type(s) specified will be by the Contractor/Manufacturer.**

C. Shop Drawings: Submit shop drawings indicating location and size of each door, elevation of each kind of door, details of construction, location and extent of hardware blocking, fire ratings, requirements for factory finishing and other pertinent data.

1. For factory-premachined doors, indicate dimensions and locations of cutouts for locksets and other cutouts adjacent to light openings.

D. Samples: Submit samples, 8" x 10" minimum for finish and 4" x 5" minimum for construction assembly, for the following:

1. Doors for Transparent Finish: Flat samples illustrating finish and color of wood grain for each species of veneer and solid hardwood lumber required.

2. Factory-Finished Doors: Each type of factory finish required.

3. Metal Frames for Light Openings: Manufacturers product samples or product cut sheets for light frames and color selector guide for each material and finish required.

E. Warranties and Certification Markings: Furnish with shop drawings:

1. Door supplier must attest, in writing addressed to Architect, that the order has been placed in conformance with specification requirements in all respects.

2. All doors shall carry a "Lifetime" guarantee, including rehang and finish for all door(s) which do not comply with the manufacturer's warranty.

3. Copy of Warranty shall be given to the Architect and Owner prior to the completion of the project.

4. All doors shall be factory marked, on the top of the door, showing the order number, item number on the order, size of finished door, material, and core construction, for future information should replacement of the door be necessary.

F. The Wood Door Supplier shall provide a letter indicating all of the following:

1. The wood door supplier has completely reviewed the contract documents (drawings, specifications and addenda) and has worked with the distributor in the preparation and submission of a complete shop drawing submittal to the Architect.

2. The wood door supplier shall attest that the order has been placed in accordance with the contract document drawings, specifications and addenda,

3. The wood doors ordered and delivered to the job site are in conformance with the requirements of the job and per the approved shop drawings.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Protect doors during transit, storage and handling to prevent damage, soiling and deterioration. Comply with requirements of referenced standards and recommendations in WDMA pamphlet "How to Store, Handle, Finish, Install, and Maintain Wood Doors", as well as with manufacturer's instructions.

B. Protect all doors from damage and moisture under cover. Use wood blocking under horizontally stored doors. At no time will doors be allowed to come in contact with floor or water.

1. The location where the doors are being stored on the job site shall be between 25 - 55% relative humidity. The Contractor shall forward independent certified testing that confirms compliance.

C. All doors not finished at factory must be sealed on all surfaces within one (1) week after arrival at jobsite.

D. Remove all damaged doors from jobsite prior to completion of project.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: Provide "Aspiro™ Series I Marshfield-Algoma™" wood doors as manufactured by Masonite Architectural, Tel.#877.332.4484, www.masonitearchitectural.com; or approved equal.

1. Products specified herein have been selected because of their quality of construction, configuration, design, function, available finishes, components, accessories, dimensions, shape and style.

2. Comparable products from other manufacturers will be considered if it can be clearly shown that their products are tested, equal to or will exceed the construction quality requirements, intended performances and all other design attributes listed above and provided that deviations in dimensions and profiles are minor and do not materially detract from the design concept or intended performances as judged solely by the Architect.

a. Eggers Industries; Architectural Flush Doors Division, Tel.# 920.722.6444, www.eggersindustries.com.

b. VT Industries, Architectural Wood Doors, Tel.# 800.827.1615, www.vtindustries.com/doors.

c. Graham Wood Doors, Tel.# 641.423.2444, www.grahamdoors.com.

d. Or approved equal.

3. The use of one manufacturer's catalog numbers, and the specific requirements set forth in drawings and specifications are not intended to preclude the use of other manufacturer's products or procedures which may be equivalent, but are given for the purpose of establishing a standard of design and quality for materials, construction and workmanship.

4. **Substitutions: Substitution of products will only be considered when the Contractor/ Door Supplier have submitted, to the Architect, all appropriate documents and in the time frame as outlined in the requirements indicated in Specification Section 00800.**

2.2 MATERIALS AND COMPONENTS

A. General: Provide wood doors complying with applicable requirements of referenced standards for kinds and types of doors indicated and as specified.

B. Solid Core Doors for Transparent Finish: Comply with the following requirements:

1. Faces: Veneer leaves shall be Slip Match and veneers assembled in Running Match, Grade 'A', plain sliced red oak for transparent finish; CS-171, Type II.

a. **At existing buildings, provide veneer faces to match the species of the existing veneer or as directed by the Architect.**

2. Construction: Premium Construction Grade, SCLC-5 Bonded (5-ply, with no added urea-formaldehyde glues).

C. Edges

1. Vertical stiles of same species to the face veneer, with a minimum of 1/4 inch solid hardwood after trimming.

a. Manufacturers standard construction with hardwood outer.

D. Core: Structural Composite Lumber Core consisting of an engineered wood product that is made by fusing a network of wood strands together with a water-resistant adhesive to produce a strong, solid and stable product that has true structural properties with excellent screw holding properties and very high split resistance.

1. Core Edge Interface: Vertical and horizontal edges of solid core doors must be securely bonded to the core with waterproof glue containing no added urea formaldehyde resin.

E. Fire-Rated Solid Core Doors

1. Faces and WDMA Grade: Provide species and grade to match non-rated doors in same area of building, unless otherwise indicated.

2. Core Construction

a. 20 Min. Doors: Single Leaf - Same Structural Composite Lumber Core as noted above.

3. Edge Construction

a. 20 Min. Doors: Single Leaf - Same Structural Composite Lumber edge construction noted above.

b. All "Category A" doors shall have concealed intumescent seals.

F. Glazing of Wood Doors:

1. Glazing shall be by the wood door manufacturer.
2. Glass shall be in accordance with requirements of Section 08800.

2.3 LITE FRAMES

A. Metal Lite Frames:

1. Standard Metal Vision Frames:

a. Basis of Design: Model "LoPro™" as manufactured by Anemostat Door Products, San Antonio, TX; Tel.# 210.662.6300; or approved equal.

b. Material: 20 ga. (1mm) Cold Rolled Steel.

c. Finish: Grey Primer, Beige or Bronze Baked Enamel.

d. Glazing: Should be 1/4" (6mm), 3/16" (5mm) or 5/16" (8mm) fire and/or safety rated with U.L. and/or W.H.I classification markings. Nominal glazing space of 3/8" (10mm) allows for glazing tape to be used on both sides of the glass.

e. Fire Ratings with U.L. & W.H.I Classification markings:

1) 20* Minute: Approved listing at 3204 sq.in. visible lite, max. width 36", max. height 89".

Note: *Must be used with Firelite Plus or NT and fire listed glazing tape, or another manufacturer's equivalent product. Glazing combination must be used in appropriately tested door assembly.

f. **Refer to Section 08870 - Security Window Film pertaining to the application of the film on the glazing and lite frame.**

g. **Refer to Section 08871 - Security Glazing (Alternate Bid).**

2.4 GENERAL FABRICATION REQUIREMENTS

A. Fabricate wood doors to produce doors complying with following requirements:

B. In sizes indicated for job-site fitting.

C. Factory-prefit and premachine doors to fit frame opening sizes indicated with the following uniform clearances and bevels:

1. Comply with tolerance requirements of WDMA for prefitting. Comply with final hardware schedules and door frame shop drawings and with hardware templates.

2. Coordinate measurements of hardware mortises in metal frames to verify dimensions and alignment before proceeding with factory premachining.

3. Pre-fit and pre-machine wood doors at factory. Machining shall be in accordance with necessary templates supplied by the Builders Hardware supplier, in accordance with the approved Finish Hardware Schedule for this project. Each door shall be machined for all necessary mortise hardware (ie, locks, hinges, closers, etc.) but face or thru bolt holes shall be done in the field, if such machining is not called for on templates, or is not normally machined at factory. No field preparation will be allowed.

4. Sizing of single doors to be undersized for nominal 1/4 inch, with edges beveled on two edges, as required by the frame manufacturer. Door edges beveled 1/8 inch in 2 inch thickness of door.

5. Door clearances are to be 1/8 inch at top and the bottom shall be a maximum of 1/2 inch, or as required by job condition or labeling requirements.

D. Openings: Cut and trim openings through doors to comply with applicable requirements of referenced standards for kind(s) of doors required.

E. Factory Finish and Uniform Range of Veneers

1. Prefinish wood doors at factory only.

2. All face veneer shall have uniform range of colors, as specified by Architect, in selection of the range of color of the veneer.

3. Comply with recommendations of WDMA for factory finishing of doors, including final sanding, immediately before application of finishing materials.

4. Provide finish WDMA, #TR-6, transparent water-based stain and ultraviolet (UV) cured water based polyurethane sealer and topcoat material, color as selected by Architect.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install doors using finish hardware in accordance with approved hardware schedule. Protect doors from damage until completion of Project. Except where through bolting is required to meet Code for "A" or "B" label doors, install surface applied hardware on metal or wood doors using all thread screws inserted in pilot drilled holes filled with white acrylic glue.

B. Manufacturer's Instructions: Install wood doors to comply with manufacturer's printed instructions and of referenced WDMA standard and indicated in the printed instructions provided by the manufacturer.

C. Install fire-rated doors in corresponding fire-rated frames in accordance with requirements of NFPA No. 80.

D. Job-Fit Doors: Align and fit doors in frames with uniform clearances and bevels as indicated below; do not trim stiles and rails in excess of limits set by manufacturer or permitted with fire-rated doors.

1. Machine doors for hardware. Seal cut surfaces after fitting and machining.

E. Fitting Clearances for Non-Rated Doors: Provide 1/8" at jambs and heads; and 1/8" from bottom of door to top of decorative floor finish or covering. Where threshold is shown or scheduled, provide 1/4" clearance from bottom of door to top of threshold.

F. Fitting Clearances for Fire-Rated Doors: Comply with NFPA 80.

1. Bevel non-rated doors 1/8" in 2" at lock and hinge edges.

2. Bevel fire-rated doors 1/8" in 2" in lock edge; trim stiles and rails only to extent permitted by labeling agency.

3. Prefit Doors: Fit to frames for uniform clearance at each edge.

G. Factory-Finished Doors: Restore finish before installation, if fitting or machining is required at the job site.

H. Manufacturer of wood doors shall install glass in wood doors.

3.2 ADJUSTING AND PROTECTION

A. Operation: Rehang or replace doors which do not swing or operate freely.

B. Finished Doors: Refinish or replace doors damaged during installation.

1. Protect doors, as recommended by door manufacturer, to ensure that wood doors will be without damage or deterioration at time of Substantial Completion.

END OF SECTION 08211

SECTION 08415 - ALUMINUM STOREFRONTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   1. Aluminum Framing for Doors, Side Lites and Transoms.
   2. Aluminum Framing for Storefronts applications.

B. Related sections include the following:
   1. Section 07900 - Joint Sealer Assemblies.
   2. Section 08700 - Finish Hardware.
   3. Section 08800 - Glass and Glazing.
   4. Section 09520 - Gypsum Drywall.

1.3 SYSTEM DESCRIPTION

A. General: Provide aluminum entrance and storefront systems capable of withstanding loads and thermal and structural movement requirements indicated without failure, based on testing manufacturer's standard units in assemblies similar to those indicated for this Project. Failure includes the following:

   1. Air infiltration and water penetration exceeding specified limits.
   2. Framing members transferring stresses, including those caused by thermal and structural movement, to glazing units.

B. Glazing: Physically and thermally isolate glazing from framing members.

C. Glazing-to-Glazing Joints: Provide glazing-to-glazing joints that accommodate thermal and mechanical movements of glazing and system, prevent glazing-to-glazing contact, and maintain required edge clearances.

D. Structural Silicone-Sealant Joints: Provide systems with structural silicone-sealant joints complying with the following requirements:

   1. Tensile or shear stress in joints is less than 20 psi.

   2. Structural sealant withstands tensile and shear stresses imposed by storefront systems without failing adhesively or cohesively. When tested for adhesive compatibility with each substrate and condition required, provide sealant that fails cohesively before it fails adhesively. Adhesive and cohesive failure are defined as follows:

      a. Adhesive failure occurs when sealant pulls away from a substrate cleanly, leaving no sealant material behind.

      b. Cohesive failure occurs when sealant breaks or tears within a joint but does not separate from each substrate because sealant-to-substrate bond strength exceeds sealant's internal strength.

E. Thermally Broken Construction: Provide systems that isolate aluminum exposed to exterior from aluminum exposed to interior with a material of low thermal conductance.

F. Wind Loads: Provide storefront systems, including anchorage, capable of withstanding wind-load design pressures calculated according to requirements of authorities having jurisdiction or the American Society of Civil Engineers' ASCE 7, "Minimum Design Loads for Buildings and Other Structures," 6.4.2, "Analytical Procedure," whichever are more stringent.

1. Deflection of framing members in a direction normal to wall plane is limited to 1/175 of clear span or 3/4 inch, whichever is smaller, unless otherwise indicated.

2. Static-Pressure Test Performance: Provide entrance and storefront systems that do not evidence material failures, structural distress, failure of operating components to function normally, or permanent deformation of main framing members exceeding 0.2 percent of clear span when tested according to ASTM E 330.

   a. Test Pressure: 150% of inward and outward wind-load design pressures.
   b. Duration: As required by design wind velocity; fastest 1 mile of wind for relevant exposure category.

G. Dead Loads: Provide entrance- and storefront-system members that do not deflect an amount which will reduce glazing bite below 75 percent of design dimension when carrying full dead load.

1. Provide a minimum 1/8-inch clearance between members and top of glazing or other fixed part immediately below.
2. Provide a minimum 1/16-inch clearance between members and operable and doors.

H. Live Loads: Provide entrance and storefront systems, including anchorage, that accommodate the supporting structures' deflection from uniformly distributed and concentrated live loads indicated without failure of materials or permanent deformation.

I. Air Infiltration: Provide entrance and storefront systems with permanent resistance to air leakage through fixed glazing and frame areas of not more than 0.06 cfm/sq. ft. of fixed wall area when tested according to ASTM E 283 at a static-air-pressure difference of 6.24 lbf/sq. ft.

J. Thermal Movements: Provide entrance and storefront systems, including anchorage, that accommodate thermal movements of systems and supporting elements resulting from the following maximum change (range) in ambient and surface temperatures without buckling, damaging stresses on glazing, failure of joint sealants, damaging loads on fasteners, failure of doors or other operating units to function properly, and other detrimental effects.

1. Temperature Change (Range): 120 degrees F, ambient; 180 degrees F material surfaces.

K. Structural-Support Movement: Provide entrance and storefront systems that accommodate structural movements including, but not limited to, sway and deflection.

L. Condensation Resistance: Provide storefront systems with condensation resistance factor (CRF) of not less than 45 when tested according to AAMA 1503.1.

M. Average Thermal Conductance: Provide storefront systems with average U-values of not more than 0.63 Btu/sq. ft. x h x deg F when tested according to AAMA 1503.1.

N. Dimensional Tolerances: Provide entrance and storefront systems that accommodate dimensional tolerances of building frame and other adjacent construction.

1.4 SUBMITTALS

A. Shop Drawings: Submit shop drawings showing adaptation of the manufacturer's standard system to the project; include typical unit elevations at 1/2" scale and details at 3" scale, to show dimensioning, member profiles, anchorage system, interface with building construction, and glazing. Indicate the section module of wind-load-bearing members, and calculations of stresses and deflections for performance under design loading. Show clearly where and how the manufacturer's system deviates from contract drawings and these specifications.

1. Engineering Responsibility: Manufacturer's fabrication and shop drawings, design calculations and other structural data shall be prepared, signed and sealed by a qualified structural engineer licensed in the State of New Jersey.

B. Product Data: Submit manufacturer's specifications for materials and fabrication of storefront system, and instructions and recommendations for installation and maintenance. Include certified test reports showing compliance with requirements where a test method is indicated.

C. Samples: Submit samples of each type and color of aluminum finish, on 12" long sections of extrusions or formed shapes and on 6" squares of sheet or plate. Include 2 or more samples in each set, showing near-limits of variations, if any, in color and texture of finish.

1. The Architect reserves the right to require fabrication samples showing the following:
   a. Prime members.
   b. Joinery.
   c. Anchorage.
   d. Expansion provisions.
   e. Glazing and similar details.
   f. Profiles.
   g. Intersections.

E. Test Reports: Submit certified copies of previous test reports which have been performed by Independent Laboratory substantiating performance of the system and indicating compliance with requirements of the Contract Documents.

F. Certificates of Conformance: Submit Manufacturer/Installer/Contractor certificates indicating conformance with specified system. Certificates shall be signed and notarized by an authorized officers and representatives.

1.5 QUALITY ASSURANCE

A. Delegated Design:

1. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated. Designated Design includes, but is not limited to:

a. Aluminum-framed entrances and storefronts indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by a qualified professional engineer responsible for their preparation in the State of New Jersey.

2. Installer Qualifications: Engage an experienced installer to assume engineering responsibility and perform work of this Section who has specialized in installing entrance and storefront systems similar to those required for this Project and who is acceptable to manufacturer.

a. Engineering Responsibility: Prepare data for entrance and storefront systems, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.

B. Testing Agency Qualifications: Demonstrate to Architect's satisfaction, based on Architect's evaluation of criteria conforming to ASTM E 699, that the independent testing agency has the experience and capability to satisfactorily conduct the testing indicated without delaying the Work.

C. Source Limitations: Obtain each type of entrance and storefront system through one source from a single manufacturer.

D. Product Options: Drawings indicate size, profiles, and dimensional requirements of entrance and storefront systems and are based on the specific systems indicated. Other manufacturers' systems with equal performance characteristics may be considered. Refer to Division 1 Section "Substitutions."

1. Do not modify intended aesthetic effect, as judged solely by Architect, except with Architect's approval and only to the extent needed to comply with performance requirements. Where modifications are proposed, submit comprehensive explanatory data to Architect for review.

E. Preconstruction Sealant Testing: Perform sealant manufacturers' standard tests for compatibility and adhesion of sealants with each material that will come in contact with sealants and each condition required by system.

1. Test a minimum of 8 samples of each metal, glazing, and other material.

2. Prepare samples using techniques and primers required for installed systems.

3. Perform tests under environmental conditions that duplicate those under which systems will be installed.

4. For materials that fail tests, determine corrective measures required to prepare each material to ensure compatibility with and adhesion of sealants, including, but not limited to, specially formulated primers. After performing these corrective measures on the minimum number of samples required for each material, retest materials.

F. Welding Standards: Comply with applicable provisions of AWS D1.2, "Structural Welding Code–Aluminum."

G. Mockups: Before installing entrance and storefront systems, construct mockups for each form of construction and finish required to verify selections made under Sample submittals and to demonstrate aesthetic effects and qualities of materials and execution. Build mockups to comply with the following requirements, using materials indicated for completed Work.

1. Locate mockups in the location and of the size indicated or, if not indicated, as directed by Architect.

2. Notify Architect 7 calendar days in advance of the dates and times when mockups will be constructed.

3. Demonstrate the proposed range of aesthetic effects and workmanship.

4. Obtain Architect's approval of mockups before proceeding with installation of systems.

5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.

a. When directed, demolish and remove mockups from Project site.

b. Approved mockups in an undisturbed condition at the time of Substantial Completion may become part of the completed Work.

1.6 PROJECT CONDITIONS

A. Field Measurements: Verify dimensions by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating systems without field measurements. Coordinate construction to ensure actual dimensions correspond to established dimensions.

1.7 WARRANTY

A. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.

B. Special Warranty: Submit a written warranty executed by the manufacturer agreeing to repair or replace components of entrance and storefront systems that fail in materials or workmanship within the specified warranty period. Failures include, but are not limited to, the following:
1. Structural failures including, but not limited to, excessive deflection.
2. Adhesive sealant failures.
3. Cohesive sealant failures.
4. Failure of system to meet performance requirements.
5. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
6. Failure of operating components to function normally.
7. Water leakage through fixed glazing and frame areas.

C. Warranty Period: **Ten (10) years** from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: "500 Tuffline® Entrances", as manufactured by Kawneer Company, Inc., Norcross, GA, Tel.# 770.449.5555, www.kawneer.com; or approved equal.

1. Subject to compliance with requirements, manufacturers of products which may be incorporated in the work include, but are not limited to, the following:

a. EFCO Corporation, Monett, MO, Tel.# 800.221.4169, www.efcocorp.com / Local Product Representative: Division 8 Concepts, Marmora, NJ, Tel.# 609.545.8683, www.division8concepts.com

b. Oldcastle Building Envelope, Terrell, TX, Tel.#972.551.6100, www.oldcastlebe.com.

c. Tubelite, Walker, MI, Tel.# 800.866.2227, www.tubeliteinc.com, Local Product Representative: Tel.# 609.314.0896.

d. or approved equal.

2.2 MATERIALS

A. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated, complying with the requirements of standards indicated below.

1. Sheet and Plate: ASTM B 209.
2. Extruded Bars, Rods, Shapes, and Tubes: ASTM B 221.
3. Extruded Structural Pipe and Tubes: ASTM B 429.
4. Bars, Rods, and Wire: ASTM B 211.
5. Welding Rods and Bare Electrodes: AWS A5.10.

B. Steel Reinforcement: Complying with ASTM A 36 for structural shapes, plates, and bars; ASTM A 611 for cold-rolled sheet and strip; or ASTM A 570 for hot-rolled sheet and strip.

C. Glazing shall be 1" thick insulating glass as specified in Division 8 Section "Glass and Glazing."

D. Glazing Gaskets: Manufacturer's standard pressure-glazing system of black, resilient glazing gaskets, setting blocks, and shims or spacers, fabricated from an elastomer of type and in hardness recommended by system and gasket manufacturer to comply with system performance requirements. Provide gasket assemblies that have corners sealed with sealant recommended by gasket manufacturer.

E. Spacers, Setting Blocks, Gaskets, and Bond Breakers: Manufacturer's standard permanent, nonmigrating types in hardness recommended by manufacturer, compatible with sealants, and suitable for system performance requirements.

F. Structural Silicone Sealant: Type recommended by sealant and system manufacturers that complies with ASTM C 1184 requirements, is compatible with system components with which it comes in contact, and is specifically formulated and tested for use as a structural sealant.

1. Color: As selected by Architect from manufacturer's full range of colors.

2. Tensile Strength: 100 psi minimum.

3. Provide sealant with modulus of elasticity that will not allow movement of more than 25 percent of joint width, unless less movement is required by structural-sealant-glazed systems' design.

4. Use neutral-cure silicone sealant with insulating-glass units.

G. Secondary Sealant: For use as weatherseal, compatible with structural silicone sealant and other system components with which it comes in contact, and that accommodates a 50 percent increase or decrease in joint width at the time of application when measured according to ASTM C 719.

1. Color: As selected by Architect from manufacturer's full range of colors.
2. Use neutral-cure silicone sealant with insulating-glass units.

H. Framing system gaskets, sealants, and joint fillers as recommended by manufacturer for joint type.

I. Sealants and joint fillers for joints at perimeter of entrance and storefront systems as specified in Division 7 Section "Joint Sealer Assemblies".

J. Bituminous Paint: Cold-applied asphalt-mastic paint complying with SSPC-Paint 12 requirements, except containing no asbestos, formulated for 30-mil thickness per coat. Color: Black.

2.3 COMPONENTS

A. Brackets and Reinforcements: Provide manufacturer's standard brackets and reinforcements that are compatible with adjacent materials. Provide nonstaining, nonferrous shims for aligning system components.

B. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding fasteners and accessories compatible with adjacent materials.

1. Reinforce members as required to retain fastener threads.

2. Do not use exposed fasteners, except for hardware application. For hardware application, use countersunk Phillips flat-head machine screws finished to match framing members or hardware being fastened, unless otherwise indicated.

C. Concrete and Masonry Inserts: Hot-dip galvanized cast-iron, malleable-iron, or steel inserts complying with ASTM A 123 or ASTM A 153 requirements.

D. Concealed Flashing: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding flashing, compatible with adjacent materials, and of type recommended by manufacturer.

E. Concealed Flashing: Dead-soft, 0.018-inch- thick stainless steel, complying with ASTM A 666, of type selected by manufacturer for compatibility with system.

F. Weather Stripping: Manufacturer's standard replaceable weather stripping as follows:

1. Compression Weather Stripping: Molded neoprene complying with ASTM D 2000 requirements or molded PVC complying with ASTM D 2287 requirements.

2. Sliding Weather Stripping: Wool, polypropylene, or nylon woven pile with nylon-fabric or aluminum-strip backing complying with AAMA 701 requirements.

2.4 FABRICATION

A. General: Fabricate components that, when assembled, will have accurately fitted joints with ends coped or mitered to produce hairline joints free of burrs and distortion. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

1. Fabricate components for head- and sill-receptor frame construction with shear-block construction at intermediate horizontal components.

B. Forming: Form shapes with sharp profiles, straight and free of defects or deformations, before finishing.

C. Prepare components to receive concealed fasteners and anchor and connection devices.

D. Fabricate components to drain water passing joints and condensation and moisture occurring or migrating within the system to the exterior.

E. Welding: Weld components to comply with referenced AWS standard. Weld before finishing components to greatest extent possible. Weld in concealed locations to greatest extent possible to minimize distortion or discoloration of finish. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.

F. Glazing Channels: Provide minimum clearances for thickness and type of glass indicated according to FGMA's "Glazing Manual."

G. Metal Protection: Where aluminum will contact dissimilar metals, protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape recommended by manufacturer for this purpose. Where aluminum will contact concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.

H. Storefront: Fabricate framing in profiles indicated for flush glazing (without projecting stops). Provide subframes and reinforcing of types indicated or, if not indicated, as required for a complete system. Factory assemble components to greatest extent possible. Disassemble components only as necessary for shipment and installation.

2.5 ALUMINUM FINISHES

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

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 the 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. Finish designations prefixed by AA conform to the system established by the Aluminum Association for designating aluminum finishes.

D. Preparation: Prior to fabrication of doors and frames, prepare the aluminum surfaces for finishing in accordance with the aluminum producer's recommendations and the standards of the finisher or processor. Process all components of each assembly simultaneously to attain complete uniformity of color.

E. Anodized Finishes: Class 1 Clear Color Anodized Finish - AA-M12C22A41 (minimum thickness 0.7 mils) integral color, medium matte finish.

1. Color shall **match the existing anodized aluminum finish** as the adjacent doors..

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of entrance and storefront systems. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General: Comply with manufacturer's written instructions for protecting, handling, and installing entrance and storefront systems. Do not install damaged components. Fit frame joints to produce hairline joints free of burrs and distortion. Rigidly secure nonmovement joints. Seal joints watertight.

B. Metal Protection: Where aluminum will contact dissimilar metals, protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape recommended by manufacturer for this purpose. Where aluminum will contact concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.

C. Install components to drain water passing joints and condensation and moisture occurring or migrating within the system to the exterior.

D. Set continuous sill members and flashing in a full sealant bed to provide weathertight construction, unless otherwise indicated. Comply with requirements of Division 7 Section "Joint Sealer Assemblies."

E. Install framing components plumb and true in alignment with established lines and grades without warp or rack of framing members.

F. Install entrances plumb and true in alignment with established lines and grades without warp or rack. Lubricate operating hardware and other moving parts according to hardware manufacturers' written instructions.

1. Install surface-mounted hardware according to manufacturer's written instructions using concealed fasteners to greatest extent possible.

G. Install glazing to comply with requirements of Division 8 Section "Glazing," unless otherwise indicated.

1. Prepare surfaces that will contact structural sealant according to sealant manufacturer's written instructions to ensure compatibility and adhesion. Preparation includes, but is not limited to, cleaning and priming surfaces.

2. Install structural silicone sealant according to sealant manufacturer's written instructions.

3. Mechanically fasten glazing in place until structural sealant has cured in accordance with manufacturer's recommendations.

4. Remove excess sealant from component surfaces before sealant has cured.

H. Install secondary-sealant weatherseal according to sealant manufacturer's written instructions to provide weatherproof joints. Install joint fillers behind sealant as recommended by sealant manufacturer.

I. Install perimeter sealant to comply with requirements of Division 7 Section "Joint Sealants," unless otherwise indicated.

J. Erection Tolerances: Install entrance and storefront systems to comply with the following maximum tolerances:

1. Variation from Plane: Limit variation from plane or location shown to 1/8 inch in 12 feet; 1/4 inch over total length.

2. Alignment: Where surfaces abut in line, limit offset from true alignment to 1/16 inch. Where surfaces meet at corners, limit offset from true alignment to 1/32 inch.

3. Diagonal Measurements: Limit difference between diagonal measurements to 1/8 inch.

3.3 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified independent testing agency to perform field quality-control testing indicated.

B. Structural-Silicone-Sealant Adhesion Test: Test installed structural silicone sealant according to field adhesion test method described in AAMA CW #13, "Structural Sealant Glazing Systems (A Design Guide)."

1. Test a minimum of 2 areas.

C. Water Spray Test: After completing the installation of test areas indicated, test storefront system for water penetration according to AAMA 501.2 requirements.

D. Repair or remove and replace Work that does not meet requirements or that is damaged by testing; replace to conform to specified requirements.

3.4 ADJUSTING AND CLEANING

A. Adjust doors and hardware to provide tight fit at contact points and weather stripping, smooth operation, and weathertight closure.

B. Remove excess sealant and glazing compounds, and dirt from surfaces.

3.5 PROTECTION

A. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure entrance and storefront systems are without damage or deterioration at the time of Substantial Completion.

END OF SECTION 08415

GENERAL FINISH NOTES:

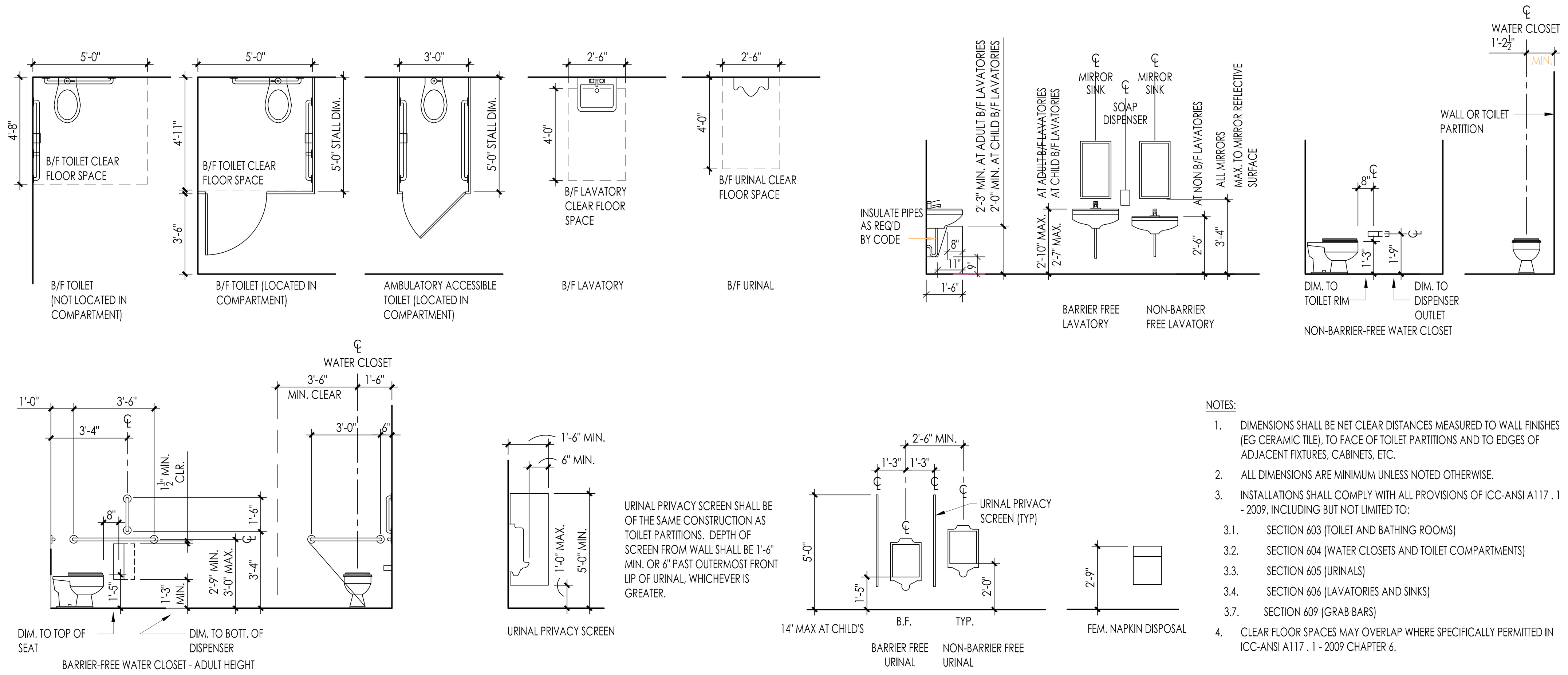
1. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION ON MATERIALS / MANUFACTURER / PERFORMANCE AND WARRANTY INFORMATION.
2. WITHIN THE EXISTING BUILDINGS, AT ALL AREAS OF NEW CONSTRUCTION ADJACENT TO EXISTING, NEW CONSTRUCTION SHALL BE FINISHED TO MATCH EXISTING ADJACENT CONSTRUCTION, INCLUDING BRICK, TILE, PLASTER, BASE, ETC.
3. MATERIALS LISTED ON THE FINISH SCHEDULE REFER TO THE MAJORITY OF WALLS, FLOOR AND CEILING OF ROOMS SCHEDULED, REFER TO PLANS, DETAILS, INTERIOR ELEVATION, AND NOTES FOR THOSE MATERIALS NOT INDICATED ON THE SCHEDULE BUT ARE STILL REQUIRED IN THE ROOM.
4. AT ALL AREAS OF EXISTING SURFACES BEING PAINTED, THE GENERAL CONSTRUCTION WORK CONTRACTOR SHALL REMOVE PRIOR TO PAINTING AND RE-INSTALL AFTER PAINTING ALL ELECTRICAL DEVICES (SWITCHES, OUTLETS, ETC.) COVER PLATES.
5. PROVIDE OPTION FOR (4) FOUR COLORS OF FLOOR AND WALL TILE. PATTERN AND COLORS SELECTED BY ARCHITECT.

ABBREVIATIONS:

ACB	ACOUSTIC CEILING BOARD
AACB	ACRYLIC ACOUSTIC CEILING BOARD
CARPET-T	CARPET TILE
CEP	CMU - EPOXY PAINTED
CONC	CONCRETE - SEALED
C.P.	CMU - PAINTED
C.T.	CERAMIC TILE
EP	EPOXY PAINTED
ETR	EXISTING TO REMAIN
ETR-P	EXISTING TO REMAIN - PAINTED
ETR-EP	EXISTING TO REMAIN - EPOXY PAINTED
EXP-TECTUM	EXPOSED TECTUM - EPOXY PAINTED
GP	GYPSUM PAINTED
ME	MATCH EXISTING
P.T.	PORCELAIN TILE
P.T. - SR	PORCELAIN TILE - SLIP RESISTANT
RUB	RUBBER BASE
VCT	VINYL COMPOSITION TILE

FINISH NOTES:

1. NEW TILE FLOOR SHALL BE INSTALLED WITH POSITIVE PITCH TO NEW FLOOR DRAIN LOCATIONS. PREPARE EXISTING SURFACE WITH PATCHING AS NECESSARY FOR NEW FLOOR FINISH.
2. NEW WALL TILE SHALL BE INSTALLED FULL HEIGHT. PREP EXISTING WALL CONSTRUCTION AS NECESSARY FOR PROPER INSTALLATION OF NEW WALL TILE.
3. FINISH MATERIAL INDICATED REFERS ONLY TO AREAS WHERE NEW FINISH IS REQUIRED TO MATCH EXISTING ADJACENT MATERIAL AT VARIOUS LOCATIONS OF DEMOLITION AND PATCHING. SEE DEMOLITION PLANS AND FLOOR PLANS.
4. ~~PAINT LAVATORY PIPE ENCLOSURES - COLOR AS SELECTED BY ARCHITECT.~~
5. EXISTING GRIDS THAT ARE TO RECEIVE NEW TILES ARE TO BE PAINTED. 1



NOTES:

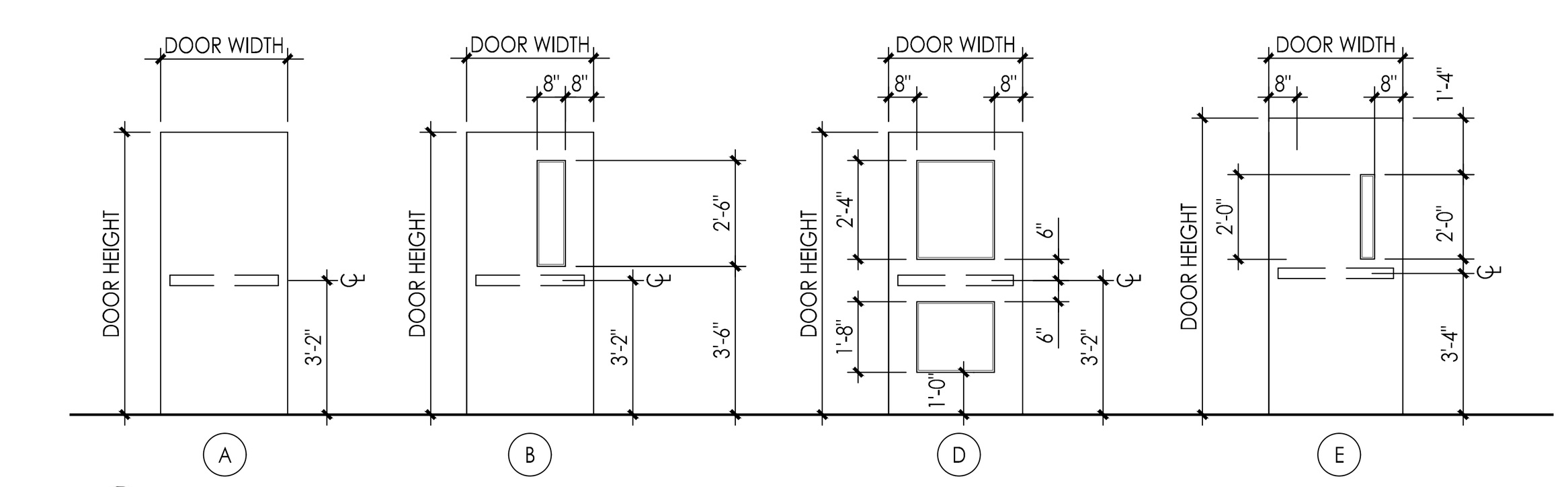
1. DIMENSIONS SHALL BE NET CLEAR DISTANCES MEASURED TO WALL FINISHES (EG CERAMIC TILE), TO FACE OF TOILET PARTITIONS AND TO EDGES OF ADJACENT FIXTURES, CABINETS, ETC.
2. ALL DIMENSIONS ARE MINIMUM UNLESS NOTED OTHERWISE.
3. INSTALLATIONS SHALL COMPLY WITH ALL PROVISIONS OF ICC-ANSI A117 . 1 - 2009, INCLUDING BUT NOT LIMITED TO:
   - 3.1. SECTION 603 (TOILET AND BATHING ROOMS)
   - 3.2. SECTION 604 (WATER CLOSETS AND TOILET COMPARTMENTS)
   - 3.3. SECTION 605 (URINALS)
   - 3.4. SECTION 606 (LAVATORIES AND SINKS)
   - 3.7. SECTION 609 (GRAB BARS)
4. CLEAR FLOOR SPACES MAY OVERLAP WHERE SPECIFICALLY PERMITTED IN ICC-ANSI A117 . 1 - 2009 CHAPTER 6.

TYPICAL FIXTURE / ACCESSORY MOUNTING HEIGHTS

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

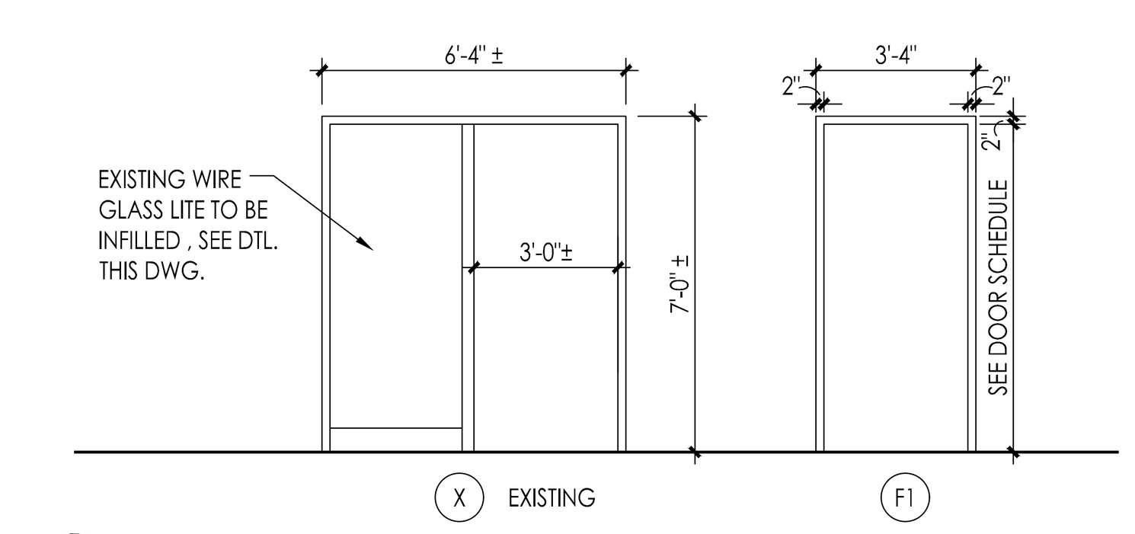
ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR	BASE MAT.	BASE HT.	WAINSCOT MAT.	WAINSCOT HT.	WALL FINISH	CEILING MAT.	CEILING HT.	REMARKS
FIRST FLOOR										
01	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
02	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
03	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
04	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
05	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
06	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
06A	GIRLS' TOILET 06A	P.T. SR	PT	--	--	--	PT - FULL HEIGHT	* AACB	8'-0"	REFER TO DWG A105 FOR WALL PATTERN / NEW FLR TILE TO BE INSTALLED OVER EX. FLOORING - * NEW GRID
06B	BOYS' TOILET 06B	P.T. SR	PT	--	--	--	PT - FULL HEIGHT	* AACB	8'-0"	REFER TO DWG A105 FOR WALL PATTERN / NEW FLR TILE TO BE INSTALLED OVER EX. FLOORING - * NEW GRID
06D	UNISEX TOILET 06D	P.T. SR	PT	--	--	--	PT - FULL HEIGHT	* AACB	8'-0"	REFER TO DWG A105 FOR WALL PATTERN / NEW FLR TILE TO BE INSTALLED OVER EX. FLOORING - * NEW GRID
07	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
08	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
09	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
10	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
11	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
12	RESOURCE ROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
13	FACULTY MEN'S TOILET 13	P.T. SR	PT	--	--	--	PT - FULL HEIGHT	AACB	8'-0"	REFER TO DWG A105 FOR WALL PATTERN / NEW FLR TILE TO BE INSTALLED OVER EX. FLOORING
15	FACULTY WOMEN'S TOILET 15	P.T. SR	PT	--	--	--	PT - FULL HEIGHT	AACB	8'-0"	REFER TO DWG A105 FOR WALL PATTERN / NEW FLR TILE TO BE INSTALLED OVER EX. FLOORING
S-1	STUDENT SUCCESS ROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
38	KINDERGARTEN	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
39	KINDERGARTEN	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
40	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
41	COMPUTER ROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
42	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
43	COMPUTER ROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
44	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
45	SPECIAL EDUCATION CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
46	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
47	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
48	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
49	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
50	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
51	CLASSROOM	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
52	KINDERGARTEN	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
53	KINDERGARTEN	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
54	KINDERGARTEN	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
56	KINDERGARTEN	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
58	KINDERGARTEN	VCT	RUB	4"	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
120	FACULTY TOILET 120	P.T. SR	PT	--	--	--	PT - FULL HEIGHT	ETR	8'-0"	REFER TO DWG A105 FOR WALL PATTERN / NEW FLR TILE TO BE INSTALLED OVER EX. FLOORING
SECOND FLOOR										
21	CLASSROOM	ETR	ETR	--	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
22	CLASSROOM	ETR	ETR	--	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
23	SPECIAL EDUCATION CLASSROOM	ETR	ETR	--	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
24	CLASSROOM	ETR	ETR	--	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
24A	BOYS' TOILET 24A	P.T. SR	PT	--	--	--	PT - FULL HEIGHT	* AACB	8'-0"	REFER TO DWG A105 FOR WALL PATTERN / NEW FLR TILE TO BE INSTALLED OVER EX. FLOORING - * NEW GRID
24B	GIRLS' TOILET 24B	P.T. SR	PT	--	--	--	PT - FULL HEIGHT	* AACB	8'-0"	REFER TO DWG A105 FOR WALL PATTERN / NEW FLR TILE TO BE INSTALLED OVER EX. FLOORING - * NEW GRID
25	CLASSROOM	ETR	ETR	--	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
26	CLASSROOM	ETR	ETR	--	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
27	G & T CLASSROOM	ETR	ETR	--	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
28	CLASSROOM	ETR	ETR	--	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
29	CLASSROOM	ETR	ETR	--	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
30	AIM CLASSROOM	ETR	ETR	--	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED
31	SPECIAL EDUCATION CLASSROOM	ETR	ETR	--	--	--	PAINTED - SEE SPECS	ACB	ETR	ABATAMENT OF EXISTING VAT / EXISTING CEILING GRID TO BE PAINTED



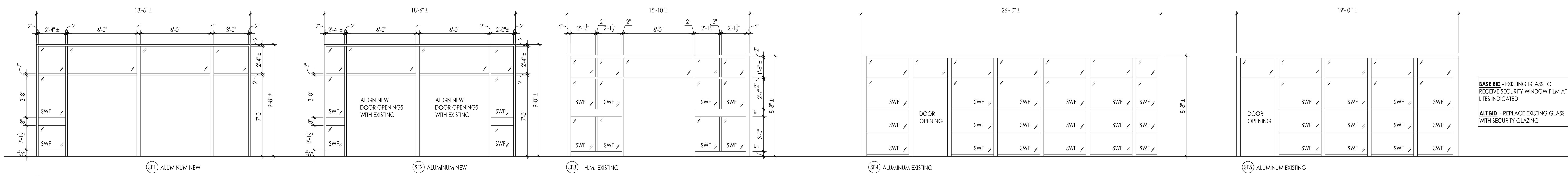
1 DOOR TYPES

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



2 HOLLOW METAL (HM) FRAME TYPES

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

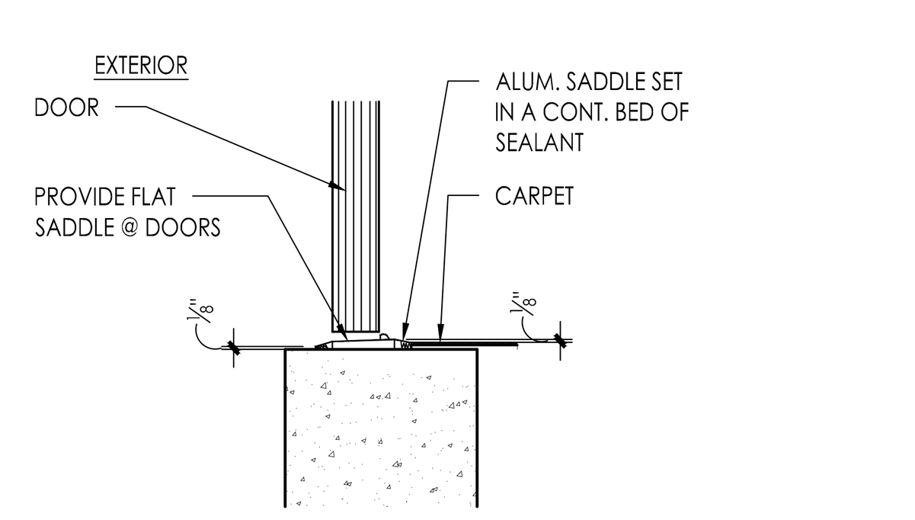


BASE BID - EXISTING GLASS TO RECEIVE SECURITY WINDOW FILM AT LITES INDICATED

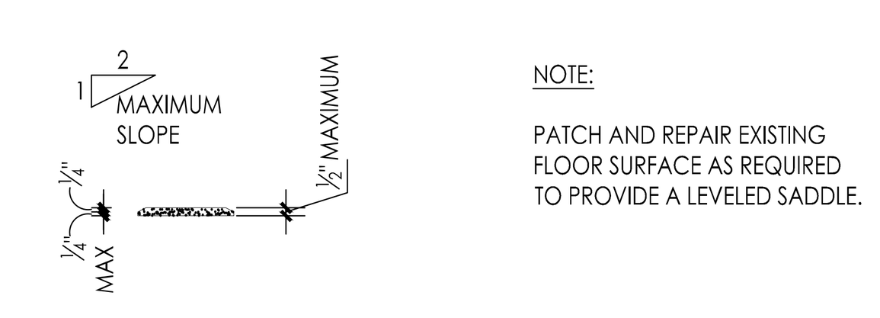
ALT BID - REPLACE EXISTING GLASS WITH SECURITY GLAZING

3 INTERIOR STOREFRONT FRAME TYPES

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



S2 - ALUMINUM SADDLE - DETAIL



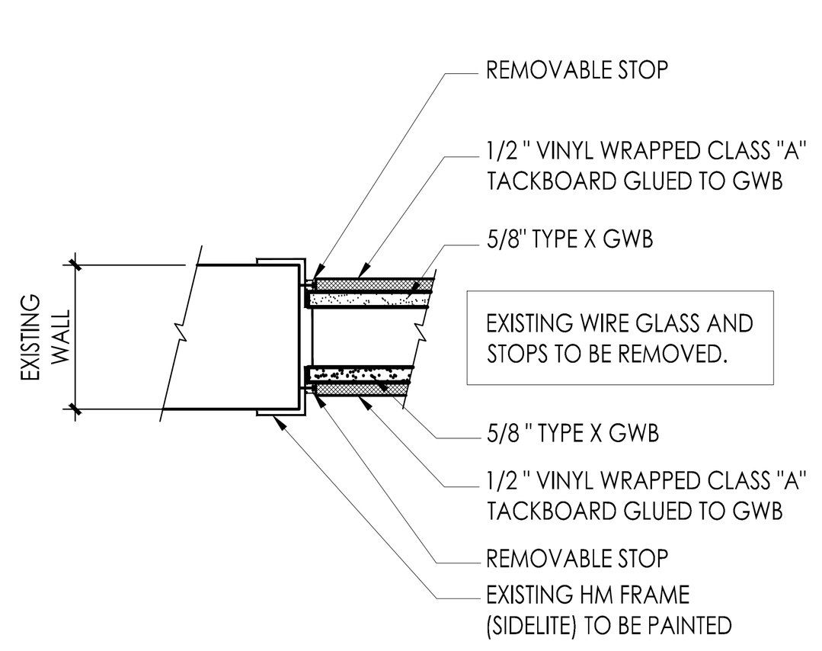
NOTE:

PATCH AND REPAIR EXISTING FLOOR SURFACE AS REQUIRED TO PROVIDE A LEVELED SADDLE.

S1 - MARBLE SADDLE - DETAIL

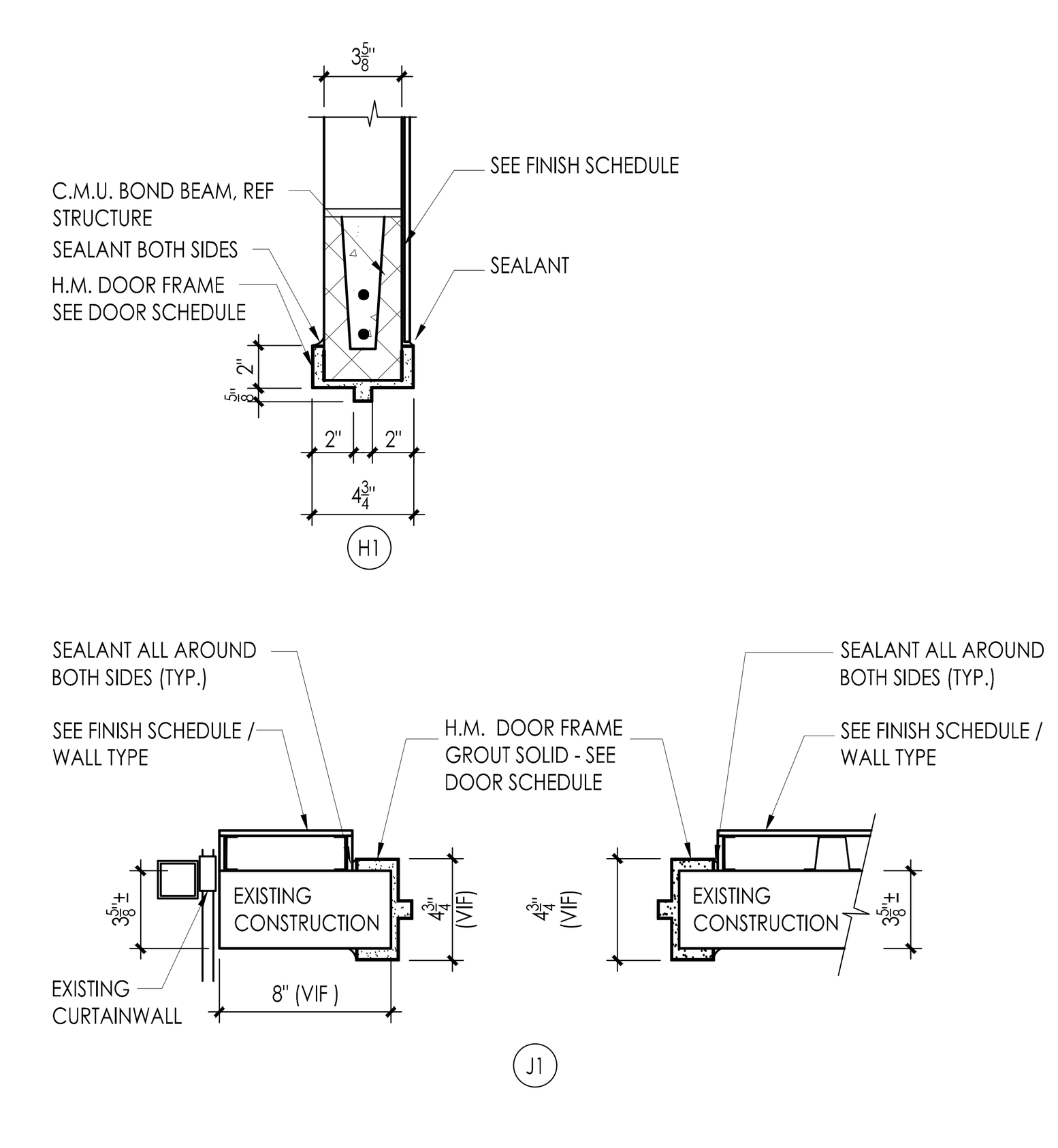
5 SADDLE TYPES

1" = 1' - 0"



4 VISION LITE INFILL - DETAIL

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



6 DOOR DETAILS

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

PORCELAIN TILE (P.T.) INSTALLATION NOTES:

1. BEFORE WORK COMMENCES, GC IS TO EXAMINE THE AREAS TO BE COVERED AND REPORT ANY DEFICIENCY OR ADVERSE CONDITION IN WRITING TO THE ARCHITECT.
2. DO NOT PROCEED WITH THE WORK UNTIL SURFACES AND CONDITIONS COMPLY WITH THE REQUIREMENTS INDICATED IN THE MANUFACTURER'S INSTRUCTIONS AND IN ANSI A108.5, A108.6 AND A108.12. SPECIFICATIONS.
3. REFER TO THE TCNA HANDBOOK FOR CERAMIC TILE INSTALLATION DETAILS (TR-712 AND TR- 713).
4. ALL SUPPORTING SURFACES MUST BE STRUCTURALLY SOUND, SOLID, STABLE,LEVEL, PLUMB AND TRUE.
5. COMPLETELY REMOVE ALL PAINT, LOOSELY BONDED TOPPING, LOOSE PARTICLES AND CONSTRUCTION DEBRIS BY MECHANICAL MEANS.
6. ACID ETCHING IS NOT RECOMMENDED.
7. ALL SUBSTRATES SHOULD BE DRY.

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Project Name
Toilet Room, Classroom Renovations, Doors-Antheil Elementary School Phase 1

Project Owner Name
Ewing Public Schools

Project Location
339 Ewingville Road, Ewing, NJ 08638

Project Number
5015A2A

Project Date
02.08.2019

Checked By
GRD

Drawn By
AMD

Scale
AS NOTED

Drawing Name
ROOM FINISH SCHEDULE, DETAILS AND GENERAL AND DOOR INFORMATION

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
G002

DOOR SCHEDULE - New Doors

- All FRIG-1 glazing is to receive security window film (SWF) - BASE BID
- Security glazing - ALTERNATE BID

AS INDICATED BY:

DOOR No.	DOOR LOCATION	DOOR				FRAME				SADDLE	HARD WARE	RATING	SIGN TYPE	REMARKS
		SIZE	TYPE	MAT.	GLASS	TYPE	MAT.	HEAD	JAMB					
FIRST FLOOR - NEW DOORS														
01	CLASSROOM 01	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
02	CLASSROOM 02	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
03	CLASSROOM 03	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
04	CLASSROOM 04	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
05	CLASSROOM 05	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
06	CLASSROOM 06	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
06A	GIRLS' TOILET ROOM 06A	3'- 0" x 6'- 8" ±	A	WD	--	ETR	--	--	--	S1	15.5	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
06B	BOYS' TOILET ROOM 06B	3'- 0" x 6'- 8" ±	A	WD	--	ETR	--	--	--	S1	15.5	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
06C	JANITOR'S CLOSET 06C	3'- 0" x 6'- 8" ±	A	WD	--	ETR	--	--	--	--	13.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
06D	UNISEX TOILET 06D	3'- 0" x 6'- 8" ±	A	WD	--	F1	HM	H1	J1	S1	21.0	20 MIN	15	
07	CLASSROOM 07	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
08	CLASSROOM 08	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
09	CLASSROOM 09	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
10	SPECIAL EDUCATION CLRM 10	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
11	CLASSROOM 11	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
12	CLASSROOM 12	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
13	FACULTY MENS' TOILET ROOM 13	3'- 0" x 6'- 8" ±	A	WD	--	ETR	--	--	--	S1	15.5	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
14	JANITOR'S CLOSET 14	3'- 0" x 6'- 8" ±	A	WD	--	ETR	--	--	--	--	11.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
15	FACULTY WOMENS' TOILET RM 15	3'- 0" x 6'- 8" ±	A	WD	--	ETR	--	--	--	S1	15.5	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
S-1	STUDENT SUCCESS ROOM S-1	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
34	MAINTENANCE RM 34	(2) 3'- 0" x 6'- 8" ±	A	WD	--	ETR	--	--	--	--	10.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
35	BOILER ROOM 35	3'- 0" x 6'- 8" ±	A	STL	--	ETR	--	--	--	--	11.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
38	KINDERGARTEN 38	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
39	KINDERGARTEN 39	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
40	CLASSROOM 40	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
41	COMPUTER ROOM 41	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
42	CLASSROOM 42	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
43	COMPUTER ROOM 43	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
44	CLASSROOM 44	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
44A	STORAGE 44A	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	11.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
45	SPECIAL EDUCATION CLRM 45	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
46	CLASSROOM 46	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
47	CLASSROOM 47	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
47B	JANITOR'S CLOSET 47B	3'- 0" x 6'- 8" ±	A	WD	--	ETR	--	--	--	--	11.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
48	CLASSROOM 48	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
49	CLASSROOM 49	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
50	CLASSROOM 50	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
50A	STORAGE 50A	3'- 0" x 6'- 8" ±	A	WD	--	ETR	--	--	--	--	11.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
51	CLASSROOM 51	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
S4	SERVER S-4	3'- 0" x 6'- 8" ±	A	WD	--	ETR	--	--	--	--	11.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
52	KINDERGARTEN 52	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
53	KINDERGARTEN 53	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
53E	JANITOR'S CLOSET 53E	3'- 0" x 6'- 8" ±	A	WD	FRIG-1	ETR	--	--	--	--	11.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
53F	STORAGE ST5 53F	3'- 0" x 6'- 8" ±	A	WD	FRIG-1	ETR	--	--	--	--	11.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
54	KINDERGARTEN 54	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
55	KINDERGARTEN 55	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
56	KINDERGARTEN 56	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
57	KINDERGARTEN 57	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
58	KINDERGARTEN 58	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
59	KINDERGARTEN 59	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
60	KINDERGARTEN 60	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
S7	SPEECH ROOM S-7	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
69A	ART ROOM 69	(2) 3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	8.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
72	BSI - FIRST GRADE 72	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
73	BSI - KINDERGARTEN 73	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
74	BSI 74	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
75	BSI 75	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
75A	STORAGE / ELECTRIC ROOM 75A	(2) 3'- 0" x 6'- 8" ±	A	WD	-	ETR	--	--	--	--	10.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
75B	STORAGE #2 75B	3'- 0" x 6'- 8" ±	A	WD	-	ETR	--	--	--	--	13.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
76A	JR HIGH CAFETERIA 76	(2) 3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	4.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
76B	JR HIGH CAFETERIA 76	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	9.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
77A	ELEMENTARY CAFETERIA 77	(2) 3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	--	--	--	--	4.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
100D	LOBBY 100	(2) 3'- 0" x 7'- 0"	D	ALUM	LG	SF1	ALUM	--	--	S2	3.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
100E	LOBBY 100	(2) 3'- 0" x 7'- 0"	D	ALUM	LG	SF1	ALUM	--	--	S2	3.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
100F	LOBBY 100	3'- 0" x 7'- 0"	D	ALUM	LG	SF1	ALUM	--	--	S2	3.5	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
101A	LOBBY 101	(2) 3'- 0" x 6'- 8" ±	A	WD	-	ETR	ETR	--	--	ETR	6.0	20 MIN	ETR	NEW DOORS UNDER ALT BID
101B	LOBBY 101	(2) 3'- 0" x 6'- 8" ±	A	WD	-	ETR	ETR	--	--	ETR	6.0	20 MIN	ETR	NEW DOORS UNDER ALT BID
103D	CORRIDOR 103 / STAGE	(2) 3'- 0" x 6'- 8" ±	A	WD	-	ETR	ETR	--	--	ETR	6	20 MIN	ETR	NEW DOORS UNDER ALT BID
105C	LOBBY 105	(2) 3'- 0" x 7'- 0"	D	ALUM	LG	SF2	ALUM	--	--	S2	3.0	--	ETR	Refer to general door notes 1 / 2 / 4 / 5
105D	LOBBY 105	(2) 3'- 0" x 7'- 0"	D	ALUM	LG	SF2	ALUM	--	--	S2	3.0	--	ETR	Refer to general door notes 1 / 2 / 4 / 5
113D	GYMNASIUM A	(2) 3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	ETR	--	--	ETR	4.0	20 MIN	ETR	NEW DOORS UNDER ALT BID
113E	GYMNASIUM B	(2) 3'- 0" x 6'- 8" ±	B	WD	FRIG-1	ETR	ETR	--	--	ETR	4.0	20 MIN	ETR	NEW DOORS UNDER ALT BID
120	FACULTY TOILET ROOM 120	3'- 0" x 6'- 8" ±	A	WD	--	ETR	--	--	--	S1	21.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
120A	JANITORS' CLOSET 120A	3'- 0" x 6'- 8" ±	A	WD	--	ETR	--	--	--	--	13.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
LMC1	LIBRARY/MEDIA CENTER LMC	(2) 3'- 0" x 7'- 0"	D	WD	LG	SF3	--	--	--	S2	8.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
LMC2	LIBRARY/MEDIA CENTER LMC	3'- 0" x 7'- 0"	D	WD	LG	ETR	--	--	--	S2	9.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
SECOND FLOOR - NEW DOORS														
21	CLASSROOM 21	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
22	CLASSROOM 22	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
23	SPECIAL EDUCATION CLRM 23	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
24	CLASSROOM 24	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	16.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
24A	BOYS TOILET 24A	3'- 0" x 6'- 8" ±	A	WD	--	ETR	--	--	--	S1	15.5	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
24B	GIRLS TOILET 24B	3'- 0" x 6'- 8" ±	A	WD	--	ETR	--	--	--	S1	15.5	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
24C	JANITOR'S CLOSET 24C	3'- 0" x 6'- 8" ±	A	WD	--	ETR	--	--	--	--	13.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
25	CLASSROOM 25	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
26	CLASSROOM 26	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
27	G & T CLASSROOM 27	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
28	CLASSROOM 28	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
29	CLASSROOM 29	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
29A	ESL CLASSROOM 29A	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
30	AIM CLASSROOM 30	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5
31	SPECIAL EDUCATION CLRM 31	3'- 0" x 6'- 8" ±	B	WD	FRIG-1	X	--	--	--	--	18.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 4 / 5

DOOR SCHEDULE - Interior Doors - Upgrades

- Upgraded to intruder locks and lever sets .
- Existing glass replacement with FRIG-1 glass and SWF - BASE BID
- Existing glass replacement with Security glass - ALTERNATE BID

AS INDICATED BY:

DOOR No.	DOOR LOCATION	DOOR				FRAME				SADDLE	HARD WARE	RATING	SIGN TYPE	REMARKS
		SIZE	TYPE	MAT.	GLASS	TYPE	MAT.	HEAD	JAMB					
FIRST FLOOR - INTERIOR DOORS SECURITY AND KEYING UPGRADES														
36	BOYS' TOILET	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR		ETR	ETR	NO WORK
37	GIRLS' TOILET	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR		ETR	ETR	NO WORK
47A	GIRLS' TOILET	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR		ETR	ETR	NO WORK
47C	BOYS' TOILET	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR		ETR	ETR	NO WORK
53C	BOYS' TOILET 53C	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR		ETR	ETR	NO WORK
53D	GIRLS' TOILET 53D	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR		ETR	ETR	NO WORK
70	SPEECH 70	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR		20 MIN	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
71	SPEECH 71	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR		20 MIN	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
101A	LOBBY 101	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR	ETR	20 MIN	ETR	NO WORK UNDER BASE BID
101B	LOBBY 101	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR	ETR	20 MIN	ETR	NO WORK UNDER BASE BID
101C	LOBBY 101	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR		20 MIN	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
103B	CORRIDOR 103	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	18.5	20 MIN	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
103C	CORRIDOR 103	ETR	ETR	ETR	FRIG-1	SF4	ETR	--	--	ETR	18.5	20 MIN	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
103D	CORRIDOR 103 / STAGE	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR	18.5	--	ETR	NO WORK UNDER BASE BID
103E	CORRIDOR 103	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR	18.5	20 MIN	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
103F	CORRIDOR 103	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	18.5	20 MIN	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
103G	CORRIDOR 103	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	18.5	20 MIN	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
103H	CORRIDOR 103	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	18.5	20 MIN	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
103K	CORRIDOR 103	ETR	ETR	ETR	FRIG-1	SF5	ETR	--	--	ETR	26.0	20 MIN	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
103L	CORRIDOR 103	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	18.5	20 MIN	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
103M	CORRIDOR 103	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	18.5	20 MIN	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
103N	CORRIDOR 103	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	18.5	20 MIN	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
103P	SMALL GROUP INSTRUCTION	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR		20 MIN	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
111D	CORRIDOR 111	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR		--	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
112A	CORRIDOR 112	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	18.5	--	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
112B	CORRIDOR 112	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	18.5	--	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
113D	GYMNASIUM A	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	ETR	--	ETR	HARDWARE TO REMAIN UNDER BASE BID - See note 5
113E	GYMNASIUM B	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	ETR	--	ETR	HARDWARE TO REMAIN UNDER BASE BID - See note 5
113F	LOBBY 113	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	18.5	--	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
113G	LOBBY 113	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	9.5	--	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
114A	CORRIDOR 114	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	18.5	--	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
114B	CORRIDOR 114	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	18.5	--	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
114C	CORRIDOR 114	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	18.5	--	ETR	Refer to general door notes 1 / 2 / 3 / 4 / 5
S1B	STAIR S1	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR		--	ETR	NO WORK
S2B	STAIR S2	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR		--	ETR	NO WORK
SECOND FLOOR - INTERIOR DOORS SECURITY AND KEYING UPGRADES														
S1C	STAIR S1	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR		--	ETR	NO WORK
S2C	STAIR S2	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR		--	ETR	NO WORK

DOOR SCHEDULE - Exterior Doors - Upgrades

- Re-Keying / New Cores

AS INDICATED BY:

DOOR No.	DOOR LOCATION	DOOR				FRAME				SADDLE	HARD WARE	RATING	SIGN TYPE	REMARKS
		SIZE	TYPE	MAT.	GLASS	TYPE	MAT.	HEAD	JAMB					
FIRST FLOOR - EXTERIOR DOORS SECURITY AND KEYING UPGRADES														
28A	MULTI-PURPOSE ROOM 28	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR		--	ETR	UPGRADE
28B	MULTI-PURPOSE ROOM 28	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR		--	ETR	UPGRADE / New Access Control - see note 6
34A1	RECEIVING ROOM 34A	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	26.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
35A	BOILER ROOM 35	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	29.0	--	ETR	UPGRADE
35A1	TRANSFORMER ROOM 35A	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	29.0	--	ETR	UPGRADE
53A	KINDERGARTEN 53	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	27.0	--	ETR	UPGRADE
62A	SGI 62	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	27.0	--	ETR	UPGRADE
68A	OFFICE 68	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	26.0	--	ETR	UPGRADE
74A	VESTIBULE 74	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	27.0	--	ETR	UPGRADE
76C	JR. HIGH CAFETERIA 76	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	28.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
77B	INSTRUMENTAL 77	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	27.0	--	ETR	UPGRADE
78A	AUDITORIUM 78	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	26.0	--	ETR	UPGRADE
100A	LOBBY 100	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	29.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
100B	LOBBY 100	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	28.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
100C	LOBBY 100	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	28.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
102A	VESTIBULE 102	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	28.0	20 MIN	ETR	UPGRADE / Ex. Access Controlled Doors
102B	VESTIBULE 102	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	25.0	20 MIN	ETR	UPGRADE / Ex. Access Controlled Doors
103A	CORRIDOR 103	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	28.0	20 MIN	ETR	UPGRADE / Ex. Access Controlled Doors
103J	CORRIDOR 103	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	28.0	20 MIN	ETR	UPGRADE
105A	LOBBY 105	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	29.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
105B	LOBBY 105	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	25.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
106A	CORRIDOR 106	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	28.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
106B	CORRIDOR 106	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	29.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
108A	CORRIDOR 108	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	29.0	--	ETR	UPGRADE
110A	CORRIDOR 110	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	29.0	--	ETR	UPGRADE / New Access Control - see note 6
A110A	FACULTY ROOM A110	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	-	--	ETR	UPGRADE
111A	CORRIDOR 111	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	28.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
111B	CORRIDOR 111 / COURTYARD	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR		--	ETR	UPGRADE
111C	CORRIDOR 111 / COURTYARD	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	28.0	--	ETR	UPGRADE
112C	CORRIDOR 112	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR		--	ETR	UPGRADE
113A	LOBBY 113	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	27.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
113B	LOBBY 113	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	28.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
113C	LOBBY 113	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	28.0	--	ETR	UPGRADE
S1A	STAIR S1	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	28.0	--	ETR	UPGRADE
S2A	STAIR S2	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	28.0	--	ETR	UPGRADE
A1	GYMNASIUM A	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	29.0	--	ETR	UPGRADE / New Access Control - see note 6
A2	GYMNASIUM A	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	29.0	--	ETR	UPGRADE
B1	GYMNASIUM B	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	29.0	--	ETR	UPGRADE
D128A	KITCHEN D128	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR		--	ETR	UPGRADE
LMC3	LIBRARY / MEDIA CENTER	ETR	ETR	ETR	ETR	ETR	ETR	--	--	ETR	27.0	--	ETR	UPGRADE

GENERAL DOOR NOTES:

1. ALL DOORS ARE $1\frac{3}{4}$" THICK UNLESS OTHERWISE NOTED.
2. CONTRACTOR TO COORDINATE NEW HARDWARE WITH EXISTING HM DOOR FRAME TO REMAIN.
3. ALL UPGRADED HARDWARE IS TO BE PROVIDED WITH RETROFIT TRIM.
4. PREP, PATCH AND PAINT EXISTING HOLLOW METAL FRAMES.
5. NEW FRIG-1 AND LG GLASS IS TO RECEIVE SECURITY WINDOW FILM (SWF) - **UNDER BASE BID** ALL GLAZING PROVIDED FOR NEW DOORS IS TO BE " SECURITY GLAZING' UNDER **ALTERNATE BID** (1)
6. ALL ACCESS CONTROL IS TO BE DONE UNDER SEPARATE CONTRACT (BY OTHERS)

ABBREVIATIONS:

ETR	- EXISTING TO REMAIN
FRIG-1	- RATED GLAZING SEE SPECIFICATION
HM	- HOLLOW METAL FRAME
LG	- LAMINATED GLASS
PTD	- PAINTED
WD	- WOOD

REFER TO DRAWING G002 FOR DOOR / FRAME TYPES AND DETAILS

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Project Name
Toilet Room, Classroom Renovations, Doors-Antheil Elementary School Phase 1

Project Owner Name
Ewing Public Schools

Project Location
339 Ewingville Road, Ewing, NJ 08638

Project Number
5015A2A

Project Date
02.08.2019

Checked By
GRD

Drawn By
AMD

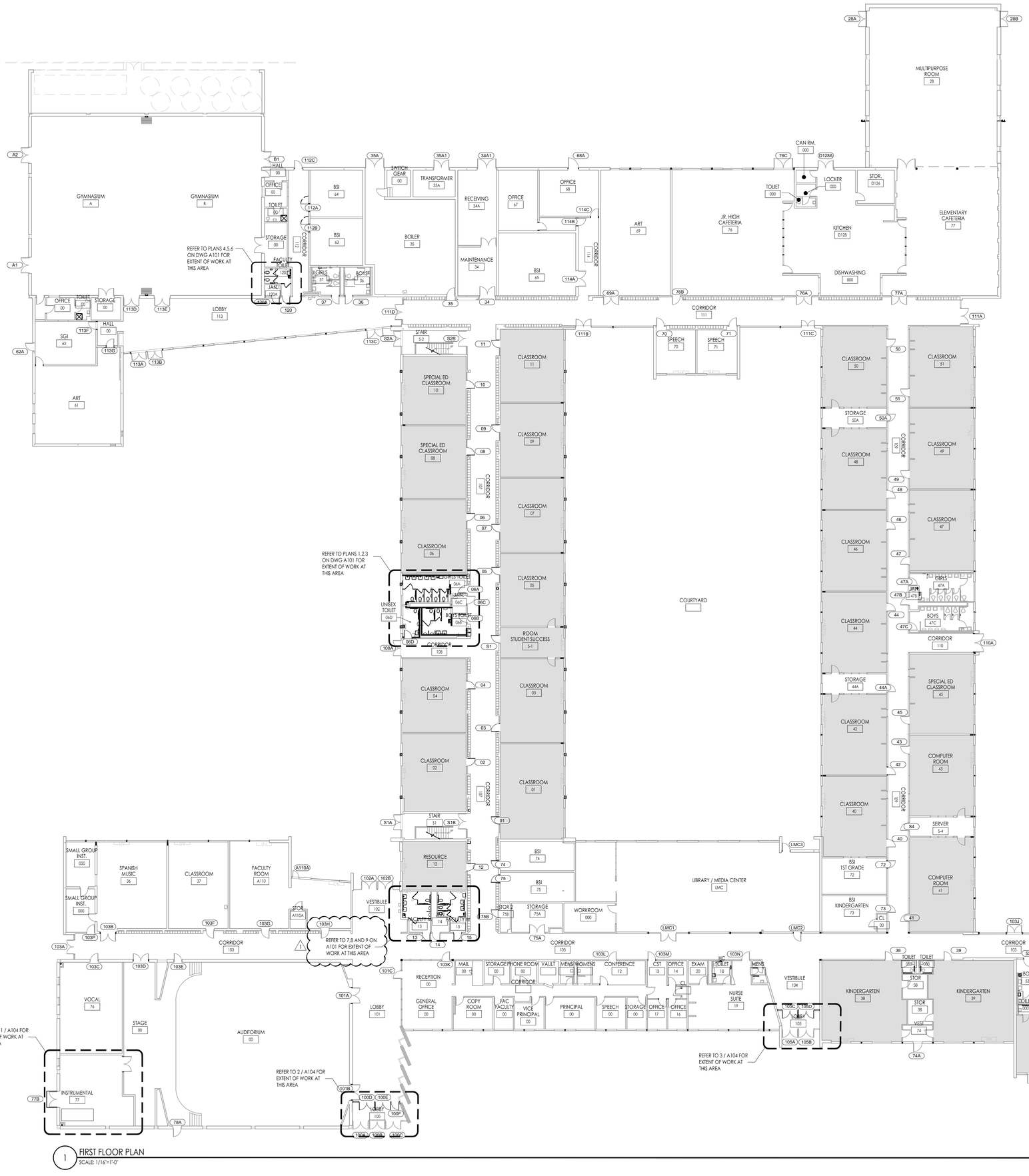
Scale
AS NOTED

Drawing Name
DOOR SCHEDULES

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
G003



1 FIRST FLOOR PLAN
SCALE: 1/16"=1'-0"

2 SECOND FLOOR PLAN
SCALE: 1/16"=1'-0"

LEGEND

RENOVATED ROOMS
NEW ACT AND LIGHTING (EXISTING GRID TO REMAIN)
NEW DOOR / NEW HARDWARE (EXISTING FRAME - PTD)

RENOVATED ROOMS
NEW VCT (WITH ABATEMENT OF EXISTING VAT)
NEW ACT AND LIGHTING (EXISTING GRID TO REMAIN)
NEW DOOR / NEW HARDWARE (EXISTING FRAME - PTD)

NOTE :
REFER TO ROOM FINISH SCHEDULE FOR EXTENT OF WORK AT EACH ROOM

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GRD

Drawn By
AMD

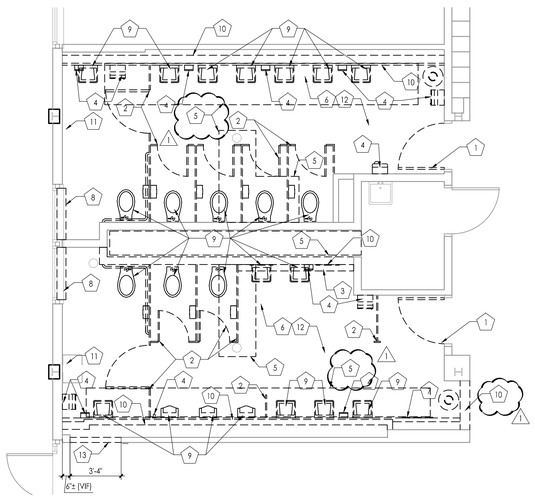
Scale
AS NOTED

Drawing Name
FIRST AND SECOND FLOOR PLANS

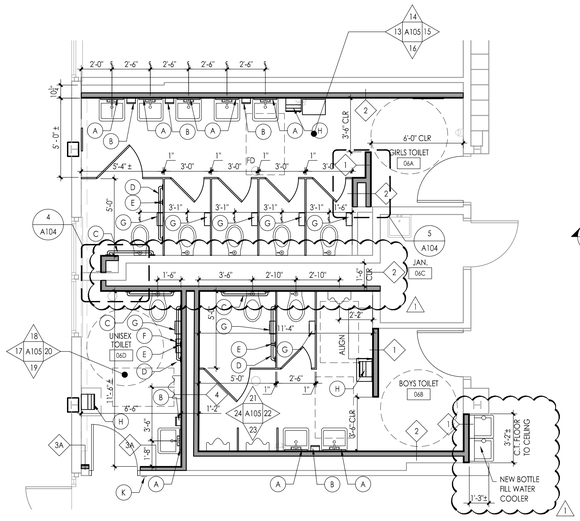
Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

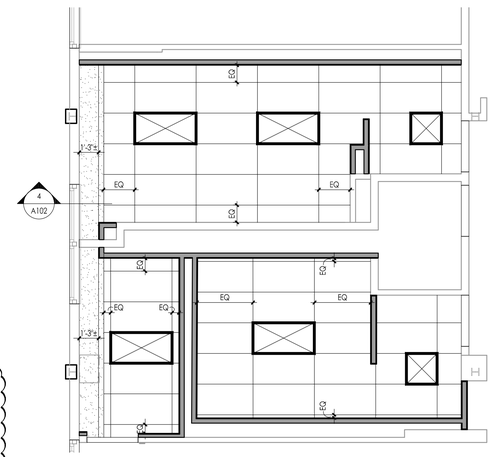
Drawing Number
A100



1 DEMOLITION PLANS - FIRST FLOOR - GIRLS TOILET 06A / BOYS TOILET 06B
SCALE: 1/4"=1'-0"



2 NEW FLR PLANS - FIRST FLOOR - GIRLS TOILET 06A / BOYS TOILET 06B / UNISEX TOILET 06D
SCALE: 1/4"=1'-0"



3 RCP - FIRST FLOOR - GIRLS TOILET 06A / BOYS TOILET 06B / UNISEX TOILET 06D
SCALE: 1/4"=1'-0"

PLAN LEGEND

NEW STUD WALLS. REFER TO DRAWING A102

REFLECTED CEILING PLAN LEGEND

AACB-2' x 4' ACRYLIC ACOUSTICAL CEILING BOARD - SEE FINISH SCHEDULE FOR LOCATION

5/8" MOISTURE RESISTANT GWB - PTD

LIGHTS (SEE ELECTRICAL DRAWINGS)

GRILL OR DIFFUSER (SEE MECHANICAL DRAWINGS)

REFLECTED CEILING NOTES:

1. SEE HVAC, PLUMBING AND ELECTRICAL DRAWINGS FOR TYPE, SIZE AND ADDITIONAL INFORMATION.
2. ALL DIFFUSERS AND LIGHTS TO BE CENTERED IN THE GWB OR ACB CEILING UNLESS NOTED OTHERWISE
3. CONTRACTOR TO COORDINATE LOCATION OF ALL DIFFUSERS AND LIGHTS.
4. SEE ROOM FINISH SCHEDULE FOR CEILING HEIGHTS

GENERAL DEMOLITION NOTES:

A. ALL CONTRACTORS ARE ADVISED TO VISIT THE SITE AND VERIFY ALL AREAS AND CONDITIONS PRIOR TO SUBMITTING THEIR BIDS. THE CONTRACTOR MUST NOTIFY THE ARCHITECT OF ANY DISCREPANCIES AND/OR OMISSIONS IN WRITING AT LEAST SEVEN DAYS PRIOR TO THE RECEIPT OF BIDS. FAILURE TO SO NOTIFY THE ARCHITECT INDICATES THAT ANY ADDITIONAL COSTS ASSOCIATED WITH THE DISCREPANCIES AND / OR OMISSIONS ARE INCLUDED IN THE CONTRACTOR'S BID AND THAT NO CHANGE TO THE CONTRACT AMOUNT WILL BE MADE AFTER THE RECEIPT OF BIDS OR THE AWARD OF CONTRACTS.

B. ALL PLUMBING, HVAC OR ELECTRICAL DISCONNECTS SHALL BE MADE BY THE RESPECTIVE TRADES. ALL EQUIPMENT, DEVICES, FIXTURES, ETC., SHALL BE REMOVED FROM THE SITE BY THE RESPECTIVE CONTRACTOR. NOTE: THE EXISTING FIRE ALARM SYSTEM SHALL NOT BE DIMINISHED NOR SHALL EXISTING FIRE ALARM DEVICES BE REMOVED UNTIL NEW DEVICES ARE READY FOR SWITCHOVER.

C. UNLESS NOTED OTHERWISE ALL DEMOLITION MATERIAL SHALL BE REMOVED OFF SITE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

D. THERE ARE SOME SPECIFIC ITEMS DESIGNATED BY THE ARCHITECT FOR SALVAGE. THESE ITEMS ARE INTENDED FOR REUSE IN THE NEW CONSTRUCTION. THE CONTRACTOR MUST TAKE CARE IN THE REMOVAL AND STORAGE OF THESE ITEMS UNTIL THEY ARE NEEDED IN THE NEW CONSTRUCTION.

E. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROTECT PORTIONS OF THE EXISTING CONSTRUCTION WHICH ARE ADJACENT TO AREAS TO BE DEMOLISHED. MAKE ALL CUTS AS NEATLY AS POSSIBLE. REFER TO FLOOR PLAN DRAWINGS FOR FINISHING OF THESE AREAS.

F. IF NOT OTHERWISE NOTED OR DETAILED, ALL SURFACES LEFT ROUGH OR UNFINISHED BY DEMOLITION AND WHICH ARE EXPOSED TO VIEW, SHALL BE PATCHED TO MATCH ADJACENT SURFACES AND FINISHED TO PROVIDE A UNIFORM APPEARANCE WITH REGARD TO SIZE, SHAPE, COLOR, TEXTURE AND MATERIAL.

G. THE CONTRACTOR SHALL PROVIDE A PHYSICAL BARRIER TO CONTAIN DUST AND DIRT AROUND THE DEMOLITION AREA AND SHALL MAKE EVERY EFFORT TO KEEP THE DEMOLITION SITE AND SURROUNDING AREAS AS CLEAN AS POSSIBLE. ALL TEMPORARY PARTITIONS SHALL BE 1 HOUR RATED CONSTRUCTION AND INCLUDE A DOOR.

H. NO DEMOLITION SHALL BEGIN UNTIL PROPER PROTECTION IS IN PLACE AND APPROVED BY ARCHITECT & OWNER TO ENSURE THE SAFETY OF THE PUBLIC, THE BUILDING OCCUPANTS, CONSTRUCTION WORKERS AND TO CONTAIN DUST AND DIRT WITHIN THE AREA OF DEMOLITION.

I. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS REGARDING THE REMOVAL AND DISPOSAL OF ALL MATERIALS & EQUIPMENT.

J. THE CONTRACTOR SHALL PROVIDE PROTECTION AGAINST INCLEMENT WEATHER FOR THE EXISTING BUILDING DURING THE INTERIM PERIOD BETWEEN DEMOLITION AND THE COMPLETION OF NEW CONSTRUCTION.

K. THE CONTRACTORS SHALL TAKE INTO ACCOUNT THEIR METHODS OF CONSTRUCTION FOR THE NEW WORK AND INCLUDE IN THEIR BID THE COST OF ADDITIONAL DEMOLITION WORK NECESSARY TO FACILITATE THE CONSTRUCTION. THIS WORK INCLUDES, BUT IS NOT LIMITED TO THE PARTIAL DEMOLITION OF WALLS AT THE POINTS WHERE NEW STEEL CONNECTS TO EXISTING BEAMS OR COLUMNS. THE AREA AROUND JOINTS BETWEEN NEW AND EXISTING CONSTRUCTION IN WALLS, FLOORS AND CEILINGS, AREAS OF SIDEWALK AND PAVING, ETC. MUCH OF THIS WORK IS INDICATED IN SECTIONS AND DETAILS RELATING TO THE NEW CONSTRUCTION.

L. THE DEMOLITION WORK SHOWN ON THIS PLAN IS INTENDED TO BE A GENERAL OVERVIEW OF MAJOR DEMOLITION WORK REQUIRED. IT IS NOT A COMPLETE AND EXCLUSIVE REPRESENTATION OF ALL DEMOLITION WORK NEEDED FOR EXECUTION OF THE PROJECT. WHEN PREPARING THEIR BIDS, CONTRACTORS MUST REFER TO THE FULL SET OF CONSTRUCTION DOCUMENTS FOR VARIOUS MISCELLANEOUS ITEMS WHICH MUST BE REMOVED AND/OR RELOCATED AS PART OF THE WORK.

M. ALL PRIME CONTRACTORS ARE RESPONSIBLE FOR THEIR OWN CUTTING AND PATCHING - SEE SPECIFICATION.

N. THE OWNER HAS THE RIGHT OF FIRST REFUSAL FOR ALL EQUIPMENT AND FIXTURES (CABINETS, SHELVING, ETC.) REMOVED UNDER CONTRACT. IF THE OWNER DOES NOT EXERCISE THIS RIGHT FOR AN INDIVIDUAL PIECE OF EQUIPMENT, THE GENERAL CONTRACTOR SHALL REMOVE SAID EQUIPMENT FROM SITE.

DEMOLITION / CONSTRUCTION NOTES:

REFER TO MECHANICAL / ELECTRICAL / PLUMBING DRAWINGS FOR ADDITIONAL DEMO/CONSTRUCTION NOTES

1. EXISTING DOOR AND HARDWARE TO BE REMOVED IN THEIR ENTIRETY INCLUDING MARBLE SADDLE. EXISTING DOOR FRAME TO BE REPAIRED AS REQUIRED AND PAINTED TO RECEIVE NEW DOOR AND HARDWARE.
2. EXISTING TOILET PARTITIONS TO BE REMOVED IN THEIR ENTIRETY INCLUDING ALL RELATED TOILET ACCESSORIES AND GRAB BARS. PATCH AND REPAIR ANY DISTURBED AREAS IN PREPARATION FOR NEW WORK AND INSTALLATIONS.
3. REMOVE EXISTING SLATE SHELVING, PATCH AND REPAIR ANY DISTURBED AREAS IN PREPARATION FOR NEW FINISHES AND INSTALLATIONS.
4. REMOVE ALL EXISTING TOILET ACCESSORIES (PAPER TOWEL / SOAP DISPENSERS) PATCH AND REPAIR ANY DISTURBED AREAS IN PREPARATION OF NEW FINISHES AND INSTALLATIONS.
5. REMOVE EXISTING FLOOR AND CONCRETE SLAB AS REQUIRED FOR PLUMBING REMOVALS AND NEW INSTALLATIONS. REFER TO MEP DRAWING FOR ADDITIONAL INFORMATION AND METHODOLOGY AND COORDINATE WITH PLUMBING CONTRACTOR FOR EXTENT OF DEMOLITION. PROVIDE NEW EXTENSIONS, CLEAN-OUTS AND FLOOR DRAIN COVERS - TYP.
6. REMOVE EXISTING CEILING GRID AND TILES INCLUDING ALL RELATED MEP INSTALLATIONS IN PREPARATION FOR NEW SUSPENDED CEILING , COORDINATE REMOVALS WITH ALL OTHER TRADES. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION AND EXTENT, PROVIDE ALL EXTENSIONS AND MATERIALS AS REQUIRED TO MEET NEW CONDITIONS.
7. REMOVE EXISTING MIRRORS AND / OR LEVELING FURRING WOOD USED FOR THEIR INSTALLATION. PATCH AND REPAIR ANY DISTURBED AREAS AS REQUIRED FOR NEW FINISHES APPLICATION.
8. REMOVE EXISTING WINDOW SILL AND PREPARE AREA AS REQUIRED TO RECEIVE NEW FINISHES AND NEW SILL.
9. REMOVE EXISTING TOILET FIXTURES IN THEIR ENTIRETY INCLUDING ALL RELATED PIPING , HANGERS AND INSTALLATIONS. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION AND PROCEDURES.
10. REMOVE EXISTING CMU PARTITION / CHASE (AND RELATED GWB FURRING WHERE OCCURS) IN ITS ENTIRETY DOWN TO EXISTING SLAB. PATCH, REPAIR AND LEVEL ANY DISTURBED AREAS TO ALLOW FOR RENOVATIONS AND NEW FLOORING INSTALLATION. REFER TO ROOM FINISH SCHEDULE.
11. EXISTING HEATING ELEMENT TO BE REPLACED , COORDINATE TYPE WITH MEP NEW WORK AND INSTALLATIONS. PATCH AND REPAIR ANY DISTURBED AREAS TO MATCH ADJACENT CONSTRUCTION AND FINISHES.
12. THOROUGHLY INSPECT AND CLEAN EXISTING FLOOR TILE IN PREPARATION FOR NEW LEVELING MATERIAL AND TILE INSTALLATION. CONFIRM EXISTING TILE AND SUBSTRATE CONDITION TO ASSURE THE STRUCTURAL STABILITY OF NEW FLOOR TILE.
13. REMOVE CMU CONSTRUCTION AS REQUIRED AT AREA INDICATED TO ACCOMMODATE NEW CMU LINTEL (4" MIN BEARING) AND HM FRAME - PATCH AND REPAIR ANY DISTURBANCES TO MEET NEW CONSTRUCTION AND FINISHES.
14. EXISTING GWB CEILING TO REMAIN, PATCH , REPAIR AND PAINT.

TOILET ROOM ACCESSORIES

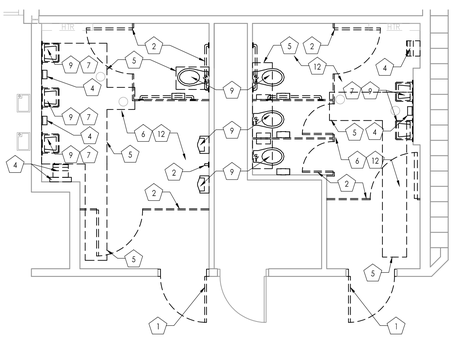
NO.	CAT. NO.	DESCRIPTION	SIZE W	SIZE H	SIZE D	REMARKS
A	780-1830	MIRROR	18"	30"		1/4" TEMPERED GLASS MIRROR
B	--	SOAP DISPENSER(SURFACE-MOUNTED TANK TYPE VERTICAL)	--	--	--	NOTE 3
C	800-001-36"	GRAB BAR	36"	--	--	SAFETY-GRIP FINISH
D	800-001-42"	GRAB BAR	42"	--	--	SAFETY-GRIP FINISH
E	800-001-18"	GRAB BAR	18"	--	--	SAFETY-GRIP FINISH, MOUNT VERTICAL
F	4722-15	SANITARY NAPKING DISPOSAL	10 3/4"	15 1/8"	4"	SURFACE MOUNTED
G	--	TOILET TISSUE DISPENSER	--	--	--	NOTE 3
H	--	HAND PAPER TOWEL DISPENSER	12"	26"	9-3/4"	NOTE 3
K	--	BARRIER FREE PLACARD	--	--	--	SEE SIGN TYPE #15 IN DWG A103

NOTES:
1. ALL CATALOG NUMBERS REFER TO BRADLEY WASHROOM ACCESSORIES UNLESS NOTED OTHERWISE.
2. INSTALL HANDICAP SIGNAGE ON FRONT OF ALL ADA TOILET STALLS. SEE SIGNAGE TYPE #2 ON A103.
3. SUPPLIED BY OWNER, INSTALLED BY GENERAL CONTRACTOR.

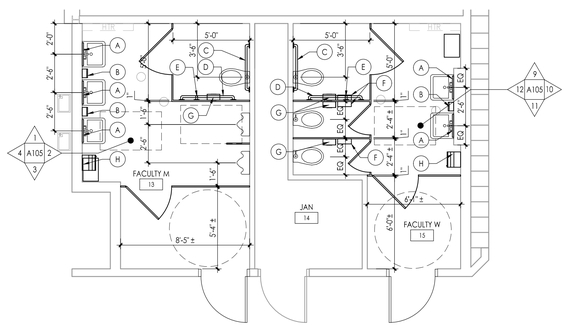
4 DEMOLITION PLAN - FIRST FLOOR - FACULTY TOILET 120
SCALE: 1/4"=1'-0"

5 NEW FLOOR PLAN - FIRST FLOOR - FACULTY TOILET 120
SCALE: 1/4"=1'-0"

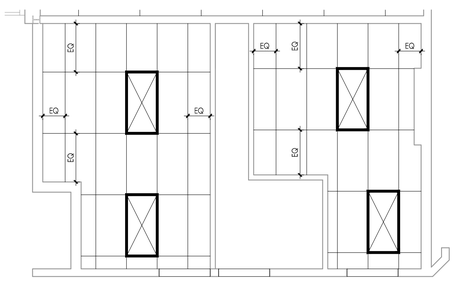
6 RCP - FIRST FLOOR - FACULTY TOILET 120
SCALE: 1/4"=1'-0"



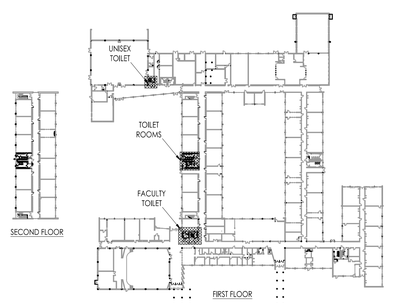
7 DEMOLITION PLAN - FIRST FLOOR FACULTY TOILETS - MEN'S 13 / WOMEN'S 15
SCALE: 1/4"=1'-0"



8 FLOOR PLAN - FIRST FLOOR FACULTY TOILETS - MEN'S 13 / WOMEN'S' 15
SCALE: 1/4"=1'-0"



9 RCP - FIRST FLOOR FACULTY TOILETS - MEN'S 13 / WOMEN'S 15
SCALE: 1/4"=1'-0"



SCHOOL - KEY PLAN
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Project Name
Toilet Room, Classroom Renovations, Doors-Antheil Elementary School Phase 1

Project Owner Name
Ewing Public Schools

Project Location
339 Ewingville Road, Ewing, NJ 08638

Project Number
5015A2A

Project Date
02.08.2019

Checked By
GRD

Drawn By
AMD

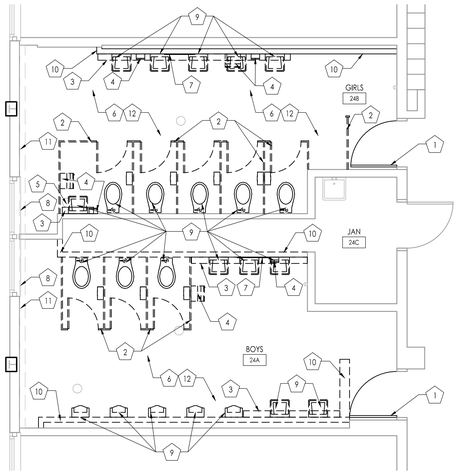
Scale
AS NOTED

Drawing Name
FIRST FLOOR ENLARGED TOILET PLANS, DEMOLITION AND NEW FLOOR PLANS

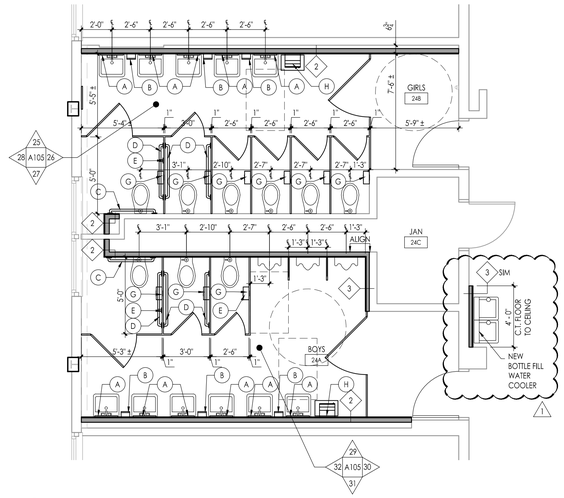
Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

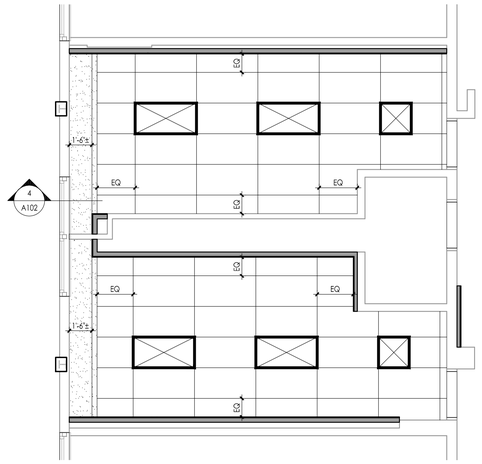
Drawing Number
A101



1 DEMOLITION PLAN - SECOND FLOOR - BOYS TOILET 24A / GIRLS TOILET 24B
SCALE: 1/4"=1'-0"



2 NEW FLOOR PLAN - SECOND FLOOR - BOYS TOILET 24A / GIRLS TOILET 24B
SCALE: 1/4"=1'-0"



3 REFLECTED CEILING PLAN - SECOND FLOOR - BOYS TOILET 24A / GIRLS TOILET 24B
SCALE: 1/4"=1'-0"

REFLECTED CEILING PLAN LEGEND

- AACB-2' x 4' ACRYLIC ACOUSTICAL CEILING BOARD - SEE FINISH SCHEDULE FOR LOCATION
- LIGHTS (SEE ELECTRICAL DRAWINGS)
- GRILL OR DIFFUSER (SEE MECHANICAL DRAWINGS)

REFLECTED CEILING NOTES:

1. SEE HVAC, PLUMBING AND ELECTRICAL DRAWINGS FOR TYPE, SIZE AND ADDITIONAL INFORMATION.
2. ALL DIFFUSERS AND LIGHTS TO BE CENTERED IN THE GWB OR ACB CEILING UNLESS NOTED OTHERWISE
3. CONTRACTOR TO COORDINATE LOCATION OF ALL DIFFUSERS AND LIGHTS.
4. SEE ROOM FINISH SCHEDULE FOR CEILING HEIGHTS

PLAN LEGEND

- NEW STUD WALLS, REFER TO DRAWING A102

GENERAL DEMOLITION NOTES:

A. ALL CONTRACTORS ARE ADVISED TO VISIT THE SITE AND VERIFY ALL AREAS AND CONDITIONS PRIOR TO SUBMITTING THEIR BIDS. THE CONTRACTOR MUST NOTIFY THE ARCHITECT OF ANY DISCREPANCIES AND/OR OMISSIONS IN WRITING AT LEAST SEVEN DAYS PRIOR TO THE RECEIPT OF BIDS. FAILURE TO SO NOTIFY THE ARCHITECT INDICATES THAT ANY ADDITIONAL COSTS ASSOCIATED WITH THE DISCREPANCIES AND / OR OMISSIONS ARE INCLUDED IN THE CONTRACTOR'S BID AND THAT NO CHANGE TO THE CONTRACT AMOUNT WILL BE MADE AFTER THE RECEIPT OF BIDS OR THE AWARD OF CONTRACTS.

B. ALL PLUMBING, HVAC OR ELECTRICAL DISCONNECTS SHALL BE MADE BY THE RESPECTIVE TRADES. ALL EQUIPMENT, DEVICES, FIXTURES, ETC. SHALL BE REMOVED FROM THE SITE BY THE RESPECTIVE CONTRACTOR. NOTE: THE EXISTING FIRE ALARM SYSTEM SHALL NOT BE DIMINISHED NOR SHALL EXISTING FIRE ALARM DEVICES BE REMOVED UNTIL NEW DEVICES ARE READY FOR SWITCHOVER.

C. UNLESS NOTED OTHERWISE ALL DEMOLITION MATERIAL SHALL BE REMOVED OFF SITE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

D. THERE ARE SOME SPECIFIC ITEMS DESIGNATED BY THE ARCHITECT FOR SALVAGE. THESE ITEMS ARE INTENDED FOR REUSE IN THE NEW CONSTRUCTION. THE CONTRACTOR MUST TAKE CARE IN THE REMOVAL AND STORAGE OF THESE ITEMS UNTIL THEY ARE NEEDED IN THE NEW CONSTRUCTION.

E. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROTECT PORTIONS OF THE EXISTING CONSTRUCTION WHICH ARE ADJACENT TO AREAS TO BE DEMOLISHED. MAKE ALL CUTS AS NEATLY AS POSSIBLE. REFER TO FLOOR PLAN DRAWINGS FOR FINISHING OF THESE AREAS.

F. IF NOT OTHERWISE NOTED OR DETAILED, ALL SURFACES LEFT ROUGH OR UNFINISHED BY DEMOLITION AND WHICH ARE EXPOSED TO VIEW, SHALL BE PATCHED TO MATCH ADJACENT SURFACES AND FINISHED TO PROVIDE A UNIFORM APPEARANCE WITH REGARD TO SIZE, SHAPE, COLOR, TEXTURE AND MATERIAL.

G. THE CONTRACTOR SHALL PROVIDE A PHYSICAL BARRIER TO CONTAIN DUST AND DIRT AROUND THE DEMOLITION AREA AND SHALL MAKE EVERY EFFORT TO KEEP THE DEMOLITION SITE AND SURROUNDING AREAS AS CLEAN AS POSSIBLE. ALL TEMPORARY PARTITIONS SHALL BE 1 HOUR RATED CONSTRUCTION AND INCLUDE A DOOR.

H. NO DEMOLITION SHALL BEGIN UNTIL PROPER PROTECTION IS IN PLACE AND APPROVED BY ARCHITECT & OWNER TO ENSURE THE SAFETY OF THE PUBLIC, THE BUILDING OCCUPANTS, CONSTRUCTION WORKERS AND TO CONTAIN DUST AND DIRT WITHIN THE AREA OF DEMOLITION.

I. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS REGARDING THE REMOVAL AND DISPOSAL OF ALL MATERIALS & EQUIPMENT.

J. THE CONTRACTOR SHALL PROVIDE PROTECTION AGAINST INCLEMENT WEATHER FOR THE EXISTING BUILDING DURING THE INTERIM PERIOD BETWEEN DEMOLITION AND THE COMPLETION OF NEW CONSTRUCTION.

K. THE CONTRACTORS SHALL TAKE INTO ACCOUNT THEIR METHODS OF CONSTRUCTION FOR THE NEW WORK AND INCLUDE IN THEIR BID THE COST OF ADDITIONAL DEMOLITION WORK NECESSARY TO FACILITATE THE CONSTRUCTION. THIS WORK INCLUDES, BUT IS NOT LIMITED TO THE PARTIAL DEMOLITION OF WALLS AT THE POINTS WHERE NEW STEEL CONNECTS TO EXISTING BEAMS OR COLUMNS, THE AREA AROUND JOINTS BETWEEN NEW AND EXISTING CONSTRUCTION IN WALLS, FLOORS AND CEILINGS, AREAS OF SIDEWALK AND PAVING, ETC. MUCH OF THIS WORK IS INDICATED IN SECTIONS AND DETAILS RELATING TO THE NEW CONSTRUCTION.

L. THE DEMOLITION WORK SHOWN ON THIS PLAN IS INTENDED TO BE A GENERAL OVERVIEW OF MAJOR DEMOLITION WORK REQUIRED. IT IS NOT A COMPLETE AND EXCLUSIVE REPRESENTATION OF ALL DEMOLITION WORK NEEDED FOR EXECUTION OF THE PROJECT. WHEN PREPARING THEIR BIDS, CONTRACTORS MUST REFER TO THE FULL SET OF CONSTRUCTION DOCUMENTS FOR VARIOUS MISCELLANEOUS ITEMS WHICH MUST BE REMOVED AND/OR RELOCATED AS PART OF THE WORK.

M. ALL PRIME CONTRACTORS ARE RESPONSIBLE FOR THEIR OWN CUTTING AND PATCHING - SEE SPECIFICATION.

N. THE OWNER HAS THE RIGHT OF FIRST REFUSAL FOR ALL EQUIPMENT AND FIXTURES (CABINETS, SHELVING, ETC.) REMOVED UNDER CONTRACT. IF THE OWNER DOES NOT EXERCISE THIS RIGHT FOR AN INDIVIDUAL PIECE OF EQUIPMENT, THE GENERAL CONTRACTOR SHALL REMOVE SAID EQUIPMENT FROM SITE.

DEMOLITION / CONSTRUCTION NOTES:

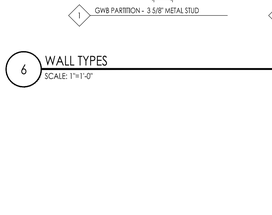
REFER TO MECHANICAL / ELECTRICAL / PLUMBING DRAWINGS FOR ADDITIONAL DEMO/CONSTRUCTION NOTES

1. EXISTING DOOR AND HARDWARE TO BE REMOVED IN THEIR ENTIRETY INCLUDING MARBLE SADDLE. EXISTING DOOR FRAME TO BE REPAIRED AS REQUIRED AND PAINTED TO RECEIVE NEW DOOR AND HARDWARE.
2. EXISTING TOILET PARTITIONS TO BE REMOVED IN THEIR ENTIRETY INCLUDING ALL RELATED TOILET ACCESSORIES AND GRAB BARS. PATCH AND REPAIR ANY DISTURBED AREAS IN PREPARATION FOR NEW WORK AND INSTALLATIONS.
3. REMOVE EXISTING SLATE SHELVING. PATCH AND REPAIR ANY DISTURBED AREAS IN PREPARATION FOR NEW FINISHES AND INSTALLATIONS.
4. REMOVE ALL EXISTING TOILET ACCESSORIES (PAPER TOWEL / SOAP DISPENSERS) PATCH AND REPAIR ANY DISTURBED AREAS IN PREPARATION OF NEW FINISHES AND INSTALLATIONS.
5. REMOVE EXISTING FLOOR AND CONCRETE SLAB AS REQUIRED FOR PLUMBING REMOVALS AND NEW INSTALLATIONS. REFER TO MEP DRAWING FOR ADDITIONAL INFORMATION AND METHODOLOGY AND COORDINATE WITH PLUMBING CONTRACTOR FOR EXTENT OF DEMOLITION. PROVIDE NEW EXTENSIONS, CLEAN-OUTS AND FLOOR DRAIN COVERS - TYP.
6. REMOVE EXISTING GYP. BD. CEILING AND ALL RELATED MEP INSTALLATIONS IN PREPARATION FOR NEW SUSPENDED CEILING . COORDINATE REMOVALS WITH ALL OTHER TRADES. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION AND EXTENT. PROVIDE ALL EXTENSIONS AND MATERIALS AS REQUIRED TO MEET NEW CONDITIONS.
7. REMOVE EXISTING MIRRORS AND / OR LEVELING FURRING WOOD USED FOR THEIR INSTALLATION. PATCH AND REPAIR ANY DISTURBED AREAS AS REQUIRED FOR NEW FINISHES APPLICATION.
8. REMOVE EXISTING WINDOW SILL AND PREPARE AREA AS REQUIRED TO RECEIVE NEW FINISHES AND NEW SILL.
9. REMOVE EXISTING TOILET FIXTURES IN THEIR ENTIRETY INCLUDING ALL RELATED PIPING , HANGERS AND INSTALLATIONS. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION AND PROCEDURES.
10. REMOVE EXISTING CMU PARTITION / CHASE (AND RELATED GWB FURRING WHERE OCCURS) IN ITS ENTIRETY DOWN TO EXISTING SLAB. PATCH, REPAIR AND LEVEL ANY DISTURBED AREAS TO ALLOW FOR RENOVATIONS AND NEW FLOORING INSTALLATION. REFER TO ROOM FINISH SCHEDULE
11. EXISTING HEATING ELEMENT TO BE REPLACED , COORDINATE TYPE WITH MEP NEW WORK AND INSTALLATIONS. PATCH AND REPAIR ANY DISTURBED AREAS TO MATCH ADJACENT CONSTRUCTION AND FINISHES.
12. THOROUGHLY INSPECT AND CLEAN EXISTING FLOOR TILE IN PREPARATION FOR NEW LEVELING MATERIAL AND TILE INSTALLATION. CONFIRM EXISTING TILE AND SUBSTRATE CONDITION TO ASSURE THE STRUCTURAL STABILITY OF NEW FLOOR TILE.

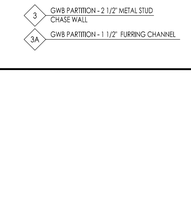
TOILET ROOM ACCESSORIES

NO.	CAT. NO.	DESCRIPTION	SIZE W	SIZE H	SIZE D	REMARKS
A	780-1830	MIRROR	18"	30"		1/4" TEMPERED GLASS MIRROR
B	--	SOAP DISPENSER(SURFACE-MOUNTED TANK TYPE VERTICAL)	--	--	--	NOTE 3
C	800-001-36"	GRAB BAR	36"	--	--	SAFETY-GRIP FINISH
D	800-001-42"	GRAB BAR	42"	--	--	SAFETY-GRIP FINISH
E	800-001-18"	GRAB BAR	18"	--	--	SAFETY-GRIP FINISH, MOUNT VERTICAL
G	--	TOILET TISSUE DISPENSER	--	--	--	NOTE 3
H	-	PAPER TOWELS DISPENSER	"	"	"	NOTE 3

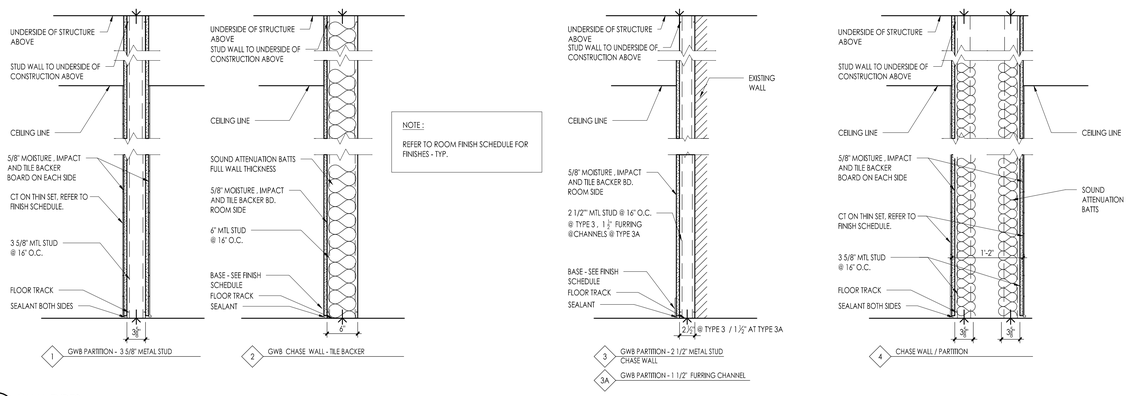
NOTES:
1. ALL CATALOG NUMBERS REFER TO BRADLEY WASHROOM ACCESSORIES UNLESS NOTED OTHERWISE.
2. INSTALL HANDICAP SIGNAGE ON FRONT OF ALL ADA TOILET STALLS. SEE SIGNAGE TYPE #3 ON A103.
3. SUPPLIED BY OWNER, INSTALLED BY GENERAL CONTRACTOR.



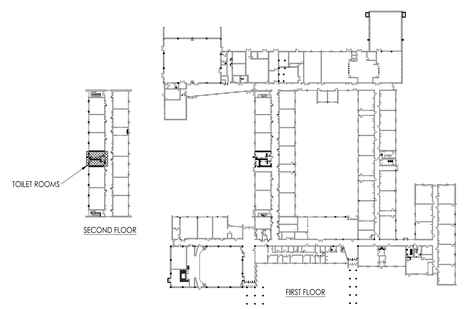
4 WALL SECTION - DETAILS
SCALE: 1/2"=1'-0"



5 WALL SECTION - DETAIL AT WAINSCOAT / UNEVEN WALLS
SCALE: 1/2"=1'-0"



6 WALL TYPES
SCALE: 1"=1'-0"



SCHOOL - KEY PLAN
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Project Name
Toilet Room, Classroom Renovations, Doors-Antheil Elementary School Phase 1

Project Owner Name
Ewing Public Schools

Project Location
339 Ewingville Road, Ewing, NJ 08638

Project Number
5015A2A

Project Date
02.08.2019

Checked By
GRD

Drawn By
AMD

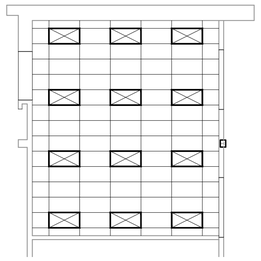
Scale
AS NOTED

Drawing Name
SECOND FLOOR ENLARGED TOILET PLANS, DEMOLITION AND NEW FLOOR PLANS

Revisions

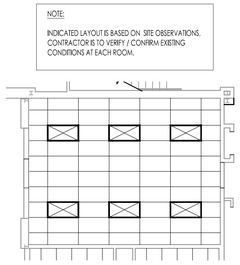
No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
A102

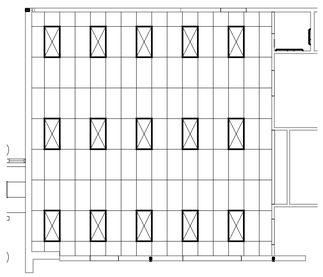


1 REFLECTED CEILING PLAN - SPECIAL ED. CLRM. 31
SCALE: 1/8"=1'-0"

SIMILAR AT : CLASSROOM 21 , CLASSROOM 22 , CLASSROOM 23, CLASSROOM 24, CLASSROOM 25, CLASSROOM 26, CLASSROOM 27, CLASSROOM 28, CLASSROOM 29 AND CLASSROOM 30

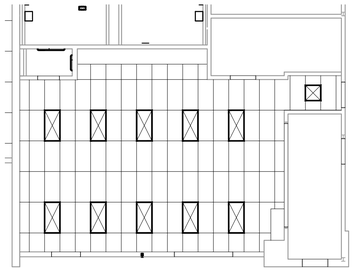


2 REFLECTED CEILING PLAN - RESOURCE 12
SCALE: 1/8"=1'-0"

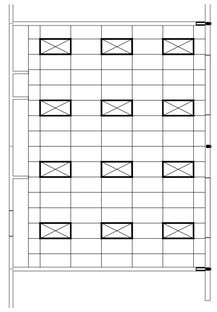


3 REFLECTED CEILING PLAN - KINDERGARTEN #38
SCALE: 1/8"=1'-0"

SIMILAR AT : KINDERGARTEN 39

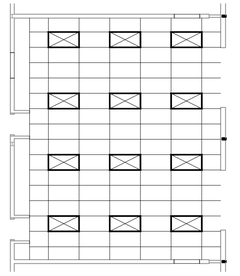


4 REFLECTED CEILING PLAN - KINDERGARTEN #53
SCALE: 1/8"=1'-0"



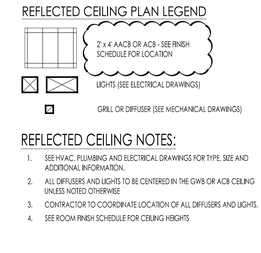
5 REFLECTED CEILING PLAN - CLASSROOM #49
SCALE: 1/8"=1'-0"

SIMILAR AT : CLASSROOM 40 , COMP. ROOM 41, CLASSROOM 42, COMP. ROOM 43 , CLASSROOM 44, SPECIAL ED.CLASSROOM 45, CLASSROOM 46, CLASSROOM 47, CLASSROOM 48, CLASSROOM 50 AND CLASSROOM 51.



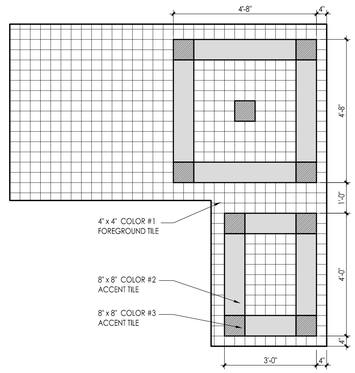
6 REFLECTED CEILING PLAN - KINDERGARTEN #56
SCALE: 1/8"=1'-0"

SIMILAR AT : KINDERGARTEN 52, KINDERGARTEN 54 AND KNDERGARTEN 58

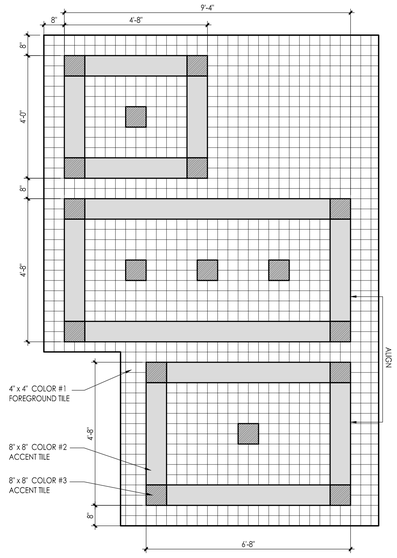


REFLECTED CEILING NOTES:

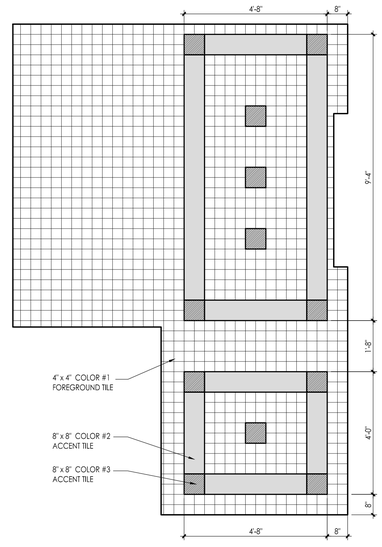
1. SEE HVAC, PLUMBING AND ELECTRICAL DRAWINGS FOR TYPE, SIZE AND ADDITIONAL INFORMATION.
2. ALL DIFFUSERS AND LIGHTS TO BE CENTERED IN THE GWB OR ACB CEILING UNLESS NOTED OTHERWISE
3. CONTRACTOR TO COORDINATE LOCATION OF ALL DIFFUSERS AND LIGHTS.
4. SEE ROOM FINISH SCHEDULE FOR CEILING HEIGHTS



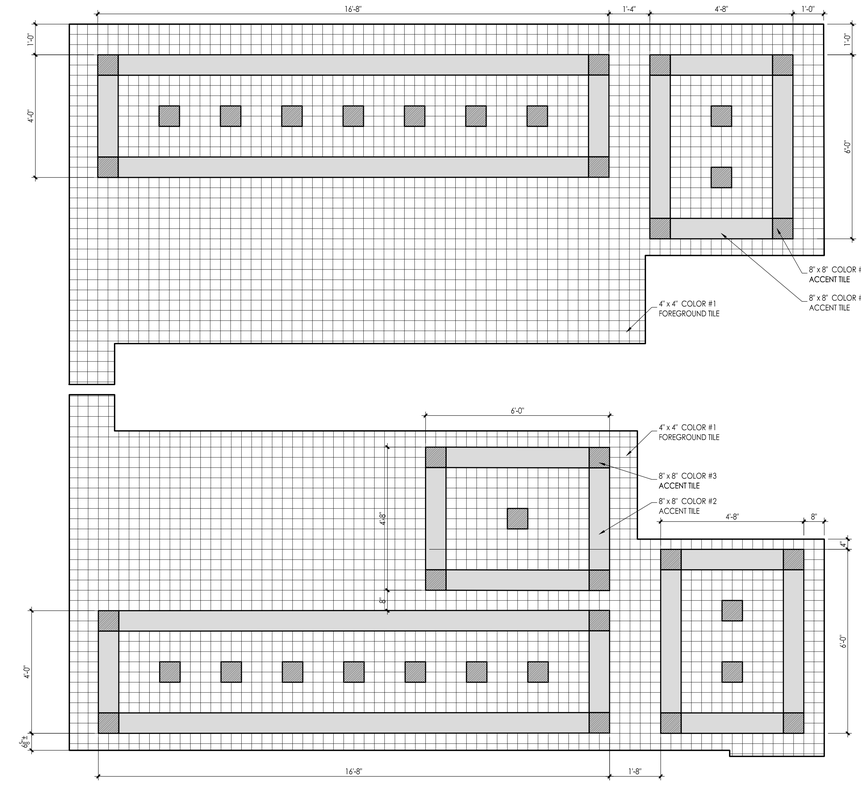
7 PORCELAIN TILE (PT) FLOOR LAYOUT - FAC. TOILET 120
SCALE: 1/2"=1'-0"



8 PORCELAIN TILE (PT) FLOOR LAYOUT - M. FAC. TOILET 13
SCALE: 1/2"=1'-0"



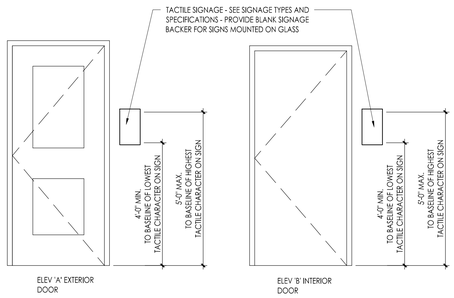
9 PORCELAIN TILE (PT) FLOOR LAYOUT - W. FAC. TOILET 15
SCALE: 1/2"=1'-0"



12 PORCELAIN TILE (PT) FLOOR LAYOUT - BOYS' TOILET 24A / GIRLS' TOILET 24B
SCALE: 1/2"=1'-0"

SIGNAGE LOCATIONS

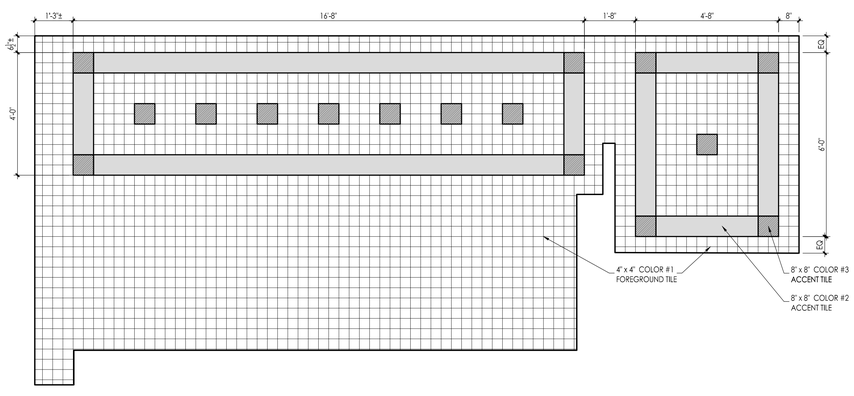
SINGLE LEAF DOORS - LATCH SIDE
DOUBLE LEAF DOORS - TO RIGHT SIDE OF RIGHT LEAF
WHERE NO WALL SPACE IS AVAILABLE - NEAREST ADJACENT WALL



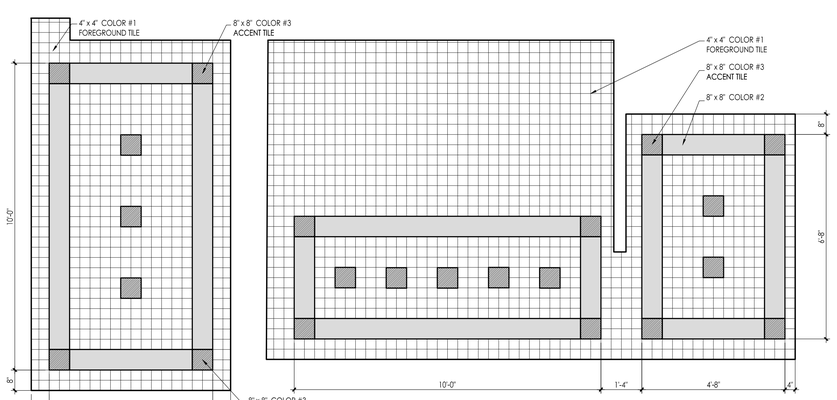
10 SIGNAGE LOCATIONS
SCALE: 1/2"=1'-0"

SIGN TYPE 15
FONT: HELVETICA 5/8"
BRAILLE: 1/4"
CORNERS: 3/8" RADIUS

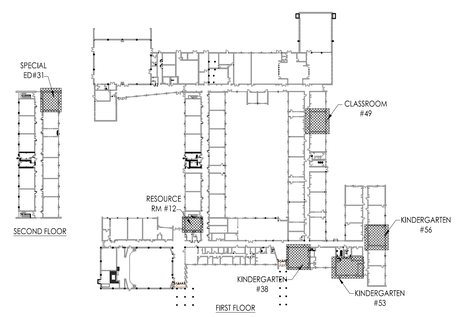
11 TACTILE SIGNAGE TYPES
SCALE: 1 1/2"=1'-0"



13 PORCELAIN TILE (PT) FLOOR LAYOUT - GIRLS' TOILET 06A
SCALE: 1/2"=1'-0"



14 PORCELAIN TILE (PT) FLOOR LAYOUT - UNISEX TOILET 06D / BOYS' TOILET 06B
SCALE: 1/2"=1'-0"



SCHOOL - KEY PLAN
NTS

JOHN J. VEISZ, AIA, CSBA
NJ-21AS00045700 | PA-RA010818
WILLIAM D. HOPKINS III, AIA, LEED AP
NJ-21AS01508600 | PA-RA012206
GEORGE R. DUTHIE JR., AIA, PP
NJ-21AI02999200
02/08/2019
Date
Architect
FVHDPC.COM
FVHD architects planners
Fraytak Veisz Hopkins Duthie PC
Corporate: 1515 Lower Ferry Road - Trenton - New Jersey 08628
Pennsylvania: 140 Whitaker Ave - Mont Clare - Pennsylvania 19453

Project Name
Toilet Room, Classroom Renovations, Doors-Antheil Elementary School Phase 1

Project Owner Name
Ewing Public Schools

Project Location
339 Ewingville Road, Ewing, NJ 08638

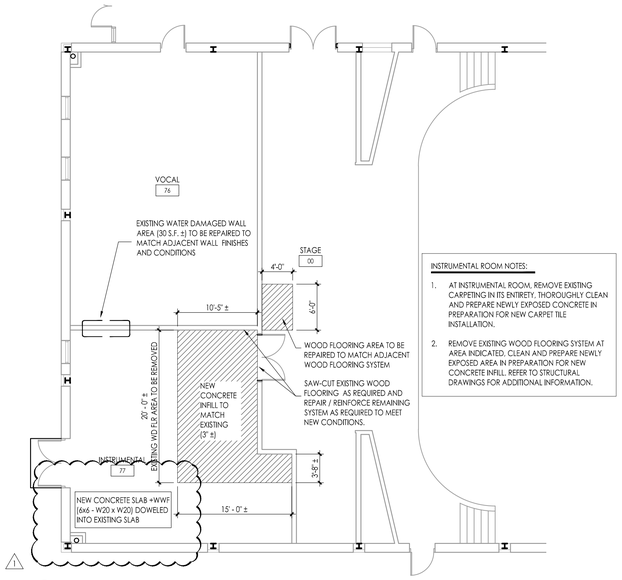
Project Number
5015A2A
Project Date
02.08.2019
Checked By
GRD
Drawn By
AMD
Scale
AS NOTED

Drawing Name
TYPICAL CLASSROOM FLOOR PLANS, REFLECTED CEILING PLANS AND NOTES

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

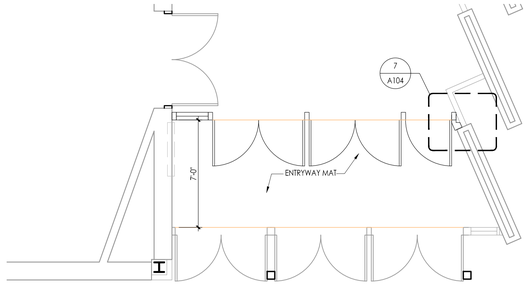
Drawing Number
A103



INSTRUMENTAL ROOM NOTES:

1. AT INSTRUMENTAL ROOM, REMOVE EXISTING CARPETING IN ITS ENTIRETY, THOROUGHLY CLEAN AND PREPARE NEWLY EXPOSED CONCRETE IN PREPARATION FOR NEW CARPET TILE INSTALLATION.
2. REMOVE EXISTING WOOD FLOORING SYSTEM AT AREA INDICATED, CLEAN AND PREPARE NEWLY EXPOSED AREA IN PREPARATION FOR NEW CONCRETE INFILL. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

1 INSTRUMENTAL ROOM - FLOOR PLAN
SCALE: 1/8"=1'-0"

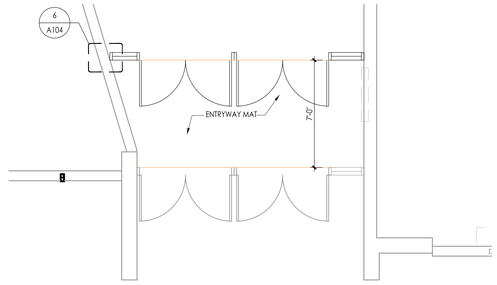


2 MAIN LOBBY - FLOOR PLAN
SCALE: 1/4"=1'-0"

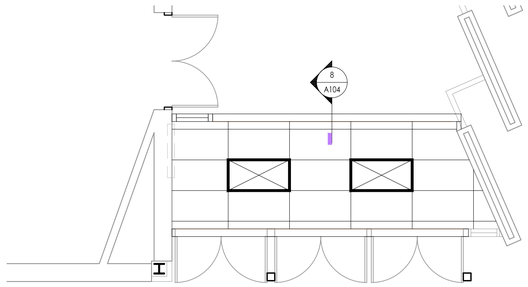
NEW LOBBIES NOTES:

EXISTING CEILING TO BE REMOVED AS REQUIRED AT LOBBY AREA TO ALLOW FOR INSTALLATION OF NEW SUSPENDED CEILING SYSTEM.

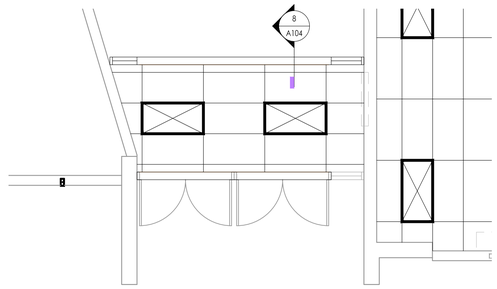
LOBBY AREA TO RECEIVE ENTRYWAY MAT



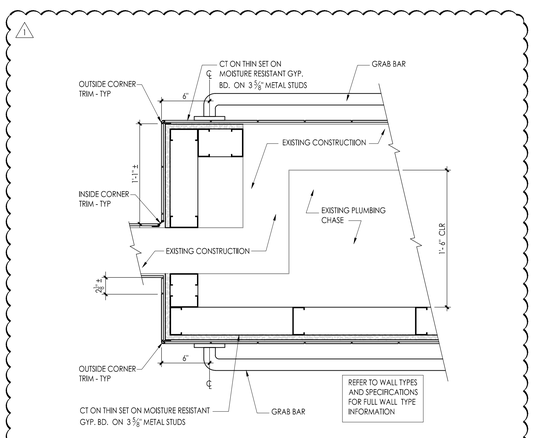
3 LOBBY - FLOOR PLAN
SCALE: 1/8"=1'-0"



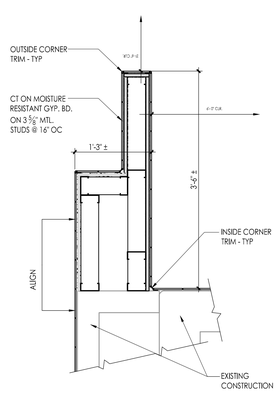
2A MAIN LOBBY - REFLECTED CEILING PLAN
SCALE: 1/4"=1'-0"



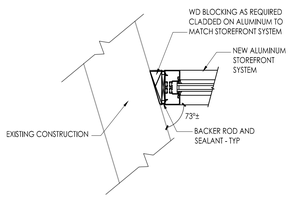
3A LOBBY - REFLECTED CEILING PLAN
SCALE: 1/8"=1'-0"



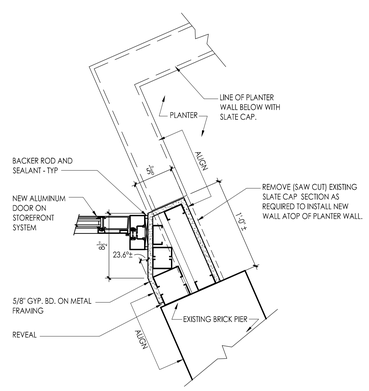
4 PLAN DETAIL
SCALE: 1 1/2"=1'-0"



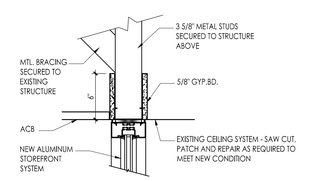
5 PLAN DETAIL
SCALE: 1"=1'-0"



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



7 PLAN DETAIL
SCALE: 1 1/2"=1'-0"



8 HEAD DETAIL
SCALE: 1 1/2"=1'-0"

JOHN J. VEISZ, AIA, CSBA
NJ-21.AM0064001 | PA-AM010818
WILLIAM D. HOPKINS III, AIA, LEED AP
NJ-21.AM0150600 | PA-AM012206
GEORGE R. DUTHIE JR., AIA, PP
NJ-21.AM0299200
02/08/2019
Date
Architect
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AMD

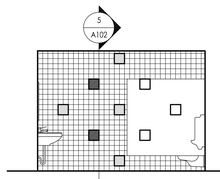
Scale
AS NOTED

Drawing Name
ENLARGED PLANS AND DETAILS

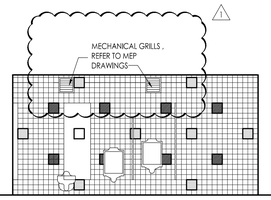
Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

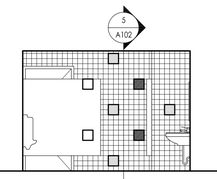
Drawing Number
A104



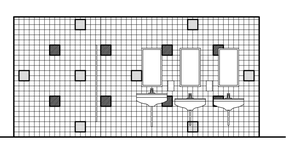
1 INT. ELEV. - FACULTY MEN'S TOILET 13
1/4" = 1'-0"



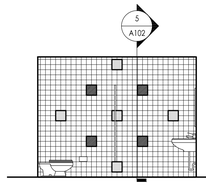
2 INT. ELEV. - FACULTY MEN'S TOILET 13
1/4" = 1'-0"



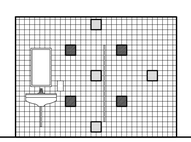
3 INT. ELEV. - FACULTY MEN'S TOILET 13
1/4" = 1'-0"



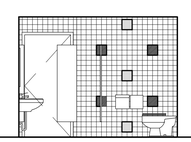
4 INT. ELEV. - FACULTY MEN'S TOILET 13
1/4" = 1'-0"



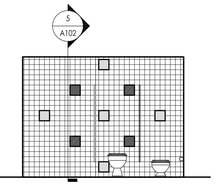
5 INT. ELEV. - FACULTY TOILET 120
1/4" = 1'-0"



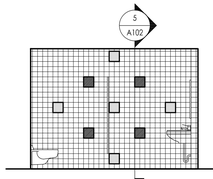
6 INT. ELEV. - FACULTY TOILET 120
1/4" = 1'-0"



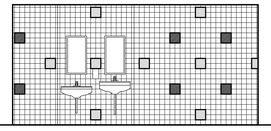
7 INT. ELEV. - FACULTY TOILET 120
1/4" = 1'-0"



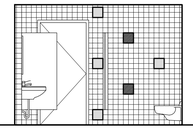
8 INT. ELEV. - FACULTY TOILET 120
1/4" = 1'-0"



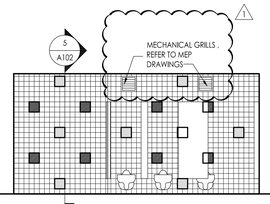
9 INT. ELEV. - FACULTY WOMEN'S TOILET 15
1/4" = 1'-0"



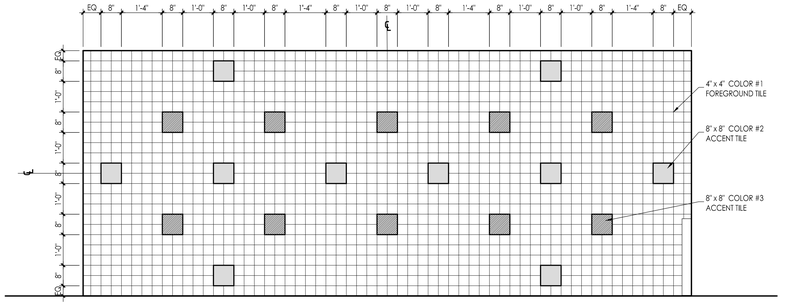
10 INT. ELEV. - FACULTY WOMEN'S TOILET 15
1/4" = 1'-0"



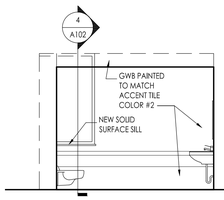
11 INT. ELEV. - FACULTY WOMEN'S TOILET 15
1/4" = 1'-0"



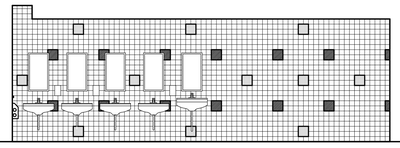
12 INT. ELEV. - FACULTY WOMEN'S TOILET 15
1/4" = 1'-0"



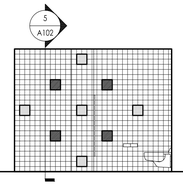
A PORCELAIN TILE (PT) LAYOUT (PATTERN / RYTHM TO BE MANTAINED AT WALLS INDICATED)
SCALE: 1/2"=1'-0"



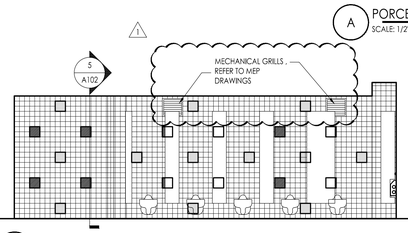
13 INT. ELEVATION - GIRLS' TOILET 06A
1/4" = 1'-0"



14 INT. ELEVATION - GIRLS' TOILET 06A
1/4" = 1'-0"

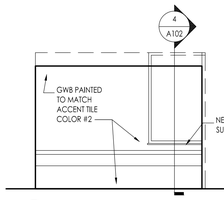


15 INT. ELEVATION - GIRLS' TOILET 06A
1/4" = 1'-0"

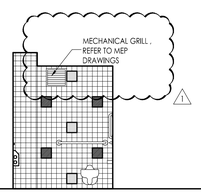


16 INT. ELEVATION - GIRLS' TOILET 06A
1/4" = 1'-0"

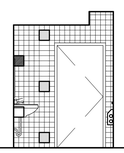
REFER TO A103 FOR FLOOR PATTERNS INFORMATION.



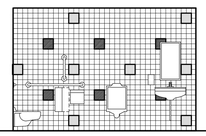
17 INT. ELEV. - UNISEX TOILET 06D
1/4" = 1'-0"



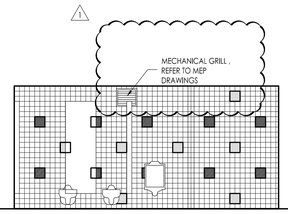
18 INT. ELEV. - UNISEX TOILET 06D
1/4" = 1'-0"



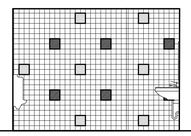
19 INT. ELEV. - UNISEX TOILET 06D
1/4" = 1'-0"



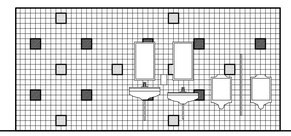
20 INT. ELEV. - UNISEX TOILET 06D
1/4" = 1'-0"



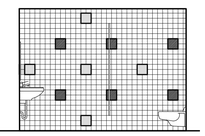
21 INT. ELEVATION - BOYS' TOILET 06B
1/4" = 1'-0"



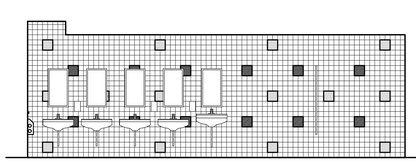
22 INT. ELEVATION - BOYS' TOILET 06B
1/4" = 1'-0"



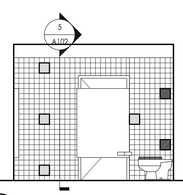
23 INT. ELEVATION - BOYS' TOILET 06B
1/4" = 1'-0"



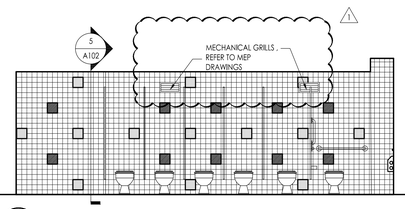
24 INT. ELEVATION - BOYS' TOILET 06B
1/4" = 1'-0"



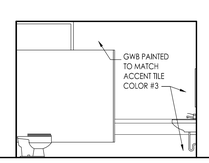
25 INT. ELEVATION - GIRLS' TOILET 24B
1/4" = 1'-0"



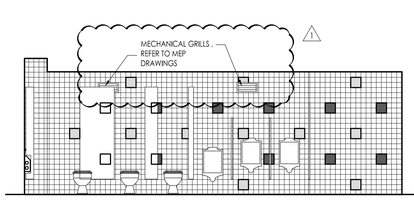
26 INT. ELEVATION - GIRLS' TOILET 24B
1/4" = 1'-0"



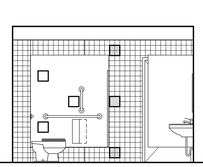
27 INT. ELEVATION - GIRLS' TOILET 24B
1/4" = 1'-0"



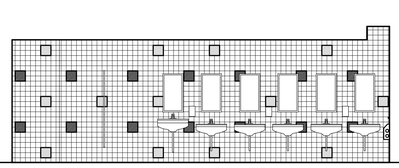
28 INT. ELEVATION - GIRLS' TOILET 24B
1/4" = 1'-0"



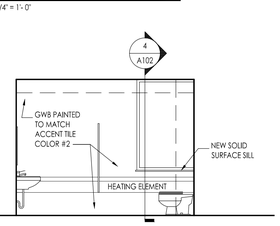
29 INT. ELEVATION - BOYS' TOILET 24A
1/4" = 1'-0"



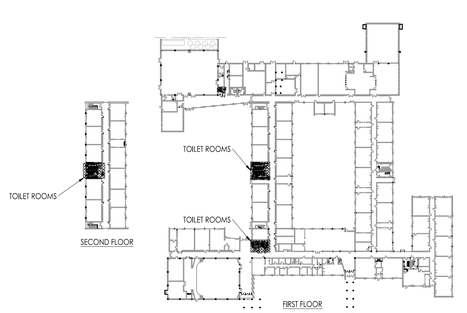
30 INT. ELEVATION - BOYS' TOILET 24A
1/4" = 1'-0"



31 INT. ELEVATION - BOYS' TOILET 24A
1/4" = 1'-0"



32 INT. ELEVATION - BOYS' TOILET 24A
1/4" = 1'-0"



SCHOOL - KEY PLAN
NTS

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Project Name
Toilet Room, Classroom Renovations, Doors-Antheil Elementary School Phase 1

Project Owner Name
Ewing Public Schools

Project Location
339 Ewingville Road, Ewing, NJ 08638

Project Number
5015A2A

Project Date
02.08.2019

Checked By
GRD

Drawn By
AMD

Scale
AS NOTED

Drawing Name
INTERIOR ELEVATIONS

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
A105

GENERAL SYMBOLS

- DEMOLISHED WORK
- EXISTING WORK
- NEW WORK
- POINT OF CONNECTION (NEW TO EXISTING)
- EXTENT OF DEMOLITION
- POINT OF CONNECTION TO EQUIPMENT SUPPLIED BY CONTRACTOR
- SECTION CUT ARROW: (SIM)
  - 1 = DENOTES SECTION IDENTIFICATION
  - # = DENOTES DRAWING NUMBER OF SECTION DETAIL
- BREAK LINE (DOUBLE LINE DUCTWORK)
- BREAK LINE (DOUBLE LINE PIPING)
- BREAK LINE (SINGLE LINE)
- FLOW ARROW
- EQPM # — EQUIPMENT TAG (REFER TO SCHEDULES AND/OR SPECS)
  - EQPM = EQUIPMENT ABBREVIATION
  - # = EQUIPMENT NUMBER
- TAG XXX — EQUIPMENT TAG (REFER TO SCHEDULES AND/OR SPECS)
  - TAG = AIR DEVICE ABBREVIATION
  - CFM = AIR DEVICE FLOW

MECHANICAL SYMBOLS

Ø	DIAMETER
W x H	DUCTWORK SIZE (INSIDE DIMENSION IN INCHES)
M	MOTOR OPERATED DAMPER W/ ACCESS DOOR
FS	FLOW SWITCH
TT	TEMPERATURE TRANSMITTER
PT	PRESSURE TRANSMITTER
PS	PRESSURE SWITCH
	THERMOMETER
	GAUGE
	AQUASTAT
	BASKET STRAINER
	STEAM TRAP
VB	VACUUM BREAKER
T	THERMOSTAT
CO2	CARBON DIOXIDE SENSOR
S	SENSOR
H	HUMIDISTAT
	PIPE/DUCT CAP
M	MOTOR OPERATOR
	PUMP - INLINE
	FAN - SINGLE LINE
	GATE VALVE
	GLOBE VALVE
	PLUG VALVE
	BUTTERFLY VALVE
	BALL VALVE
	CHECK VALVE
	LIFT CHECK VALVE
	GATE VALVE, ANGLE
	GLOBE VALVE, ANGLE
	BALANCING VALVE
CBV	CIRCUIT SETTING BALANCING VALVE
	THREE WAY CONTROL VALVE
	TWO WAY CONTROL VALVE
	SOLENOID VALVE
	PRESSURE REDUCING VALVE
	TEMP/PRESS RELIEF VALVE
	SAFETY RELIEF VALVE
	FLEXIBLE CONNECTION
	GAS COCK
	FUSIBLE LINK VALVE - QUICK CLOSING
	FUSIBLE LINK VALVE - QUICK OPENING
MV	MANUAL AIR VENT
AV	AUTO AIR VENT
	FLOW METER - VENTURI
	FLOW METER - ORIFICE
	STRAINER
	STRAINER WITH BLOW OFF VALVE
	PIPE RISING
	PIPE DROPPING DOWN
	TEE OUTLET DOWN
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	UNION - SCREWED OR FLANGED
×	ANCHOR
=	GUIDE

MECHANICAL ABBREVIATIONS

(D)	DEMOLISH
(E)	EXISTING
(F)	REFURBISH
(M)	PROVIDED BY MANUFACTURER
(N)	NEW
(R)	RELOCATE
AC	AIR CONDITIONING UNIT
ACC	AIR COOLED CONDENSER
ACCU	AIR COOLED CONDENSING UNIT
ACFM	ACTUAL CUBIC FEET PER MINUTE
AD	ACCESS DOOR
ADJ	ADJUSTABLE
AF	AIRFOIL
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AI	ANALOG INPUT
AL	ACOUSTICAL LINING
AMB	AMBIENT
AMS	AIR FLOW MEASURING STATION
AO	ANALOG OUTPUT
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
ARCH	ARCHITECTURAL
AS	AIR SEPARATOR
ASC	APPLICATION SPECIFIC CONTROLLER
ATC	AUTOMATIC TEMPERATURE CONTROL
AVG	AVERAGE
AWT	AVERAGE WATER TEMPERATURE
B	BOILER
BAS	BUILDING AUTOMATION SYSTEM
BDD	BACKDRAFT DAMPER
BDS	BLOWDOWN SEPARATOR
BFP	BACK FLOW PREVENTER OR BOILER FEED PUMP
BFU	BOILER FEED UNIT
BHP	BRAKE HORSEPOWER OR BOILER HORSEPOWER
BI	BACKWARD INCLINED OR BINARY INPUT
BLD	BUILDING
BO	BINARY OUTPUT
BOD	BOTTOM OF DUCT OR BASIS OF DESIGN
BOP	BOTTOM OF PIPE
BOT	BOTTOM
BRD	BAROMETRIC RELIEF DAMPER
BT	BLOWDOWN TANK
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
C	CONVECTOR
CAP	CAPACITY
CAV	CONSTANT AIR VOLUME
CB	CONCRETE BASE
CC	COOLING COIL
CCO	CAPPED CURB OPENING
CD	CEILING DIFFUSER
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CL	COOLING
CLG	CEILING
CMPR	COMPRESSOR
CO	CLEAN OUT
COL	COLUMN
CONC	CONCENTRATION OR CONCRETE
COND	CONDENSATE (STEAM/ COOLING COIL)
CONN	CONNECTION
CONT	CONTINUATION
CP	CONDENSATE PUMP
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT
CT	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CV	COEFFICIENT OF CAPACITY
D	DROP
DA	DEAERATOR
DB	DRY BULB
DC	DRY COOLER
DDC	DIRECT DIGITAL CONTROL
DEFL	DEFLECTION
DET	DETAIL
DIA	DIAMETER
DISC	DISCONNECT
DISCH	DISCHARGE
DI	DIGITAL INPUT
DN	DOWN
DO	DIGITAL OUTPUT
DR	DRAIN
DS	DISCONNECT SWITCH
DWG	DRAWING
EA	EXHAUST AIR OR EACH
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECH	ELECTRIC CEILING HEATER
EDB	ENTERING DRY BULB TEMPERATURE
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EFF	EFFICIENCY
EG	EXHAUST GRILLE
EJ	EXPANSION JOINT
ELEC	ELECTRIC
ELEV	ELEVATION

EM	EQUIPMENT MANUFACTURER
EMER	EMERGENCY
ENT	ENTERING
ER	EXHAUST REGISTER
ERAD	ELECTRIC RADIATION
ERC	EXHAUST ENERGY RECOVERY COIL
ERU	ENERGY RECOVERY UNIT
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EVC	EVAPORATIVE COOLER
EWB	ENTERING WET BULB TEMPERATURE
EWH	ELECTRIC WATER HEATER
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXIST	EXISTING
EXT	EXTERNAL
F	FILTER
F&T	FLOAT AND THERMOSTATIC STEAM TRAP
FA	FACE AREA
FA	FROM ABOVE
FAS	FIRE ALARM SYSTEM
FB	FROM BELOW
FC	FORWARD CURVED
FCU	FAN COIL UNIT
FD	FIRE DAMPER OR FLOOR DRAIN
FIN	FINAL
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLR	FLOOR
FLTR	FILTER
FM	FLOW METERING DEVICE
FO	FUEL OIL
FOB	FLAT ON BOTTOM
FOF	FUEL OIL FILL
FOO	FUEL OIL OVERFLOW
FOP	FUEL OIL PUMP
FOS	FUEL OIL SUPPLY
FOT	FLAT ON TOP
FPB	FAN POWERED BOX
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FLASH TANK OR FOOT OR FEET
FTR	FINNED TUBE RADIATION
FUT	FUTURE
FXC	FLEXIBLE CONNECTION
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRILLE
GRV	GRAVITY ROOF VENT
GV	GRAVITY VENT
H	HUMIDIFIER
HAV	HEAT ACTUATED SHUTOFF VALVE
HC	HEATING COIL
HG	MERCURY
HO	HUB OUTLET
HP	HORSEPOWER
HTG	HEATING
HV	HEATING & VENTILATING UNIT
HWG	HOT WATER GENERATOR
HX	HEAT EXCHANGER
ID	INSIDE DIAMETER
IN	INCHES
INT	INITIAL
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LB	POUND
LD	LINEAR DIFFUSER
LDB	LEAVING DRY BULB TEMPERATURE
LF	LINEAR FOOT
LG	LINEAR GRILLE
LOC	LOCATION
LP	PROPANE
LRA	LOCKED ROTOR AMPS
LVG	LEAVING
LWB	LEAVING WET BULB TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBC	MODULAR BUILDING CONTROLLER
MBH	1000 BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MER	MECHANICAL EQUIPMENT ROOM
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM OR MINUTE
MOCP	MAXIMUM OVER-CURRENT PROTECTION
MOD	MOTOR OPERATED DAMPER
MODU	MODULATING
MXB	MIXING BOX
N	NEW
NC	NORMALLY CLOSED
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN OR NUMBER
NTS	NOT TO SCALE

OA	OUTSIDE AIR
OAE	OUTSIDE AIR ENTHALPY
OAH	OUTSIDE AIR HUMIDITY
OAI	OUTSIDE AIR INTAKE
OAT	OUTSIDE AIR TEMPERATURE
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OED	OPEN ENDED DUCT
OEM	ORIGINAL EQUIPMENT MANUFACTURER
OPER	OPERATING
OPNG	OPENING
P	PUMP
PBD	PARALLEL BLADE DAMPER
PC	PUMPED CONDENSATE
PD	PRESSURE DROP
PFHX	PLATE & FRAME HEAT EXCHANGER
PHC	PREHEAT COIL
PLN	PLENUM
POS	POSITION
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH- ABSOLUTE
PSIG	POUNDS PER SQUARE INCH- GAUGE
QUAN or	QUANTITY
QTY	RISE
R	RETURN OR RELIEF AIR
RA	RETURN AIR ENTHALPY
RAE	RETURN AIR HUMIDITY
RAH	RETURN AIR TEMPERATURE
RAT	RADIANT CEILING PANEL
RCP	REQUIRED
REQ	RETURN
RET	REVISION
REV	RETURN FAN
RF	RETURN GRILLE
RG	RELIEF HOOD OR RELATIVE HUMIDITY
RH	REHEAT COIL
RHC	ROTARY HEAT WHEEL
RHW	RUN LOAD AMPS
RLA	ROOM
RM	RECIRCULATION PUMP
RP	REVOLUTIONS PER MINUTE
RPM	RETURN REGISTER
RR	ROOFTOP UNIT
RTU	RELIEF VALVE
RV	SUPPLY AIR
SA	STRUCTURAL BASE
SB	SELF CONTAINED UNIT
SCU	SMOKE DAMPER OR DETECTOR
SD	SECOND
SEC	EFFICIENCY RATING
SEER	SENSIBLE
SENS	SUPPLY FAN
SF	SUPPLY GRILLE
SG	SPRING HANGER
SI	SCREENED OPENING
SO	STATIC PRESSURE IN WG
SP	STEAM PRESSURE DROP
SPD	SUPPLY REGISTER
SR	SUPPLY ENERGY RECOVERY COIL
SRC	SAFETY RELIEF VALVE
SRV	SIDE-STREAM FILTER
SSF	SOUND ATTENUATOR
ST	STANDBY
STBY	STEAM
STM	SUPPLY
SUP	SURGE TANK
SUT	TRANSFER AIR
TA	TRANSFER AIR DUCT
TAD	TERMINAL EQUIPMENT CONTROLLER
TEC	TRANSFER GRILLE
TG	TOP OF DUCT
TOD	TOP OF PIPE
TOP	TOTAL
TOT	TRANSFER PUMP
TP	TOTAL STATIC PRESSURE
TSP	TIGHT TO STRUCTURE
TTS	TYPICAL
TYP	UNIT HEATER
UH	UNLESS NOTED OTHERWISE
UNO	VARIABLE AIR VOLUME
VAV	VOLUME DAMPER
VD	VELOCITY
VEL	VARIABLE FREQUENCY DRIVE
VFD	VIBRATION
VIB	VARIABLE INLET VALVES
VIV	VENT THROUGH ROOF
VTR	VARIABLE VOLUME AND TEMPERATURE
VVT	WITH
W/	WITHOUT
W/O	WET BULB
WB	WATER COOLED CONDENSING UNIT
WCU	WATER GAUGE
WG	WATER SOURCE HEAT PUMP
WHP	WIRE MESH SCREEN
WMS	WATER PRESSURE DROP
WPD	

GENERAL NOTES

1. MECHANICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES INDICATED ON THIS DRAWING ARE TYPICAL. MECHANICAL DRAWINGS MAY NOT INDICATE ALL SYMBOLS AND ABBREVIATIONS SHOWN ON THIS DRAWING.
2. THE TERM "PROVIDE" MEANS "FURNISH AND INSTALL".
3. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL HVAC/MECHANICAL DRAWINGS.
4. THE CONTRACTOR SHALL ABIDE AND ENFORCE ALL SAFETY RULES AND REGULATIONS SET FORTH BY THE OWNER. ALL WORKERS AND SUPERVISORS MUST ATTAIN SAFETY TRAINING CLASSES (IF APPLICABLE). THE CONTRACTOR SHALL BE RESPONSIBLE TO FOLLOW ALL VERBAL INSTRUCTIONS GIVEN BY OWNERS REPRESENTATIVES.
5. THE SUBMISSION OF A BID BY THE CONTRACTOR IS NOTIFICATION THAT THE CONTRACTOR HAS TOTALLY FAMILIARIZED HIMSELF WITH THE CONTRACT DOCUMENTS AND EXISTING SITE CONDITIONS AND HAS AGREED TO PROVIDE THE NECESSARY LABOR AND MATERIAL FOR THE COMPLETE INSTALLATION OF EACH SYSTEM IN A NEAT AND WORKMANLIKE MANNER IN ACCORDANCE WITH THE BEST PRACTICES OF THE INDUSTRY AND IN COMPLIANCE WITH ALL AUTHORITIES HAVING JURISDICTION.
6. THESE DRAWINGS ARE PRESENTED TO THE CONTRACTOR WITH THE UNDERSTANDING THAT THE CONTRACTOR IS AN EXPERT AND COMPETENT IN THE PREPARATION OF CONTRACT BID PRICES ON THE BASIS OF INFORMATION SUCH AS IS CONTAINED IN THESE DOCUMENTS. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION AND IN COMPLETE CONFORMANCE WITH ALL APPLICABLE CODES, RULES, AND REGULATIONS. MINOR ITEMS NOT USUALLY SHOWN OR SPECIFIED, BUT MANIFESTLY NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE VARIOUS SYSTEMS, SHALL BE INCLUDED IN THE WORK AND IN THE PROPOSAL THE SAME AS IF SPECIFIED OR SHOWN ON THE DRAWINGS. IF ANY DEPARTURES FROM THE DRAWINGS ARE DEEMED NECESSARY, DETAILS OF SUCH DEPARTURES AND THE REASONS THEREFORE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. NO DEPARTURES SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER AND OWNER.
7. CONTRACTOR SHALL VISIT THE SITE AND ADJOINING AREAS AND EXAMINE THE EXISTING CONDITIONS TO BECOME FAMILIAR WITH THEM AND TO DETERMINE THE DIFFICULTIES WHICH WILL AFFECT THE EXECUTION OF THE WORK OF THIS CONTRACT. THIS CONTRACTOR SHALL PERFORM THIS PRIOR TO THE SUBMISSION OF HIS PROPOSAL. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.
8. CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL DIMENSIONS IN THE FIELD, AND SHALL ADVISE THE ARCHITECT/ENGINEER AND THE OWNER OF ANY DISCREPANCIES BEFORE PERFORMING THE WORK.
9. THE DRAWINGS INDICATE ARRANGEMENTS AND APPROXIMATE SIZES AND RELATIVE LOCATIONS OF PRINCIPAL APPARATUS, EQUIPMENT, DEVICES, AND SERVICES TO BE PROVIDED. DRAWINGS ARE DIAGRAMMATIC AND ARE A GRAPHIC REPRESENTATION OF CONTRACT REQUIREMENTS TO THE BEST AVAILABLE STANDARDS AT THE SCALE INDICATED.
10. LAYOUT OF EQUIPMENT INDICATED ON THE DRAWINGS SHALL BE CHECKED AND COMPARED AGAINST ALL DRAWINGS AND SPECIFICATIONS OF ALL TRADES AND EXACT LOCATIONS DETERMINED USING APPROVED SHOP DRAWINGS OF SUCH EQUIPMENT. WHERE PHYSICAL INTERFERENCES OCCUR, CONSULT WITH ENGINEER AND PREPARE DATED, DIMENSIONED DRAWINGS COORDINATED WITH ALL OTHER TRADES WORKING IN THIS AREA AND CORRECTING SUCH INTERFERENCE.
11. CONTRACTOR SHALL SCHEDULE HIS WORK IN ACCORDANCE WITH THE CONSTRUCTION SCHEDULE SO THAT ALL OF HIS WORK CAN BE INSTALLED WITHOUT DELAYING THE PROJECT. ALL WORK RELATED TO SHUTDOWN OF EXISTING SERVICES SHALL BE PERFORMED AT THE HOURS DESIGNATED BY THE OWNER WITH ALL ASSOCIATED COSTS BORNE BY THE CONTRACTOR AT NO COST TO THE OWNER. PROVIDE ANY TEMPORARY FACILITIES REQUIRED TO PERMIT THE OWNER'S USE OF EXISTING FACILITIES AND SYSTEMS TO REMAIN UNDISTURBED. COORDINATE ALL WORK, INCLUDING ALL SHUTDOWNS THAT AFFECT SYSTEMS AND/OR PORTIONS OF THE BUILDING THAT MUST REMAIN IN OPERATION, WITH THE OWNER AND ALL OTHER CONTRACTORS.
12. CONTRACTOR SHALL SECURE AND PAY ALL FEES, LICENSES, INSPECTIONS, AND PERMITS PERTAINING TO THE CONTRACT. SUBMIT TO OWNER DUPLICATE CERTIFICATES OF INSPECTION FROM APPROVED INSPECTION AGENCY.
13. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR WORKMEN'S IDENTIFICATION AND BADGING, SAFETY AND FIRE PROTECTION, BARRICADES, WARNING SIGNS, TRASH REMOVAL, CUTTING AND PATCHING.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RIGGING, HANDLING, AND PROTECTION OF MATERIALS. ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND WITHOUT BLEMISH OR DEFECT. ALL EQUIPMENT INSTALLED SHALL BEAR THE LABEL OF AN APPROVED AGENCY.
16. CONTRACTOR SHALL PROVIDE LABOR TO RECEIVE, UNLOAD, STORE, PROTECT, AND TRANSFER TO POINT OF INSTALLATION FOR ALL FURNISHED ITEMS.
17. WHERE CONDUIT, CABLES, DUCTWORK, OR PIPING PASSES THROUGH FIRE RATED FLOORS OR WALLS, THE PENETRATION SHALL BE COMPLETELY SEALED WITH A FIRE STOP MATERIAL THAT IS UL LISTED AND ACCEPTED BY THE BUILDING DEPARTMENT AND FIRE DEPARTMENT AS BEING SUITABLE FOR THIS SERVICE. THIS MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER TO MAINTAIN THE UL LISTED FIRE RATING OF THE PENETRATED WALL OR FLOOR.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SLAB OPENINGS, WALL OPENINGS, BEAM PENETRATIONS, AND CORING AS IT RELATES TO HIS WORK. CONTRACTOR SHALL SUBMIT SIZE AND LOCATION FOR REVIEW AND APPROVAL.
19. CONTRACTOR SHALL RESTORE EXISTING SYSTEMS, DEVICES, FINISHED, ETC. DAMAGED OR ALTERED BY WORK TO ACCEPTABLE CONDITIONS AS DETERMINED BY THE OWNER, ARCHITECT, AND/OR ENGINEER. EXISTING SYSTEMS AND SERVICES THAT ARE TEMPORARILY DISCONNECTED BUT ARE TO REMAIN IN USE SHALL BE PERMANENTLY RECONNECTED AND RETURNED TO PROPER OPERATION.
20. CONTRACTOR SHALL SUBMIT A SCHEDULE OF SUBMITTALS PRIOR TO SUBMITTING ANY SHOP DRAWINGS, ETC. FOR THIS PROJECT, INCLUDING THE ANTICIPATED DATE OF EACH SUBMISSION. CONTRACTORS SHALL SUBMIT FOUR (4) SETS OF COMPLETE SHOP DRAWINGS AND CATALOG CUTS, WIRING DIAGRAMS AND ASSOCIATED DATA TO THE ENGINEER FOR APPROVAL PRIOR TO PURCHASING EQUIPMENT OR STARTING ANY WORK. CONTRACTOR SHALL SUBMIT FOUR (4) PRINTS OF ALL PIPING AND DUCTWORK FIELD INSTALLATION DRAWINGS FOR EACH SYSTEM TO BE INSTALLED. ENGINEER SHALL RETAIN TWO (2) COPIES FOR RECORD AND RETURN TWO (2) COPIES TO CONTRACTOR VIA CONTRACTUAL REQUIREMENTS. ANY WORK INSTALLED OR EQUIPMENT PURCHASED PRIOR TO RECEIPT OF ENGINEER APPROVED SHOP DRAWINGS THAT REQUIRES CHANGES SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
21. SUBMIT CATALOG INFORMATION, FACTORY ASSEMBLY DRAWINGS AND FIELD INSTALLATION DRAWINGS AS REQUIRED FOR A COMPLETE EXPLANATION AND DESCRIPTION OF ALL ITEMS TO BE PROVIDED. THE CONTRACTOR SHALL REVIEW AND APPROVE ALL SHOP DRAWINGS. NO SUBMISSION WILL BE ACCEPTED WITHOUT THE SIGNED APPROVAL OF THE CONTRACTOR. THE CONTRACTOR SHALL CHECK AND VERIFY ALL FIELD MEASUREMENTS.
22. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL SUPPLY THE ENGINEER WITH ONE (1) COMPLETE SET OF AS-BUILT DRAWINGS IN ELECTRONIC AUTOCAD SOFTWARE FORMAT AT CONTRACTOR'S EXPENSE AND THREE (3) COMPLETE BOUND COPIES OF OPERATION AND MAINTENANCE MANUALS. THESE SHALL BE PROVIDED TO THE OWNER AT CONTRACTOR'S EXPENSE. CONTRACTOR SHALL INSTRUCT THE OWNER'S PERSONNEL WITH REGARD TO THE PROPER OPERATION OF ALL SYSTEMS TO THE SATISFACTION OF THE OWNER.
23. CONTRACTOR SHALL NOTIFY ENGINEER OF COMPLETION OF ALL WORK, INDICATING THE CONTRACTOR IS READY FOR THE ENGINEER TO PERFORM THE FINAL PUNCHLIST INSPECTION.
24. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF AN INDEPENDENT AABC OR NEBB CERTIFIED BALANCING CONTRACTOR TO ADJUST EQUIPMENT TO ACHIEVE DESIGN AIR AND WATER FLOWS. ALL REQUIRED MEASURED PARAMETERS SHALL BE PRESENTED IN THE BALANCING REPORTS IN ORDER TO PROPERLY EVALUATE THE PERFORMANCE AND CAPACITY AT THE EQUIPMENT. BELTS AND SHEAVES SHALL BE REPLACED AS REQUIRED.
25. THE CONTRACTOR SHALL SUBMIT COPIES OF THE AIR BALANCE REPORT TO THE ENGINEER FOR APPROVAL. UPON APPROVAL, TWO COPIES SHALL BE TURNED OVER TO THE OWNER AND ONE COPY SHALL BE SUBMITTED TO THE TOWNSHIP INSPECTOR AT OR PRIOR TO FINAL INSPECTION.
26. UNLESS MORE STRINGENT REQUIREMENTS ARE SPECIFIED, ALL WORK FURNISHED UNDER THE CONTRACT SHALL BE GUARANTEED AGAINST ANY AND ALL DEFECTS IN WORKMANSHIP AND/OR MATERIALS FOR A PERIOD OF NOT LESS THAN TWO (2) YEARS FROM THE DATE OF FINAL ACCEPTANCE OF THE INSTALLATION. ANY DEFECTS OF WORKMANSHIP DEVELOPING DURING THIS PERIOD SHALL BE REMEDIED AND ANY DEFECTIVE MATERIAL REPLACED WITHOUT ADDITIONAL COST TO THE OWNER. (1)
27. CONTRACTOR SHALL PREPARE FULLY DIMENSIONED FIELD SHEET METAL AND PIPING INSTALLATION DRAWINGS (MIN. 1/4"=1'-0" SCALE). THESE DRAWINGS SHALL BE FORWARDED TO ALL CONTRACTORS. EACH CONTRACTOR SHALL SUBSEQUENTLY IN SUCCESSION DELINEATE HIS RESPECTIVE WORK ON THESE COORDINATION DRAWINGS. WHEN ALL WORK HAS BEEN PROPERLY SHOWN ON THE COORDINATION DRAWINGS, AND ALL CONTRACTORS AGREE THAT THEIR RESPECTIVE WORK CAN BE INSTALLED AND WILL PROPERLY FIT TOGETHER, THEY SHALL SO ACKNOWLEDGE BY ENDORSING THE DRAWING(S). ANY WORK DONE PRIOR TO COMPLETION OF ABOVE COORDINATION PROCESS FOUND IN CONFLICT SHALL BE REMOVED AND REPLACED AT THE RESPECTIVE CONTRACTOR'S EXPENSE.
28. EXISTING WORK THAT IS TO BE REMOVED SHALL BE LEGALLY DISPOSED OF. ALL WORK TO BE DISPOSED OF SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM THE SITE.
29. INSTALLED SYSTEMS SHALL OPERATE UNDER ALL CONDITIONS OF LOAD WITHOUT SOUND OR VIBRATION THAT IS OBJECTABLE TO THE ENGINEER, ARCHITECT, OR THE OWNER. OBJECTABLE SOUND OR VIBRATION CONDITIONS DUE TO WORKMANSHIP SHALL BE CORRECTED IN APPROVED MANNER BY THE CONTRACTOR AT HIS EXPENSE.
30. UPON COMPLETION OF ALL UNFINISHED OR FAULTY WORK NOTED IN ENGINEER FINAL PUNCH LIST, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER IN WRITING A LETTER OF COMPLETION CERTIFYING THAT ALL PUNCH LIST ITEMS HAVE BEEN COMPLETED AND ALL AS-BUILTS, MANUALS, ETC. HAVE BEEN SUBMITTED.

MECHANICAL NOTES

1. MOUNT SENSORS AND SWITCHES AT 4'-0" MAX ABOVE FINISHED FLOOR (2'-10" MAX ABOVE FINISHED FLOOR IN SIDE REACH ACCESSIBLE LOCATIONS). COORDINATE EXACT LOCATIONS W/ARCHITECT. UNLESS OTHERWISE SPECIFIED, CONTRACTOR SHALL PROVIDE CONTROL WIRING FROM SENSORS OR SWITCH TO THE CORRESPONDING HVAC EQUIPMENT AND/OR CONTROL PANEL. ALL LOW VOLTAGE CONTROL WIRING SHALL BE INSTALLED IN A MANNER TO PREVENT PHYSICAL DAMAGE.
2. UNLESS OTHERWISE SPECIFIED, CONTRACTOR SHALL PROVIDE ALL AUTOMATIC TEMPERATURE CONTROLS (ATC) INCLUDING WIRING, DDC SENSORS AND ALL MISCELLANEOUS APPURTENANCES TO MEET THE INTENT OF THESE DOCUMENTS.
3. UNLESS OTHERWISE INDICATED, THE RESPONSIBILITIES OF THE MECHANICAL AND ELECTRICAL CONTRACTORS SHALL BE AS FOLLOWS: MECHANICAL CONTRACTOR SHALL FURNISH COMBINATION MOTOR STARTERS / DISCONNECTS AND/OR DISCONNECT SWITCHES FOR ALL MECHANICAL EQUIPMENT FOR INSTALLATION BY ELECTRICAL CONTRACTOR. ALL CONTROL WIRING FOR ALL MECHANICAL EQUIPMENT SHALL BE FURNISHED THE MECHANICAL CONTRACTOR. ALL DUCT MOUNTED SMOKE DETECTORS SHALL BE LISTED, FURNISHED AND WIRED BY THE ELECTRICAL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL ASSIST THE ELECTRICAL CONTRACTOR IN TESTING THE SMOKE DETECTION SYSTEM.
4. PROVIDE HANGERS, INSERTS, ANCHORS, SUPPLEMENTAL STEEL & SUPPORTS AS REQUIRED TO SUPPORT DUCTWORK, PIPING AND EQUIPMENT FROM STRUCTURE.
5. RUN DUCTS AND PIPING CONCEALED, UNLESS OTHERWISE SPECIFIED AND CLEAR OF CEILING INSERTS.
6. STRUCTURAL WELDING SHALL BE CONTINUOUS 1/4" FILLET UNLESS REQUIRED OTHERWISE.
7. PROVIDE 36" CLEARANCE IN FRONT OF ALL ELECTRIC CONTROL PANELS PER N.E.C. AND MFG. REQUIREMENTS.
8. PITCH PIPING 1" IN 20' IN DIRECTION OF FLOW.
9. PROVIDE TRAPS IN CONDENSATE LINES THAT EXTEND OVER 2".

GENERAL COMPLIANCE - NJ

DESIGN AND PERFORMANCE OF COMPONENTS AND METHODS SPECIFIED HERIN SHALL COMPLY WITH THE LATEST ADOPTED VERSIONS OF THE STATE CODES, STANDARDS, AND MANUFACTURER'S RECOMMENDATIONS OF THE ENTITIES LISTED BELOW BUT NOT LIMITED TO:

IBC	2015 INTERNATIONAL BUILDING CODE
IFGC	2015 INTERNATIONAL FUEL GAS CODE
IMC	2015 INTERNATIONAL MECHANICAL CODE
IECC	ASHRAE 90.1-20.3
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
UL	UNDERWRITER'S LABORATORIES, INC.
FM	FACTORY MUTUAL
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
AMCA	AIR MOVING AND CONDITIONING ASSOCIATION
ARI	AMERICAN REFRIGERATION INSTITUTE
MSS	MANUFACTURER'S STANDARDIZATION SOCIETY OF THE VALVE AND FITTING INDUSTRY

MECHANICAL DEMOLITION NOTES

1. IT IS THE INTENT THAT ALL EXISTING PIPING, DUCTWORK, FIXTURES, AND OTHER EQUIPMENT AND MATERIALS THAT INTERFERE WITH THE ALTERED EXISTING BUILDING ARRANGEMENTS AND NEW SYSTEMS BE REMOVED, RELOCATED, REROUTED, OR ABANDONED. THE DRAWINGS GENERALLY INDICATE MAJOR ITEMS OF EXISTING MATERIALS AND EQUIPMENT THAT ARE TO BE REMOVED, RELOCATED, REROUTED, OR ABANDONED BY EACH TRADE. IT IS NOT POSSIBLE TO INDICATE ALL RELATED ACCESSORIES, SPECIALTIES, AND OTHER MINOR ITEMS. HOWEVER, THEIR REMOVAL, RELOCATION, REROUTING, OR ABANDONMENT SHALL ALSO BE INCLUDED IN THIS CONTRACT AND SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
2. THE DEMOLITION WORK SHALL INCLUDE, PROVIDING ALL MATERIALS, ALL NECESSARY EXTENSIONS, CONNECTIONS, CUTTING, REPAIRING, ADAPTING AND OTHER MECHANICAL WORK REQUIRED, TOGETHER WITH ANY REQUIRED TEMPORARY CONNECTIONS TO MAINTAIN SERVICE PENDING THE COMPLETION OF THE PERMANENT WORK. NOTES AND GRAPHIC REPRESENTATION SHALL NOT LIMIT THE EXTENT OF DEMOLITION REQUIRED. EXTENT OF DEMOLITION WORK SHALL BE COORDINATED WITH THE ARCHITECT AND BUILDING MANAGEMENT.
3. SHOULD A CONTRACTOR REQUIRE REMOVAL, RELOCATION, OR REROUTING OF ANOTHER TRADE'S WORK THAT IS NOT INDICATED ON DRAWINGS, THE CONTRACTOR REQUIRING SUCH WORK SHALL BE RESPONSIBLE FOR THAT WORK, AND PAY ALL REQUIRED COSTS.
4. EXISTING CONCEALED AND EXPOSED EQUIPMENT AND MATERIALS THAT WILL BECOME ABANDONED DUE TO NEW WORK, SHALL BE REMOVED BACK TO RISER OR MAIN AND PROPERLY PLUGGED OR CAPPED BEHIND FINISHED SURFACES.
5. EXISTING CONCEALED EQUIPMENT AND MATERIALS THAT ARE TO REMAIN, BUT BECOME EXPOSED DUE TO NEW WORK, SHALL BE RELOCATED AND RECONNECTED AS DIRECTED BY ARCHITECT/ENGINEER.
6. UNLESS INDICATED OTHERWISE, ABANDONED EXISTING PIPING AND SIMILAR MATERIALS CONCEALED WITHIN FINAL CONSTRUCTION, SUCH AS WITHIN WALLS AND UNDER FLOORS ON GRADE, NEED NOT BE REMOVED, BUT NEED ONLY TO BE PROPERLY SHUTOFF AND PLUGGED BEHIND FINISHED SURFACES, PROVIDED THEY DO NOT INTERFERE WITH THE NEW SYSTEMS, EQUIPMENT, AND BUILDING ARRANGEMENTS.
7. ALL WORK INVOLVING ALTERATIONS TO EXISTING SYSTEMS, EQUIPMENT, AND MATERIALS SHALL BE REVIEWED WITH THE ARCHITECT AND OWNER BEFORE BEGINNING WORK.
8. PROVIDE ADDITIONAL SUPPORT FOR ALL EXISTING DUCTS AND PIPING TO REMAIN WHICH ARE AFFECTED BY DEMOLITION OF EXISTING CEILING AND PARTITIONS.
9. EXISTING WORK THAT IS TO BE REMOVED SHALL BE LEGALLY DISPOSED OF. ALL WORK TO BE DISPOSED OF SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM THE SITE.
10. EQUIPMENT REQUIRED TO BE TURNED OVER TO THE OWNER SHALL BE PLACED IN A MUTUALLY ACCEPTABLE LOCATION. ALL MATERIALS AND EQUIPMENT REMOVED AS A RESULT OF DEMOLITION SHALL BE TAKEN FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS AND ENVIRONMENTAL REGULATIONS.
11. CONTRACTOR SHALL IDENTIFY ALL EXISTING WORK TO REMAIN BY ACCEPTABLE IDENTIFICATION MEANS TO CONFIRM PROPER SCOPE PRIOR TO COMMENCEMENT OF DEMOLITION.

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Project Name: Toilet Room, Classroom Renovations, Doors - Antheil Elementary School Phase 1

Project Owner Name: Ewing Public Schools

Project Location: 339 Ewingville Road, Ewing, NJ 08638

Project Number: 5015A2A

Project Date: 02.08.2019

Checked By: RHG

Drawn By: DMR

Scale: AS NOTED

Drawing Name: MECHANICAL INDEX SHEET

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number: M001

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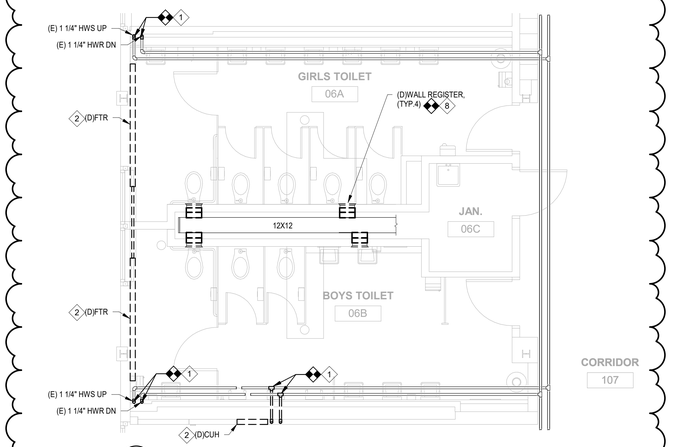
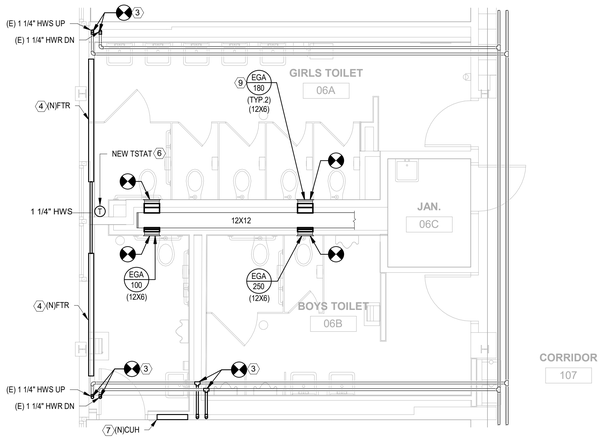


1 M101 MECHANICAL FIRST FLOOR PLAN - BATHROOM 06A & 06B - MECHANICAL DEMOLITION
1/4" = 1'-0"



2 M101 MECHANICAL FIRST FLOOR PLAN - BATHROOM 06A & 06B - PROPOSED MECHANICAL
1/4" = 1'-0"

GENERAL NOTES

1. ALL PIPING WITHIN TOILET ROOMS SHALL BE CONCEALED. UTILIZE EXISTING PIPE CHASES.
2. REBALANCE EXHAUST SYSTEM TO AIRFLOWS SHOWN.

DEMOLITION NOTES

1 DISCONNECT AND REMOVE EXISTING HOT WATER PIPING WHERE INDICATED INCLUDING, BUT NOT LIMITED TO, PIPE, INSULATION, VALVES, HANGERS AND SUPPORTS.

2 DISCONNECT AND REMOVE EXISTING FINNED TUBE RADIATOR AND CABINET UNIT HEATER WHERE INDICATED INCLUDING, BUT NOT LIMITED TO, FTR/UH, PIPING, VALVES, POWER, WIRING AND CONTROLS.

8 DISCONNECT AND REMOVE EXISTING WALL AND AIR DEVICE WHERE INDICATED. EXISTING DUCTWORK TO REMAIN.

NEW WORK NOTES

3 PROVIDE NEW HOT WATER PIPING WHERE INDICATED.

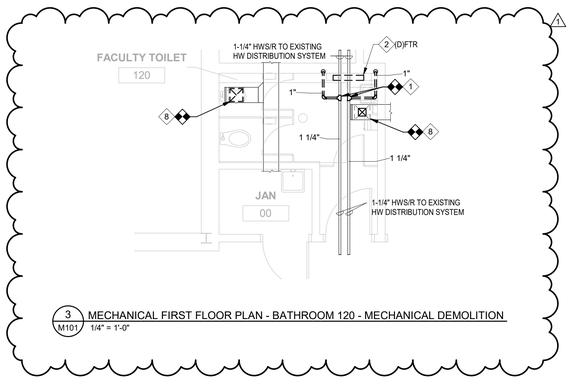
4 PROVIDE NEW 8'-0" ACTIVE LENGTH BASEBOARD RADIATOR SIMILAR TO RITTLING C1-1/4 X 4-1/4 X 4-1/4 - 40 FPI OR APPROVED EQUAL. PROVIDE 1-1/4 INCH COPPER TUBE WITH 4-1/4 INCH SQ ALUMINUM FINS, 40 FPI, 1 ROW, 1,200 BTU/LF AT 190 DEG F EWT AND 65 DEG F EAT. 20 DEG DT, 1.0 GPM. REFER TO DETAIL FOR PIPING AND VALVE ARRANGEMENT. PROVIDE FTR IN SLOPED ENCLOSURE SIMILAR TO RITTLING MODEL S-SL. FINISH BY ARCHITECT.

5 PROVIDE NEW 2'-0" ACTIVE LENGTH BASEBOARD RADIATOR SIMILAR TO RITTLING C1 X 4-1/4 X 4-1/4 - 40 FPI OR APPROVED EQUAL. PROVIDE 1 INCH COPPER TUBE WITH 4-1/4 INCH SQ ALUMINUM FINS, 40 FPI, 1 ROW, 1,200 BTU/LF AT 190 DEG F EWT AND 65 DEG F EAT. 20 DEG DT, 1.0 GPM. REFER TO DETAIL FOR PIPING AND VALVE ARRANGEMENT. PROVIDE FTR IN SLOPED ENCLOSURE SIMILAR TO RITTLING MODEL S-SL. FINISH BY ARCHITECT.

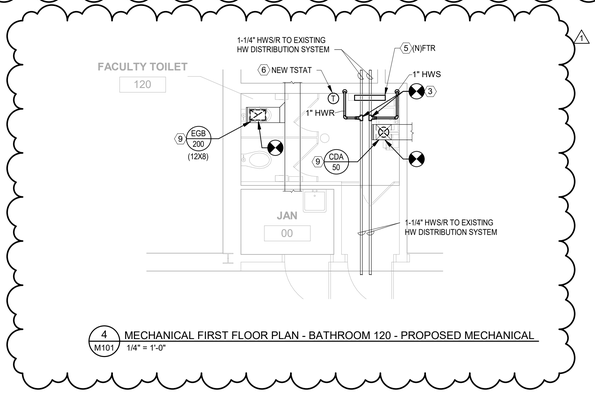
6 PROVIDE LOCKING COVER OVER THERMOSTAT.

7 PROVIDE NEW RECESSED-VERTICAL CABINET UNIT HEATER WHERE INDICATED SIMILAR TO TRANE FORCE-FLO MODEL 04: 350 CFM, 2.5 GPM, 30 MBH AT 200 DEG F EWT, 1/20HP, 120V, 1PH. PROVIDE CUH WITH AUTOFLOW BALANCING VALVE AND SUPPLY AND RETURN PIPING ISOLATION VALVE KIT. PROVIDE CUH WITH INTEGRAL TEMPERATURE CONTROL AND BACNET INTERFACE.

9 PROVIDE NEW AIR DEVICE WHERE INDICATED. EXTEND EXISTING BRANCH DUCTWORK WHERE REQUIRED TO COORDINATE WITH NEW ARCHITECTURAL FINISHES AND CEILING.



3 M101 MECHANICAL FIRST FLOOR PLAN - BATHROOM 120 - MECHANICAL DEMOLITION
1/4" = 1'-0"

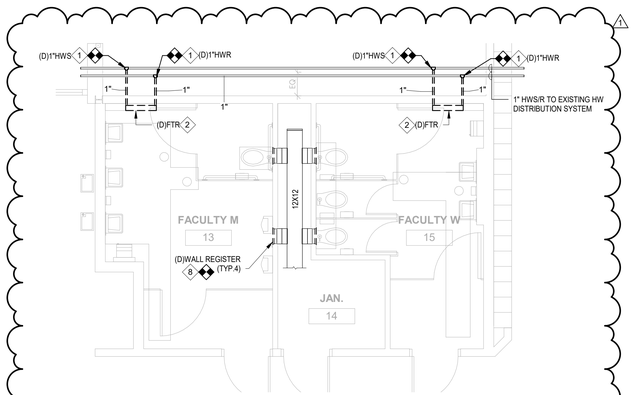


4 M101 MECHANICAL FIRST FLOOR PLAN - BATHROOM 120 - PROPOSED MECHANICAL
1/4" = 1'-0"

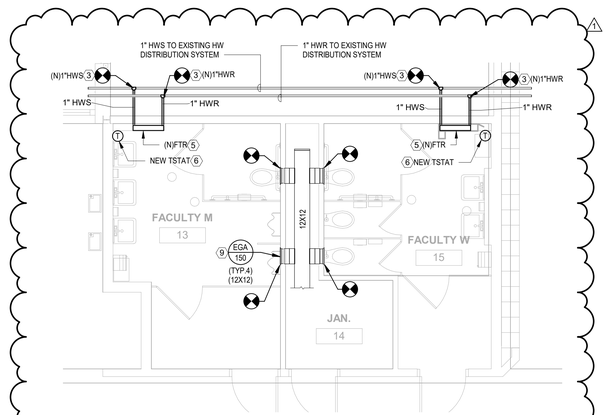
AIR DEVICE SCHEDULE

UNIT NO.	TYPE	FACE SIZE	NECK SIZE	MAX. S.P. in. W.G.	MATERIAL	BASIS OF DESIGN: MANUFACTURER AND MODEL NO.	REMARKS
CDA	LAY-IN	12 x 12	8"Ø	0.1	STEEL	TITUS TDC	SEE NOTES
EGA	WALL MTD.	NECK + 2in.	AS NOTED	0.1	STEEL	TITUS 350	SEE NOTES
EGB	CEILING MTD.	NECK + 2in.	AS NOTED	0.1	STEEL	TITUS 350	SEE NOTES

NOTES:
1. VERIFY NECK SIZES IN FIELD PRIOR TO GENERATING SUBMITTAL
2. PROVIDE ALL AIR DEVICES WITH FACTORY COLOR OF WHITE, UNLESS NOTED OTHERWISE
3. PROVIDE EACH AIR DEVICE WITH THE CORRECT MOUNTING FRAME TYPE TO MATCH CEILING TYPE WHERE INSTALLED. VERIFY MOUNTING TYPE PRIOR TO ORDERING
4. PROVIDE AIR DEVICES WITH NECK-MOUNTED VOLUME CONTROL DAMPER.



5 M101 MECHANICAL FIRST FLOOR PLAN - BATHROOM 13 & 15 - MECHANICAL DEMOLITION
1/4" = 1'-0"



6 M101 MECHANICAL FIRST FLOOR PLAN - BATHROOM 13 & 15 - PROPOSED MECHANICAL
1/4" = 1'-0"

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Project Name
Toilet Room, Classroom Renovations, Doors - Antheil Elementary School Phase 1

Project Owner Name
Ewing Public Schools

Project Location
339 Ewingville Road
Ewing, NJ 08638

Project Number
5015A2A

Project Date
02.08.2019

Checked By
RHG

Drawn By
DMR

Scale
AS NOTED

Drawing Name
MECHANICAL PARTIAL PLANS

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
M101

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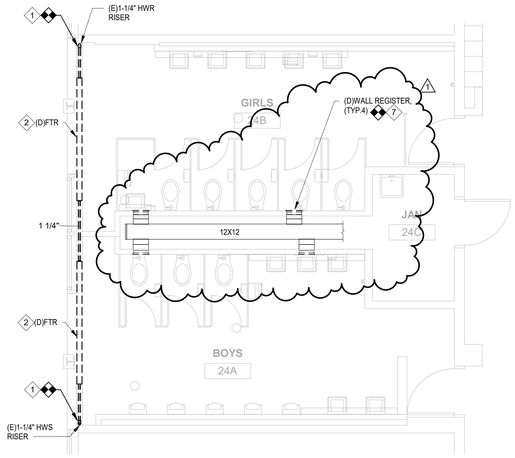
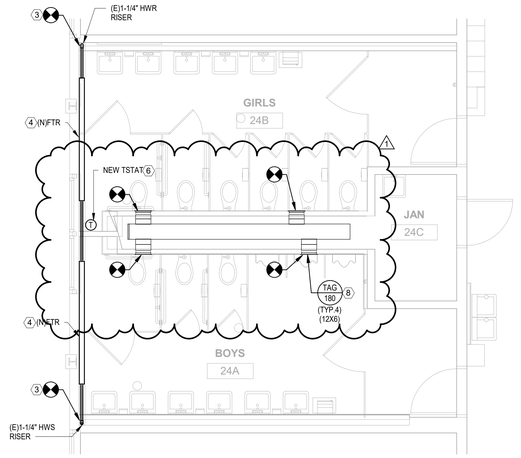


1 M102 MECHANICAL SECOND FLOOR PLAN - BATHROOM 24A & 24B - MECHANICAL DEMOLITION
1/4" = 1'-0"



2 M102 MECHANICAL SECOND FLOOR PLAN - BATHROOM 24A & 24B - PROPOSED MECHANICAL
1/4" = 1'-0"

GENERAL NOTES

1. ALL PIPING WITHIN TOILET ROOMS SHALL BE CONCEALED. UTILIZE EXISTING PIPE CHASES.
2. REBALANCE EXHAUST SYSTEM TO AIRFLOWS SHOWN.

DEMOLITION NOTES

1 DISCONNECT AND REMOVE EXISTING HOT WATER PIPING WHERE INDICATED INCLUDING, BUT NOT LIMITED TO, PIPE, INSULATION, VALVES, HANGERS AND SUPPORTS.

2 DISCONNECT AND REMOVE EXISTING FINNED TUBE RADIATOR AND CABINET UNIT HEATER WHERE INDICATED INCLUDING, BUT NOT LIMITED TO, FTR/CUH, PIPING, VALVES, POWER, WIRING AND CONTROLS.

7 DISCONNECT AND REMOVE EXISTING WALL AND AIR DEVICE WHERE INDICATED. EXISTING DUCTWORK TO REMAIN.

NEW WORK NOTES

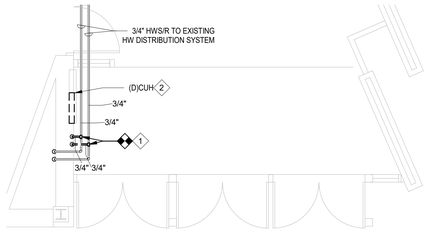
3 PROVIDE NEW HOT WATER PIPING WHERE INDICATED.

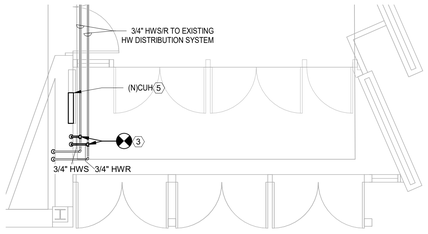
4 PROVIDE NEW 8'-0" ACTIVE LENGTH BASEBOARD RADIATOR SIMILAR TO RITTLING C1-114 X 4-1/4 X 4-1/4 - 40 FPI OR APPROVED EQUAL. PROVIDE 1-1/4 INCH COPPER TUBE WITH 4-1/4 INCH SQ ALUMINUM FINS, 40 FPI, 1 ROW, 1,200 BTU/LF AT 190 DEG F EWT AND 65 DEG F EAT, 20 DEG DT, 1.0 GPM. REFER TO DETAIL FOR PIPING AND VALVE ARRANGEMENT. PROVIDE FTR IN SLOPED ENCLOSURE SIMILAR TO RITTLING MODEL S-SL. FINISH BY ARCHITECT.

5 PROVIDE NEW RECESSED-VERTICAL CABINET UNIT HEATER WHERE INDICATED SIMILAR TO TRANE FORCE-FLO MODEL 04: 350 CFM, 2.5 GPM, 30 MBH AT 200 DEG F EWT, 1/20HP, 120V, 1PH. PROVIDE CUH WITH AUTOFLOW BALANCING VALVE AND SUPPLY AND RETURN PIPING ISOLATION VALVE KIT. PROVIDE CUH WITH INTEGRAL TEMPERATURE CONTROL AND BACNET INTERFACE.

6 PROVIDE LOCKING COVER OVER THERMOSTAT.

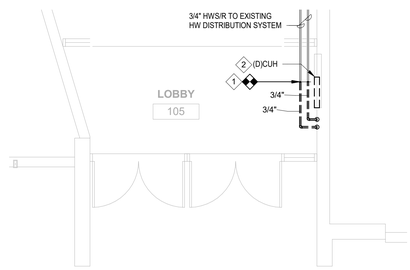
8 PROVIDE NEW AIR DEVICE WHERE INDICATED. EXTEND EXISTING BRANCH DUCTWORK WHERE REQUIRED TO COORDINATE WITH NEW ARCHITECTURAL FINISHES AND CEILING.

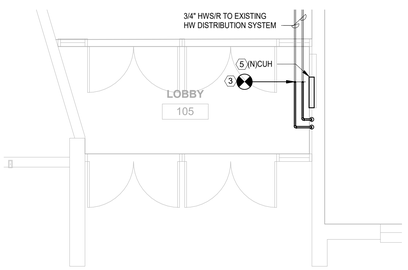




3 M102 MECHANICAL FIRST FLOOR PLAN - LOBBY 101 - MECHANICAL DEMOLITION
1/4" = 1'-0"

4 M102 MECHANICAL FIRST FLOOR PLAN - LOBBY 101 - PROPOSED MECHANICAL
1/4" = 1'-0"





5 M102 MECHANICAL FIRST FLOOR PLAN - LOBBY 105 - MECHANICAL DEMOLITION
1/4" = 1'-0"

6 M102 MECHANICAL FIRST FLOOR PLAN - LOBBY 105 - PROPOSED MECHANICAL
1/4" = 1'-0"

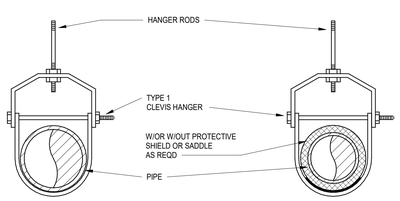
PIPE SCHEDULE

	SERVICE	HOT WATER	
	LOCATION TEMPERATURE	INDOORS	
		120-200 F	
PIPE MATERIALS	PIPE MATERIALS	PIPE SIZE	MATERIAL/JOINTS
		3/4" - 2"	ASTM B88 HARD-DRAWN TYPE L COPPER/ANSI B16.22 SOLDER 95/5TA SOLDERED
		2 1/2" & UP	ASTM A53 SCH 40 SEAMLESS STEEL/ANSI B16.9 BUTT WELD
		-	-
	MAX OPERATING PRESSURE	150 PSIG	
	SEAMLESS/ERW	SEAMLESS	
	-	-	
PIPE INSULATION	MINIMUM INSULATION THICKNESS	PIPE SIZE	INSULATION THICKNESS
		3/4" - 1"	1 1/2"
		1 1/2" - 4"	2"
		6"	2"
		8" & UP	2"
		-	-
	INSULATION TYPE	MOLDED FIBERGLASS	
	JACKET	ASJ	
	WEATHERPROOFING	NONE	
	MAXIMUM K-VALUE	Kmax = 0.27 AT 175 DEG F MEAN TEMP	
PIPE VALVES	VALVES	PIPE SIZE	ISOLATION/THROTTLE
		3/4" - 2"	BALL VALVE/BALL VALVE
		2-1/2" & UP	BUTTERFLY VALVE/BALLVALVE
		-	-
REMARKS			

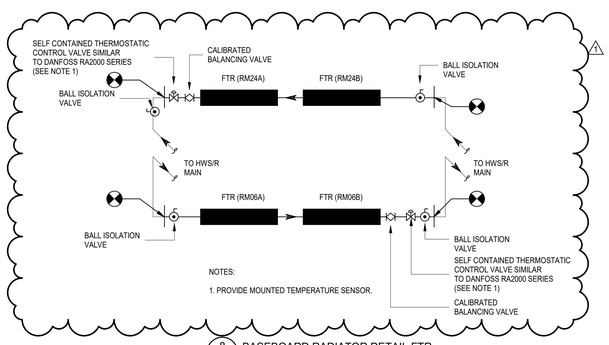
AIR DEVICE SCHEDULE

UNIT NO.	TYPE	FACE SIZE	NECK SIZE	MAX. S.P. in. W.G.	MATERIAL	BASIS OF DESIGN: MANUFACTURER AND MODEL NO.	REMARKS
CDA	LAY-IN	12 x 12	8"Ø	0.1	STEEL	TITUS TDC	SEE NOTES
EGA	WALL MTD.	NECK + 2in.	AS NOTED	0.1	STEEL	TITUS 350	SEE NOTES
EGB	CEILING MTD.	NECK + 2in.	AS NOTED	0.1	STEEL	TITUS 350	SEE NOTES

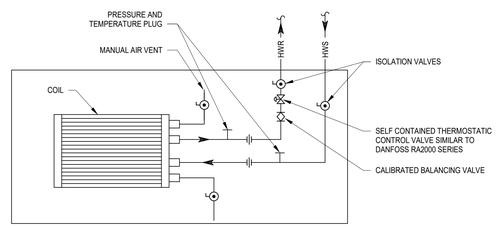
NOTES:
1. VERIFY NECK SIZES IN FIELD PRIOR TO GENERATING SUBMITTAL
2. PROVIDE ALL AIR DEVICES WITH FACTORY COLOR OF WHITE, UNLESS NOTED OTHERWISE
3. PROVIDE EACH AIR DEVICE WITH THE CORRECT MOUNTING FRAME TYPE TO MATCH CEILING TYPE WHERE INSTALLED. VERIFY MOUNTING TYPE PRIOR TO ORDERING
4. PROVIDE AIR DEVICES WITH NECK-MOUNTED VOLUME CONTROL DAMPER.



7 M102 PIPE HANGER
NOT TO SCALE



8 M102 BASEBOARD RADIATOR DETAIL FTR
NOT TO SCALE



9 M102 CABINET UNIT HEATER PIPING ARRANGEMENT
NOT TO SCALE

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Project Name
Toilet Room, Classroom Renovations, Doors - Antheil Elementary School Phase 1

Project Owner Name
Ewing Public Schools

Project Location
339 Ewingville Road Ewing, NJ 08638

Project Number
5015A2A

Project Date
02.08.2019

Checked By
RHG

Drawn By
DMR

Scale
AS NOTED

Drawing Name
MECHANICAL PARTIAL PLANS

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
M102

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2/20/2019 8:58:43 PM BIM 360://FVHDA18001 – EWING TOWNSHIP SCHOOL DISTRICT/ANTHEIL ES_R18.rvt

ELECTRICAL SYMBOLS LIST

(NOT ALL SYMBOLS ARE NECESSARILY USED ON THIS PROJECT)

ANNOTATION

- KEY NOTE

LIGHTING SYMBOLS

- CEILING MOUNTED DOWNLIGHT
  CONNECTED TO NORMAL CIRCUIT
  A = FIXTURE TYPE
- CEILING MOUNTED DOWNLIGHT
  CONNECTED TO EMERGENCY/LIFE SAFETY CIRCUIT OR 90 MINUTES BATTERY BACKUP
  A = FIXTURE TYPE
- CEILING MOUNTED DOWNLIGHT
  CONNECTED TO CRITICAL/STANDBY CIRCUIT
  A = FIXTURE TYPE
- 2'x4'/2'x2'/4'x1' RECESSED CEILING MOUNTED LIGHT FIXTURE
  A = FIXTURE TYPE
  ○ = EQUIPPED WITH INTEGRAL OCCUPANCY SENSOR
  □ = EQUIPPED WITH INTEGRAL DAYLIGHT HARVESTING PHOTOCELL
- 2'x4'/2'x2'/4'x1' RECESSED CEILING MOUNTED LIGHT FIXTURE
  EQUIPPED CONNECTED TO EMERGENCY/LIFE SAFETY CIRCUIT OR 90 MINUTES BATTERY BACKUP
  A = FIXTURE TYPE
- 2'x4'/2'x2'/4'x1' RECESSED CEILING MOUNTED LIGHT FIXTURE
  EQUIPPED CONNECTED TO CRITICAL/STANDBY CIRCUIT
  A = FIXTURE TYPE
- LIGHT TRACK-TYPE 'A' WITH TRACK MOUNTED FIXTURE TYPE 'B'
- WALL/CEILING SURFACE MOUNTED FLUORESCENT STRIP FIXTURE-TYPE AS NOTED
  A = FIXTURE TYPE
- WALL MOUNTED SCONCE LIGHT FIXTURE
  A = FIXTURE TYPE
- ACCENT LIGHT OR WALL WASHER
  A = FIXTURE TYPE
- EXTERIOR LIGHTING FIXTURE (BRACKET TYPE)
  A = FIXTURE TYPE
- CEILING/WALL MOUNTED EXIT SIGN
  SHADED AREAS INDICATE ILLUMINATED FACE/FACES
  DIRECTIONAL ARROWS WHERE INDICATED
- EMERGENCY BATTERY LIGHT UNIT
  A = FIXTURE TYPE
- REMOTE LIGHT HEADS FOR EMERGENCY BATTERY LIGHT UNIT TYPE AS NOTED
- LINE-VOLTAGE SWITCH / LOW-VOLTAGE SWITCH OR SMART CONTROL SWITCH
  FLUSH WALL MOUNTED @ 48" AFF, UON
  3 = THREE-WAY
  4 = FOUR-WAY
  D = INTEGRAL DIMMER
  K = KEY OPERATED
  T = TIME SWITCH
  OS = INTEGRATED OCCUPANCY SENSOR
  MM = MOMENTARY SWITCH
  R = AUXILIARY RELAY TO CONTROL OTHER THAN LIGHTING LOADS
  10V = 0-10V DIMMER
- OCCUPANCY SENSOR/ VACANCY SENSOR. 180° RANGE
  WALL MOUNTED @ 10" BELOW FINISHED CEILING
  DT = DUAL TECHNOLOGY,
  US = ULTRASONIC
  R = AUXILIARY RELAY TO CONTROL OTHER THEN LIGHTING LOADS
- OCCUPANCY SENSOR/ VACANCY SENSOR. 360° RANGE
  CEILING MOUNTED
  R = AUXILIARY RELAY TO CONTROL OTHER THEN LIGHTING LOADS
- PHOTOCELL CONTROL SWITCH - WALL OR CEILING MOUNTED OUTDOOR
  WP = WEATHERPROOF FOR OUTDOOR INSTALLATIONS,
  DL = DAYLIGHT HARVESTING CONTROL SWITCH
- POWER PACK 24VDC FOR LIGHTING SENSORS - UNIVERSAL VOLTAGE (100-277V)
- AUTOMATIC LOAD CONTROL RELAY - PER UL924
  WHEN NORMAL POWER IS AVAILABLE, LOAD LIGHTS SHALL BE CONTROLLABLE
  WHEN NORMAL POWER FAILS, RELAY SWITCHES TO EMERGENCY POWER SOURCE AND LOAD LIGHTS ARE FORCED ON.

POWER SYMBOLS

- JUNCTION BOX / EQUIPMENT CONNECTION
  MOUNTED ABOVE SUSPENDED CEILING / FLUSH WALL MOUNTED,
  INSTALLED WITHIN 2' OF EQUIPMENT WHERE REQUIRED AND DEDICATED FOR:
  VAV = DEDICATED TO VARIABLE AIR VOLUME BOX CONTROL
  SD = DEDICATED TO SMOKE DAMPER
  MD = DEDICATED TO MOTORIZED VOLUME DAMPER
  F = FURNITURE SYSTEM
  HT = HEAT TRACE CABLES
  EM = WITH EMERGENCY CIRCUIT
  120V, 277V = WITH 120V OR 277V CIRCUIT
- JUNCTION BOX / MOTOR CONNECTION, FRACTIONAL HP EXHAUST FAN
- 15 or 20A, 125V DUPLEX RECEPTACLE, FLUSH WALL MOUNTED @ 18" AFF, UON
  C = GRAY COLORED RECEPTACLE FOR COMPUTERS OR OTHER EQUIPMENT
  T = TAMPER PROOF
  XP = EXPLOSION PROOF
  AFI = ARC FLASH CIRCUIT INERRUPTER
- 15 or 20A, 125V QUADRUPLEX RECEPTACLE
  FLUSH WALL MOUNTED @ 18" AFF, UON
- 20A, 125V, 2P W/G. SINGLE RECEPTACLE
  FLUSH WALL MOUNTED @ 18" AFF, UON
  EWC = ELECTRIC WATER COOLER
- 15 or 20A, 125V DUPLEX RECEPTACLE, GFI TYPE
  FLUSH WALL MOUNTED @ 18" AFF, UON
  WP = WEATHER PROOF
- 20A, 125V DUPLEX RECEPTACLE, FLUSH CEILING MOUNTED
- 20A, 125V DUPLEX RECEPTACLE , FLUSH FLOOR MOUNTED
- POWER/DATA COMBINATION POKE-THRU, TYPE/NUMBER OF OUTLETS AS INDICATED ON FLOOR PLANS, FLUSH FLOOR MOUNTED
  A = TYPE
- MULTIOUTLET ASSEMBLY - SURFACE MOUNTED
  POWER AND DATA WITH DIVIDER. DEVICES AS INDICATED ON PLANS

- PUSH-BUTTON STATION
  WALL MOUNTED @ 48" AFF, UON
  EPO = EMERGENCY POWER OFF SWITCH
  HOA = HAND-OFF-AUTOMATIC SWITCH
  K = KEY OPERATED
  P = PANIC BUTTON
  HC = HANDICAP DOOR ASSIST
- PULLBOX
- HANDHOLE
- HOMERUN-NUMERAL WHERE USED INDICATES DESIGNATED PANEL AND CIRCUIT NUMBER FOR REFERENCE ONLY. WHERE CONDUIT IS NOT SPECIFIED USE AC OR MC CABLE FOR APPLICATION.
  2#12, #12G, 3/4"C HOMERUN, UON
  3#12, #12G, 3/4"C HOMERUN, UON
  4#12, #12G, 3/4"C HOMERUN, UON
  AT 120V AND OVER 100' CIRCUIT LENGTH PROVIDE #10 MINIMUM.
  AT 277V AND OVER 200' CIRCUIT LENGTH PROVIDE #10 MINIMUM.
- DIMMER ZONE HOMERUN
- CONDUIT OR RACEWAY TURNING UP
- CONDUIT OR RACEWAY TURNING DOWN
- CONDUIT WITH CAP
- CONDUIT WITH BUSHING
- CONDUIT SEAL
- CONDUIT SLEEVE
- SPLICE (JUNCTION) OF PATHS OF CONDUCTORS OR CABLES.
- TAPBOX, SPLICE BOX
- INDIVIDUAL RUNS OR FEEDERS ARE BEING COMBINED INTO ONE GROUP.
- NEW CONDUIT/EQUIPMENT
  DENOTES EXISTING-TO-REMAIN
  DENOTES FOR DEMOLITION
- TRANSFORMER
- FLOOR MOUNTED METAL SUPPORT FRAME FOR ELECTRICAL ENCLOSURES
- MOTOR RATED TOGGLE SWITCH, 20A SINGLE POLE, UON
  HORSEPOWER RATED WITH OVERLOAD PROTECTION.
- COMBINATION MOTOR CONTROLLER / DISCONNECT SWITCH
  <SWITCH AMPS>/<POLES>, VOLTAGE RATING AS REQUIRED
  VFD = VARIABLE FREQUENCY DRIVE
  10HP = HORSE POWER RATING OF VFD
- COMBINATION MOTOR CONTROLLER / DISCONNECT SWITCH WITH BYPASS
  <SWITCH AMPS>/<POLES>, VOLTAGE RATING AS REQUIRED
  VFD = VARIABLE FREQUENCY DRIVE
  10HP = HORSE POWER RATING OF VFD
- UNFUSED DISCONNECT SWITCH
  <SWITCH AMPS>/<POLES>, VOLTAGE RATING AS REQUIRED
- FUSED DISCONNECT SWITCH
  <SWITCH AMPS>/<FUSE AMPS>/<POLES>, VOLTAGE RATING AS REQUIRED
- ENCLOSED CIRCUIT BREAKER
  <FRAME AMPS>/<TRIP AMPS>/<POLES>, VOLTAGE RATING AS REQUIRED
  ST = SHUNT TRIP
- 208/120V PANELBOARD
  SURFACE MOUNTED
- 208/120V PANELBOARD
  FLUSH MOUNTED
- 208/120V DISTRIBUTION PANELBOARD
  SURFACE MOUNTED
- 480/277V PANELBOARD
  SURFACE MOUNTED
- 480/277V PANELBOARD
  FLUSH MOUNTED
- 480/277V DISTRIBUTION PANELBOARD
  SURFACE MOUNTED
- GROUND BUS
  TMGB = TELECOMMUNICATIONS MAIN GROUNDING BUS
  TGB = TELECOMMUNICATIONS GROUNDING BUS

RISER / SINGLE LINE SYMBOLS

- 460V 500KVA 208/120V — POWER TRANSFORMER
  VOLTAGES, WINDINGS AND SIZE AS INDICATED
- ATS 100A 480V,4P — TRANSFER SWITCH
  ATS = AUTOMATIC TRANSFER
  MTS = MANUAL TRANSFER
  POLES AND RATING AS NOTED
- ATS 100A 480V,4P — TRANSFER SWITCH WITH BYPASS ISOLATION
  ATS = AUTOMATIC TRANSFER
  MTS = MANUAL TRANSFER
  POLES AND RATING AS NOTED
- GENERATOR
- GROUND CONNECTION
- 100/100 — FUSED SWITCH
  <SWITCH AMPS>/<TYPE 'FA' FUSE AMPS>
- 100 — UNFUSED SWITCH
  <SWITCH AMPS>
- 100/90 — CIRCUIT BREAKER - MOLDED CASE TYPE
  <FRAME AMPS>/<TRIP AMPS>
- 100/90 — CIRCUIT BREAKER - DRAW-OUT TYPE
  <FRAME AMPS>/<TRIP AMPS>
- DIGITAL MULTIMETER WITH POTENTIAL TRANSFORMER
- XXX/5, 3 — CURRENT TRANSFORMER
  NUMBER AND RATIO AS INDICATED
- CONTACTS NORMALLY CLOSE.
- CONTACTS NORMALLY OPEN.

VOICE / DATA SYMBOLS

- VOICE/DATA OUTLET
  FLUSH WALL MOUNTED @ 18" AFF UON, WITH 3/4" CONDUIT IN DEMISING WALL, TERMINATED IN A 90° BEND 6" INTO ACCESSIBLE CEILING
- VOICE OUTLET
  FLUSH WALL MOUNTED @ 18" AFF UON, WITH 3/4" CONDUIT IN DEMISING WALL, TERMINATED IN A 90° BEND 6" INTO ACCESSIBLE CEILING
  W = BRACKET MOUNTED @ 44" AFF, UON
- DATA OUTLET
  FLUSH WALL MOUNTED @ 18" AFF UON, WITH 3/4" CONDUIT IN DEMISING WALL, TERMINATED IN A 90° BEND 6" INTO ACCESSIBLE CEILING
- VOICE/DATA OUTLET - FLUSH CEILING MOUNTED
- DATA OUTLET - FLUSH CEILING MOUNTED
- VOICE/DATA OUTLET - FLUSH FLOOR MOUNTED
- VOICE OUTLET - FLUSH FLOOR MOUNTED
- DATA OUTLET - FLUSH FLOOR MOUNTED
- WIRELESS ACCESS POINT
- TELEVISION OUTLET
  FLUSH WALL MOUNTED @ 18" AFF UON, WITH 3/4" CONDUIT IN DEMISING WALL, TERMINATED IN A 90° BEND 6" INTO ACCESSIBLE CEILING
- TELEPHONE BACKBOARD
- MICROPHONE OUTLET - FLUSH CEILING MOUNTED
- INTERCOM - FLUSH CEILING / WALL MOUNTED
- PUBLIC ADDRESS SPEAKER - FLUSH CEILING / WALL MOUNTED
- CLOCK, CEILING MOUNTED OR WALL MOUNTED @ 90" AFF, UON
  MC = MASTER CLOCK
- DOORBELL
- DOOR BUZZER

FIRE ALARM SYMBOLS

- SPACE/ SPOT SYSTEM SMOKE DETECTOR - CEILING MOUNTED
  F = MOUNTED UNDER RAISED FLOOR
  C = MOUNTED ABOVE SUSPENDED CEILING
  P = PHOTOELECTRIC TYPE
  I = IONIZATION TYPE
  A = AIR SAMPLING TYPE SMOKE DETECTOR
  BT = BEAM TRANSMITTER PROJECTION TYPE SMOKE DETECTOR
  BR = BEAM RECEIVER PROJECTION TYPE SMOKE DETECTOR
  BT/R = BEAM TRANSMITTER/RECEIVER PROJECTION TYPE SMOKE DETECTOR
  RF = BEAM REFLECTOR FOR PROJECTION TYPE SMOKE DETECTOR
  D = SMOKE DETECTOR FOR DOOR RELEASE SERVICE
  V = VIDEO IMAGE SMOKE DETECTION
  R = RELAY BASE
  SB = SOUNDER BASE
- DUCT SMOKE DETECTOR
- HEAT DETECTOR - CEILING MOUNTED
  R = RATE COMPENSATION HEAT DETECTOR
  C = MOUNTED ABOVE SUSPENDED CEILING
- SMOKE/ HEAT COMBINATION DETECTOR
- WATER DETECTOR/ SWITCH
- SPRINKLER WATER FLOW DETECTOR/ SWITCH
- SPRINKLER TAMPER SWITCH
- SPRINKLER PRESSURE DETECTOR WITH SWITCH, NUMBER INDICATES QUANTITIES
  H = HIGH PRESSURE
  L = LOW PRESSURE
- FIRE ALARM ADDRESSABLE INPUT MONITOR MODULE
- FIRE ALARM ADDRESSABLE OUTPUT CONTROL MODULE
- FIRE ALARM PULL STATION - WALL MOUNTED @ 48" AFF, UON
- FIREMAN'S TELEPHONE - WALL MOUNTED @ 48" AFF, UON
- FIRE ALARM STROBE
  WALL MOUNTED SO THAT ENTIRE LENS IS PLACED BETWEEN 80" & 96" AFF
  NUMBER INDICATES CANDELA RATING
- FIRE ALARM STROBE - CEILING MOUNTED
  NUMBER INDICATES CANDELA RATING
- FIRE ALARM HORN, WALL MOUNTED @ 84" AFF
- FIRE ALARM HORN / STROBE COMBINATION, WALL MOUNTED SO THAT ENTIRE LENS IS PLACED BETWEEN 80" & 96" AFF
  NUMBER INDICATES CANDELA RATING
- FIRE ALARM SPEAKER, WALL MOUNTED @ 80" AFF
- FIRE ALARM SPEAKER, FLUSH CEILING MOUNTED
- FIRE ALARM SPEAKER / STROBE
  WALL MOUNTED SO THAT ENTIRE LENS IS PLACED BETWEEN 80" & 96" AFF
  NUMBER INDICATES CANDELA RATING
- FIRE ALARM SPEAKER / STROBE
  CEILING MOUNTED
  NUMBER INDICATES CANDELA RATING
- MOTORIZED SMOKE DAMPER, INTEGRATED WITH FIRE ALARM SYSTEM
- MOTORIZED SMOKE DAMPER AND ASSOCIATED DUCT SMOKE DETECTOR, INTEGRATED WITH FIRE ALARM SYSTEM. SMOKE DETECTOR SHALL BE INSTALLED IN SMOKE WALL NO MORE THAN 2 FEET FROM ASSOCIATED SMOKE DAMPER.
- DOOR HOLDERS - DOOR MAGNETIC HOLD OPEN DEVICE
- FIRE ALARM ANNUNCIATOR
- FIRE ALARM CONTROL PANEL
- FIRE ALARM COMMUNICATOR
- FIRE ALARM CONTROL UNIT
- FIRE ALARM TERMINAL CABINET
- POWER SUPPLY
- END OF LINE SUPERVISORY DEVICE
  R = RESISTOR
  C = CAPACITOR
  D = DIODE
  RL OR K = RELAY

GENERAL NOTES

1. DEFINITION: UNLESS OTHERWISE NOTED, ALL WORK SPECIFIED HEREIN OR NOTED ON DRAWINGS, SHALL BE BY THE ELECTRICAL CONTRACTOR. ALL REFERENCES TO "CONTRACTOR" OR "THIS CONTRACTOR" ON DRAWINGS OR SPECIFICATIONS ARE ADDRESSED TO THE ELECTRICAL CONTRACTOR. THE TERM "PROVIDE" WHENEVER ENCOUNTERED ON DRAWINGS OR IN THESE SPECIFICATIONS, SHALL MEAN "FURNISH AND INSTALL."
2. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CONDUIT ROUTING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL BENDS, OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL ALLOW IN HIS PRICE FOR ROUTING OF CONDUIT TO AVOID OBSTRUCTIONS. COORDINATE WITH OTHER TRADES, AS REQUIRED. MAINTAIN HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. THE EXACT LOCATIONS OF DEVICES AND EQUIPMENT ARE SUBJECT TO THE APPROVAL OF THE OWNER, WHO RESERVES THE RIGHT TO MAKE ANY REASONABLE CHANGES IN LOCATION WITHOUT EXTRA COST.
3. SECURE ALL SUPPORTS TO BUILDING STRUCTURE UTILIZING TOGGLE BOLTS (HOLLOW MASONRY), EXPANSION SHIELDS OR INSERTS (CONCRETE AND BRICK), MACHINE SCREWS (METAL), BEAM CLAMPS (FRAMEWORK), WOOD SCREWS (WOOD) OR PAN THRU STRAPS (METAL DECK). NAILS, RAWL PLUGS AND WOOD PLUGS ARE NOT PERMITTED. WHERE REQUIRED BY STRUCTURE, PROVIDE THRU BOLTS AND FISH PLATES. SUPPORT HORIZONTAL RUNS OF METALLIC RACEWAYS NOT MORE THAN 10' APART. SUPPORT RACEWAY RISERS AT EACH FLOOR LEVEL. RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO WALLS. MC AND AC CABLES SHALL BE SECURED EVERY 6' AND WITHIN 12" FROM THE JUNCTION BOX. SUPPORT PANEL, JUNCTION AND PULLBOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.
4. PROVIDE TEMPORARY LIGHT AND POWER SYSTEMS AT EARLIEST POSSIBLE DATE WITHIN THE CONSTRUCTION AREAS FOR THE REQUIREMENTS OF ALL TRADES AS HEREIN DESCRIBED. EXTEND SYSTEMS TO NEW CONSTRUCTION AS SOON AS PHYSICALLY POSSIBLE. MAINTAIN SYSTEM DURING WORKING HOURS OF ALL TRADES. OWNER WILL PAY FOR COST OF ENERGY. PROVIDE ALL REQUIRED MAINTENANCE, INCLUDING LAMPS AND SOCKETS.
5. IN LOCATING BOXES AND OUTLETS TO AVOID INACCESSIBLITY, ALLOW FOR OVERHEAD PIPES, DUCTS AND MECHANICAL EQUIPMENT, VARIATIONS IN FIREPROOFING AND PLASTERING, WINDOW AND DOOR TRIM, PANELING, HUNG CEILINGS AND THE LIKE. CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSE TO OWNER.
6. PASS RACEWAYS OVER WATER, STEAM OR OTHER PIPING WHEN PULL BOXES ARE NOT REQUIRED. NO RACEWAY WITHIN 3" OF STEAM OR HOT WATER PIPES OR APPLIANCES (EXCEPT PIPE CROSSINGS WHERE RACEWAY IS AT LEAST 1" FROM PIPE COVERS AND PARALLEL RUNS WHERE RACEWAY IS AT LEAST 18").
7. CUT CONDUIT ENDS SQUARE. REAM SMOOTH. PAINT MALE THREAD OF FIELD THREADED RACEWAYS WITH GRAPHITE BASE PIPE COMPOUND. DRAW UP TIGHT WITH RACEWAY COUPLING.
8. HORIZONTAL OR CROSS RUNS IN PARTITIONS AND WALLS ARE NOT PERMITTED. DO NOT RUN CONDUIT IN PRECAST ROOF SLABS, IN 2" SLABS OR IN TERRAZZO FLOOR FINISH.
9. MINIMUM CONDUIT SIZE SHALL BE 3/4".
10. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS. RACEWAYS OVER 10' LONG IN WHICH WIRING IS NOT INSTALLED: FURNISH NYLON PULL STRING. FOR ANY RACEWAY OVER 25' PROVIDE PULL STRING WITH CONDUIT MEASURING TAPE AND INDICATE DESIGNATION OF THE RACEWAY ON EACH END.
11. VERIFY LOCATIONS OF OUTLETS AND SWITCHES IN FINISHED ROOMS WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISH. LOCATIONS INDICATED FOR LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS AT OR NEAR DOORS. COORDINATE WITH ARCHITECT AND INSTALL SWITCH ON LOCK/ LATCH SIDE OF DOOR. VERIFY FINAL HINGE LOCATIONS IN FIELD PRIOR TO SWITCH OUTLET INSTALLATION.
12. SET BOXES SQUARE AND TRUE WITH BUILDING FINISH. ERECT WALL AND SWITCH OUTLETS IN ADVANCE OF FURRING AND FIREPROOFING. SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRONS.
13. COVERS OF JUNCTION AND PULLBOXES SHALL BE ACCESSIBLE.
14. PROVIDE PULLBOXES WHERE INDICATED, REQUIRED BY CODE AND WHEREVER NECESSARY TO FACILITATE PULLING OF WIRE. COORDINATE PULLBOX LOCATIONS WITH OTHER TRADES. BOXES SHALL BE ACCESSIBLE AND GENERALLY NOT EXPOSED IN FINISHED SPACES. WHERE NECESSARY, REROUTE RACEWAYS OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT.
15. EMPTY RACEWAY RUNS: PROVIDE PULLBOXES EVERY 100' AND AS INDICATED. COORDINATE LOCATIONS WITH OTHER TRADES. THE PULLBOX SHALL BE INSTALLED EVERY 270° OF TOTAL CONDUIT TURNS.
16. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.
17. CONNECT CONDUIT TO MOTOR TERMINAL BOXES WITH FLEXIBLE CONDUIT OF MINIMUM 18", MAXIMUM 6' LENGTH. (PROVIDE SUFFICIENT WIRING SLACK AT EACH END OF TERMINATION). DO NOT TERMINATE IN OR FASTEN RACEWAYS TO MOTOR FOUNDATION.
18. PROVIDE 2 #14AWG WIRING FOR INDICATING PILOT LIGHT FROM PILOT LIGHT IN CONTROLLER TO LOAD SIDE OF DISCONNECT SWITCH. RUN WIRES IN BRANCH CIRCUIT CONDUIT AND INCREASE CONDUIT SIZE AS REQUIRED.
19. PULL NO THERMOPLASTIC WIRES AT AMBIENT TEMPERATURES LOWER THAN 32°F (0°C). PROVIDE CABLE SUPPORTS FOR WIRE IN RISER CONDUITS AS REQUIRED BY CODE.
20. PROVIDE SEPARATE SYSTEMS AND ENCLOSURES FOR 208/120V AND 480/277V POWER AND CONTROL WIRING AND SEPARATE SYSTEMS FOR EMERGENCY AND NORMAL POWER. THE EMERGENCY AND NORMAL SYSTEMS SHALL NOT BE INSTALLED IN THE SAME RACEWAYS, ENCLOSURES, JUNCTION BOXES, PULLBOXES, TERMINATION CABINETS, EXCEPT IN EQUIPMENT ENCLOSURES DESIGNED TO ACCEPT BOTH SYSTEMS SUCH AS AUTOMATIC TRANSFER SWITCH OR EMERGENCY LIGHTING.
21. CORE BORING OF CONCRETE FLOORS AND/OR WALLS IF REQUIRED, IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL PENETRATIONS THROUGH CONCRETE STRUCTURAL FLOORING SHALL BE SCANNED WITH GROUND PENETRATING RADAR (GPR). SUBMIT FINDINGS TO ENGINEER FOR APPROVAL PRIOR TO PENETRATION.
22. WIRE COLOR CODING: AS PER CODE. WHERE COLOR-CODED CABLE IS NOT AVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION FOR OVERLAP COLOR TAPING OF CONDUCTORS (MINIMUM LENGTH 6") IN ALL ACCESSIBLE LOCATIONS. COLOR CODING, ONCE SELECTED, MUST BE USED CONSISTENTLY FOR THE ENTIRE PROJECT.
    480/277V - WAY SYSTEM:
    PHASES A = BROWN, B = ORANGE, C = YELLOW, NEUTRAL = GRAY, GROUNDING = GREEN WITH YELLOW STRIPES.
    208/120V - WAY SYSTEM:
    PHASES A = BLACK, B = REED, C = BLUE, NEUTRAL = WHITE, GROUNDING = GREEN.
    240/120V - DELTA SYSTEM WITH HIGH LEG:
    PHASES A = BLACK, B (HIGH LEG)= ORANGE, C = RED, NEUTRAL = WHITE, GROUNDING = GREEN.
    240/120 V SINGLE PHASE:
    PHASES A = BLACK, B = RED, NEUTRAL = WHITE, GROUNDING = GREEN.
    DC SYSTEM:
    POSITIVE = RED, MID-WIRE = WHITE, NEGATIVE = BLACK,
23. FIRESTOPPING SHALL BE INSTALLED WHENEVER WIRING OR RACEWAYS CROSS FIRE RATED CONSTRUCTION AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER TO MAINTAIN THE UL LISTED FIRE RATING OF THE PENETRATED WALL OR FLOOR ASSEMBLY.
24. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WORK BETWEEN THE TRADES. ANY WORK RESULTING FROM THE LACK OF COORDINATION SHALL BE CORRECTED WITH NO ADDITIONAL COST TO THE OWNER.
25. THE CONTRACTOR IS RESPONSIBLE FOR REPORTING INCONSISTENCIES TO THE ENGINEER IN FORM OF "RFI" REQUEST FOR INFORMATION BEFORE ANY INACCURATE WORK IS EXECUTED.
26. CONTRACTOR SHALL INCLUDE PRICING FOR ARC FLASH STUDY/LABELING AND DEVICE COORDINATION STUDY BY CONTRACTOR OR EQUIPMENT VENDOR.

DEMOLITION NOTES

1. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL COSTS ASSOCIATED WITH REMOVAL AND RELOCATION OF ELECTRICAL WORK AS DESCRIBED IN THE SPECIFICATIONS WITH ALLOWANCES FOR EXPECTED OR UNFORESEEN DIFFICULTIES WHEN CONCEALED WORK HAS BEEN OPENED. NO CLAIMS FOR ADDITIONAL WORK ASSOCIATED WITH DEMOLITION WILL BE ACCEPTED, EXCEPT IN CERTAIN CASES CONSIDERED JUSTIFIABLE BY THE ARCHITECT.
2. THE CONTRACTOR SHALL REMOVE AND/OR RELOCATE ALL EXISTING ELECTRICAL WORK WHICH INTERFERES WITH THE NEW ARCHITECTURAL AND ELECTRICAL LAYOUTS IN FULL COORDINATION WITH THE ARCHITECT'S DEMOLITION PLANS. ALL SYSTEMS WHICH ARE NO LONGER REQUIRED TO FUNCTION SHALL BE DE-ENERGIZED AND DISCONNECTED AT THE SOURCE OF POWER SUPPLY.
3. DEMOLITION AND REMOVAL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. THE CONTRACTOR SHALL PATCH, REPAIR OR OTHERWISE RESTORE ANY DAMAGED INTERIOR OR EXTERIOR BUILDING SURFACE TO ITS ORIGINAL CONDITION. ALL PATCHING SHALL BE OF THE SAME MATERIALS, WORKMANSHIP, AND FINISH, AND SHALL ACCURATELY MATCH ALL SURROUNDING WORK.
4. THE CONTRACTOR SHALL REMOVE ALL ELECTRICAL OUTLETS, SWITCHES AND OTHER DEVICES, COMPLETE WITH ASSOCIATED WIRING AND CONDUITS BACK TO NEAREST JUNCTION BOX THAT IS TO REMAIN OR TO PANELBOARD. WHERE THE REMOVAL OF THESE ITEMS DISRUPTS EXISTING WIRING TO REMAIN, THE CONTRACTOR SHALL INSTALL JUNCTION BOXES AND EXTEND FEEDER WITH MATCHING CABLE TYPE, CONDUCTOR AMPACITY AND CONDUIT SIZES.
5. WHERE IT IS IMPRACTICAL TO REMOVE RACEWAY BACK TO SOURCE, DISCONNECT WIRING AT LOAD (EQUIPMENT) AND AT LINE SIDE, CUT AND CAP, FLUSH TO SURFACE. REMOVE CONDUCTORS FROM EXISTING RACEWAYS TO BE REWIRED. CLEAN RACEWAY AS REQUIRED PRIOR TO REWIRING.
6. ALL RACEWAYS WHICH BECOME EXPOSED DURING THE ALTERATION WORK SHALL BE REMOVED AND REROUTED CONCEALED BEHIND FINISHED SURFACES. (1)
8. EXISTING PANEL DIRECTORIES AFFECTED BY THE ALTERATION WORK SHALL BE MODIFIED TO REFLECT THE BRANCH CIRCUIT WIRING CHANGES.
9. INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES. TEMPORARY SHUTDOWNS OF EXISTING SERVICES SHALL BE PERFORMED AT NO ADDITIONAL CHARGES, AT TIMES NOT TO INTERFERE WITH NORMAL OPERATION OF EXISTING FACILITIES AND ONLY WITH WRITTEN CONSENT OF OWNER. NOTIFICATION MUST BE GIVEN AT LEAST 5 DAYS PRIOR TO SHUT DOWN. ALARM AND EMERGENCY SYSTEMS SHALL NOT BE INTERRUPTED. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES AS REQUIRED WITH NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING WORK. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND ACCEPTABLE MANNER. RESTORE EXISTING DISTURBED WORK TO ORIGINAL CONDITION, INCLUDING MAINTENANCE OF WIRING CONTINUITY AS REQUIRED.
10. THE CONTRACTOR SHALL NOTIFY THE OWNER AT THE APPROPRIATE TIME OF THE PROJECTED DEMOLITION AND PHASING SCHEDULE SO THAT REMOVAL OR RELOCATION OF AFFECTED UTILITIES MAY BE CARRIED OUT IN COORDINATION WITH THE PROJECT REQUIREMENTS. THE CONTRACTOR SHALL FOLLOW CLOSELY THE ARCHITECT'S DEMOLITION AND PHASING SCHEDULE AND PROCEED IN THE SPECIFIED SEQUENCE.
11. ALL EXISTING MATERIAL AND EQUIPMENT IN USABLE CONDITION, WHICH IS TO BE REMOVED UNDER THIS CONTRACT, SHALL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF IN A LEGAL MANNER BY THE ELECTRICAL CONTRACTOR, AS DIRECTED BY THE OWNER. ITEMS OF SALVAGE SHALL BE CAREFULLY REMOVED AND STORED AT LOCATIONS DIRECTED BY THE OWNER.
12. ARRANGE TO WORK CONTINUOUSLY, INCLUDING OVERTIME, IF REQUIRED, TO ASSURE THAT SYSTEMS WILL BE SHUT DOWN ONLY DURING THE TIME ACTUALLY REQUIRED TO MAKE THE NECESSARY CONNECTIONS TO THE EXISTING SYSTEMS.
13. PATCH AND PAINTING OF EXISTING WALLS TO REMAIN AFFECTED BY ELECTRICAL DEMOLITION ARE TO COMPLETED UNDER ARCHITECTURAL SPECIFICATION. THERE SHALL BE NO BLANK COVER-PLATES. THE ELECTRICAL WORK SHALL BE ENTIRELY COMPLETED BEFORE PATCHING AND PAINTING.
14. THE CONTRACTOR SHALL SURVEY AND RECORD THE CONDITION OF EXISTING FACILITIES TO REMAIN IN PLACE THAT MAY BE AFFECTED BY DEMOLITION OPERATIONS. THE CONTRACTOR SHALL VERIFY ALL EXISTING SOURCES OF POWER TO EQUIPMENT PRIOR TO FINAL REMOVAL.
15. IF WORK REQUIRES THE INTERRUPTION FIRE ALARM AND FIRE PROTECTION SYSTEMS, ARRANGE WITH OWNER TO CONDUCT A FIRE WATCH WHILE THESE SYSTEMS ARE OUT OF SERVICE. CONSULT WITH FIRE MARSHALL PRIOR TO FIRE WATCH.

ABBREVIATIONS

(NOT ALL ABBREVIATIONS ARE NECESSARILY USED ON THIS PROJECT)

+	MOUNTING HEIGHT AFF.
(E)	EXISTING TO REMAIN
(D)	DEMOLISH
(ER)	EXISTING TO BE RELOCATED
(ERRO)	REMOVED & RETURNED TO OWNER
(N)	NEW
(RE)	RELOCATED EXISTING
(FBO)	FURNISHED BY OTHERS
(PBO)	PROVIDED BY OTHERS
1P	SINGLE POLE
2P	TWO POLE
3P	THREE POLE
A	AMPERE
AC	ARMORED CABLE
AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERE INTERRUPTING CAPACITY
ALT	ALTERNATE
APPROX	APPROXIMATE(LY)
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
BLDG	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
C, CND	CONDUIT
°C	DEGREE CELSIUS
CB, C/B	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CD	CANDELA
CL	CEILING MOUNT
CKT	CIRCUIT
CONT	CONTINUATION
CU	COPPER
CT, C/T	CURRENT TRANSFORMER
DEG	DEGREE
DIA	DIAMETER
DISC	DISCONNECT
DIST	DISTRIBUTION
DIV	DIVISION
DWG	DRAWING
EA	EACH
EC, E.C.	ELECTRICAL CONTRACTOR
ELEC	ELECTRICAL
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
°F	DEGREE FAHRENHEIT
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FATC	FIRE ALARM TERMINATION CABINET
FC	FOOT CANDLE
FDR	FEEDER
FL	FLOOR
FLA	FULL LOAD AMPERES
FLEX	FLEXIBLE
FLUOR	FLUORESCENT
FMC	FLEXIBLE METAL CONDUIT
G, GND	GROUND
GFI	GROUND FAULT INTERRUPTER
GRC	GALVANIZED RIGID CONDUIT
HH	HANDHOLE
HP	HORSE POWER
HZ	HERTZ
IG	ISOLATED GROUND
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
LTG, LTS	LIGHTING, LIGHTS
MC	METAL-CLAD CABLE
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCM	THOUSAND CIRCULAR MILS
MH	MANHOLE
MI	MINERAL INSULATED CABLE
MFR	MANUFACTURER
MLO	MAIN LUGS ONLY
MTD, MTG	MOUNTED, MOUNTING
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
N, NEUT	NEUTRAL
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
P	POLE
Ø	PHASE
PNL	PANEL
PVC	POLYVINYL CHLORIDE CONDUIT
PWR	POWER
RCP	REFLECTED CEILING PLAN
REC	RECEPTACLE
REQ'D	REQUIRED
RMC	RIGID METAL CONDUIT
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
SPD	SURGE PROTECTION DEVICE
SPEC	SPECIFICATION
STBY	STANDBY
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYS	SYSTEMS
TBD	TO BE DETERMINED
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTED POWER SUPPLY
V	VOLTS
VIF	VERIFY IN FIELD
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE
W/	WITH
WP	WEATHERPROOF (NEMA 3R RATING MIN)
XFMR	TRANSFORMER
Y	WYE
Δ	DELTA

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Project Name
Toilet Room, Classroom Renovations, Doors - Antheil Elementary School Phase 1

Project Owner Name
Ewing Public Schools

Project Location
339 Ewingville Road
Ewing, NJ 08638

Project Number	5015A2A
Project Date	02.08.2019
Checked By	RHG
Drawn By	RKM
Scale	AS NOTED

Drawing Name
ELECTRICAL INDEX SHEET

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
E001

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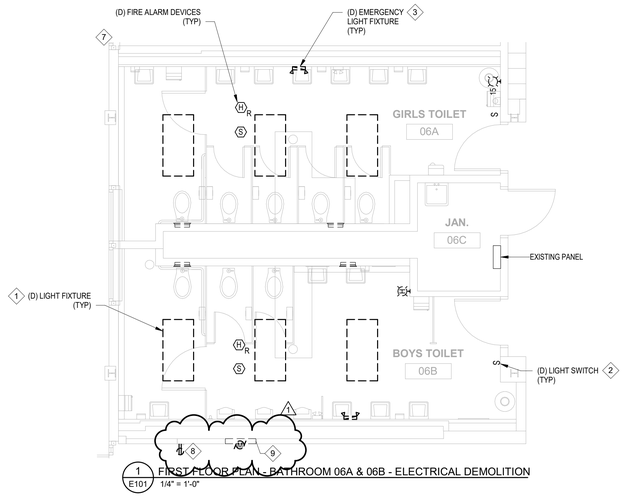
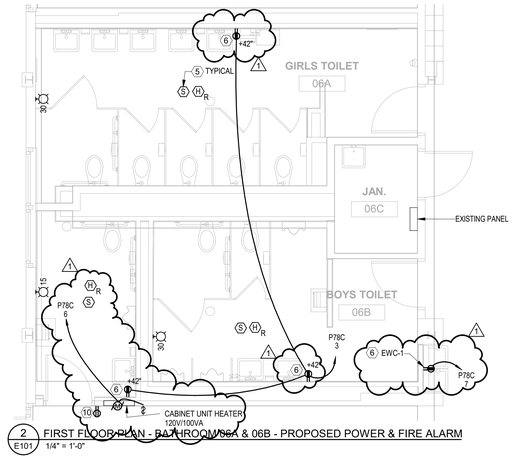
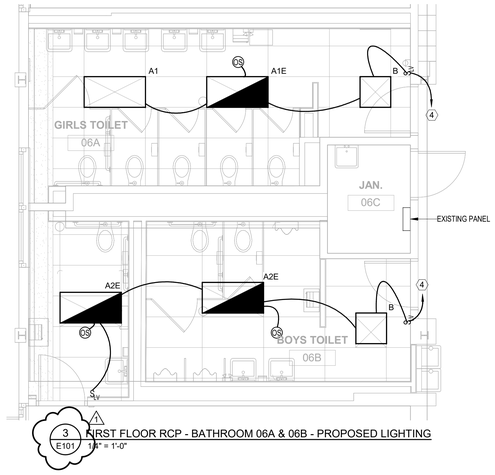


1 E101 FIRST FLOOR PLAN - BATHROOM 06A & 06B - ELECTRICAL DEMOLITION
1/4" = 1'-0"



2 E101 FIRST FLOOR PLAN - BATHROOM 06A & 06B - PROPOSED POWER & FIRE ALARM
1/4" = 1'-0"



3 E101 FIRST FLOOR RCP - BATHROOM 06A & 06B - PROPOSED LIGHTING
1/4" = 1'-0"

GENERAL NOTES

1 DISCONNECT POWER PRIOR TO PERFORMING WORK IN ACCORDANCE WITH NFPA 70E.

2 PROVIDE UNIT PRICING FOR THE FOLLOWING IN ADDITION TO THE BID: UNIT PRICE FOR EACH LUMINAIRE TYPE, UNIT PRICE PER SWITCH, AND UNIT PRICE PER OCCUPANCY/VACANCY SENSOR.

DEMOLITION NOTES

1 DISCONNECT AND REMOVE LIGHT FIXTURE. REMOVE ALL ASSOCIATED EQUIPMENT. TAG AND PRESERVE BRANCH CIRCUIT FOR REUSE IN NEW WORK PHASE.

2 DISCONNECT AND REMOVE SWITCH. REMOVE ALL ASSOCIATED EQUIPMENT. TAG AND PRESERVE CIRCUIT FOR REUSE IN NEW WORK PHASE.

3 DISCONNECT AND REMOVE EMERGENCY LIGHT FIXTURE. REMOVE ALL ASSOCIATED EQUIPMENT. REMOVE CONDUIT AND WIRE BACK TO SOURCE.

7 DISCONNECT AND REMOVE FIRE ALARM DEVICES. STORE IN A SAFE LOCATION FOR RECONNECTION IN NEW WORK PHASE. REMOVE ALL ASSOCIATED EQUIPMENT. TAG AND PRESERVE CIRCUIT FOR REUSE IN NEW WORK PHASE.

8 DISCONNECT AND REMOVE EXIST RECEPTICALE. TAG AND PRESERVE BRANCH CIRCUIT FOR REUSE IN NEW WORK PHASE.

NEW WORK NOTES

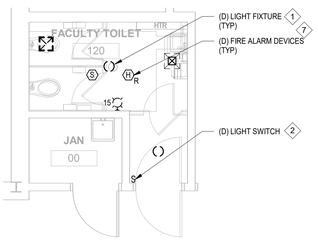
4 RECONNECT LIGHT FIXTURES TO EXISTING CIRCUIT. EXTEND CIRCUIT TO ACCOMMODATE NEW LOCATION. MATCH EXISTING WIRE AND CONDUIT TYPES.

5 RECONNECT FIRE ALARM DEVICES TO THEIR EXISTING CIRCUITS. EXTEND CIRCUIT TO ACCOMMODATE NEW LOCATION. MATCH EXISTING WIRE AND CONDUIT TYPES.

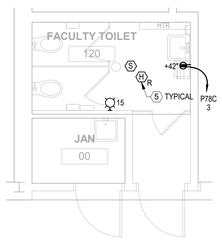
6 COORDINATE MOUNTING LOCATION WITH MANUFACTURER'S INSTRUCTIONS AND PLUMBING CONTRACTOR.

9 CABINET HEATER TO BE REMOVED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL DISCONNECT UNIT AND REMOVE EQUIPMENT DISCONNECT. REMOVE ALL ASSOCIATED ELECTRICAL EQUIPMENT. REMOVE CONDUIT AND WIRE BACK TO SOURCE.

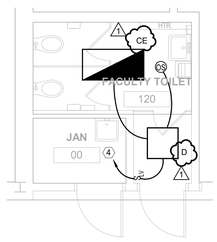
10 RECONNECT RECEPTACLE TO EXISTING CIRCUIT. EXTEND CIRCUIT TO ACCOMMODATE NEW LOCATION. MATCH EXISTING WIRE AND CONDUIT TYPES.



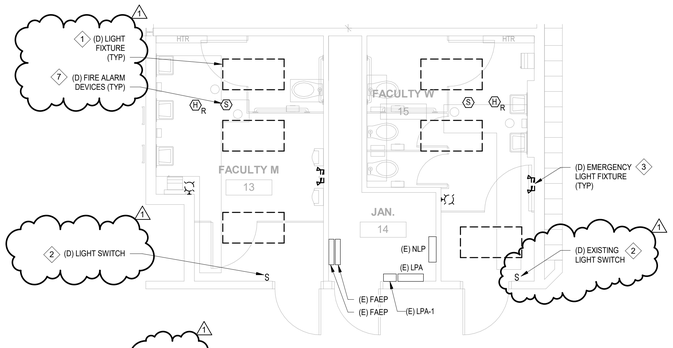
4 E101 FIRST FLOOR PLAN - BATHROOM 120 - ELECTRICAL DEMOLITION
1/4" = 1'-0"



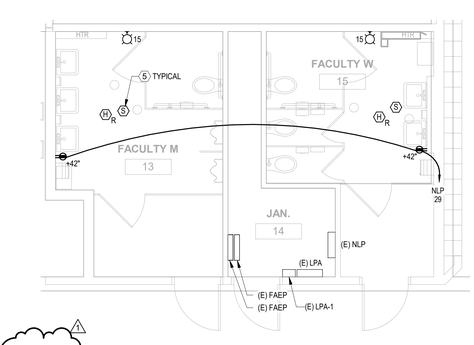
5 E101 FIRST FLOOR PLAN - BATHROOM 120 - PROPOSED POWER & FIRE ALARM
1/4" = 1'-0"



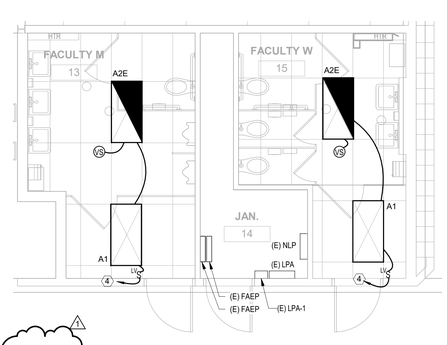
6 E101 FIRST FLOOR RCP - BATHROOM 120 - PROPOSED LIGHTING
1/4" = 1'-0"



7 E101 FIRST FLOOR PLAN - BATHROOM 13 & 15 - ELECTRICAL DEMOLITION
1/4" = 1'-0"



8 E101 FIRST FLOOR PLAN - BATHROOM 13 & 15 - PROPOSED POWER & FIRE ALARM
1/4" = 1'-0"



9 E101 FIRST FLOOR RCP - BATHROOM 13 & 15 - PROPOSED LIGHTING
1/4" = 1'-0"

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Project Name
Toilet Room, Classroom Renovations, Doors - Antheil Elementary School Phase 1

Project Owner Name
Ewing Public Schools

Project Location
339 Ewingville Road
Ewing, NJ 08638

Project Number
5015A2A

Project Date
02.08.2019

Checked By
RHG

Drawn By
RKM

Scale
AS NOTED

Drawing Name
ELECTRICAL PARTIAL PLANS

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
E101

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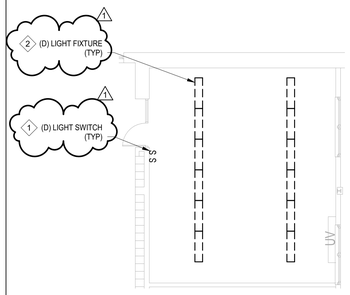
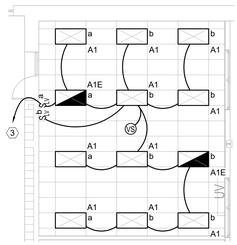


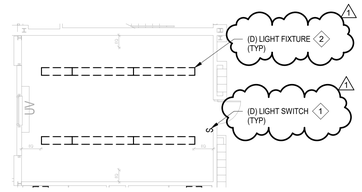
1 E103 SECOND FLOOR PLAN - SPECIAL ED 31 - ELECTRICAL DEMOLITION
1/8" = 1'-0"

NOTE: THIS DEMOLITION PLAN IS TYPICAL FOR THE FOLLOWING CLASSROOMS:
21, 22, 23, 24, 25, 26, 27, 28, 29, AND 30.

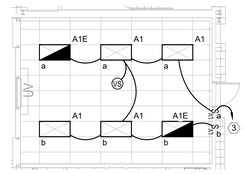


2 E103 SECOND FLOOR RCP - SPECIAL ED 31 - PROPOSED LIGHTING
1/8" = 1'-0"

NOTE: THIS LIGHTING PLAN IS TYPICAL FOR THE FOLLOWING CLASSROOMS:
21, 22, 23, 24, 25, 26, 27, 28, 29, AND 30.



3 E103 FIRST FLOOR PLAN - RESOURCE 12 - ELECTRICAL DEMOLITION
1/8" = 1'-0"



4 E103 FIRST FLOOR RCP - RESOURCE 12 - PROPOSED LIGHTING
1/8" = 1'-0"

GENERAL NOTES

1 DISCONNECT POWER PRIOR TO PERFORMING WORK IN ACCORDANCE WITH NFPA 70E.

2 PROVIDE UNIT PRICING FOR THE FOLLOWING IN ADDITION TO THE BID: UNIT PRICE FOR EACH LUMINAIRE TYPE, UNIT PRICE PER SWITCH, AND UNIT PRICE PER OCCUPANCY/VACANCY SENSOR.

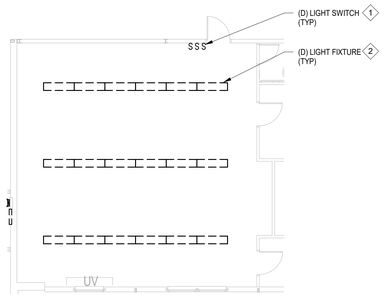
DEMOLITION NOTES

1 DISCONNECT AND REMOVE SWITCH. REMOVE ALL ASSOCIATED EQUIPMENT. REMOVE CONDUIT AND WIRE BACK TO SOURCE. TAG BRANCH CIRCUIT BREAKER FOR REUSE IN NEW WORK PHASE.

2 DISCONNECT AND REMOVE LIGHT FIXTURE. REMOVE ALL ASSOCIATED EQUIPMENT. REMOVE CONDUIT AND WIRE BACK TO SOURCE. TAG AND PRESERVE CIRCUIT BREAKER FOR REUSE IN NEW WORK PHASE.

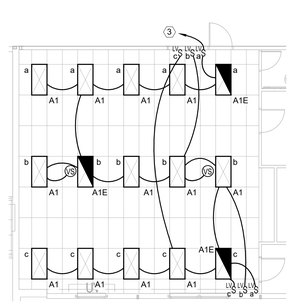
NEW WORK NOTES

3 RECONNECT LIGHT FIXTURES TO EXISTING CIRCUIT. EXTEND CIRCUIT TO ACCOMMODATE NEW LOCATION. MATCH EXISTING WIRE AND CONDUIT TYPES.



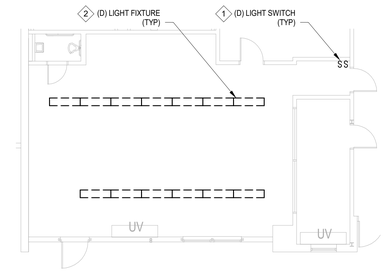
5 E103 FIRST FLOOR PLAN - KINDERGARTEN 38 - ELECTRICAL DEMOLITION
1/8" = 1'-0"

NOTE: THIS DEMOLITION PLAN IS TYPICAL FOR THE FOLLOWING CLASSROOMS:
KINDERGARTEN 39.

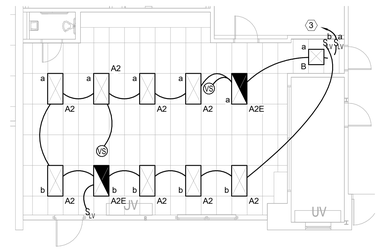


6 E103 FIRST FLOOR RCP - KINDERGARTEN 38 - PROPOSED LIGHTING
1/8" = 1'-0"

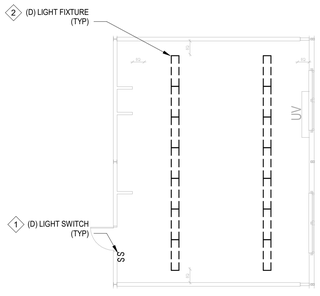
NOTE: THIS LIGHTING PLAN IS TYPICAL FOR THE FOLLOWING CLASSROOMS:
KINDERGARTEN 39.



7 E103 FIRST FLOOR PLAN - KINDERGARTEN 53 - ELECTRICAL DEMOLITION
1/8" = 1'-0"

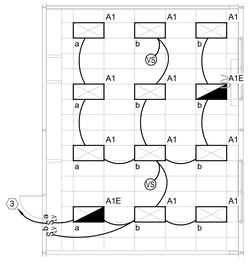


8 E103 FIRST FLOOR PLAN - KINDERGARTEN 53 - PROPOSED LIGHTING
1/8" = 1'-0"



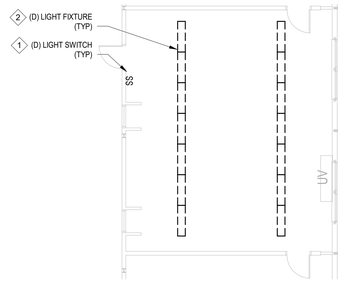
9 E103 FIRST FLOOR PLAN - CLASSROOM 49 - ELECTRICAL DEMOLITION
1/8" = 1'-0"

NOTE: THIS DEMOLITION PLAN IS TYPICAL FOR THE FOLLOWING CLASSROOMS:
40, 41, 42, 43, 44, 45, 46, 47, 48, 50, AND 51.



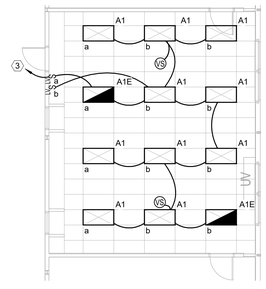
10 E103 FIRST FLOOR RCP - CLASSROOM 49 - PROPOSED LIGHTING
1/8" = 1'-0"

NOTE: THIS LIGHTING PLAN IS TYPICAL FOR THE FOLLOWING CLASSROOMS: 40,
41, 42, 43, 44, 45, 46, 47, 48, 50, AND 51.



11 E103 FIRST FLOOR PLAN - KINDERGARTEN 56 - ELECTRICAL DEMOLITION
1/8" = 1'-0"

NOTE: THIS DEMOLITION PLAN IS TYPICAL FOR THE FOLLOWING CLASSROOMS:
KINDERGARTEN 52, 54, AND 58.



12 E103 FIRST FLOOR RCP - KINDERGARTEN 56 - PROPOSED LIGHTING
1/8" = 1'-0"

NOTE: THIS LIGHTING PLAN IS TYPICAL FOR THE FOLLOWING CLASSROOMS:
KINDERGARTEN 52, 54, AND 58.

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Project Name
Toilet Room, Classroom Renovations, Doors - Antheil Elementary School Phase 1

Project Owner Name
Ewing Public Schools

Project Location
339 Ewingville Road
Ewing, NJ 08638

Project Number
5015A2A

Project Date
02.08.2019

Checked By
RHG

Drawn By
RKM

Scale
AS NOTED

Drawing Name
ELECTRICAL PARTIAL PLANS

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
E103

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ROBERT MELLOHUSKY
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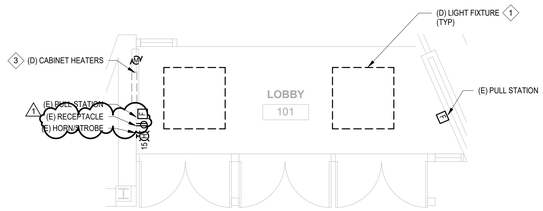
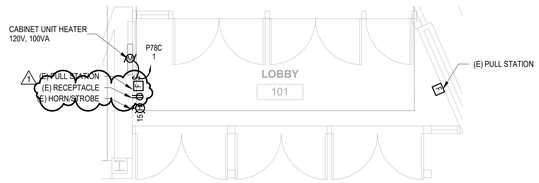
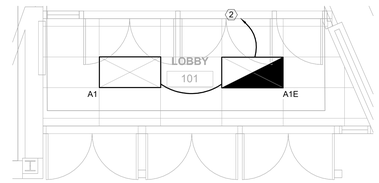


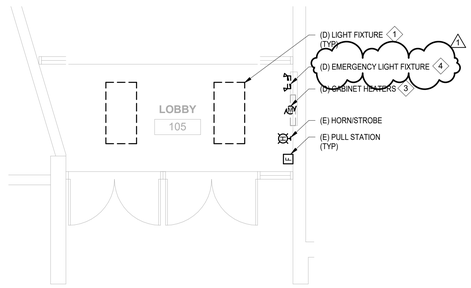
1 E104 MAIN LOBBY - ELECTRICAL DEMOLITION
1/4" = 1'-0"



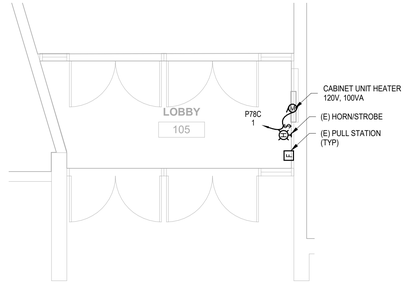
2 E104 MAIN LOBBY - PROPOSED POWER
1/4" = 1'-0"



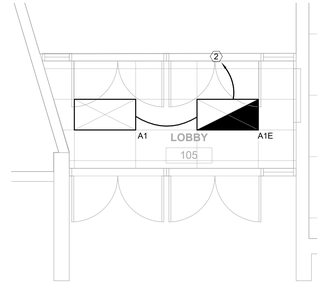
3 E104 MAIN LOBBY - REFLECTED CEILING PLAN - PROPOSED LIGHTING
1/4" = 1'-0"



4 E104 LOBBY - ELECTRICAL DEMOLITION
1/4" = 1'-0"



5 E104 LOBBY - PROPOSED POWER
1/4" = 1'-0"



6 E104 LOBBY - REFLECTED CEILING PLAN - PROPOSED LIGHTING
1/4" = 1'-0"

GENERAL NOTES

1. DISCONNECT POWER PRIOR TO PERFORMING WORK IN ACCORDANCE WITH NFPA 70E.
2. PROVIDE UNIT PRICING FOR THE FOLLOWING IN ADDITION TO THE BID: UNIT PRICE FOR EACH LUMINAIRE TYPE, UNIT PRICE PER SWITCH, AND UNIT PRICE PER OCCUPANCY/VACANCY SENSOR.

⊗ DEMOLITION NOTES

1. DISCONNECT AND REMOVE LIGHT FIXTURE. REMOVE ALL ASSOCIATED EQUIPMENT. TAG AND PRESERVE BRANCH CIRCUIT FOR REUSE IN NEW WORK PHASE.
3. CABINET HEATER TO BE REMOVED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL DISCONNECT UNIT AND REMOVE EQUIPMENT DISCONNECT. REMOVE ALL ASSOCIATED ELECTRICAL EQUIPMENT. REMOVE CONDUIT AND WIRE BACK TO SOURCE.
4. DISCONNECT AND REMOVE EMERGENCY LIGHT FIXTURE. REMOVE ALL ASSOCIATED EQUIPMENT. REMOVE CONDUIT AND WIRE BACK TO SOURCE.

⊕ NEW WORK NOTES

2. RECONNECT LIGHT FIXTURES TO EXISTING CIRCUIT. EXTEND CIRCUIT TO ACCOMMODATE NEW LOCATION. MATCH EXISTING WIRE AND CONDUIT TYPES.

EXISTING PANEL: P78C

LOCATION:	OFFICE 68			**VOLTS:**	120/208 Wye						**BUS:**	225 A COPPER				
SUPPLIED FROM:				**PHASES:**	3				**GROUND BUS:**		**MAIN:**					
FEEDER SIZE:	Refer to Power Riser Diagram			**WIRES:**	4				**ISOLATED GROUND:**		**AIC:**	10 kA				
MANUFACTURER:	REFER TO SPECIFICATIONS			**MOUNTING:**	SURFACE				**NEUTRAL:**	100.00%	**LUGS:**					

CKT	CIRCUIT DESCRIPTION	WIRE SIZE	TRIP	POLES	A		B		C		POLES	TRIP	WIRE SIZE	CIRCUIT DESCRIPTION	CKT
1	CUH - MAIN LOBBY, LOBBY	2#12,#12G	20	1	0.2	0.0					1	20		(E) ACP	2
3	RECEPTACLE - ROOM NO. 68B	2#12,#12G	20	1			1.1	0.0			1	20		(E) EXHAUST FAN	4
5	ELECTRIC WATER COOLERS	2#12,#12G	20	1					0.1	0.1	1	20	2#12,#12G	CUH-CORRIDOR	6
7	ELECTRIC WATER COOLERS	2#12,#12G	20	1	0.1	0.0					1	20		(E) SPARE	8
9	(E) SPARE		20	1			0.0	0.0			1	20		(E) SPARE	10
11	(E) SPARE		20	1					0.0	0.0	1	20		(E) SPARE	12
13	(E) SPARE		20	1	0.0	0.0					1	20		(E) SPARE	14
15	(E) SPARE		20	1			0.0	0.0			1	20		(E) SPARE	16
17	(E) SPARE		20	1					0.0	0.0	1	20		(E) SPARE	18
19	(E) SPARE		20	1	0.0	0.0					1	20		(E) SPARE	20
21	(E) SPARE		20	1			0.0	0.0			1	20		(E) SPARE	22
23	(E) SPARE		20	1					0.0	0.0	1	20		(E) SPARE	24
25	(E) SPARE		20	1	0.0	0.0					1	20		(E) SPARE	26
27	(E) SPARE		20	1			0.0	0.0			1	20		(E) SPARE	28
29	(E) SPARE		20	1					0.0	0.0	1	20		(E) SPARE	30
31	(E) SPARE		20	1	0.0	0.0					1	20		(E) SPARE	32
33	(E) SPARE		20	1			0.0	0.0			1	20		(E) SPARE	34
35	(E) SPARE		20	1					0.0	0.0	1	20		(E) SPARE	36
37	(E) SPARE		20	1	0.0	0.0					1	20		(E) SPARE	38
39	(E) SPARE		20	1			0.0	0.0			1	20		(E) SPARE	40
41	(E) SPARE		20	1					0.0	0.0	1	20		(E) SPARE	42
					0.3 kVA		1.1 kVA		0.2 kVA						

LOAD CLASSIFICATION	CONNECTED...	DEMAND...	DEMAND LOAD
HVAC	200 VA	100.00%	200 VA
Motor	100 VA	125.00%	125 VA
Other	0 VA	0.00%	0 VA
Power	260 VA	100.00%	260 VA
Receptacle	1080 VA	100.00%	1080 VA

TOTAL ADDED LOAD:	2 kVA	5 A
TOTAL DEMAND LOAD:	2 kVA	5 A
TOTAL DEMAND PLUS...	2081 VA	6 A

EXISTING PANEL: NLP

LOCATION:	JAN. 14			**VOLTS:**	120/208 Wye						**BUS:**	250 A COPPER				
SUPPLIED FROM:				**PHASES:**	3				**GROUND BUS:**		**MAIN:**					
FEEDER SIZE:	Refer to Power Riser Diagram			**WIRES:**	4				**ISOLATED GROUND:**		**AIC:**	10 kA				
MANUFACTURER:	REFER TO SPECIFICATIONS			**MOUNTING:**	SURFACE				**NEUTRAL:**	100.00%	**LUGS:**					

CKT	CIRCUIT DESCRIPTION	WIRE SIZE	TRIP	POLES	A		B		C		POLES	TRIP	WIRE SIZE	CIRCUIT DESCRIPTION	CKT
1	EXISTING		20	1	0.0	0.0					1	20		EXISTING	2
3	EXISTING		20	1			0.0	0.0			1	20		EXISTING	4
5	EXISTING		20	1					0.0	0.0	1	20		EXISTING	6
7	EXISTING		30	3	0.0	0.0					1	20		EXISTING	8
9	--	--	--	--			0.0	0.0			1	20		EXISTING	10
11	--	--	--	--					0.0	0.0	1	20		EXISTING	12
13	EXISTING		30	2	0.0	0.0					1	20		EXISTING	14
15	--	--	--	--			0.0	0.0			1	20		EXISTING	16
17	EXISTING		30	2					0.0	0.0	1	20		EXISTING	18
19	--	--	--	--	0.0	0.0					1	20		EXISTING	20
21	EXISTING		30	2			0.0	0.0			1	20		EXISTING	22
23	--	--	--	--					0.0	0.0	1	20		EXISTING	24
25	EXISTING		30	2	0.0	0.0					2	30		EXISTING	26
27	--	--	--	--			0.0	0.0			--	--	--	--	28
29	RECEPTACLES - BATHROOM	2#12,#12G	20	1					0.4	0.0	--	--	--	SPACE	30
					0.0 kVA		0.0 kVA		0.4 kVA						

LOAD CLASSIFICATION	CONNECTED...	DEMAND...	DEMAND LOAD
Receptacle	360 VA	100.00%	360 VA

TOTAL ADDED LOAD:	0 kVA	1 A
TOTAL DEMAND LOAD:	0 kVA	1 A
TOTAL DEMAND PLUS...	450 VA	1 A

LIGHTING FIXTURE SCHEDULE

DESIGNATION	DESCRIPTION	LUMENS	TYPE	COLOR	VOLTS	LOAD	MANUFACTURER	CATALOG NO.	MOUNTING
A1	2'X4' LENSED TROFFER	3000 lm	LED	3500 K	UNV	24 VA	ACUITY	2GTL-4-30L-GZ10-LP835	RECESSED
A1E	2'X4' EMERGENCY LENSED TROFFER	3000 lm	LED	3500 K	UNV	24 VA	ACUITY	2GTL-4-30L-GZ10-LP835-EL7L	RECESSED
A2	2'X4' LENSED TROFFER	4000 lm	LED	4000 K	UNV	30 VA	ACUITY	2GTL-4-40L-GZ10-LP835	RECESSED
A2E	2'X4' EMERGENCY LENSED TROFFER	4000 lm	LED	3500 K	UNV	30 VA	ACUITY	2GTL-4-40L-GZ10-LP835-EL7L	RECESSED
B	2'X2' LENSED TROFFER	2000 lm	LED	4000 K	UNV	19 VA	ACUITY	2GTL2-20L-ADP-MVOLT-840	RECESSED
CE	2'X4' EMERGENCY LED PANEL	3000 lm	LED	3500 K	UNV	33 VA	ACUITY	CPANL-2X4-40LM-35K-PS1055CP-FMC-BRKT	SURFACE
D	2'X2' LED PANEL	2000 lm	LED	3500 K	UNV	19 VA	ACUITY	CPANL-2X2-24LM-35K-M4	SURFACE

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Architect | Date

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Pennsylvania: 140 Whitaker Ave - Mont Clare - Pennsylvania 19453

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Scale
AS NOTED

Drawing Name
ELECTRICAL PARTIAL PLANS & SCHEDULES

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
E104

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ROBERT MELLOHUSKY
NEW JERSEY #24GE03440100

2/8/2019 5:13:08 PM BIM 360://FVHDA18001 - EWING TOWNSHIP SCHOOL DISTRICT/ANTHES_ES_R18.rvt

REFERENCED MANUFACTURES NOTE

REFERENCED MANUFACTURES DENOTES A MINIMUM ACCEPTABLE LEVEL OF QUALITY AND IS NOT INTENDED TO PREVENT SUBMISSION OF EQUIVALENT EQUIPMENT.

PLUMBING GENERAL NOTES

A. SAFETY REQUIREMENTS

1. THE CONTRACTOR SHALL ABIDE AND ENFORCE ALL SAFETY RULES AND REGULATIONS SET FORTH BY THE OWNER. ALL WORKERS AND SUPERVISORS MUST ATTAIN SAFETY TRAINING CLASSES (IF APPLICABLE). THE CONTRACTOR SHALL BE RESPONSIBLE TO FOLLOW ALL VERBAL INSTRUCTIONS GIVEN BY OWNERS REPRESENTATIVES.

B. GENERAL REQUIREMENTS

1. PROVIDE COMPLETE PLUMBING SYSTEMS AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN. VISIT THE SITE AND VERIFY ALL CONDITIONS BEFORE SUBMITTING A BID. "PROVIDE", WHEN USED IN THIS SPECIFICATION SHALL MEAN FURNISH AND INSTALL.
2. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND REGULATORY BODIES HAVING JURISDICTION OVER THIS WORK. PROVIDE ALL PERMITS AND PAY ALL FEES REQUIRED FOR PERMITS.
3. COORDINATE THE INSTALLATION OF ALL WORK WITH THE LOCAL UTILITIES AND OTHER BUILDING TRADES. THE CONTRACTOR SHALL INFORM THE OWNER IN WRITING WHEN HE INTENDS TO SCHEDULE WORK WHICH INVOLVES EXISTING SYSTEMS AND/OR UTILITIES. NOTICE SHALL BE GIVEN ONE WEEK PRIOR TO THE ANTICIPATED WORK. THE CONTRACTOR MUST RECEIVE APPROVAL FROM THE OWNER PRIOR TO PERFORMING SUCH WORK.
4. PLUMBING WORK SHALL BE DONE AT SUCH A TIME AND MANNER THAT WILL LEAST INTERFERE WITH THE MAINTENANCE AND OPERATION OF THE SITE AND OR BUILDING'S ACTIVITIES. PROVISIONS SHALL BE MADE TO PERMIT THE USE OF ALL EXISTING PIPING SYSTEMS AT ALL TIMES. PROVIDE TEMPORARY FACILITIES TO SECURE THESE CONDITIONS AND REMOVE SUCH TEMPORARY FACILITIES WHEN NO LONGER REQUIRED.
5. SHUTDOWN OF WORK SHALL BE AT SUCH A TIME AND MANNER AS DIRECTED BY THE OWNER.
6. WHERE SHUTDOWN PERIODS CANNOT BE OF A DURATION TO ACCOMMODATE THE NEW WORK, THE CONTRACTOR SHALL PERFORM THE WORK IN A SERIES OF PRE-PLANNED STAGES OF MINIMAL ALLOWABLE SHUTDOWN PERIODS. PROVIDE TEMPORARY FACILITIES TO ALLOW REUSE OF SERVICE BETWEEN WORKING STAGES.
7. ONLY WRITTEN CHANGES AND/OR MODIFICATIONS APPROVED BY THE ARCHITECT, CONSULTING ENGINEER OR OWNER'S REPRESENTATIVES WILL BE RECOGNIZED.
8. CONTRACTOR SHALL SUBMIT SCHEDULE OF SUBMITTALS PRIOR TO SUBMITTING ANY SHOP DRAWINGS TO BE SUBMITTED FOR THIS PROJECT, INCLUDING THE ANTICIPATED DATE OF EACH SUBMISSION. PLUMBING CONTRACTOR SHALL SUBMIT (6) SETS OF SHOP DRAWINGS AND EQUIPMENT CUTS TO THE ENGINEER FOR APPROVAL PRIOR TO PURCHASING EQUIPMENT OR THE STARING OF ANY WORK. ANY WORK INSTALLED OR EQUIPMENT PURCHASED PRIOR TO RECEIPT OF ENGINEER-APPROVED SHOP DRAWINGS THAT REQUIRED CHANGES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
9. PROVIDE ONE (1) SET OF REPRODUCIBLE AS-BUILT DRAWINGS AND ONE (1) ELECTRONIC COPY. AS-BUILT DRAWINGS SHALL INDICATE ANY CHANGES TO THE ORIGINAL DRAWINGS INCLUDING ALL PIPING LOCATIONS AND SIZES.
10. ALL MATERIALS, EQUIPMENT AND WORKMENSHIP SHALL BE GUARANTEED IN WRITING FOR A MINIMUM OF TWO (2) YEARS AFTER FINAL ACCEPTANCE BY OWNER. ANY DEFECTS OF WORKMANSHIP DEVELOPING DURING THIS PERIOD SHALL BE REMEDIED AND DEFECTIVE MATERIAL REPLACED WITHOUT ADDITIONAL COST.

C. PROJECT COORDINATION

1. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND COORDINATING ALL WORK WITH ALL TRADES.
2. THE CONTRACTOR SHALL FURNISH A SCHEDULE INDICATING HIS PORTION OF TIME, WITHIN OVER ALL SCHEDULE, REQUIRED TO COMPLETE THE WORK IN CONJUNCTION WITH ALL TRADES.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY FIELD CONDITIONS AT THE SITE PRIOR TO BID. CONTRACTOR TO NOTIFY THE OWNER REPRESENTATIVE OF ANY DISCREPANCIES PRIOR TO COMMENCING WITH WORK.
4. DURING THE CONSTRUCTION OF THIS PROJECT, THE CONTRACTOR SHALL COORDINATE WITH BUILDING REPRESENTATIVES THE TEMPORARY SHUTDOWN OR CAPPING OF ANY PLUMBING SYSTEMS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WARNING SIGNS, RIGGING, HANDLING AND PROTECTION OF MATERIAL. ALL EQUIPMENT, MATERIALS SHALL BE NEW AND WITHOUT BLEMISHES OR DEFECTS. ALL EQUIPMENT INSTALLED SHALL BEAR THE LABEL OF THE APPROVING AGENCY.
6. CONTRACTOR SHALL PROVIDE THE LABOR TO RECEIVE, UNLOAD, STORE, PROTECT AND TRANSFER TO POINT OF INSTALLATION OWNER FURNISHED ITEMS.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SLAB AND WALL OPENINGS, BEAM PENETRATIONS AND CORING DRILLING AS IT RELATES TO HIS WORK. PLUMBING CONTRACTOR SHALL SUBMIT SIZE AND LOCATION TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL.

D. REFERENCED STANDARDS

1. ALL PLUMBING MATERIALS, FIXTURES AND EQUIPMENT SHALL BE LISTED BY THE FOLLOWING APPLICABLE STANDARDS:

* AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
* AMERICAN SOCIETY OF MECHANICAL ENGINEERS (AMSE)
* AMERICAN SOCIETY FOR TESTING MATERIALS (ASTM)
* AMERICAN WATER WORKS ASSOCIATION (AWWA)
* CAST IRON SOIL PIPE INSTITUTE (CISPI)
* MANUFACTURING STANDARDIZATION SOCIETY (MSS)
* NATION FIRE PROTECTION ASSOCIATION (NFPA)
* NATIONAL SANITATION FOUNDATION (NSF)
* UNDERWRITERS LABORATORIES (UL)

E. PROTECTION OF WORK

1. EFFECTIVELY PROTECT ALL MATERIALS AND EQUIPMENT FROM ENVIRONMENTAL AND PHYSICAL DAMAGE UNTIL FINAL ACCEPTANCE. CLOSE AND PROTECT ALL OPENINGS DURING CONSTRUCTION. PROVIDE NEW MATERIALS AND EQUIPMENT TO REPLACE DAMAGED ITEMS AT NO ADDITIONAL LOST TO OWNER.

PIPE INSULATION SCHEDULE

MANUFACTURER	SYSTEM	INSULATION SYSTEM DESCRIPTION
JOHNS MANSVILLE OR APPROVED EQUAL	DOMESTIC WATER	INSULATE HOT, AND COLD WATER PIPING WITH JOHNS MANSVILLE'S "MICRO-LOK" HP ALL SERVICE (ASJ) VAPOR-RETARDER JACKET WITH A SELF-SEALING LOGITUDINAL CLOSURE LAP (SSL) AND BUTT STRIPS & "ZESTON 2000" PVC INSULATED FITTING COVERS AND "HI-LOW TEMPERATURE" FIBER GLASS INSULATED INSERTS WITH PVC "Z-TAPE" PER MANUFACTURER'S RECOMMENDATIONS.
AP ARMAFLEX OR APPROVED EQUAL	TRAP PRIMING	INSULATE ALL "UNDER SLAB" TRAP PRIMING PIPING WITH FLEXIBLE ELASTOMERIC PIPE INSULATION. JACKET SHALL BE PROPERLY SEALED WITH ADHESIVE ALONG ENTIRE SEAM.

LAVATORY ASSEMBLY NOTE

PLUMBING CONTRACTOR TO PROVIDE ALL NEW SUPPLIES, COMPRESSION STOPS, STRAINERS, TAILPIECES, P-TRAPS & INSULATION COVERS FOR A FULLY FUNCTIONAL AND ADA ♿ COMPLIANT SYSTEM.

MANUFACTURERS SHALL BE:
MCGUIRE PRODUCTS OR BRASSCRAFT & TRUEBRO

PIPE MATERIAL SCHEDULE

SYMBOL	SYSTEM DESCRIPTION	PIPING SIZE	PIPING MATERIAL	FITTINGS	PIPING JOINTS	MFR & MODEL NO.	INSULATION	NOTES
SAN	SANITARY WASTE BELOW GRADE	2" & LARGER	POLYVINYL CHLORIDE (PVC)	DWV SOCKET	SOLVENT WELD	R&G SLOANE/FISCHER	NO	CONFORM TO NSF
V	SANITARY VENT BELOW GRADE	2" & LARGER	POLYVINYL CHLORIDE (PVC)	DWV SOCKET	SOLVENT WELD	R&G SLOANE/FISCHER	NO	CONFORM TO NSF
SAN	SANITARY WASTE ABOVE GRADE	1 1/2" & LARGER	CAST IRON SOIL PIPE	DWV HUBLESS	STN STL CLAMP	TYLER PIPE	NO	CONFORM TO NSF
V	SANITARY VENT ABOVE GRADE	1 1/2" & LARGER	CAST IRON SOIL PIPE	DWV HUBLESS	STN STL CLAMP	TYLER PIPE	NO	CONFORM TO NSF
CW	DOMESTIC COLD WATER ABOVE GRADE	3" & SMALLER	HARD DRAWN TYPE "L" CU TUBE	XL-C FITTINGS	CRIMPED	MUELLER	YES	ASTM 88
HW	DOMESTIC HOT WATER ABOVE GRADE	3" & SMALLER	HARD DRAWN TYPE "L" CU TUBE	XL-C FITTINGS	CRIMPED	MUELLER	YES	ASTM 88
AW	ACID WASTE	1 1/2" & LARGER	CHLORINATED POLYVINYL CHLORIDE (CPVC)			AW 14015	NO	ASTM F 2618
AWV	ACID WASTE VENT	1 1/2" & LARGER	CHLORINATED POLYVINYL CHLORIDE (CPVC)			AW 14015	NO	ASTM F 2618

NOTE:
DOMESTIC WATER FITTINGS & VALVES SHALL BE MANUFACTURED BY: VIEGA PROPRESS SYSTEM. SEE SPECIFICATIONS ON THIS DRAWING.
ALL ASSOCIATED FITTING FOR ACID WASTE SYSTEM SHALL BE CHARLOTTE CHEMDRAIN SYSTEMS. REFER BACK TO INSTALLATION MANUEL.

PLUMBING FIXTURE SCHEDULE

FIXTURES				ROUGH INS				SUPPORTS, CARRIERS ETC	NOTES OR ACCESSORIES
NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	DRAIN	VENT	CW	HW	MFR & MODEL NO.	SUPPLIES, DRAINS, TRAPS, TOILET SEATS ETC
EWC-1	WATER COOLER ♿	ELKAY	LZSTLDDWSLK - GRAY	1-1/4"	1-1/4"	1/2"	-	WALL MOUNTED	PROVIDE WALL MOUNTING BRACKET
EWC-2	WATER COOLER ♿	ELKAY	LZSTLDDWSLK - GRAY	1-1/4"	1-1/4"	1/2"	-	WALL MOUNTED	PROVIDE MOUNTING BRACKET & (2)CANE TOUCH APRONS ELKAY LKAPREZL
LAV1	LAVATORY	AMERICAN STANDARD	PIAZZA - 0478.001 - CENTER HOLE - WHITE	1-1/4"	1-1/4"	1/2"	1/2"	WALL MOUNTED	SEE FAUCET SCHEDULE
UR1	URINAL	SLOAN	SU-1009 .5 GPF - WHITE	2"	2"	3/4"	-	JR SMITH - #0637	COMES WITH "SOLIS" SOLAR POWERED FLUSHOMETER
WC1	WATER CLOSET	AMERICAN STANDARD	2234.001 - 1.28 GPF - WHITE	4"	2"	1-1/4"	-	FLOOR MOUNTED	AMERICAN STANDARD #5901.110 HEAVY DUTY OPEN FRONT LESS COVER TOILET SEAT
WC-1A	WATER CLOSET ♿	AMERICAN STANDARD	3641.001 - 1.28 GPF - WHITE	4"	2"	1-1/4"	-	FLOOR MOUNTED	AMERICAN STANDARD #5901.110 HEAVY DUTY OPEN FRONT LESS COVER TOILET SEAT
WC-2	WATER CLOSET	AMERICAN STANDARD	2856.001 - 1.28 GPF - WHITE	4"	2"	1-1/4"	-	JR SMITH - #0209Y SERIES	AMERICAN STANDARD #5901.110 HEAVY DUTY OPEN FRONT LESS COVER TOILET SEAT
WC-2A	WATER CLOSET ♿	AMERICAN STANDARD	2856.001 - 1.28 GPF - WHITE	4"	2"	1-1/4"	-	JR SMITH - #0209Y SERIES	AMERICAN STANDARD #5901.110 HEAVY DUTY OPEN FRONT LESS COVER TOILET SEAT
WC-3	WATER CLOSET	AMERICAN STANDARD	2882.001 - 1.28 GPF - WHITE	4"	2"	1-1/4"	-	FLOOR MOUNTED	AMERICAN STANDARD #5901.110 HEAVY DUTY OPEN FRONT LESS COVER TOILET SEAT

NOTES: ♿ HANDICAP COMPLIANT: MEETS THE AMERICAN'S WITH DISABILITIES ACT GUIDELINES

PLUMBING SPECIALTIES SCHEDULE

NO.	DESCRIPTION	MANUFACTURER	MODEL	MATERIALS OF CONSTRUCTION OR ACCESSORIES
FD1	FLOR DRAIN	JR SMITH	2005-Y-L SERIES	CAST IRON BODY W/ FLASHING COLLAR AND ADJUSTABLE STRAINER
FCO	CLEAN OUT	JR SMITH	4040	CAST IRON BODY WITH ROUND ADJUSTABLE SCORIATED SECURED SQUARE NICKEL BRONZE TOP.
WCO	WALL CLEAN OUT	JR SMITH	4710	STAINLESS STEEL SHALLOW COVER WITH CENTER SCREW.
SA1	SHOCK ABSORBER	JOSAM	75004B	SHOCK ABSORBER WITH STAINLESS STEEL SHELL, HYDRO-PNEUMATIC CUSHION OF NITROGEN, STAINLESS STEEL BELLOWS & STAINLESS STEEL MALE THREADED PIPE NIPPLE.
SA2	SHOCK ABSORBER	JOSAM	75004D	SHOCK ABSORBER WITH STAINLESS STEEL SHELL, HYDRO-PNEUMATIC CUSHION OF NITROGEN, STAINLESS STEEL BELLOWS & STAINLESS STEEL MALE THREADED PIPE NIPPLE.
HB1	HOSE BIBB	WOODFORD	24	CHROME, ANTI-SIPHON, VACUUM BREAKER WALL FAUCET WITH SL-24 STEMLOCK.

NOTE: INSTALL ALL FLOOR DRAINS WITH A DEEP SEALING P-TRAP.

FAUCET & FLUSHOMETER SCHEDULE

FIXTURE	ITEM	MANUFACTURER	MODEL NO.	DESCRIPTION AND OR ACCESSORIES
WC-1	FLUSHOMETER	SLOAN	SOLIS 8111-1.28-OR "HIGH EFFICIENCY" (1.28 GPF)	POLISHED CHROME FINISH BODY, BATTERY OPERATED W/ "LOW BATTERY" FLASHING LED, ADA COMPILANT - "NO HANDS OPERATION" , MANUAL OVERRIDE BUTTON, DIAPHRAGM VALVE
WC-1A	FLUSHOMETER	SLOAN	SOLIS 8111-1.28-OR "HIGH EFFICIENCY" (1.28 GPF)	
WC-2	FLUSHOMETER	SLOAN	SOLIS 8111-1.28-OR "HIGH EFFICIENCY" (1.28 GPF)	
WC-2A	FLUSHOMETER	SLOAN	SOLIS 8111-1.28-OR "HIGH EFFICIENCY" (1.28 GPF)	
WC-3	FLUSHOMETER	SLOAN	SOLIS 8111-1.28-OR "HIGH EFFICIENCY" (1.28 GPF)	
UR-1	FLUSHOMETER	SLOAN	SOLIS 8186-0.5 "HIGH EFFICIENCY" (0.5 GPF)	
L-1	FAUCET	SLOAN	SF-2350-BAT-BDT-CP-0.5GPM-MLM-IR-FCT	POLISHED CHROME, BATTERY POWERED, SENSOR OPERATED FAUCET, .5 GPM, 4"CENTERS, BELOW DECK THERMOSTATIC MIXING VALVE (SET @ 110 DEG.)

PLUMBING CODE REQUIREMENTS

PLUMBING CONTRACTOR TO CONFORM TO ALL LOCAL CODES AND ANY OTHER AUTHORITY HAVING JURISDICTION INCLUDING:

2015 NATIONAL STANDARD PLUMBING CODE
UNIFORM CONSTRUCTION CODE (N.J.A.C. 5:23)
REHABILITATION SUB CHAPTERS 6 & 7 "BARRIER FREE"

LEGEND

	TO BE DEMOLISHED
	VENT PIPING
	COLD WATER PIPING
HWS	HOT WATER SUPPLY PIPING
HWR	HOT WATER RETURN PIPING
RWC	RAIN WATER CONDUCTOR
	SANITARY PIPING
WCO	WALL CLEAN OUT
	POINT OF CONNECTION BETWEEN NEW & EXISTING
	POINT OF DEMOLITION
	DIRECTION OF FLOW
	PIPE DROP
	PIPE OFFSET
	BALL VALVE
C.V.	CHECK VALVE
	HANDICAP COMPLIANT (MEETS THE AMERICAN'S WITH DISABILITIES ACT GUIDELINES)
X / X	DETAIL NUMBER / DETAIL CALL OUT / DRAWING NUMBER
FCO	FLOOR CLEAN OUT
	SHOCK ABSORBER
	HOSE BIBB

ADA	AMERICAN WITH DISABILITIES ACT
AW	ACID WASTE
AWV	ACID WASTE VENT
CW	COLD WATER
CV	CHECK VALVE
CLG	CEILING
DFU	DRAINAGE FIXTURE UNIT
DN	DOWN
(E)	EXISTING
FD	FLOOR DRAIN
F.F.	FINISHED FLOOR
HDCP	HANDICAP
HW	HOT WATER
HWR	HOT WATER RETURN
LAV	LAVATORY
M.S.	MOP SINK
(N)	NEW
NSF	NATIONAL SANITARY FOUNDATION
(R)	REMOVE
RPZ	REDUCED PRESSURE DETECTOR
S	SANITARY PIPING
SK	SINK
UR	URINAL
WC	WATER CLOSET
WCO	WALL CLEANOUT
WHA	WATER HAMMER ARRESTER
WSFU	WATER SUPPLY FIXTURE UNIT
V	VENT
V.I.F.	VERIFY IN FIELD
VTR	VENT THROUGH ROOF

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Architect | Date

Project Name
Toilet Room, Classroom Renovations, Doors - Antheil Elementary School Phase 1

Project Owner Name
Ewing Public Schools

Project Location
339 Ewingville Road Ewing, NJ 08638

Project Number
5015A2A

Project Date
02.08.2019

Checked By
OT

Drawn By
DMR

Scale
AS NOTED

Drawing Name
PLUMBING INDEX SHEET

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
P001

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NEW JERSEY #24GE03440100

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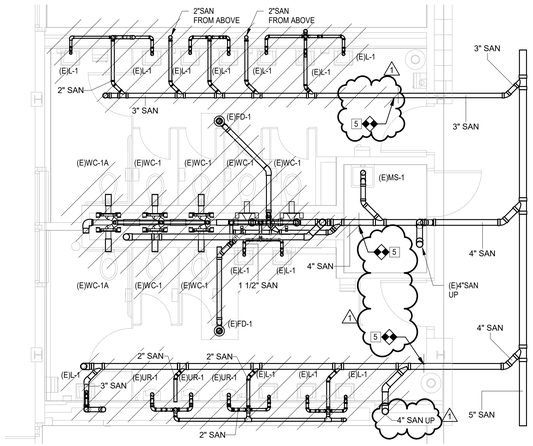
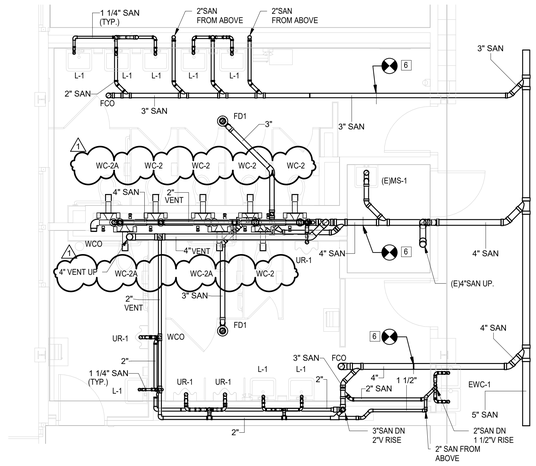
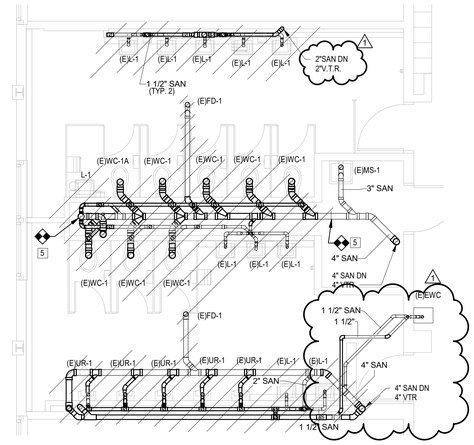


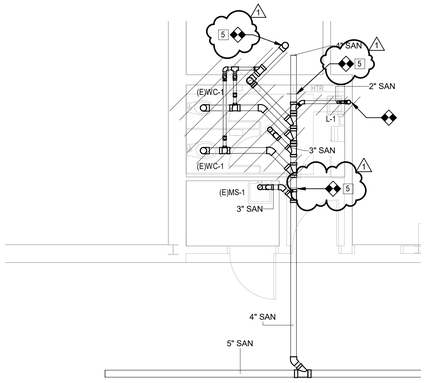
1 P101 FIRST FLOOR PLAN - BATHROOM 06A & 06B - SANITARY DEMOLITION
1/4" = 1'-0"



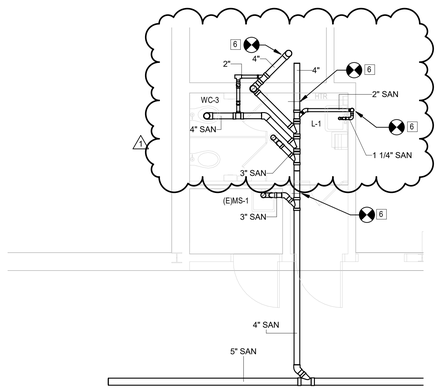
2 P101 FIRST FLOOR PLAN - BATHROOM 06A & 06B - PROPOSED SANITARY
1/4" = 1'-0"



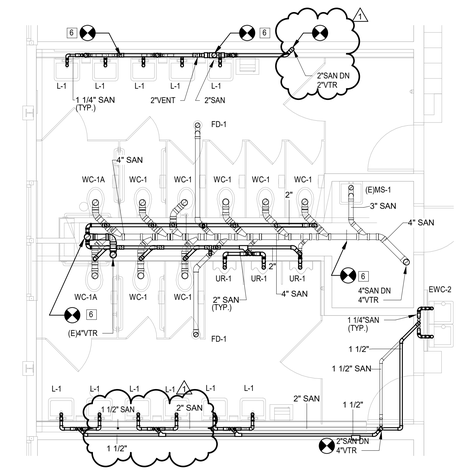
3 P101 SECOND FLOOR PLAN - BATHROOM 24A & 24B - SANITARY DEMOLITION
1/4" = 1'-0"



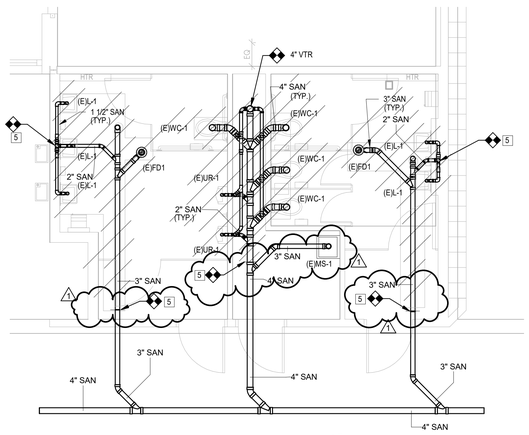
4 P101 FIRST FLOOR PLAN - BATHROOM 120 - SANITARY DEMOLITION
1/4" = 1'-0"



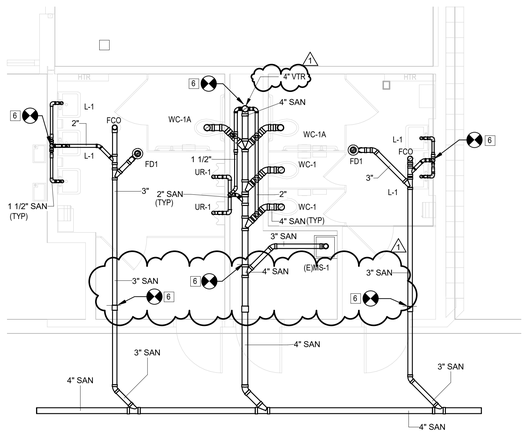
5 P101 FIRST FLOOR PLAN - BATHROOM 120 - PROPOSED SANITARY
1/4" = 1'-0"



6 P101 SECOND FLOOR PLAN - BATHROOM 24A & 24B - PROPOSED SANITARY
1/4" = 1'-0"



7 P101 FIRST FLOOR PLAN - BATHROOM 13 & 15 - SANITARY DEMOLITION
1/4" = 1'-0"



8 P101 FIRST FLOOR PLAN - BATHROOM 13 & 15 - PROPOSED SANITARY
1/4" = 1'-0"

GENERAL NOTES:

1. GENERAL PHASING - PERFORM TEMPORARY SHUT-DOWN TO DEMOLISH AND INSTALL NEW ISOLATION VALVES ON DCW AND DHW ENTERING BATHROOMS. ONCE NEW VALVES ARE INSTALLED OPEN THE WATER SYSTEM TO THE REMAINDER OF THE BUILDING AND WORK BEHIND NEW ISOLATION VALVES.

GENERAL DEMOLITION NOTES:

1. CONTRACTOR SHALL REMOVE ALL EXISTING FIXTURES, FIXTURE SUPPORTS, SANITARY AND VENT PIPING, DOMESTIC WATER, PURE WATER, GAS PIPING, SUPPORTS AND VALVES, AND ALL OTHER RELATED PLUMBING EQUIPMENT UNLESS NOTED OR SHOWN OTHERWISE ON FLOOR PLANS.
2. UNLESS OTHERWISE NOTED, PIPING TO BE DEMOLISHED SHALL BE REMOVED BACK TO ACTIVE MAIN AND CAPPED AIR/WATER TIGHT .
3. THIS DRAWING PRIMARILY IS INTENDED TO SHOW GENERAL PLUMBING DEMOLITION AREAS OF WORK.
4. COORDINATE ALL DEMOLITION REQUIREMENTS WITH THE OWNER. SECURE OPEN FLAME PERMITS FROM THE OWNER SO ALARM SYSTEMS AND FIRE WATCH PERSONNEL CAN BE EMPLOYED AS NECESSARY.
5. ANY SHUTDOWNS OF EXISTING PLUMBING MECHANICAL SYSTEMS SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE AND SHALL BE BRIEF, OCCUR WHEN USAGE IS NONEXISTENT OR VERY LIGHT, OR METHODS SHALL BE EMPLOYED WHICH PERMIT SYSTEMS TO STAY IN OPERATION AVOIDING SHUTDOWNS ALTOGETHER. THE OWNER SHALL DETERMINE WHEN AND IF AN EXISTING SYSTEM MAY BE SHUTDOWN.
6. ALL PLUMBING FIXTURES, BACKFLOW PREVENTERS, VALVES, OR EQUIPMENT INDICATED TO BE DEMOLISHED SHALL FIRST BE OFFERED TO THE OWNER. THE SCOPE OF DEMOLITION WORK, HOWEVER, SHALL INCLUDE THE DISPOSAL OF ALL DEMOLISHED EQUIPMENT. THE DISPOSAL SHALL BE OFF-SITE AND IN A SAFE & LEGAL MANNER.
7. WHERE EXISTING CEILINGS REMAIN, CAREFULLY REMOVE AND REINSTALL EXISTING CEILING TILES, AS REQUIRED, IN ORDER TO GAIN ACCESS TO DEMOLITION WORK. REPLACE DAMAGED TEE BARS, TILE ETC. IF DAMAGED.
8. REFER TO AND COORDINATE PLUMBING DEMOLITION WORK WITH ALL OTHER DISCIPLINES AS SHOWN ON ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DEMOLITION DRAWINGS.
9. CAP THE OPEN END OF EXISTING PIPING AND EQUIPMENT IMMEDIATELY AFTER OPENING PIPE/EQUIPMENT CONNECTIONS TO PREVENT DEBRIS FROM CONTAMINATING EXISTING-TO-REMAIN ITEMS AND TO PREVENT SEWER GASES FROM ENTERING INTO THE INTERIOR OF THE BUILDING.
10. ANY SHAFT OR WALL OPENING CREATED TO IMPLEMENT PIPE DEMOLITION OR CREATED BY REMOVED PIPE OR FIXTURES SHALL BE REPAIRED BY THE CONTRACTOR. FILL OPENINGS WITH THE SAME MATERIAL AS THE WALL OR FLOOR. FINISH FLUSH TO THE EXISTING SURFACE.
11. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2009 NATIONAL STANDARD PLUMBING CODE.
12. CONTRACTORS SHALL VERIFY THE EXISTING CONDITIONS AND LOCATIONS FOR NEW CONNECTIONS PRIOR TO START OF WORK.
13. PIPING/RISERS WHICH SERVE OTHER AREAS, ENTERING AND PASSING THROUGH THE AREA WHERE DEMOLITION WORK IS INDICATED, SHALL REMAIN.

DEMOLITION NOTES:

1	DISCONNECT AND REMOVE EXISTING ISOLATION VALVE.
3	DISCONNECT AND REMOVE EXISTING FIXTURE AND ASSOCIATED ROUGH-IN PIPING BACK TO POINT OF DISCONNECTION FROM MAIN OR STACK.
5	DISCONNECT AND REMOVE BRANCH PIPING BACK TO POINT OF DISCONNECTION.
7	REMOVE ROUGH-IN PIPING TO EXISTING FIXTURE TO REMAIN.

NEW WORK NOTES:

2	INSTALL NEW FULL LINE SIZE ISOLATION VALVE.
4	INSTALL NEW FIXTURE AND ASSOCIATED ROUGH-IN PIPING UP TO POINT OF NEW CONNECTION TO MAIN OR STACK.
6	INSTALL NEW BRANCH PIPING TO POINT OF CONNECTION.
8	INSTALL ROUGH-IN PIPING TO EXISTING FIXTURE TO REMAIN.

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Project Name
Toilet Room, Classroom Renovations, Doors - Antheil Elementary School Phase 1

Project Owner Name
Ewing Public Schools

Project Location
339 Ewingville Road
Ewing, NJ 08638

Project Number
5015A2A

Project Date
02.08.2019

Checked By
OT

Drawn By
DMR

Scale
AS NOTED

Drawing Name
PLUMBING PARTIAL PLANS

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
P101

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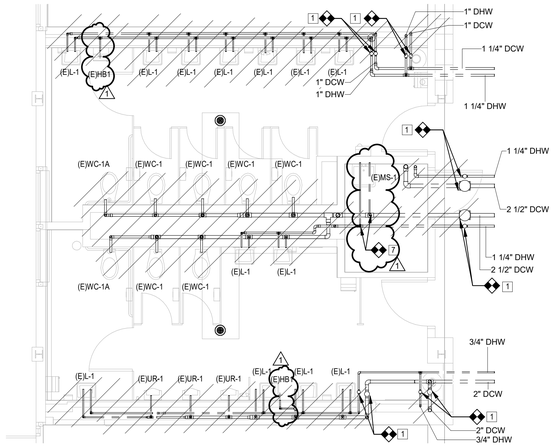
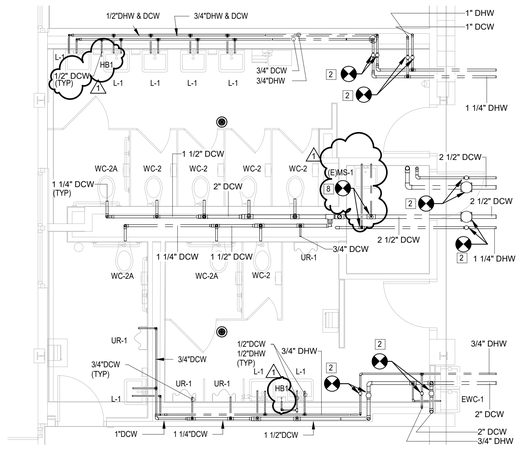
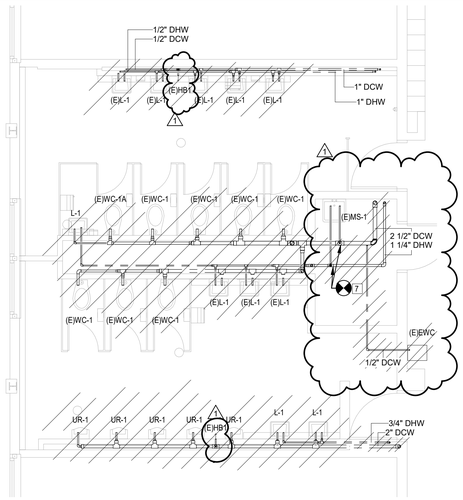


1 P102 FIRST FLOOR PLAN - BATHROOM 06A & 06B - DOMESTIC WATER DEMOLITION
1/4" = 1'-0"



2 P102 FIRST FLOOR PLAN - BATHROOM 06A & 06B - PROPOSED DOMESTIC WATER
1/4" = 1'-0"



3 P102 SECOND FLOOR PLAN - BATHROOM 24A & 24B - DOMESTIC WATER DEMOLITION
1/4" = 1'-0"

GENERAL DEMOLITION NOTES:

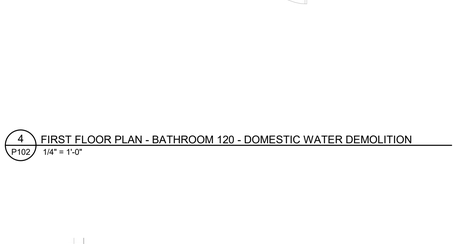
1. CONTRACTOR SHALL REMOVE ALL EXISTING FIXTURES, FIXTURE SUPPORTS, SANITARY AND VENT PIPING, DOMESTIC WATER, PURE WATER, GAS PIPING, SUPPORTS AND VALVES, AND ALL OTHER RELATED PLUMBING EQUIPMENT UNLESS NOTED OR SHOWN OTHERWISE ON FLOOR PLANS.
2. UNLESS OTHERWISE NOTED, PIPING TO BE DEMOLISHED SHALL BE REMOVED BACK TO ACTIVE MAIN AND CAPPED AIR/WATER TIGHT .
3. THIS DRAWING PRIMARILY IS INTENDED TO SHOW GENERAL PLUMBING DEMOLITION AREAS OF WORK.
4. COORDINATE ALL DEMOLITION REQUIREMENTS WITH THE OWNER. SECURE OPEN FLAME PERMITS FROM THE OWNER SO ALARM SYSTEMS AND FIRE WATCH PERSONNEL CAN BE EMPLOYED AS NECESSARY.
5. ANY SHUTDOWNS OF EXISTING PLUMBING MECHANICAL SYSTEMS SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE AND SHALL BE BRIEF, OCCUR WHEN USAGE IS NONEXISTENT OR VERY LIGHT, OR METHODS SHALL BE EMPLOYED WHICH PERMIT SYSTEMS TO STAY IN OPERATION AVOIDING SHUTDOWNS ALTOGETHER. THE OWNER SHALL DETERMINE WHEN AND IF AN EXISTING SYSTEM MAY BE SHUTDOWN.
6. ALL PLUMBING FIXTURES, BACKFLOW PREVENTERS, VALVES, OR EQUIPMENT INDICATED TO BE DEMOLISHED SHALL FIRST BE OFFERED TO THE OWNER. THE SCOPE OF DEMOLITION WORK, HOWEVER, SHALL INCLUDE THE DISPOSAL OF ALL DEMOLISHED EQUIPMENT. THE DISPOSAL SHALL BE OFF-SITE AND IN A SAFE & LEGAL MANNER.
7. WHERE EXISTING CEILINGS REMAIN, CAREFULLY REMOVE AND REINSTALL EXISTING CEILING TILES, AS REQUIRED, IN ORDER TO GAIN ACCESS TO DEMOLITION WORK. REPLACE DAMAGED TEE BARS, TILE ETC. IF DAMAGED.
8. REFER TO AND COORDINATE PLUMBING DEMOLITION WORK WITH ALL OTHER DISCIPLINES AS SHOWN ON ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DEMOLITION DRAWINGS.
9. CAP THE OPEN END OF EXISTING PIPING AND EQUIPMENT IMMEDIATELY AFTER OPENING PIPE/EQUIPMENT CONNECTIONS TO PREVENT DEBRIS FROM CONTAMINATING EXISTING-TO-REMAIN ITEMS AND TO PREVENT SEWER GASES FROM ENTERING INTO THE INTERIOR OF THE BUILDING.
10. ANY SHAFT OR WALL OPENING CREATED TO IMPLEMENT PIPE DEMOLITION OR CREATED BY REMOVED PIPE OR FIXTURES SHALL BE REPAIRED BY THE CONTRACTOR. FILL OPENINGS WITH THE SAME MATERIAL AS THE WALL OR FLOOR. FINISH FLUSH TO THE EXISTING SURFACE.
11. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2009 NATIONAL STANDARD PLUMBING CODE.
12. CONTRACTORS SHALL VERIFY THE EXISTING CONDITIONS AND LOCATIONS FOR NEW CONNECTIONS PRIOR TO START OF WORK.
13. PIPING/RISERS WHICH SERVE OTHER AREAS, ENTERING AND PASSING THROUGH THE AREA WHERE DEMOLITION WORK IS INDICATED, SHALL REMAIN.

DEMOLITION NOTES:

1	DISCONNECT AND REMOVE EXISTING ISOLATION VALVE.
3	DISCONNECT AND REMOVE EXISTING FIXTURE AND ASSOCIATED ROUGH-IN PIPING BACK TO POINT OF DISCONNECTION FROM MAIN OR STACK.
5	DISCONNECT AND REMOVE BRANCH PIPING BACK TO POINT OF DISCONNECTION.
7	REMOVE ROUGH-IN PIPING TO EXISTING FIXTURE TO REMAIN.

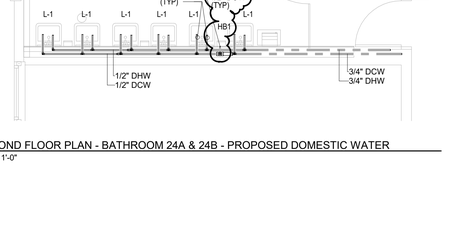
NEW WORK NOTES:

2	INSTALL NEW FULL LINE SIZE ISOLATION VALVE.
4	INSTALL NEW FIXTURE AND ASSOCIATED ROUGH-IN PIPING UP TO POINT OF NEW CONNECTION TO MAIN OR STACK.
6	INSTALL NEW BRANCH PIPING TO POINT OF CONNECTION.
8	INSTALL ROUGH-IN PIPING TO EXISTING FIXTURE TO REMAIN.

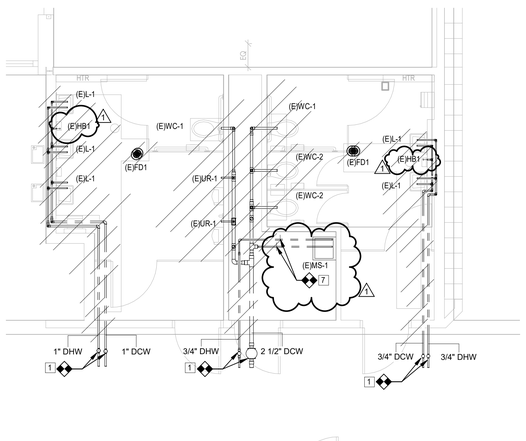


4 P102 FIRST FLOOR PLAN - BATHROOM 120 - DOMESTIC WATER DEMOLITION
1/4" = 1'-0"

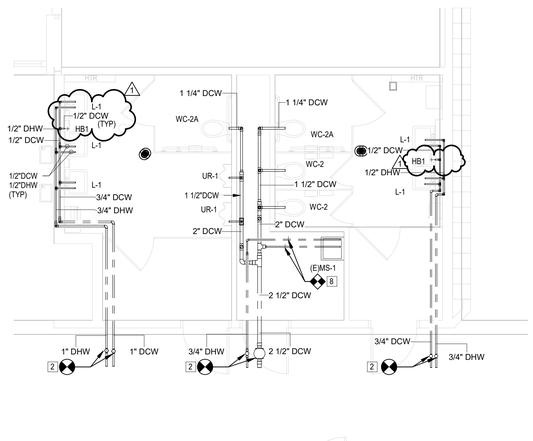
5 P102 FIRST FLOOR PLAN - BATHROOM 120 - PROPOSED DOMESTIC WATER
1/4" = 1'-0"



6 P102 SECOND FLOOR PLAN - BATHROOM 24A & 24B - PROPOSED DOMESTIC WATER
1/4" = 1'-0"



7 P102 FIRST FLOOR PLAN - BATHROOM 13 & 15 - DOMESTIC WATER DEMOLITION
1/4" = 1'-0"



8 P102 FIRST FLOOR PLAN - BATHROOM 13 & 15 - PROPOSED DOMESTIC WATER
1/4" = 1'-0"

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Architect Date

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Pennsylvania: 140 Whitaker Ave - Mont Clare - Pennsylvania 19453

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Project Owner Name
Ewing Public Schools

Project Location
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Project Number
5015A2A

Project Date
02.08.2019

Checked By
OT

Drawn By
DMR

Scale
AS NOTED

Drawing Name
PLUMBING PARTIAL PLANS

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
P102

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ROBERT MELLOHUSKY
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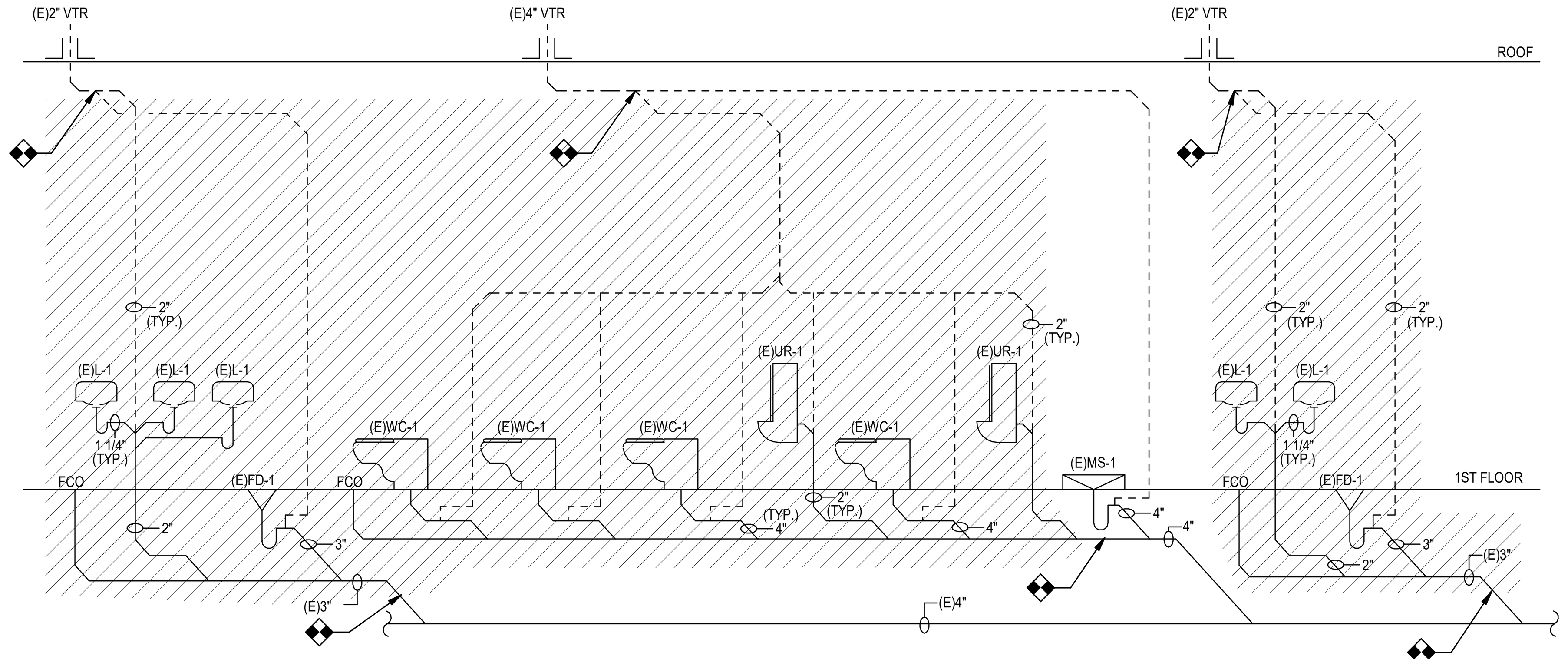
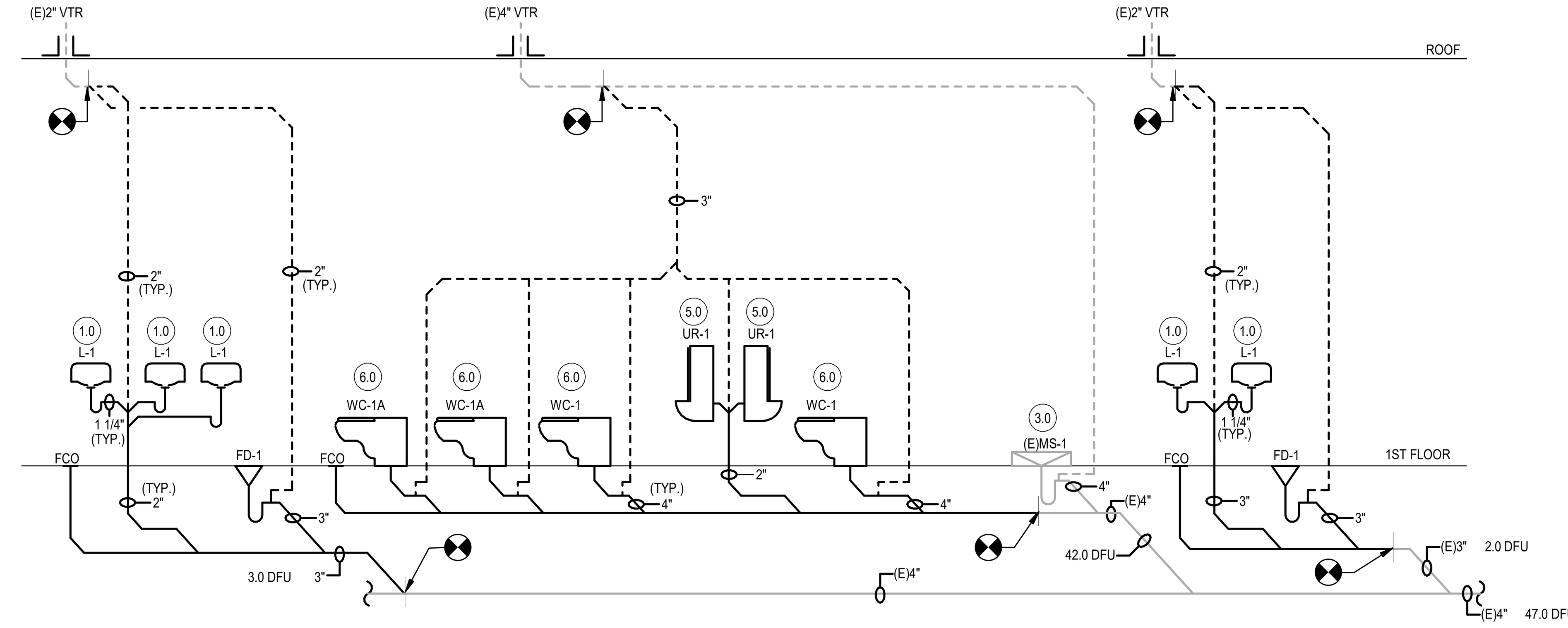


1 P200 EXISTING PARTIAL SANITARY RISER DIAGRAM BATHROOM 13 & 15
NOT TO SCALE



2 P200 PROPOSED PARTIAL SANITARY RISER DIAGRAM BATHROOM 13 & 15
NOT TO SCALE

DRAINAGE FIXTURE UNITS PLUMBING CODE TABLE	
FIXTURE	VALUE (DFU)
WATER CLOSET (WC)	6.0
URINAL (UR)	5.0
LAVATORY (L)	1.0
SHOWER (SH)	2.0
WASHER SUPPLY BOX (WSB)	2.0
MOP SINK (MS)	3.0
ELECTRIC WATER COOLER (EWC)	0.5
FLOOR DRAIN (FD)	X

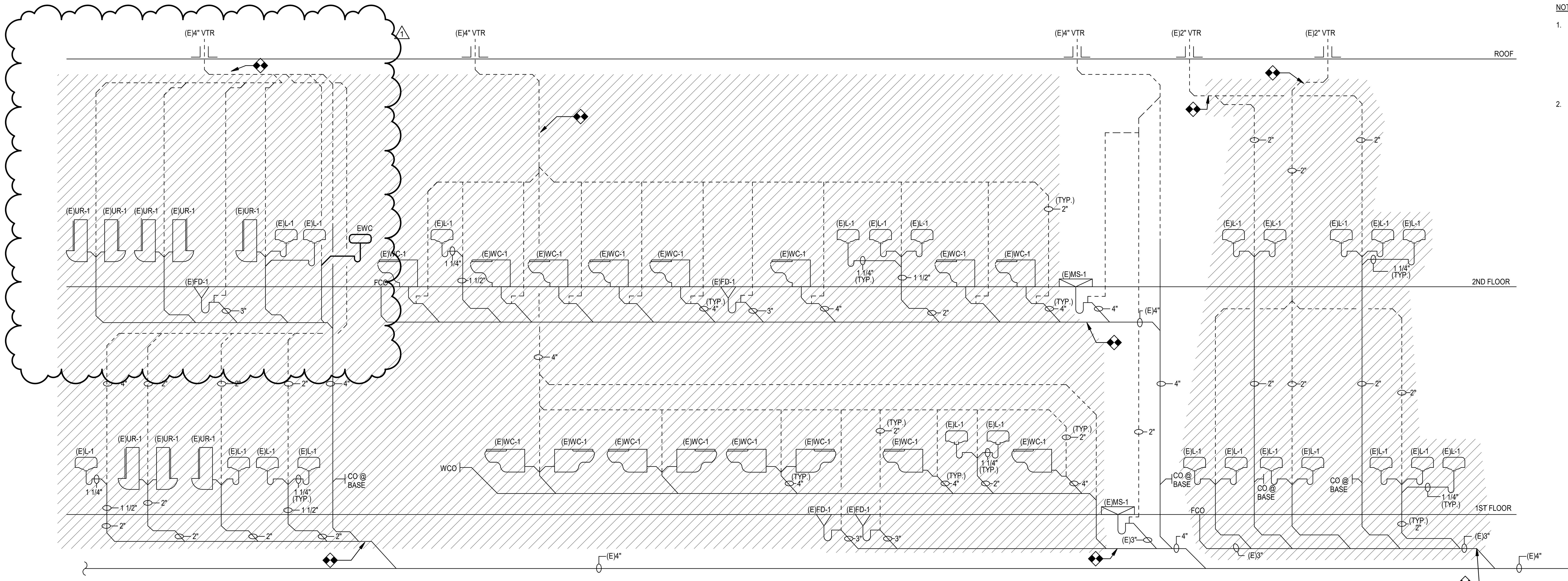
NOTES:

1. PLUMBING CONTRACTOR TO COORDINATE THE LOCATION OF NEW ACCESS PANELS WITH LOCATIONS OF ALL TRAP PRIMERS & SHOCK ABSORBERS. PLUMBING CONTRACTOR SHALL COORDINATE WITH OTHER TRADES THE INSTALLATION OF ALL HARDWARE OR DEVICES BEING INSTALLED ON WALL. ACCESS PANEL SHALL BE INSTALLED SO THAT PANEL IS FULLY ACCESSIBLE.

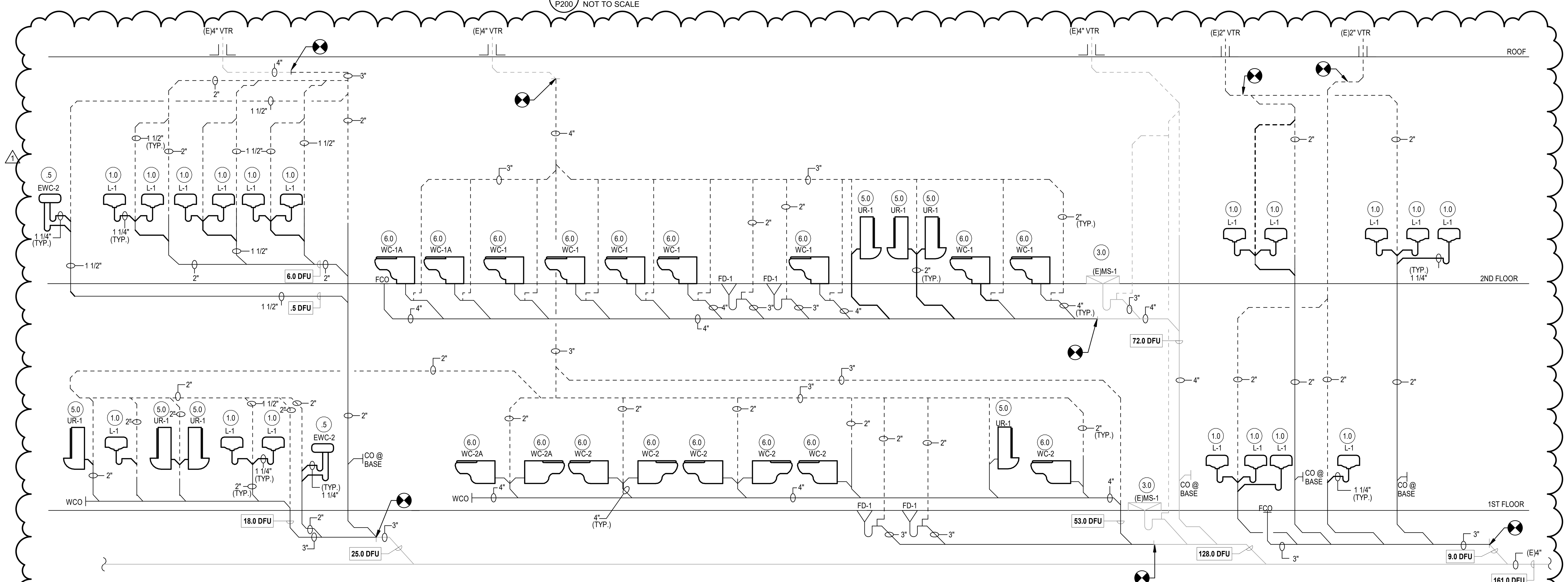
   MANUFACTURER TO BE: MIFAB - SERIES UA (12"x12") OR APPROVED EQUAL.

2. ALL UNDERGROUND TRAP PRIMING PIPING SHALL BE INSULATED WITH A FLEXIBLE ELASTOMERIC THERMAL INSULATION.

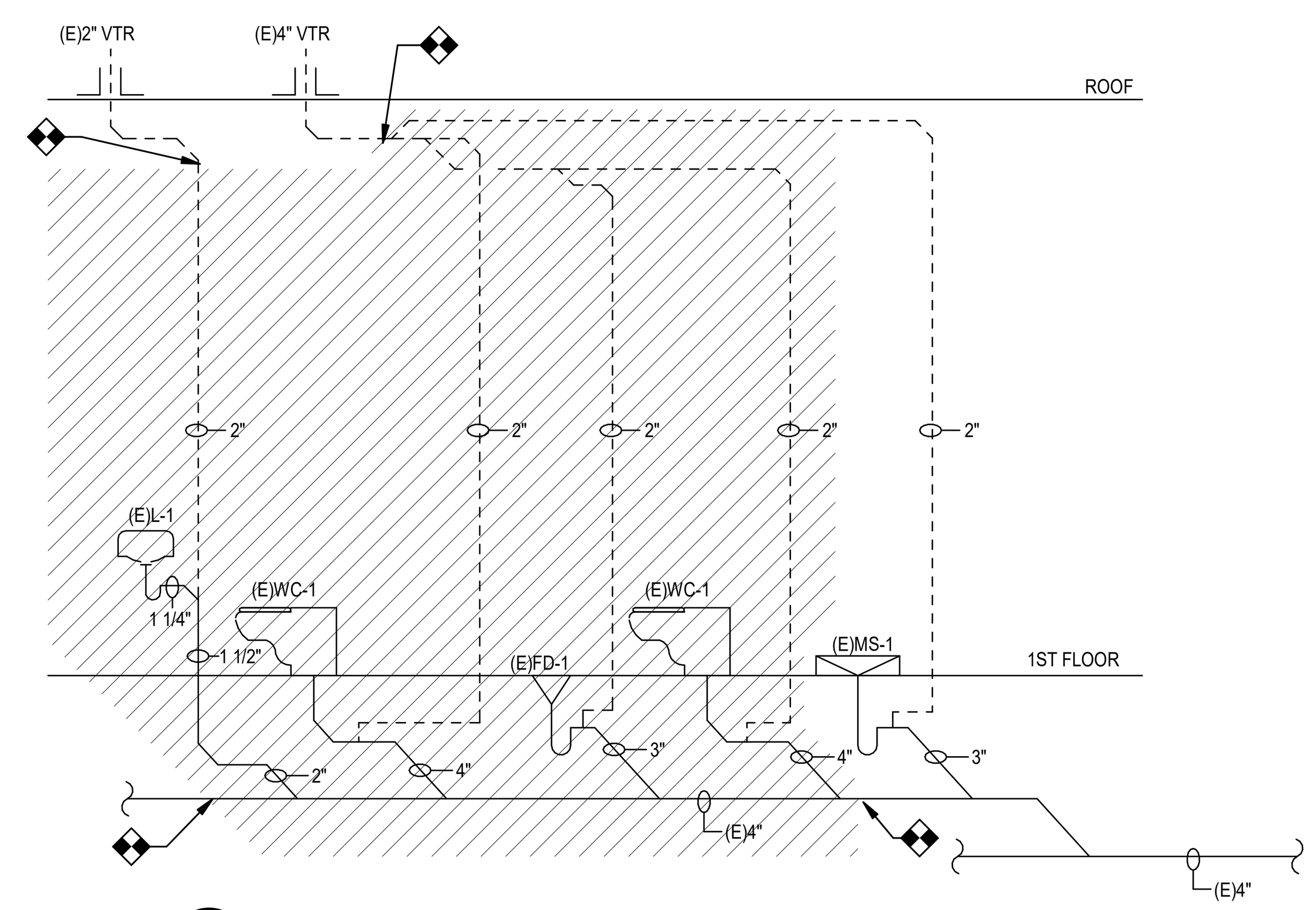
   MANUFACTURER SHALL BE: ARMACELL ENGINEERED FOAMS OR APPROVED EQUAL.



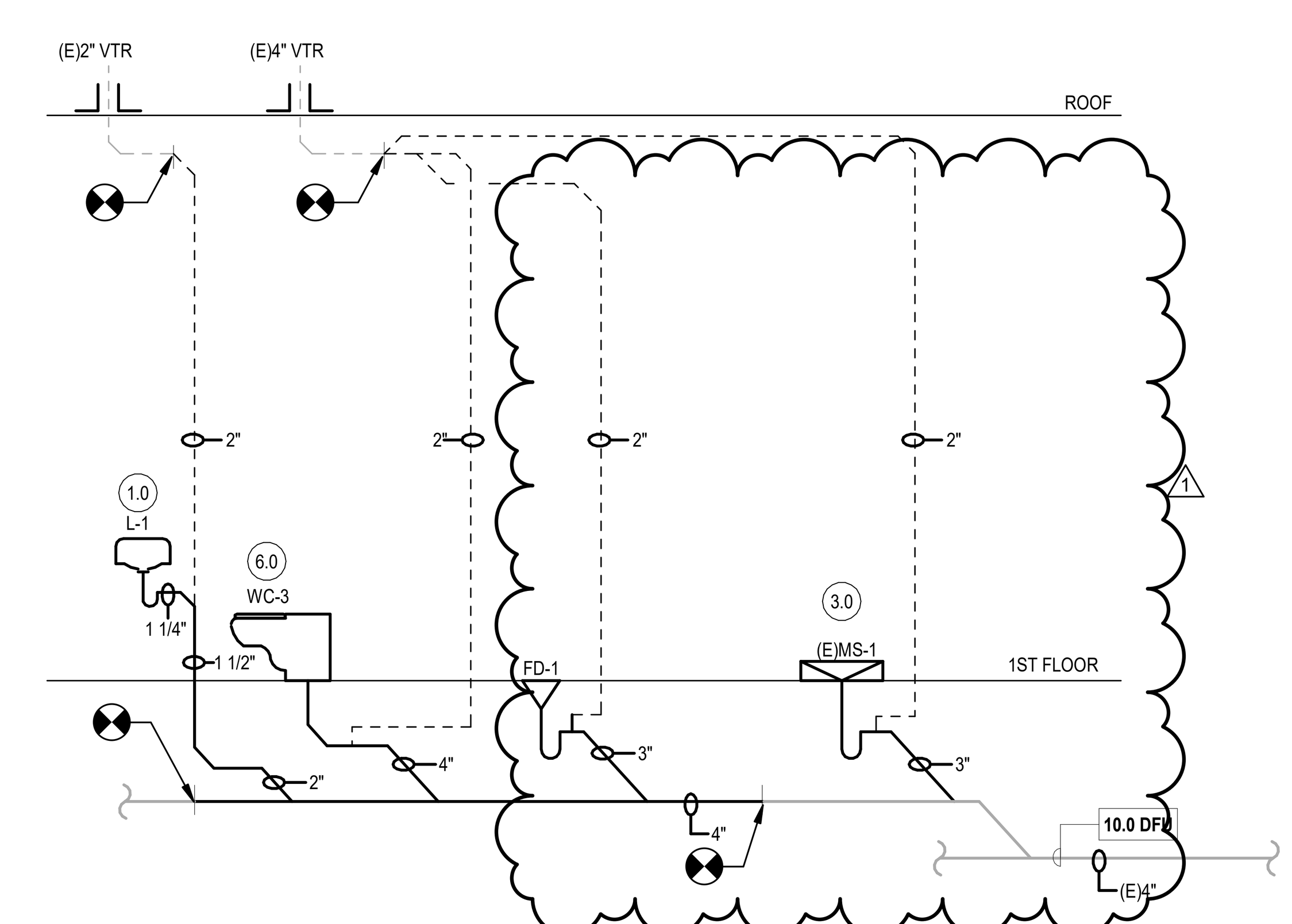
3 P200 EXISITING PARTIAL SANITARY RISER DIAGRAM BATHROOM 06A, 06B, 24A & 24B
NOT TO SCALE



4 P200 PROPOSED SANITARY RISER DIAGRAM BATHROOM 06A, 06B, 24A & 24B
NOT TO SCALE



5 P200 EXISITING PARTIAL SANITARY RISER DIAGRAM BATHROOM 120
NOT TO SCALE



6 P200 PROPOSED PARTIAL SANITARY RISER DIAGRAM BATHROOM 120
NOT TO SCALE

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Scale
AS NOTED

Drawing Name
PLUMBING RISER DIAGRAMS

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
P200

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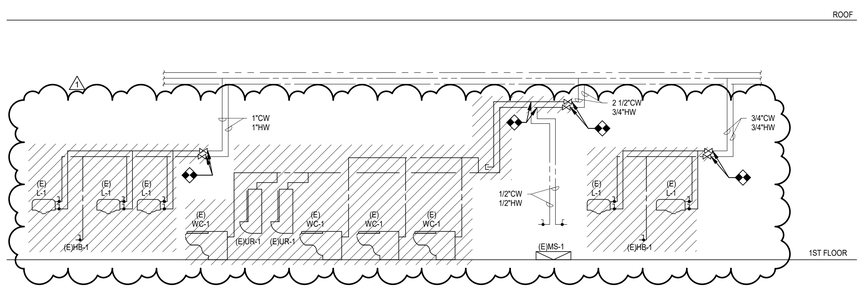
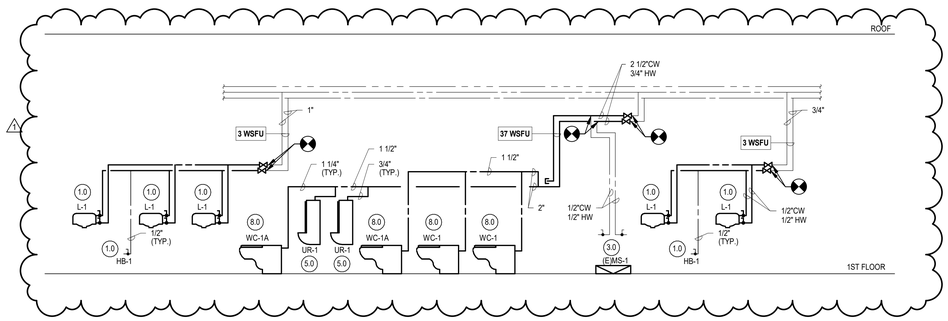
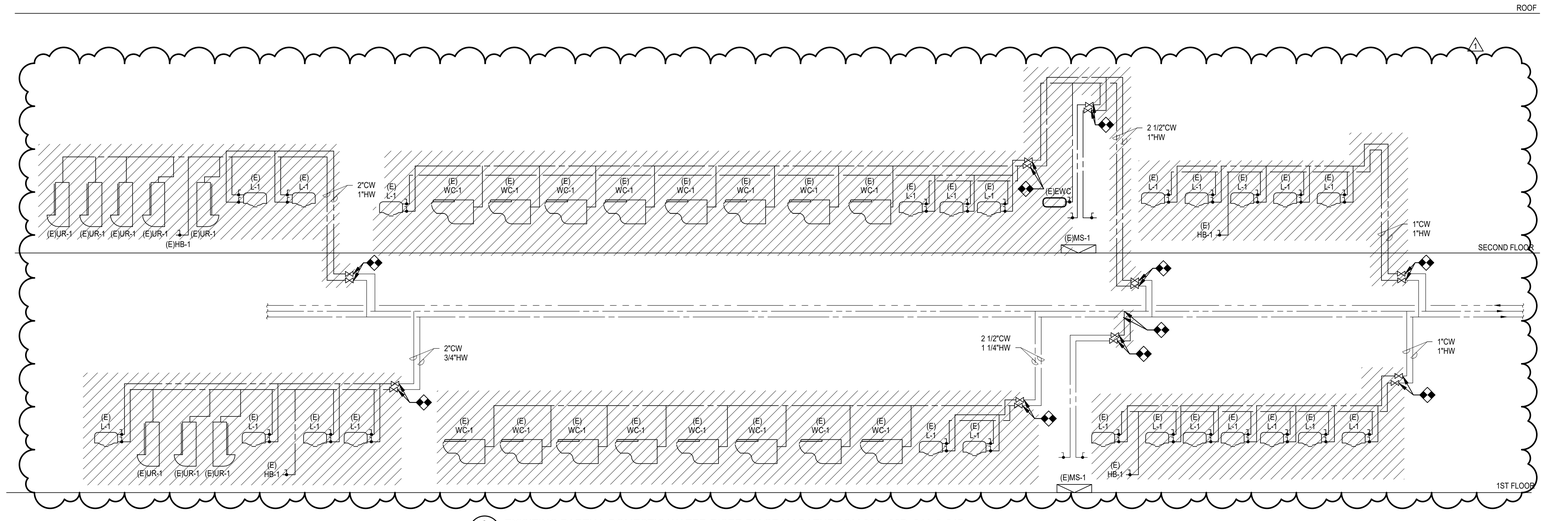


1 P201 EXISTING PARTIAL DOMESTIC RISER DIAGRAM BATHROOM 13 &15
NOT TO SCALE

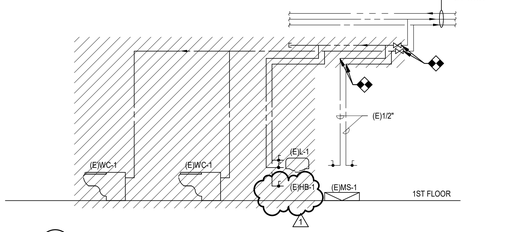


2 P201 PROPOSED PARTIAL DOMESTIC WATER RISER DIAGRAM BATHROOM 13 & 15
NOT TO SCALE

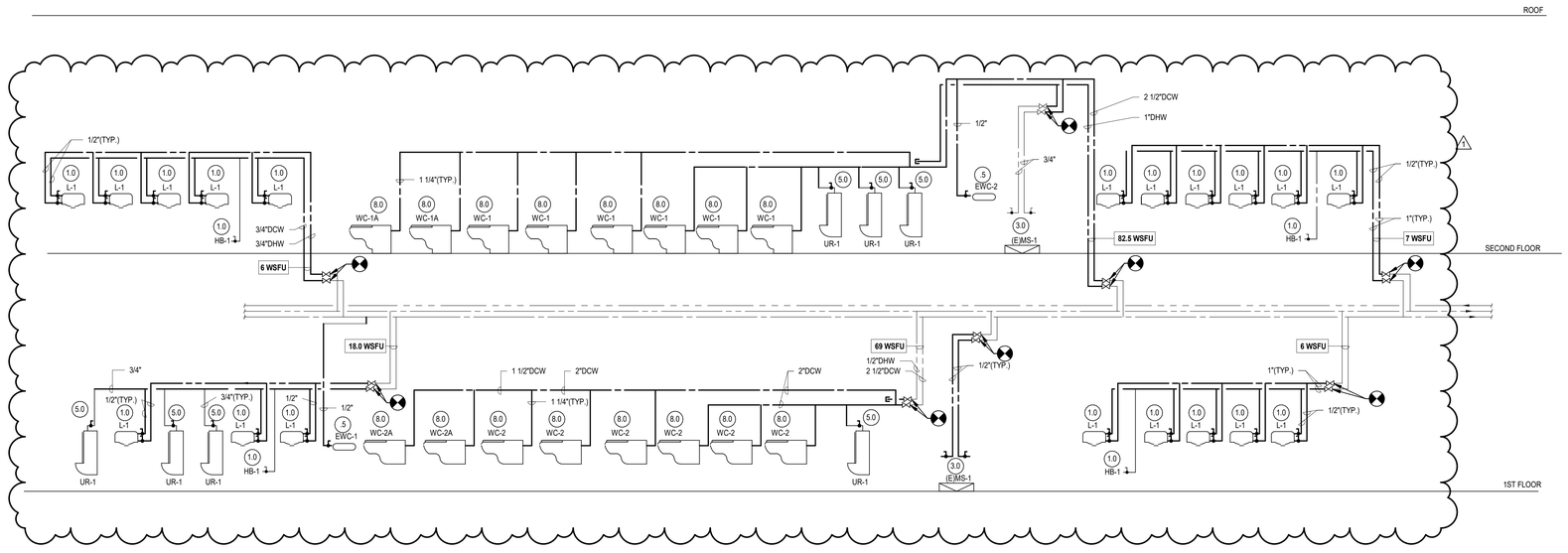
WATER SUPPLY FIXTURE UNITS PLUMBING CODE TABLE	
FIXTURE	VALUE (DFU)
WATER CLOSET (WC)	8.0
URINAL (UR)	5.0
LAVATORY (L)	1.0
SHOWER (SH)	2.0
WASHER SUPPLY BOX (WSB)	2.0
MOP SINK (MS)	3.0
ELECTRIC WATER COOLER (EWC)	0.5
FLOOR DRAIN (FD)	X
HOSE BIBB (HB)	1.0



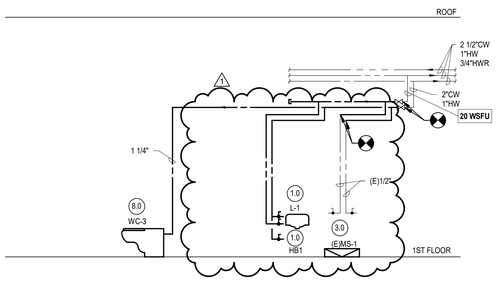
3 P201 EXISITING PARTIAL DOMESTIC WATER RISER DIAGRAM BATHROOM 06A, 06B, 24A & 24B
NOT TO SCALE



5 P201 EXISTING PARTIAL DOMESTIC WATER RISER DIAGRAM BATHROOM 120
NOT TO SCALE



4 P201 PROPOSED PARTIAL DOMESTIC WATER RISER DIAGRAM BATHROOM 06A, 06B, 24A & 24B
NOT TO SCALE



6 P201 PROPOSED PARTIAL DOMESTIC WATER RISER DIAGRAM BATHROOM 120
NOT TO SCALE

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Architect Date

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Checked By
OT

Drawn By
DMR

Scale
AS NOTED

Drawing Name
PLUMBING RISER DIAGRAMS

Revisions		
No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
P201

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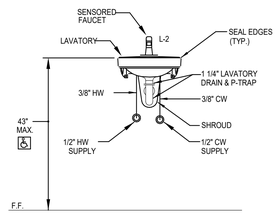
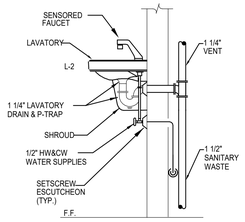
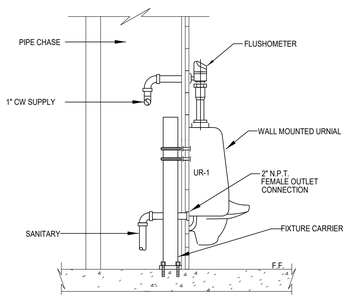


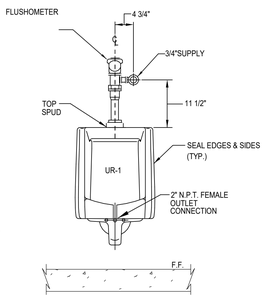


NOTES:

1. PLUMBING CONTRACTOR SHALL PROVIDE & INSTALL ALL NEEDED PIPING, STRAINERS, TAIL PIECE, P-TRAP, INSULATED COVERS, WATER SUPPLIES AND SHUT OFF VALVES FOR A COMPLETE AND FUNCTIONAL ADA COMPLIANT ♿ SYSTEM.

1 P300 WALL HUNG LAVATORY DETAIL
NOT TO SCALE

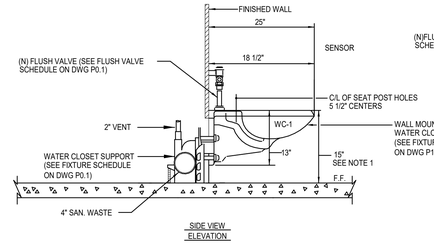




NOTES:

1. PLUMBING CONTRACTOR SHALL COORDINATE LOCATIONS OF ALL ADA COMPLIANT FIXTURES WITH ARCHITECTURAL DRAWINGS.
2. ALL ADA COMPLIANT URINALS SHALL BE INSTALLED WITH A MAXIMUM DISTANCE OF 17" FROM LIP OF URINAL TO FINISHED FLOOR.

2 P300 URINAL DETAIL
NOT TO SCALE



NOTES:

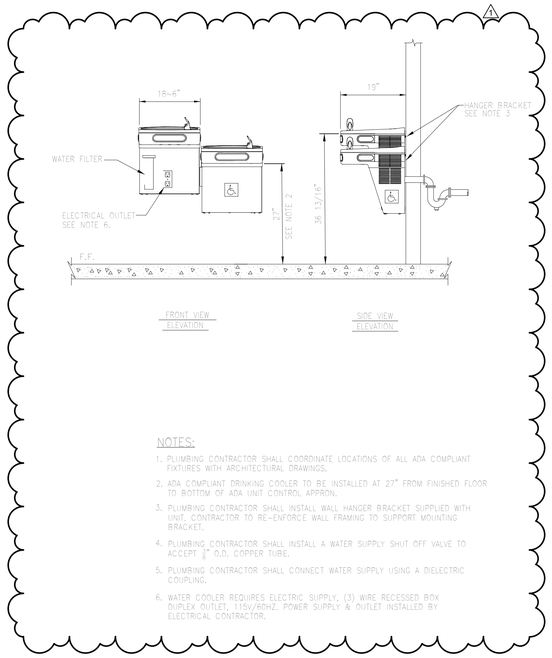
1. ALL ADA COMPLIANT WATER CLOSET SHALL BE INSTALLED WITH A SEAT HEIGHT SET AT 17" TO 19" FROM FINISHED FLOOR. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL ADA COMPLIANT FIXTURES.

3 P300 WALL HUNG WATER CLOSET DETAIL
NOT TO SCALE

NOTES:

1. CONTRACTOR TO SUPPLY AND INSTALL MIXING VALVE.
2. MANUFACTURER AND MODEL TO BE WATTS LFUSG-B OR APPROVED EQUAL.

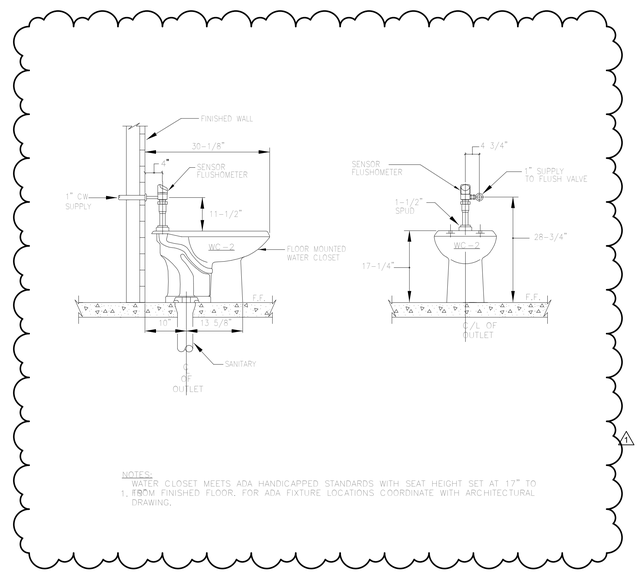
4 P300 MIXING VALVE DETAIL
NOT TO SCALE



NOTES:

1. PLUMBING CONTRACTOR SHALL COORDINATE LOCATIONS OF ALL ADA COMPLIANT FIXTURES WITH ARCHITECTURAL DRAWINGS.
2. ADA COMPLIANT DRINKING COOLER TO BE INSTALLED AT 27" FROM FINISHED FLOOR TO BOTTOM OF ADA UNIT CONTROL APPRON.
3. PLUMBING CONTRACTOR SHALL INSTALL WALL HANGER BRACKET SUPPLIED WITH UNIT. CONTRACTOR TO RE-ENFORCE WALL FRAMING TO SUPPORT MOUNTING BRACKET.
4. PLUMBING CONTRACTOR SHALL INSTALL A WATER SUPPLY SHUT OFF VALVE TO ACCEPT ⅜" O.D. COPPER TUBE.
5. PLUMBING CONTRACTOR SHALL CONNECT WATER SUPPLY USING A DIELECTRIC COUPLING.
6. WATER COOLER REQUIRES ELECTRIC SUPPLY, (3) WIRE RECESSED BOX DUPLEX OUTLET, 115V/60HZ. POWER SUPPLY & OUTLET INSTALLED BY ELECTRICAL CONTRACTOR.

5 P300 ELECTRIC WATER COOLER
1" = 1'-0"



NOTES:

1. WATER CLOSET MEETS ADA HANDICAPPED STANDARDS WITH SEAT HEIGHT SET AT 17" TO 19" FROM FINISHED FLOOR. FOR ADA FIXTURE LOCATIONS COORDINATE WITH ARCHITECTURAL DRAWING.

6 P300 FLOOR MOUNTED WATER CLOSET DETAIL
1" = 1'-0"

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Scale
AS NOTED

Drawing Name
PLUMBING DETAILS

Revisions

No.	Date	Description
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Drawing Number
P300

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NEW JERSEY #24GE03440100

2/25/2019 6:06:31 PM BIM 360://FVHDA18001 - EWING TOWNSHIP SCHOOL DISTRICT\ANTHEIL ES_R19.rvt

DOOR SCHEDULE - New Doors

- All FRIG-1 glazing is to receive security window film (SWF) - BASE BID
- Security glazing - ALTERNATE BID

AS INDICATED BY:

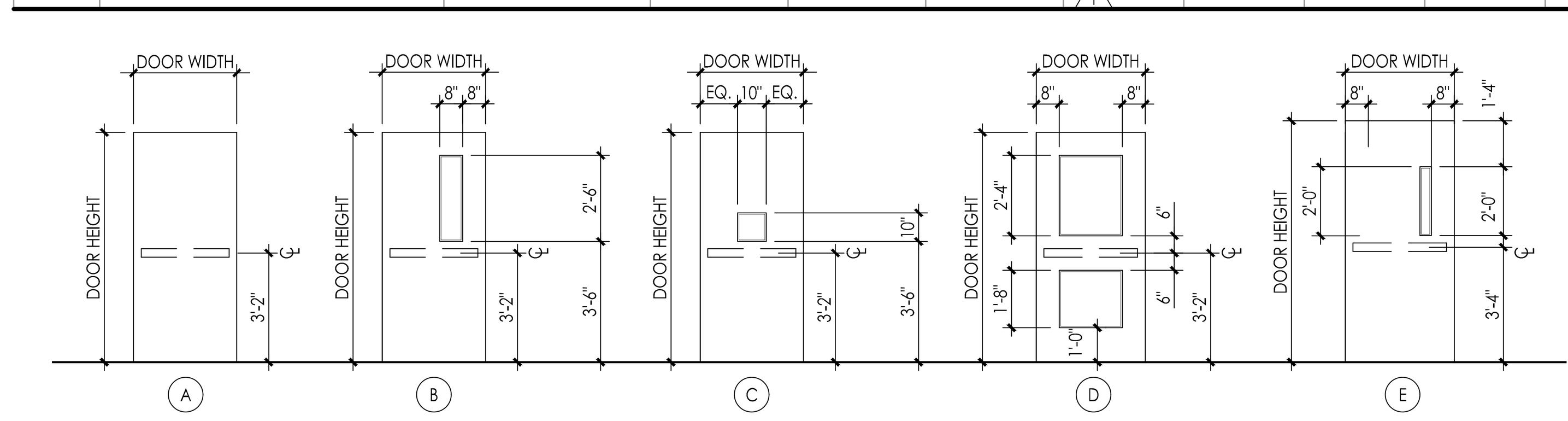
DOOR No.	DOOR LOCATION	DOOR SIZE	DOOR TYPE	DOOR MAT.	DOOR GLASS	FRAME TYPE	FRAME MAT.	FRAME HEAD	FRAME JAMB	SADDLE	HARD WARE	RATING	SIGN TYPE	REMARKS
01	KINDERGARTEN 01	2'- 8" x 6'- 8" ±	B	WD	FRIG-1	ETR	HM	--	--	--	17.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
02	KINDERGARTEN 02	2'- 8" x 6'- 8" ±	B	WD	FRIG-1	ETR	HM	--	--	--	17.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
03	KINDERGARTEN 03	2'- 8" x 6'- 8" ±	B	WD	FRIG-1	ETR	HM	--	--	--	17.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
04	FIRST GRADE CLRM 04	2'- 8" x 6'- 8" ±	B	WD	FRIG-1	ETR	HM	--	--	--	17.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
05	FIRST GRADE CLRM 05	2'- 8" x 6'- 8" ±	B	WD	FRIG-1	ETR	HM	--	--	--	17.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
06	FIRST GRADE CLRM 06	2'- 8" x 6'- 8" ±	B	WD	FRIG-1	ETR	HM	--	--	--	17.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
09	FIRST GRADE CLRM 09	2'- 8" x 6'- 8" ±	B	WD	FRIG-1	ETR	HM	--	--	--	17.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
10	FIRST GRADE CLRM 10	2'- 8" x 6'- 8" ±	B	WD	FRIG-1	ETR	HM	--	--	--	17.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
10A	FACULTY DINING 10	2'- 8" x 6'- 8" ±	B	WD	FRIG-1	ETR	HM	--	--	--	17.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
11	SPEECH 11	3'- 0" x 6'- 8"±	B	WD	FRIG-1	ETR	HM	--	--	--	17.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
12	SGI 12	3'- 0" x 6'- 8"±	B	WD	FRIG-1	ETR	HM	--	--	--	17.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
13	SGI 13	3'- 0" x 6'- 8"±	B	WD	FRIG-1	ETR	HM	--	--	--	17.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
14	SGI 14	3'- 0" x 6'- 8"±	B	WD	FRIG-1	ETR	HM	--	--	--	17.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
14A	TEAM RESOURCE 14	3'- 0" x 6'- 8"±	B	WD	FRIG-1	ETR	HM	--	--	--	11.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
15	THIRD GRADE CLRM 15	3'- 0" x 6'- 8"±	B	WD	FRIG-1	ETR	HM	--	--	--	17.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
16	THIRD GRADE CLRM 16	3'- 0" x 6'- 8"±	B	WD	FRIG-1	ETR	HM	--	--	--	17.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
17	THIRD GRADE CLRM 17	3'- 0" x 6'- 8"±	B	WD	FRIG-1	ETR	HM	--	--	--	17.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
18	SGI 18	3'- 0" x 6'- 8"±	B	WD	FRIG-1	ETR	HM	--	--	--	17.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
19	SGI 19	3'- 0" x 6'- 8"±	B	WD	FRIG-1	ETR	HM	--	--	--	17.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
21A	MEN'S 21A	3'- 0" x 6'- 8"±	B	WD	FRIG-1	ETR	HM	--	--	--	20	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
41A	GYMNASIUM 41	(2) 3'- 0" x 6'- 8"±	B	WD	SECURITY	ETR	HM	--	--	ETR	6.0	ETR	ETR	NEW DOORS ON EXISTING FRAME - ALT BID
41B	GYMNASIUM 41	(2) 3'- 0" x 6'- 8"±	B	WD	SECURITY	ETR	HM	--	--	ETR	6.0	ETR	ETR	NEW DOORS ON EXISTING FRAME - ALT BID
43	BOYS' TOILET 43	3'- 0" x 6'- 8"±	A	WD	--	ETR	HM	--	--	S1	15.5	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
44	GIRLS' TOILET 44	3'- 0" x 6'- 8"±	A	WD	--	ETR	HM	--	--	S1	15.5	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5
61A	LIBRARY 61	(2) 3'-0" x 6'-8"±	B	WD	SECURITY	FX	ETR	--	--	ETR	6.0	20 MIN	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
120A	CAFETORIUM 120	36"/ 24"± x 6'-8"±	B	WD	SECURITY	ETR	HM	--	--	ETR	7.0	20 MIN	ETR	NEW DOORS ON EXISTING FRAME - ALT BID
120B	CAFETORIUM 120	36"/ 24"± x 6'-8"±	B	WD	SECURITY	ETR	HM	--	--	ETR	7.0	20 MIN	ETR	NEW DOORS ON EXISTING FRAME - ALT BID
121	STAGE 121	3'- 0" x 6'- 8"±	A	WD	FRIG-1	ETR	HM	--	--	--	17.0	20 MIN	ETR	refer to general door note 1 / 2 / 4 / 5

DOOR SCHEDULE - Interior Doors - Upgrades

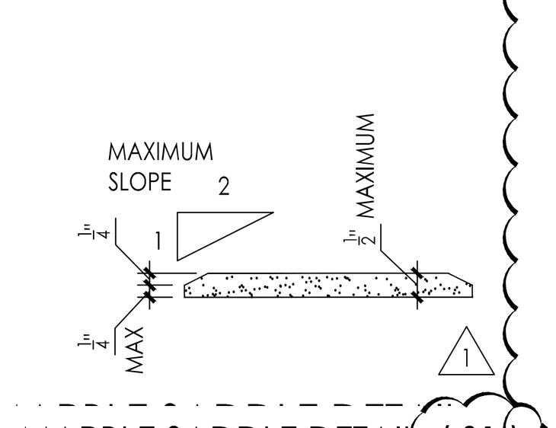
- Upgraded to intruder locks and lever sets .
- Existing glass replacement with FRIG-1 glass and SWF - BASE BID
- Existing glass replacement with Security glass - ALTERNATE BID

AS INDICATED BY:

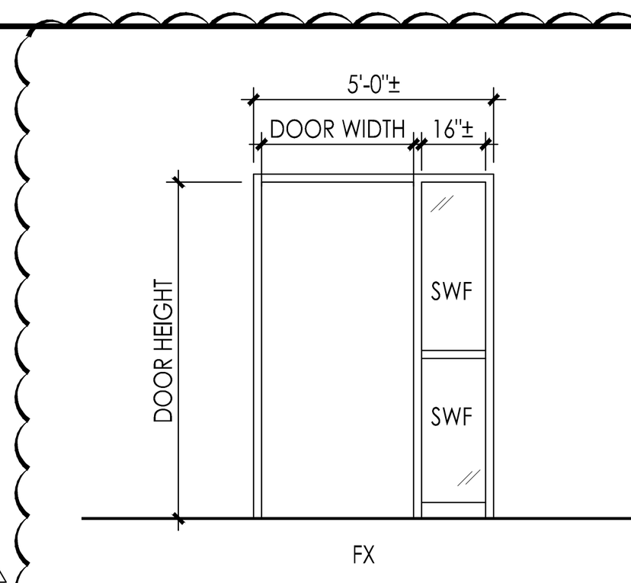
DOOR No.	DOOR LOCATION	DOOR SIZE	DOOR TYPE	DOOR MAT.	DOOR GLASS	FRAME TYPE	FRAME MAT.	FRAME HEAD	FRAME JAMB	SADDLE	HARD WARE	RATING	SIGN TYPE	REMARKS
02A	WAITING ROOM 02	ETR	ETR	ETR	FRIG-1	ETR	HM	--	--	ETR	18.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
07	CLASSROOM 07	ETR	ETR	ETR	FRIG-1	ETR	HM	--	--	ETR	14.0	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
08	CLASSROOM 08	ETR	ETR	ETR	FRIG-1	ETR	HM	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
21B	TOILET 21	ETR	ETR	ETR	--	ETR	HM	--	--	ETR	20.0	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
22	TEST ROOM 22	ETR	ETR	ETR	FRIG-1	ETR	HM	--	--	ETR	13.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
23	EXAM ROOM 23	ETR	ETR	ETR	FRIG-1	ETR	HM	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
25	WAITING	ETR	ETR	ETR	FRIG-1	ETR	HM	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
36B	WOMEN'S TOILET 36	ETR	ETR	ETR	--	ETR	HM	--	--	ETR	20.0	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
39B	MEN'S TOILET 39	ETR	ETR	ETR	--	ETR	HM	--	--	ETR	20.0	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
41A	GYMNASIUM 41	ETR	ETR	ETR	FRIG-1	ETR	HM	--	--	ETR	--	ETR	ETR	HARDWARE TO REMAIN UNDER BASE BID - See note 5
41B	GYMNASIUM 41	ETR	ETR	ETR	FRIG-1	ETR	HM	--	--	ETR	--	ETR	ETR	HARDWARE TO REMAIN UNDER BASE BID - See note 5
45	CLASSROOM 45	ETR	ETR	ETR	FRIG-1	FX	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
46	CLASSROOM 46	ETR	ETR	ETR	FRIG-1	FX	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
47	CLASSROOM 47	ETR	ETR	ETR	FRIG-1	FX	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
48	CLASSROOM 48	ETR	ETR	ETR	FRIG-1	FX	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
49	SGI 49	ETR	ETR	ETR	FRIG-1	FX	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
50	TEACHER WORK ROOM 50	ETR	ETR	ETR	FRIG-1	FX	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
51	AIM 51	ETR	ETR	ETR	FRIG-1	FX	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
52	RESOURCE ROOM 52	ETR	ETR	ETR	FRIG-1	FX	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
53A	4th GRADE CLASSROOM 53	ETR	ETR	ETR	FRIG-1	FX	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
53B	4th GRADE CLASSROOM 53	ETR	ETR	ETR	FRIG-1	FX	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
54A	4th GRADE CLASSROOM 54	ETR	ETR	ETR	FRIG-1	FX	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
54B	4th GRADE CLASSROOM 54	ETR	ETR	ETR	FRIG-1	FX	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
55A	INSTRUMENTAL ROOM 55	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
57A	VOCAL MUSIC 57	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
59A	ART CLASSROOM 59	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
65	STORAGE ROOM 65	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	13.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
66	COPY ROOM 66	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
67	ELECTRICAL CLOSET 67	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	13.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
68A	COMPUTER INSTRUCTION 68	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	13.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
120A	CAFETORIUM 120	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	--	ETR	ETR	HARDWARE TO REMAIN UNDER BASE BID - See note 5
120B	CAFETORIUM 120	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	--	ETR	ETR	HARDWARE TO REMAIN UNDER BASE BID - See note 5
130	CLASSROOM 130	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
131	CLASSROOM 131	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
132	SGI 132	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
133	CLASSROOM 133	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
134	SGI 134	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
135	SGI 135	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
136	SGI 136	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
137	SGI 137	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
138	SGI 138	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
139	STORAGE ROOM 139	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
140	CLASSROOM 140	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
141	CLASSROOM 141	ETR	ETR	ETR	FRIG-1	ETR	ETR	--	--	ETR	17.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
100C	BOYS' TOILET	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR	28.0	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
100D	JC	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR	13.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
100E	GIRLS' TOILET	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR	03	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
104C	BOYS' TOILET	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR	19.0	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
104D	MEN'S TOILET	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR	21.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
104E	WOMEN'S TOILET	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR	21.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
104F	GIRLS' TOILET	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR	19.0	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
105C	JC	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR	13.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
CR1	CAMERA ROOM	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR	13.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5
ER1	ELECTRICAL ROOM	ETR	ETR	ETR	--	ETR	ETR	--	--	ETR	13.5	ETR	ETR	refer to general door note 1 / 2 / 3 / 4 / 5



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



2 MARBLE SADDLE DETAIL (S1)
SCALE: NTS



3 EXISTING FRAME "FX"
SCALE: 1/4" = 1' - 0"

DOOR SCHEDULE - Exterior Doors - Upgrades

- Re-Keying / New Cores

AS INDICATED BY:

DOOR No.	DOOR LOCATION	DOOR SIZE	DOOR TYPE	DOOR MAT.	DOOR GLASS	FRAME TYPE	FRAME MAT.	FRAME HEAD	FRAME JAMB	SADDLE	HARD WARE	RATING	SIGN TYPE	REMARKS
02B	KINDERGARTEN 02	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	26.0	--	ETR	UPGRADE
04A	1st GRADE CLASSROOM 03	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	26.0	--	ETR	UPGRADE
41C	GYMNASIUM 41	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	25.0	--	ETR	UPGRADE / New Access Control - see note 6
41D	GYMNASIUM 41	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	25.0	--	ETR	UPGRADE
57B	VOCAL MUSIC 59	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	26.0	--	ETR	UPGRADE
59B	ART ROOM 59	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	26.0	--	ETR	UPGRADE
61B	LIBRARY 61	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	25.0	--	ETR	UPGRADE
68B	COMPUTER INSTRUCTION 68	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	25.0	--	ETR	UPGRADE
70A	CORRIDOR 70	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	25.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
70B	CORRIDOR 70	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	26.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
72A	CORRIDOR 72	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	26.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
72B	CORRIDOR 72	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	25.0	--	ETR	UPGRADE
72C	CORRIDOR 72	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	25.0	--	ETR	UPGRADE
74A	CORRIDOR 74	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	26.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
100A	LOBBY 100	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	26.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
101A	CORRIDOR 101	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	29.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
103A	CORRIDOR 103	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	26.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
104A	CORRIDOR 104	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	31.0	--	ETR	UPGRADE / New Access Control - see note 6
105A	CORRIDOR 105	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	30.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
105B	CORRIDOR 105	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	29.0	--	ETR	UPGRADE
106A	CORRIDOR 106	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	32.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
106B	CORRIDOR 106	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	32.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
106C	CORRIDOR 106	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	25.0	--	ETR	UPGRADE
122A	BOILER ROOM 122	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	26.0	--	ETR	UPGRADE
122B	BOILER ROOM 122	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	26.0	--	ETR	UPGRADE / Ex. Access Controlled Doors
122C	BOILER ROOM 122	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	25.0	--	ETR	UPGRADE
123	MAINTENANCE OFFICE 123	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	26.0	--	ETR	UPGRADE
CY1	COURTYARD	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	26.0	--	ETR	UPGRADE
CY2	COURTYARD	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	26.0	--	ETR	UPGRADE
CY3	COURTYARD	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	26.0	--	ETR	UPGRADE
CY4	COURTYARD	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	26.0	--	ETR	UPGRADE
CY5	COURTYARD	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	26.0	--	ETR	UPGRADE
CY6	COURTYARD	ETR	ETR	ETR	ETR	ETR	ETR	--	--	--	26.0	--	ETR	UPGRADE

ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR	BASE MAT.	BASE HT.	WAINSCOT MAT.	WAINSCOT HT.	WALL FINISH	CEILING MAT.	CEILING HT.	REMARKS
05	1st. GRADE CLASSROOM 05	ETR	ETR	--	--	--	PAINTED	ACB	9'-6" ±	
06	1st. GRADE CLASSROOM 06	ETR	ETR	--	--	--	PAINTED	ACB	9'-6" ±	
09	1st. GRADE CLASSROOM 09	ETR	ETR	--	--	--	PAINTED	ACB	9'-6" ±	
10	1st. GRADE CLASSROOM 10	ETR	ETR	--	--	--	PAINTED	ACB	9'-6" ±	
43	BOYS' TOILET 43	P.T. - SR	P.T.	--	--	FULL HGT	PORCELAIN TILE (P.T.)	* AACB	8'-0" ±	REFER TO DWG A101 FOR WALL PATTERN / NEW FLR TILE TO BE INSTALLED OVER EX. FLOORING - * NEW GRID
44	GIRLS' TOILET 44	P.T. - SR	P.T.	--	--	FULL HGT	PORCELAIN TILE (P.T.)	* AACB	8'-0" ±	REFER TO DWG A101 FOR WALL PATTERN / NEW FLR TILE TO BE INSTALLED OVER EX. FLOORING - * NEW GRID

FINISH NOTES:

1. NEW TILE FLOOR SHALL BE INSTALLED WITH POSITIVE PITCH TO NEW FLOOR DRAIN LOCATIONS. PREPARE EXISTING SURFACE WITH PATCHING AS NECESSARY FOR NEW FLOOR FINISH.
2. NEW WALL TILE SHALL BE INSTALLED FULL HEIGHT. PREP EXISTING WALL CONSTRUCTION AS NECESSARY FOR PROPER INSTALLATION OF NEW WALL TILE.
3. FINISH MATERIAL INDICATED REFERS ONLY TO AREAS WHERE NEW FINISH IS REQUIRED TO MATCH EXISTING ADJACENT MATERIAL AT VARIOUS LOCATIONS OF DEMOLITION AND PATCHING. SEE DEMOLITION PLANS AND FLOOR PLANS.
4. PAINT LAVATORY PIPE ENCLOSURES - COLOR AS SELECTED BY ARCHITECT

PORCELAIN TILE (P.T.) INSTALLATION NOTES:

1. BEFORE WORK COMMENCES, GC IS TO EXAMINE THE AREAS TO BE COVERED AND REPORT ANY DEFICIENCY OR ADVERSE CONDITION IN WRITING TO THE ARCHITECT.
2. DO NOT PROCEED WITH THE WORK UNTIL SURFACES AND CONDITIONS COMPLY WITH THE REQUIREMENTS INDICATED IN THE MANUFACTURER'S INSTRUCTIONS AND IN ANSI A108.5, A108.6 AND A108.12. SPECIFICATIONS.
3. REFER TO THE TCNA HANDBOOK FOR CERAMIC TILE INSTALLATION DETAILS (TR-712 AND TR- 713).
4. ALL SUPPORTING SURFACES MUST BE STRUCTURALLY SOUND, SOLID, STABLE,LEVEL, PLUMB AND TRUE.
5. COMPLETELY REMOVE ALL PAINT, LOOSELY BONDED TOPPING, LOOSE PARTICLES AND CONSTRUCTION DEBRIS BY MECHANICAL MEANS.
6. ACID ETCHING IS NOT RECOMMENDED.
7. ALL SUBSTRATES SHOULD BE DRY.

GENERAL FINISH NOTES:

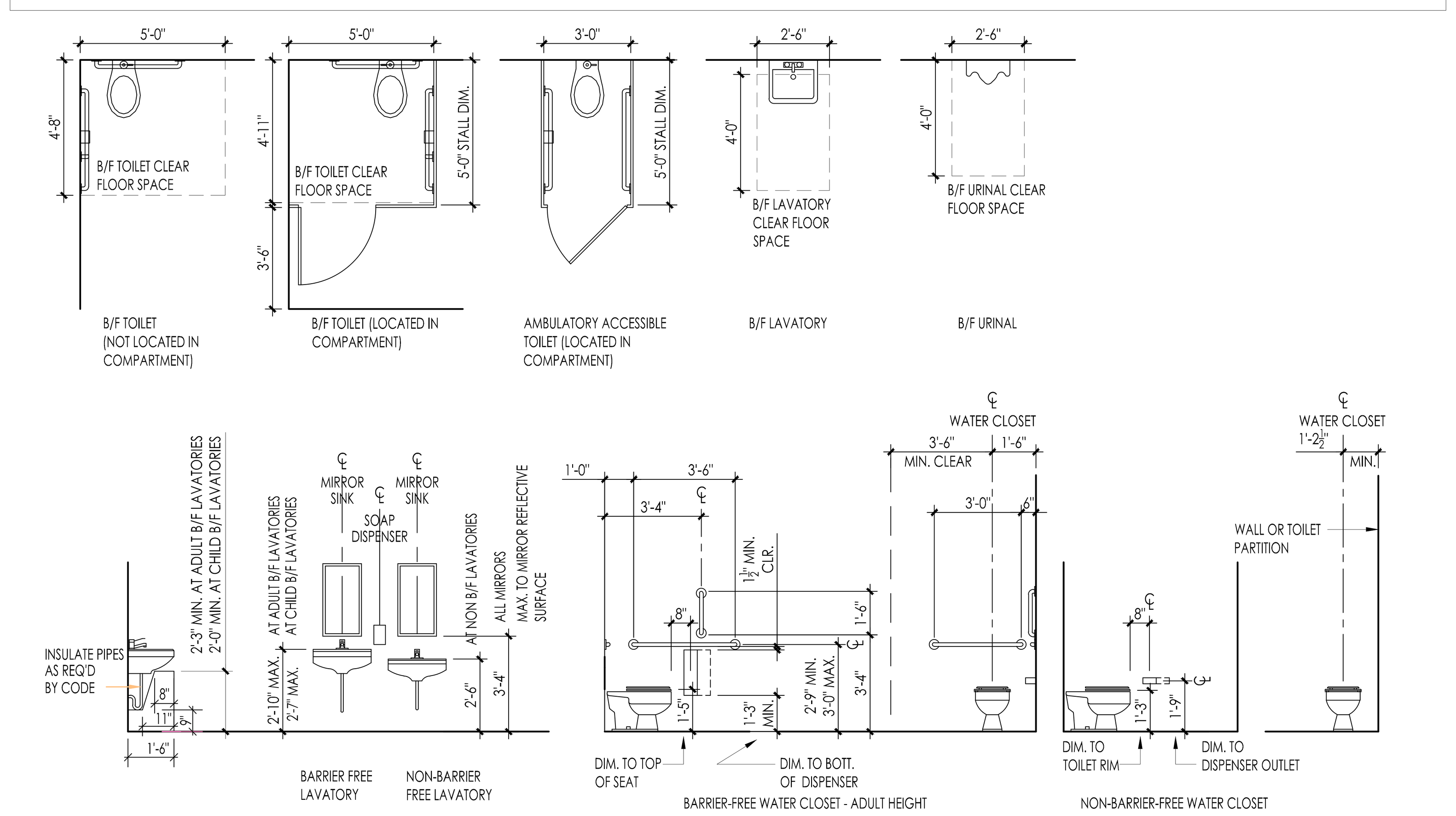
1. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION ON MATERIALS / MANUFACTURER / PERFORMANCE AND WARRANTY INFORMATION.
2. WITHIN THE EXISTING BUILDINGS, AT ALL AREAS OF NEW CONSTRUCTION ADJACENT TO EXISTING, NEW CONSTRUCTION SHALL BE FINISHED TO MATCH EXISTING ADJACENT CONSTRUCTION, INCLUDING BRICK, TILE, PLASTER, BASE, ETC.
3. MATERIALS LISTED ON THE FINISH SCHEDULE REFER TO THE MAJORITY OF WALLS, FLOOR AND CEILING OF ROOMS SCHEDULED, REFER TO PLANS, DETAILS, INTERIOR ELEVATION, AND NOTES FOR THOSE MATERIALS NOT INDICATED ON THE SCHEDULE BUT ARE STILL REQUIRED IN THE ROOM.
4. AT ALL AREAS OF EXISTING SURFACES BEING PAINTED, THE GENERAL CONSTRUCTION WORK CONTRACTOR SHALL REMOVE PRIOR TO PAINTING AND RE-INSTALL AFTER PAINTING ALL ELECTRICAL DEVICES (SWITCHES, OUTLETS, ETC.) COVER PLATES.
5. PROVIDE OPTION FOR (4) FOUR COLORS OF FLOOR AND WALL TILE. PATTERN AND COLORS SELECTED BY ARCHITECT.

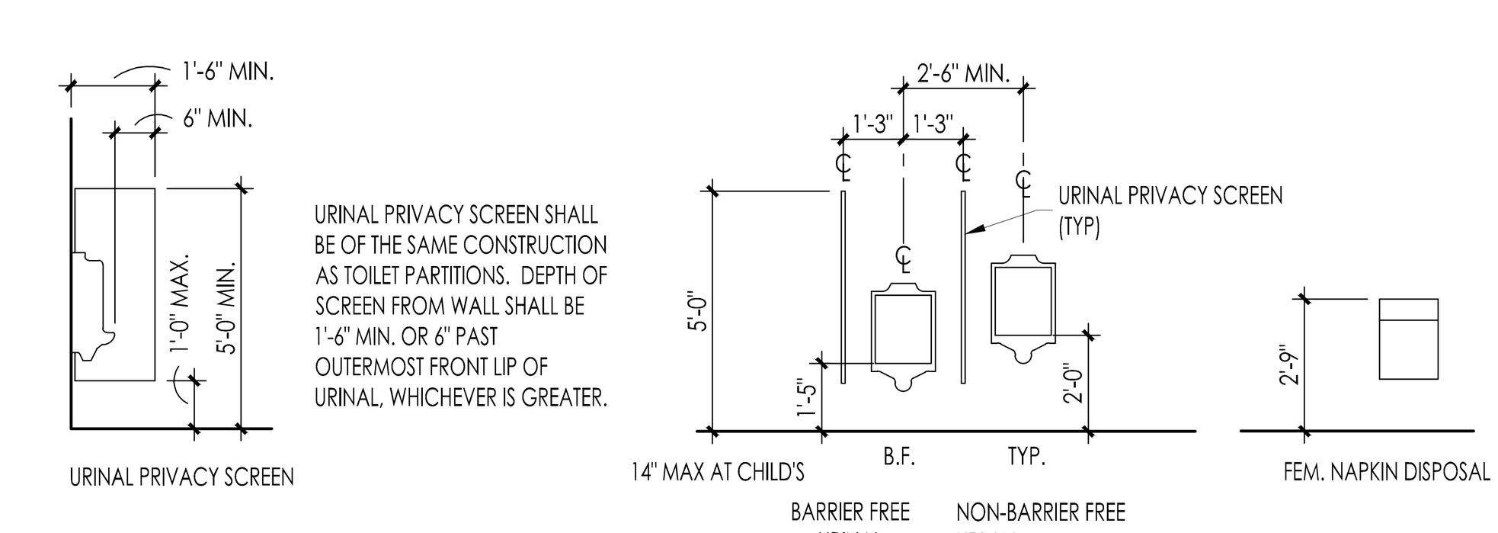
GENERAL DOOR NOTES:

1. ALL DOORS ARE 1 3/4" THICK UNLESS OTHERWISE NOTED.
2. CONTRACTOR TO COORDINATE NEW HARDWARE WITH EXISTING HM DOOR FRAME TO REMAIN.
3. ALL UPGRADED HARDWARE IS TO BE PROVIDED WITH RETROFIT TRIM.
4. PREP , PATCH AND PAINT EXISTING HOLLOW METAL FRAMES.
5. NEW FRIG-1 GLASS IS TO RECEIVE SECURITY WINDOW FILM (SWF) - **UNDER BASE BID** ALL GLAZING PROVIDED FOR NEW DOORS IS TO BE " SECURITY GLAZING' UNDER **ALTERNATE BID**
6. ALL ACCESS CONTROL IS TO BE DONE UNDER SEPARATE CONTRACT (BY OTHERS)

ABBREVIATIONS :

ACB	ACOUSTIC CEILING BOARD
AACB	ACRYLIC ACOUSTIC CEILING BOARD
CARPET-T	CARPET TILE
CEP	CMU - EPOXY PAINTED
CONC	CONCRETE - SEALED
CP.	CMU - PAINTED
C.T.	CERAMIC TILE
EP	EPOXY PAINTED
ETR	EXISTING TO REMAIN
ETR-P	EXISTING TO REMAIN - PAINTED
ETR-EP	EXISTING TO REMAIN - EPOXY PAINTED
EXP-TECTUM	EXPOSED TECTUM - EPOXY PAINTED
FRIG-1	RATED GLAZING - SEE SPECIFICATION
GP	GYPSUM PAINTED
HM	HOLLOW METAL
ME	MATCH EXISTING
P.T.	PORCELAIN TILE
P.T. - SR	PORCELAIN TILE - SLIP RESISTANT
PTD	PAINTED
RUB	RUBBER BASE
SWF	SECURITY WINDOW FILM
VCT	VINYL COMPOSITION TILE
WD	WOOD





NOTES:

1. DIMENSIONS SHALL BE NET CLEAR DISTANCES MEASURED TO WALL FINISHES (EG CERAMIC TILE), TO FACE OF TOILET PARTITIONS AND TO EDGES OF ADJACENT FIXTURES, CABINETS, ETC.
2. ALL DIMENSIONS ARE MINIMUM UNLESS NOTED OTHERWISE.
3. INSTALLATIONS SHALL COMPLY WITH ALL PROVISIONS OF ICC-ANSI A117 . 1 - 2009, INCLUDING BUT NOT LIMITED TO:
   - 3.1. SECTION 603 (TOILET AND BATHING ROOMS)
   - 3.2. SECTION 604 (WATER CLOSETS AND TOILET COMPARTMENTS)
   - 3.3. SECTION 605 (URINALS)
   - 3.4. SECTION 606 (LAVATORIES AND SINKS)
   - 3.7. SECTION 609 (GRAB BARS)
4. CLEAR FLOOR SPACES MAY OVERLAP WHERE SPECIFICALLY PERMITTED IN ICC-ANSI A117 . 1 - 2009 CHAPTER 6.

TYPICAL FIXTURE / ACCESSORY MOUNTING HEIGHTS
SCALE: 1/4"=1'-0"

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Project Name
Toilet Room, Classroom Renovations, Doors-Lore Elementary School

Project Owner Name
Ewing Public Schools

Project Location
13 Westwood Drive, Ewing, NJ 08628

Project Number
5015L2

Project Date
02.08.2019

Checked By
GRD

Drawn By
AMD

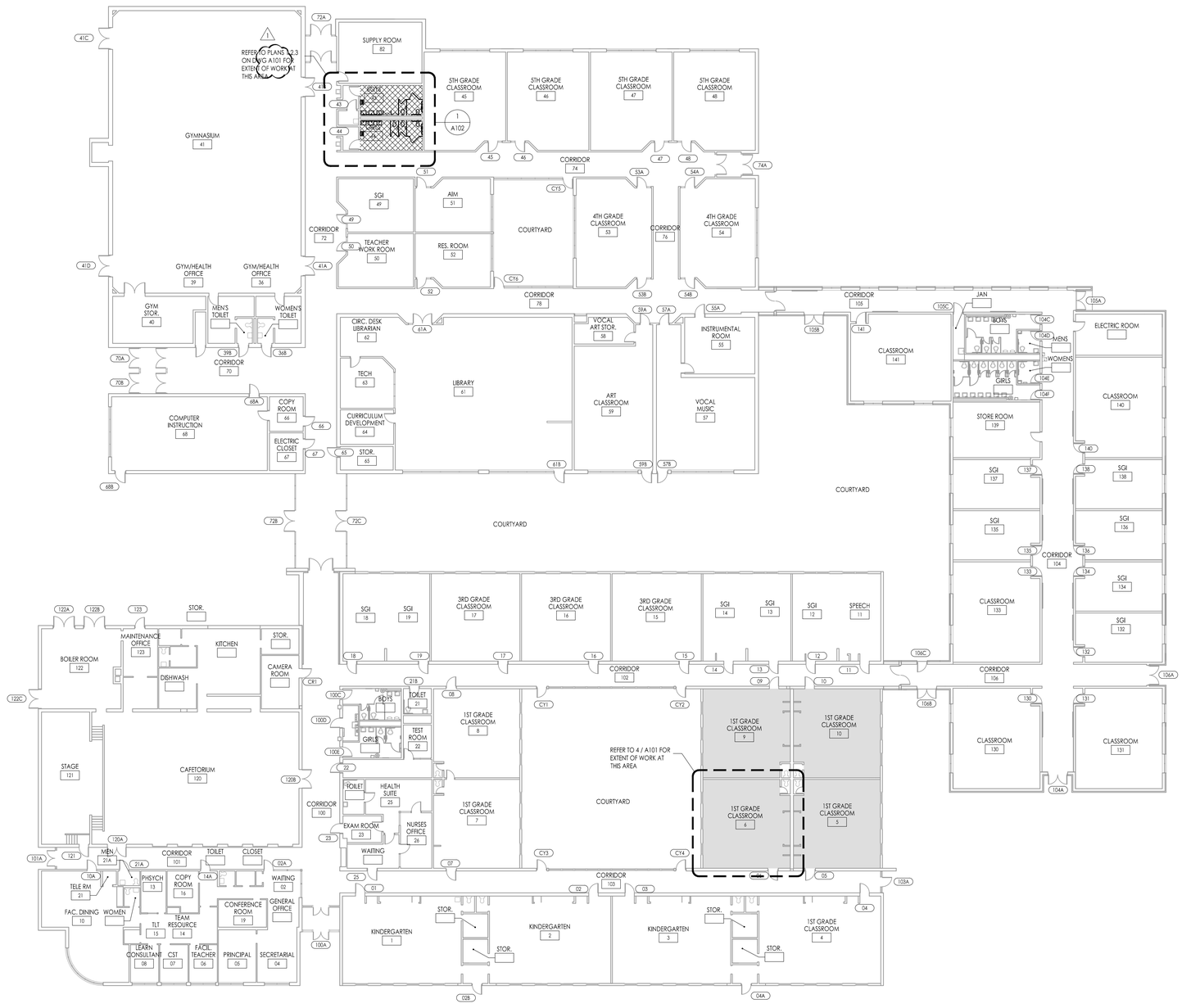
Scale
AS NOTED

Drawing Name
ROOM AND DOOR FINISH SCHEDULES, NOTES AND DOOR INFORMATION

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
G002



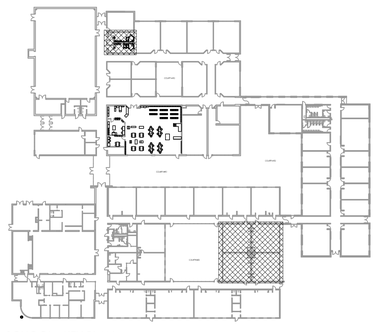
1 FIRST FLOOR KEY PLAN
SCALE: 1/16"=1'-0"

LEGEND

EXISTING TOILET RENOVATIONS
NEW FINISHES - WALL TILE AND FLOORS
NEW CEILING TILE AND GRID
NEW PLUMBING FIXTURES AND ACCESSORIES
NEW DOOR / NEW HARDWARE (EXISTING FRAME - PTD)

RENOVATED ROOMS
NEW VCT (WITH ABATEMENT OF EXISTING VAT)
NEW ACT AND LIGHTING (EXISTING GRID TO REMAIN)
NEW DOOR / NEW HARDWARE (EXISTING FRAME - PTD)

NOTE :
REFER TO ROOM FINISH SCHEDULE FOR EXTENT OF WORK AT EACH ROOM



SCHOOL - KEY PLAN
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Scale
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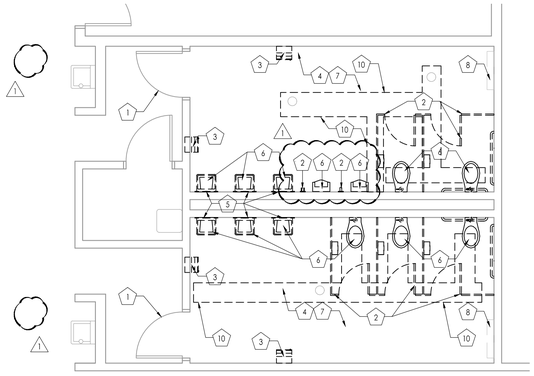
Drawing Name
FIRST FLOOR PLAN

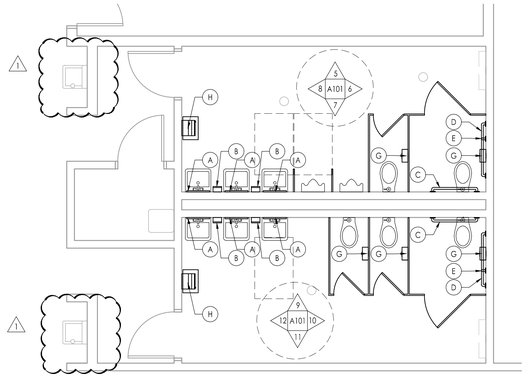
Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

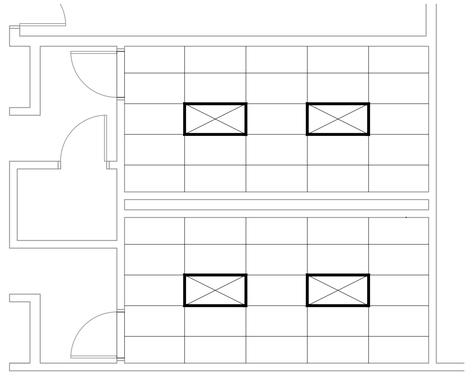
Drawing Number
A100



1 ENLARGED TOILETS - DEMOLITION PLANS
SCALE: 1/4"=1'-0"



2 ENLARGED TOILETS - FLOOR PLAN
SCALE: 1/4"=1'-0"



3 ENLARGED TOILETS - REFLECTED CEILING PLAN
SCALE: 1/4"=1'-0"

GENERAL DEMOLITION NOTES:

A. ALL CONTRACTORS ARE ADVISED TO VISIT THE SITE AND VERIFY ALL AREAS AND CONDITIONS PRIOR TO SUBMITTING THEIR BIDS. THE CONTRACTOR MUST NOTIFY THE ARCHITECT OF ANY DISCREPANCIES AND/OR OMISSIONS IN WRITING AT LEAST SEVEN DAYS PRIOR TO THE RECEIPT OF BIDS. FAILURE TO SO NOTIFY THE ARCHITECT INDICATES THAT ANY ADDITIONAL COSTS ASSOCIATED WITH THE DISCREPANCIES AND / OR OMISSIONS ARE INCLUDED IN THE CONTRACTOR'S BID AND THAT NO CHANGE TO THE CONTRACT AMOUNT WILL BE MADE AFTER THE RECEIPT OF BIDS OR THE AWARD OF CONTRACTS.

B. ALL PLUMBING, HVAC OR ELECTRICAL DISCONNECTS SHALL BE MADE BY THE RESPECTIVE TRADES. ALL EQUIPMENT, DEVICES, FIXTURES, ETC., SHALL BE REMOVED FROM THE SITE BY THE RESPECTIVE CONTRACTOR. NOTE: THE EXISTING FIRE ALARM SYSTEM SHALL NOT BE DIMINISHED NOR SHALL EXISTING FIRE ALARM DEVICES BE REMOVED UNTIL NEW DEVICES ARE READY FOR SWITCHOVER.

C. UNLESS NOTED OTHERWISE ALL DEMOLITION MATERIAL SHALL BE REMOVED OFF SITE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

D. THERE ARE SOME SPECIFIC ITEMS DESIGNATED BY THE ARCHITECT FOR SALVAGE. THESE ITEMS ARE INTENDED FOR REUSE IN THE NEW CONSTRUCTION. THE CONTRACTOR MUST TAKE CARE IN THE REMOVAL AND STORAGE OF THESE ITEMS UNTIL THEY ARE NEEDED IN THE NEW CONSTRUCTION.

E. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROTECT PORTIONS OF THE EXISTING CONSTRUCTION WHICH ARE ADJACENT TO AREAS TO BE DEMOLISHED. MAKE ALL CUTS AS NEATLY AS POSSIBLE. REFER TO FLOOR PLAN DRAWINGS FOR FINISHING OF THESE AREAS.

F. IF NOT OTHERWISE NOTED OR DETAILED, ALL SURFACES LEFT ROUGH OR UNFINISHED BY DEMOLITION AND WHICH ARE EXPOSED TO VIEW, SHALL BE PATCHED TO MATCH ADJACENT SURFACES AND FINISHED TO PROVIDE A UNIFORM APPEARANCE WITH REGARD TO SIZE, SHAPE, COLOR, TEXTURE AND MATERIAL.

G. THE CONTRACTOR SHALL PROVIDE A PHYSICAL BARRIER TO CONTAIN DUST AND DIRT AROUND THE DEMOLITION AREA AND SHALL MAKE EVERY EFFORT TO KEEP THE DEMOLITION SITE AND SURROUNDING AREAS AS CLEAN AS POSSIBLE. ALL TEMPORARY PARTITIONS SHALL BE 1 HOUR RATED CONSTRUCTION AND INCLUDE A DOOR.

H. NO DEMOLITION SHALL BEGIN UNTIL PROPER PROTECTION IS IN PLACE AND APPROVED BY ARCHITECT & OWNER TO ENSURE THE SAFETY OF THE PUBLIC, THE BUILDING OCCUPANTS, CONSTRUCTION WORKERS AND TO CONTAIN DUST AND DIRT WITHIN THE AREA OF DEMOLITION.

I. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS REGARDING THE REMOVAL AND DISPOSAL OF ALL MATERIALS & EQUIPMENT.

J. THE CONTRACTOR SHALL PROVIDE PROTECTION AGAINST INCLEMENT WEATHER FOR THE EXISTING BUILDING DURING THE INTERIM PERIOD BETWEEN DEMOLITION AND THE COMPLETION OF NEW CONSTRUCTION.

K. THE CONTRACTORS SHALL TAKE INTO ACCOUNT THEIR METHODS OF CONSTRUCTION FOR THE NEW WORK AND INCLUDE IN THEIR BID THE COST OF ADDITIONAL DEMOLITION WORK NECESSARY TO FACILITATE THE CONSTRUCTION. THIS WORK INCLUDES, BUT IS NOT LIMITED TO THE PARTIAL DEMOLITION OF WALLS AT THE POINTS WHERE NEW STEEL CONNECTS TO EXISTING BEAMS OR COLUMNS, THE AREA AROUND JOINTS BETWEEN NEW AND EXISTING CONSTRUCTION IN WALLS, FLOORS AND CEILINGS, AREAS OF SIDEWALK AND PAVING, ETC. MUCH OF THIS WORK IS INDICATED IN SECTIONS AND DETAILS RELATING TO THE NEW CONSTRUCTION.

L. THE DEMOLITION WORK SHOWN ON THIS PLAN IS INTENDED TO BE A GENERAL OVERVIEW OF MAJOR DEMOLITION WORK REQUIRED. IT IS NOT A COMPLETE AND EXCLUSIVE REPRESENTATION OF ALL DEMOLITION WORK NEEDED FOR EXECUTION OF THE PROJECT. WHEN PREPARING THEIR BIDS, CONTRACTORS MUST REFER TO THE FULL SET OF CONSTRUCTION DOCUMENTS FOR VARIOUS MISCELLANEOUS ITEMS WHICH MUST BE REMOVED AND/OR RELOCATED AS PART OF THE WORK.

M. ALL PRIME CONTRACTORS ARE RESPONSIBLE FOR THEIR OWN CUTTING AND PATCHING - SEE SPECIFICATION.

N. THE OWNER HAS THE RIGHT OF FIRST REFUSAL FOR ALL EQUIPMENT AND FIXTURES (CABINETS, SHELVING, ETC.) REMOVED UNDER CONTRACT. IF THE OWNER DOES NOT EXERCISE THIS RIGHT FOR AN INDIVIDUAL PIECE OF EQUIPMENT, THE GENERAL CONTRACTOR SHALL REMOVE SAID EQUIPMENT FROM SITE.

DEMOLITION / CONSTRUCTION NOTES:

REFER TO MECHANICAL / ELECTRICAL / PLUMBING DRAWINGS FOR ADDITIONAL DEMO/CONSTRUCTION NOTES

1. EXISTING DOOR AND HARDWARE TO BE REMOVED IN THEIR ENTIRETY INCLUDING MARBLE SADDLE. EXISTING DOOR FRAME TO BE REPAIRED AS REQUIRED, AND PAINTED TO RECEIVE NEW DOOR AND HARDWARE.
2. EXISTING URINAL AND TOILET PARTITIONS TO BE REMOVED IN THEIR ENTIRETY INCLUDING ALL RELATED TOILET ACCESSORIES AND GRAB BARS. PATCH AND REPAIR ANY DISTURBED AREAS IN PREPARATION FOR NEW WORK AND INSTALLATIONS.
3. REMOVE ALL EXISTING TOILET ACCESSORIES (PAPER TOWEL / SOAP DISPENSERS) PATCH AND REPAIR ANY DISTURBED AREAS IN PREPARATION OF NEW FINISHES AND INSTALLATIONS. WHERE RECESSED PAPER TOWEL DISPENSER IS REMOVED, INFILL REMAINING OPENING WITH SIMILAR MATERIAL (CMU) ALIGNED WITH ADJACENT SURFACE IN PREPARATION FOR NEW FINISHES.
4. REMOVE EXISTING CEILING GRID AND TILES INCLUDING ALL RELATED MEP INSTALLATIONS IN PREPARATION FOR NEW SUSPENDED CEILING . COORDINATE REMOVALS WITH ALL OTHER TRADES. REFER TO MEP DRAWINGS FOR ADDITIONAL INFORMATION AND EXTENT. PROVIDE ALL EXTENSIONS AND MATERIALS AS REQUIRED TO MEET NEW CONDITIONS.
5. REMOVE EXISTING MIRRORS AND / OR LEVELING FURRING WOOD USED FOR THEIR INSTALLATION. PATCH AND REPAIR ANY DISTURBED AREAS AS REQUIRED FOR NEW FINISHES APPLICATION.
6. REMOVE EXISTING TOILET FIXTURES IN THEIR ENTIRETY INCLUDING ALL RELATED PIPING , HANGERS AND INSTALLATIONS. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION AND PROCEDURES.
7. THOROUGHLY INSPECT AND CLEAN EXISTING FLOOR TILE IN PREPARATION FOR NEW LEVELING MATERIAL AND TILE INSTALLATION. CONFIRM EXISTING TILE AND SUBSTRATE CONDITION TO ASSURE THE STRUCTURAL STABILITY OF NEW FLOOR TILE.
8. EXISTING HEATING ELEMENT TO BE REPLACED. COORDINATE TYPE WITH MEP NEW WORK AND INSTALLATIONS. PATCH AND REPAIR ANY DISTURBED AREAS TO MATCH NEW CONSTRUCTION AND FINISHES.
9. NOT USED
10. REMOVE EXISTING FLOOR AND CONCRETE SLAB AS REQUIRED FOR PLUMBING REMOVALS AND NEW INSTALLATIONS. REFER TO MEP DRAWING FOR ADDITIONAL INFORMATION AND METHODOLOGY AND COORDINATE WITH PLUMBING CONTRACTOR FOR EXTENT OF DEMOLITION. PROVIDE NEW EXTENSIONS, CLEAN-OUTS AND FLOOR DRAIN COVERS - TYP.

TOILET ROOM ACCESSORIES

NO.	CAT. NO.	DESCRIPTION	SIZE W	SIZE H	SIZE D	REMARKS
A	780-1830	MIRROR	18"	30"		1/4" TEMPERED GLASS MIRROR
B	--	SOAP DISPENSER(SURFACE-MOUNTED TANK TYPE VERTICAL)	--	--	--	NOTE 3
C	800-001-36"	GRAB BAR	36"	--	--	SAFETY-GRIP FINISH
D	800-001-42"	GRAB BAR	42"	--	--	SAFETY-GRIP FINISH
E	800-001-18"	GRAB BAR	18"	--	--	SAFETY-GRIP FINISH, MOUNT VERTICAL
G	--	TOILET TISSUE DISPENSER	--	--	--	NOTE 3
H	-	HAND PAPER TOWEL DISPENSER	-	-	-	NOTE 3

NOTES:
1. ALL CATALOG NUMBERS REFER TO BRADLEY WASHROOM ACCESSORIES UNLESS NOTED OTHERWISE.
2. INSTALL HANDICAP SIGNAGE ON FRONT OF ALL ADA TOILET STALLS. SEE SIGNAGE TYPE #2 ON THIS DRAWING.
3. SUPPLIED BY OWNER, INSTALLED BY GENERAL CONTRACTOR.

REFLECTED CEILING PLAN LEGEND

2' x 4' AACB OR ACB - SEE FINISH SCHEDULE FOR LOCATION.

LIGHTS (SEE ELECTRICAL DRAWINGS)

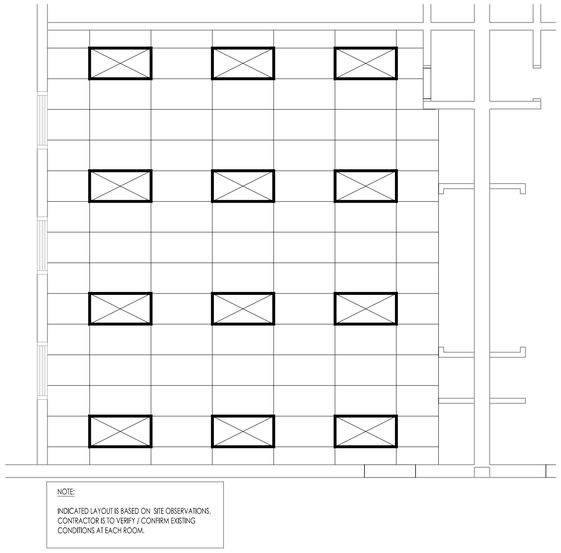
GRILL OR DIFFUSER (SEE MECHANICAL DRAWINGS)

REFLECTED CEILING NOTES:

1. SEE HVAC, PLUMBING AND ELECTRICAL DRAWINGS FOR TYPE, SIZE AND ADDITIONAL INFORMATION.
2. ALL DIFFUSERS AND LIGHTS TO BE CENTERED IN THE GWB OR ACB CEILING UNLESS NOTED OTHERWISE
3. CONTRACTOR TO COORDINATE LOCATION OF ALL DIFFUSERS AND LIGHTS.
4. SEE ROOM FINISH SCHEDULE FOR CEILING HEIGHTS

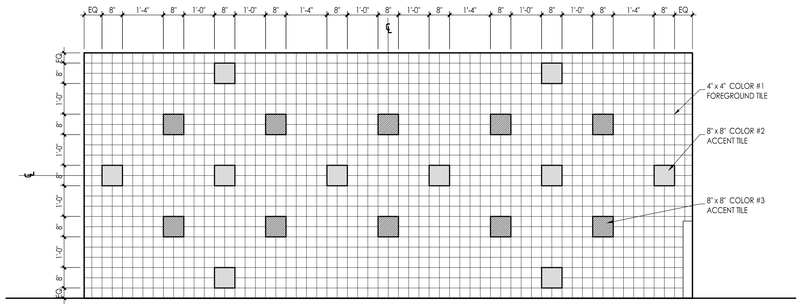
SIGN TYPE 2
CORNERS: 3/8" RADIUS

15 BARRIER FREE SIGNAGE @ ADA TOILET STALLS
SCALE: 1/2"=1'-0"

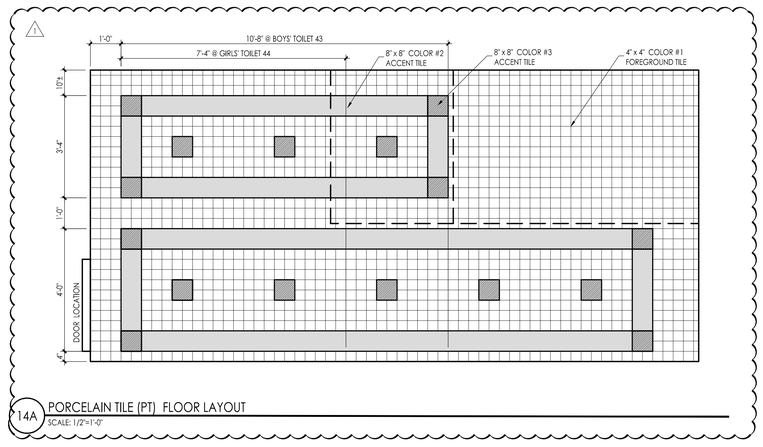


4 FIRST GRADE CLASSROOM 9 - REFLECTED CEILING PLAN
SCALE: 1/4"=1'-0"

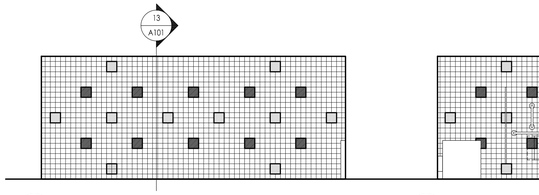
SIMILAR AT CLASSROOMS 5, 6 AND 10



14 PORCELAIN TILE (PT) LAYOUT (PATTERN / RYTHM TO BE MANTAINED AT FOUR WALLS)
SCALE: 1/2"=1'-0"

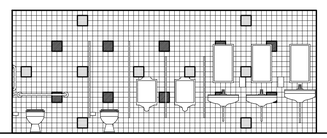


14A PORCELAIN TILE (PT) FLOOR LAYOUT
SCALE: 1/2"=1'-0"

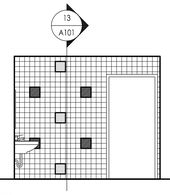


5 BOYS' TOILET 43 - INT. ELEVATION
SCALE: 1/4"=1'-0"

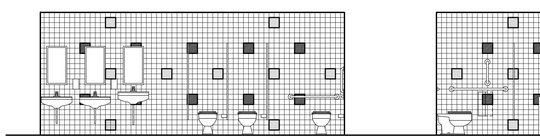
6 BOYS' TOILET 43 - INT. ELEVATION
SCALE: 1/4"=1'-0"



7 BOYS' TOILET 43 - INT. ELEVATION
SCALE: 1/4"=1'-0"

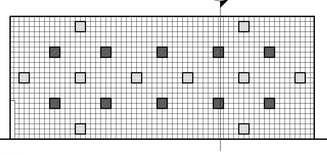


8 BOYS' TOILET 43 - INT. ELEVATION
SCALE: 1/4"=1'-0"

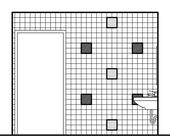


9 GIRLS' TOILET 44 - INT. ELEVATION
SCALE: 1/4"=1'-0"

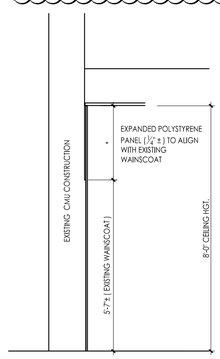
10 GIRLS' TOILET 44 - INT. ELEVATION
SCALE: 1/4"=1'-0"



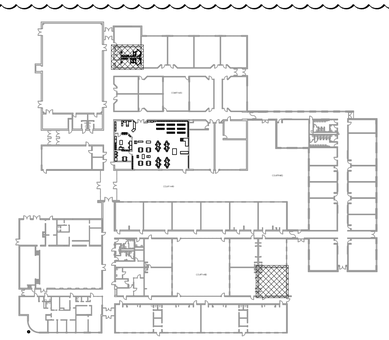
11 GIRLS' TOILET 44 - INT. ELEVATION
SCALE: 1/4"=1'-0"



12 GIRLS' TOILET 44 - INT. ELEVATION
SCALE: 1/4"=1'-0"



13 WALL SECTION / DETAIL
SCALE: 1/2"=1'-0"



SCHOOL - KEY PLAN
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AS NOTED

Drawing Name
ENLARGED FLOOR PLANS, DEMOLITION , NEW RCP, INTERIOR ELEVATIONS AND NOTES.

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
A101

GENERAL SYMBOLS

- DEMOLISHED WORK
- EXISTING WORK
- NEW WORK
- POINT OF CONNECTION (NEW TO EXISTING)
- EXTENT OF DEMOLITION
- POINT OF CONNECTION TO EQUIPMENT SUPPLIED BY CONTRACTOR
- SIM / 1 / # — SECTION CUT ARROW:
  1 = DENOTES SECTION IDENTIFICATION
  # = DENOTES DRAWING NUMBER OF SECTION DETAIL
- BREAK LINE (DOUBLE LINE DUCTWORK)
- BREAK LINE (DOUBLE LINE PIPING)
- BREAK LINE (SINGLE LINE)
- FLOW ARROW
- EQPM / # — EQUIPMENT TAG (REFER TO SCHEDULES AND/OR SPECS)
  EQPM = EQUIPMENT ABBREVIATION
  # = EQUIPMENT NUMBER
- TAG / XXX — EQUIPMENT TAG (REFER TO SCHEDULES AND/OR SPECS)
  TAG = AIR DEVICE ABBREVIATION
  CFM = AIR DEVICE FLOW

MECHANICAL SYMBOLS

Symbol	Description
Ø	DIAMETER
W x H	DUCTWORK SIZE (INSIDE DIMENSION IN INCHES)
M	MOTOR OPERATED DAMPER W/ ACCESS DOOR
FS	FLOW SWITCH
TT	TEMPERATURE TRANSMITTER
PT	PRESSURE TRANSMITTER
PS	PRESSURE SWITCH
	THERMOMETER
	GAUGE
	AQUASTAT
	BASKET STRAINER
	STEAM TRAP
VB	VACUUM BREAKER
T	THERMOSTAT
CO2	CARBON DIOXIDE SENSOR
S	SENSOR
H	HUMIDISTAT
	PIPE/DUCT CAP
M	MOTOR OPERATOR
	PUMP - INLINE
	FAN - SINGLE LINE
	GATE VALVE
	GLOBE VALVE
	PLUG VALVE
	BUTTERFLY VALVE
	BALL VALVE
	CHECK VALVE
	LIFT CHECK VALVE
	GATE VALVE, ANGLE
	GLOBE VALVE, ANGLE
	BALANCING VALVE
CBV	CIRCUIT SETTING BALANCING VALVE
	THREE WAY CONTROL VALVE
	TWO WAY CONTROL VALVE
	SOLENOID VALVE
	PRESSURE REDUCING VALVE
	TEMP/PRESS RELIEF VALVE
	SAFETY RELIEF VALVE
	FLEXIBLE CONNECTION
	GAS COCK
	FUSIBLE LINK VALVE - QUICK CLOSING
	FUSIBLE LINK VALVE - QUICK OPENING
MV	MANUAL AIR VENT
AV	AUTO AIR VENT
	FLOW METER - VENTURI
	FLOW METER - ORIFICE
	STRAINER
	STRAINER WITH BLOW OFF VALVE
	PIPE RISING
	PIPE DROPPING DOWN
	TEE OUTLET DOWN
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	UNION - SCREWED OR FLANGED
×	ANCHOR
=	GUIDE

MECHANICAL ABBREVIATIONS

(D)	DEMOLISH
(E)	EXISTING
(F)	REFURBISH
(M)	PROVIDED BY MANUFACTURER
(N)	NEW
(R)	RELOCATE
AC	AIR CONDITIONING UNIT
ACC	AIR COOLED CONDENSER
ACCU	AIR COOLED CONDENSING UNIT
ACFM	ACTUAL CUBIC FEET PER MINUTE
AD	ACCESS DOOR
ADJ	ADJUSTABLE
AF	AIRFOIL
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AI	ANALOG INPUT
AL	ACOUSTICAL LINING
AMB	AMBIENT
AMS	AIR FLOW MEASURING STATION
AO	ANALOG OUTPUT
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
ARCH	ARCHITECTURAL
AS	AIR SEPARATOR
ASC	APPLICATION SPECIFIC CONTROLLER
ATC	AUTOMATIC TEMPERATURE CONTROL
AVG	AVERAGE
AWT	AVERAGE WATER TEMPERATURE
B	BOILER
BAS	BUILDING AUTOMATION SYSTEM
BDD	BACKDRAFT DAMPER
BDS	BLOWDOWN SEPARATOR
BFP	BACK FLOW PREVENTER OR BOILER FEED PUMP
BFU	BOILER FEED UNIT
BHP	BRAKE HORSEPOWER OR BOILER HORSEPOWER
BI	BACKWARD INCLINED OR BINARY INPUT
BLD	BUILDING
BO	BINARY OUTPUT
BOD	BOTTOM OF DUCT OR BASIS OF DESIGN
BOP	BOTTOM OF PIPE
BOT	BOTTOM
BRD	BAROMETRIC RELIEF DAMPER
BT	BLOWDOWN TANK
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
C	CONVECTOR
CAP	CAPACITY
CAV	CONSTANT AIR VOLUME
CB	CONCRETE BASE
CC	COOLING COIL
CCO	CAPPED CURB OPENING
CD	CEILING DIFFUSER
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CL	COOLING
CLG	CEILING
CMPR	COMPRESSOR
CO	CLEAN OUT
COL	COLUMN
CONC	CONCENTRATION OR CONCRETE
COND	CONDENSATE (STEAM/ COOLING COIL)
CONN	CONNECTION
CONT	CONTINUATION
CP	CONDENSATE PUMP
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT
CT	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CV	COEFFICIENT OF CAPACITY
D	DROP
DA	DEAERATOR
DB	DRY BULB
DC	DRY COOLER
DDC	DIRECT DIGITAL CONTROL
DEFL	DEFLECTION
DET	DETAIL
DIA	DIAMETER
DISC	DISCONNECT
DISCH	DISCHARGE
DI	DIGITAL INPUT
DN	DOWN
DO	DIGITAL OUTPUT
DR	DRAIN
DS	DISCONNECT SWITCH
DWG	DRAWING
EA	EXHAUST AIR OR EACH
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECH	ELECTRIC CEILING HEATER
EDB	ENTERING DRY BULB TEMPERATURE
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EFF	EFFICIENCY
EG	EXHAUST GRILLE
EJ	EXPANSION JOINT
ELEC	ELECTRIC
ELEV	ELEVATION

EM	EQUIPMENT MANUFACTURER
EMER	EMERGENCY
ENT	ENTERING
ER	EXHAUST REGISTER
ERAD	ELECTRIC RADIATION
ERC	EXHAUST ENERGY RECOVERY COIL
ERU	ENERGY RECOVERY UNIT
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EVC	EVAPORATIVE COOLER
EWB	ENTERING WET BULB TEMPERATURE
EWH	ELECTRIC WATER HEATER
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXIST	EXISTING
EXT	EXTERNAL
F	FILTER
F&T	FLOAT AND THERMOSTATIC STEAM TRAP
FA	FACE AREA
FA	FROM ABOVE
FAS	FIRE ALARM SYSTEM
FB	FROM BELOW
FC	FORWARD CURVED
FCU	FAN COIL UNIT
FD	FIRE DAMPER OR FLOOR DRAIN
FIN	FINAL
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLR	FLOOR
FLTR	FILTER
FM	FLOW METERING DEVICE
FO	FUEL OIL
FOB	FLAT ON BOTTOM
FOF	FUEL OIL FILL
FOO	FUEL OIL OVERFLOW
FOP	FUEL OIL PUMP
FOS	FUEL OIL SUPPLY
FOT	FLAT ON TOP
FPB	FAN POWERED BOX
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FLASH TANK OR FOOT OR FEET
FTR	FINNED TUBE RADIATION
FUT	FUTURE
FXC	FLEXIBLE CONNECTION
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRILLE
GRV	GRAVITY ROOF VENT
GV	GRAVITY VENT
H	HUMIDIFIER
HAV	HEAT ACTUATED SHUTOFF VALVE
HC	HEATING COIL
HG	MERCURY
HO	HUB OUTLET
HP	HORSEPOWER
HTG	HEATING
HV	HEATING & VENTILATING UNIT
HWG	HOT WATER GENERATOR
HX	HEAT EXCHANGER
ID	INSIDE DIAMETER
IN	INCHES
INT	INITIAL
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LB	POUND
LD	LINEAR DIFFUSER
LDB	LEAVING DRY BULB TEMPERATURE
LF	LINEAR FOOT
LG	LINEAR GRILLE
LOC	LOCATION
LP	PROPANE
LRA	LOCKED ROTOR AMPS
LVG	LEAVING
LWB	LEAVING WET BULB TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBC	MODULAR BUILDING CONTROLLER
MBH	1000 BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MER	MECHANICAL EQUIPMENT ROOM
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM OR MINUTE
MOCP	MAXIMUM OVER-CURRENT PROTECTION
MOD	MOTOR OPERATED DAMPER
MODU	MODULATING
MXB	MIXING BOX
N	NEW
NC	NORMALLY CLOSED
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN OR NUMBER
NTS	NOT TO SCALE

OA	OUTSIDE AIR
OAE	OUTSIDE AIR ENTHALPY
OAH	OUTSIDE AIR HUMIDITY
OAI	OUTSIDE AIR INTAKE
OAT	OUTSIDE AIR TEMPERATURE
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OED	OPEN ENDED DUCT
OEM	ORIGINAL EQUIPMENT MANUFACTURER
OPER	OPERATING
OPNG	OPENING
P	PUMP
PBD	PARALLEL BLADE DAMPER
PC	PUMPED CONDENSATE
PD	PRESSURE DROP
PFHX	PLATE & FRAME HEAT EXCHANGER
PHC	PREHEAT COIL
PLN	PLENUM
POS	POSITION
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH- ABSOLUTE
PSIG	POUNDS PER SQUARE INCH- GAUGE
QUAN or	QUANTITY
QTY	RISE
R	RETURN OR RELIEF AIR
RA	RETURN AIR ENTHALPY
RAE	RETURN AIR HUMIDITY
RAH	RETURN AIR TEMPERATURE
RAT	RADIANT CEILING PANEL
RCP	REQUIRED
REQ	RETURN
RET	REVISION
REV	RETURN FAN
RF	RETURN GRILLE
RG	RELIEF HOOD OR RELATIVE HUMIDITY
RH	REHEAT COIL
RHC	ROTARY HEAT WHEEL
RHW	RUN LOAD AMPS
RLA	ROOM
RM	RECIRCULATION PUMP
RP	REVOLUTIONS PER MINUTE
RPM	RETURN REGISTER
RR	ROOFTOP UNIT
RTU	RELIEF VALVE
RV	SUPPLY AIR
SA	STRUCTURAL BASE
SB	SELF CONTAINED UNIT
SCU	SMOKE DAMPER OR DETECTOR
SD	SECOND
SEC	EFFICIENCY RATING
SEER	SENSIBLE
SENS	SUPPLY FAN
SF	SUPPLY GRILLE
SG	SPRING HANGER
SI	SCREENED OPENING
SO	STATIC PRESSURE IN WG
SP	STEAM PRESSURE DROP
SPD	SUPPLY REGISTER
SR	SUPPLY ENERGY RECOVERY COIL
SRC	SAFETY RELIEF VALVE
SRV	SIDE-STREAM FILTER
SSF	SOUND ATTENUATOR
ST	STANDBY
STBY	STEAM
STM	SUPPLY
SUP	SURGE TANK
SUT	TRANSFER AIR
TA	TRANSFER AIR DUCT
TAD	TERMINAL EQUIPMENT CONTROLLER
TEC	TRANSFER GRILLE
TG	TOP OF DUCT
TOD	TOP OF PIPE
TOP	TOTAL
TOT	TRANSFER PUMP
TP	TOTAL STATIC PRESSURE
TSP	TIGHT TO STRUCTURE
TTS	TYPICAL
TYP	UNIT HEATER
UH	UNLESS NOTED OTHERWISE
UNO	VARIABLE AIR VOLUME
VAV	VOLUME DAMPER
VD	VELOCITY
VEL	VARIABLE FREQUENCY DRIVE
VFD	VIBRATION
VIB	VARIABLE INLET VALVES
VIV	VENT THROUGH ROOF
VTR	VARIABLE VOLUME AND TEMPERATURE
VVT	WITH
W/	WITHOUT
W/O	WET BULB
WB	WATER COOLED CONDENSING UNIT
WCU	WATER GAUGE
WG	WATER SOURCE HEAT PUMP
WHP	WIRE MESH SCREEN
WMS	WATER PRESSURE DROP
WPD	

GENERAL NOTES

1. MECHANICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES INDICATED ON THIS DRAWING ARE TYPICAL. MECHANICAL DRAWINGS MAY NOT INDICATE ALL SYMBOLS AND ABBREVIATIONS SHOWN ON THIS DRAWING.
2. THE TERM "PROVIDE" MEANS "FURNISH AND INSTALL".
3. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL HVAC/MECHANICAL DRAWINGS.
4. THE CONTRACTOR SHALL ABIDE AND ENFORCE ALL SAFETY RULES AND REGULATIONS SET FORTH BY THE OWNER. ALL WORKERS AND SUPERVISORS MUST ATTAIN SAFETY TRAINING CLASSES (IF APPLICABLE). THE CONTRACTOR SHALL BE RESPONSIBLE TO FOLLOW ALL VERBAL INSTRUCTIONS GIVEN BY OWNERS REPRESENTATIVES.
5. THE SUBMISSION OF A BID BY THE CONTRACTOR IS NOTIFICATION THAT THE CONTRACTOR HAS TOTALLY FAMILIARIZED HIMSELF WITH THE CONTRACT DOCUMENTS AND EXISTING SITE CONDITIONS AND HAS AGREED TO PROVIDE THE NECESSARY LABOR AND MATERIAL FOR THE COMPLETE INSTALLATION OF EACH SYSTEM IN A NEAT AND WORKMANLIKE MANNER IN ACCORDANCE WITH THE BEST PRACTICES OF THE INDUSTRY AND IN COMPLIANCE WITH ALL AUTHORITIES HAVING JURISDICTION.
6. THESE DRAWINGS ARE PRESENTED TO THE CONTRACTOR WITH THE UNDERSTANDING THAT THE CONTRACTOR IS AN EXPERT AND COMPETENT IN THE PREPARATION OF CONTRACT BID PRICES ON THE BASIS OF INFORMATION SUCH AS IS CONTAINED IN THESE DOCUMENTS. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION AND IN COMPLETE CONFORMANCE WITH ALL APPLICABLE CODES, RULES, AND REGULATIONS. MINOR ITEMS NOT USUALLY SHOWN OR SPECIFIED, BUT MANIFESTLY NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE VARIOUS SYSTEMS, SHALL BE INCLUDED IN THE WORK AND IN THE PROPOSAL THE SAME AS IF SPECIFIED OR SHOWN ON THE DRAWINGS. IF ANY DEPARTURES FROM THE DRAWINGS ARE DEEMED NECESSARY, DETAILS OF SUCH DEPARTURES AND THE REASONS THEREFORE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. NO DEPARTURES SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER AND OWNER.
7. CONTRACTOR SHALL VISIT THE SITE AND ADJOINING AREAS AND EXAMINE THE EXISTING CONDITIONS TO BECOME FAMILIAR WITH THEM AND TO DETERMINE THE DIFFICULTIES WHICH WILL AFFECT THE EXECUTION OF THE WORK OF THIS CONTRACT. THIS CONTRACTOR SHALL PERFORM THIS PRIOR TO THE SUBMISSION OF HIS PROPOSAL. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.
8. CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL DIMENSIONS IN THE FIELD, AND SHALL ADVISE THE ARCHITECT/ENGINEER AND THE OWNER OF ANY DISCREPANCIES BEFORE PERFORMING THE WORK.
9. THE DRAWINGS INDICATE ARRANGEMENTS AND APPROXIMATE SIZES AND RELATIVE LOCATIONS OF PRINCIPAL APPARATUS, EQUIPMENT, DEVICES, AND SERVICES TO BE PROVIDED. DRAWINGS ARE DIAGRAMMATIC AND ARE A GRAPHIC REPRESENTATION OF CONTRACT REQUIREMENTS TO THE BEST AVAILABLE STANDARDS AT THE SCALE INDICATED.
10. LAYOUT OF EQUIPMENT INDICATED ON THE DRAWINGS SHALL BE CHECKED AND COMPARED AGAINST ALL DRAWINGS AND SPECIFICATIONS OF ALL TRADES AND EXACT LOCATIONS DETERMINED USING APPROVED SHOP DRAWINGS OF SUCH EQUIPMENT. WHERE PHYSICAL INTERFERENCES OCCUR, CONSULT WITH ENGINEER AND PREPARE DATED, DIMENSIONED DRAWINGS COORDINATED WITH ALL OTHER TRADES WORKING IN THIS AREA AND CORRECTING SUCH INTERFERENCE.
11. CONTRACTOR SHALL SCHEDULE HIS WORK IN ACCORDANCE WITH THE CONSTRUCTION SCHEDULE SO THAT ALL OF HIS WORK CAN BE INSTALLED WITHOUT DELAYING THE PROJECT. ALL WORK RELATED TO SHUTDOWN OF EXISTING SERVICES SHALL BE PERFORMED AT THE HOURS DESIGNATED BY THE OWNER WITH ALL ASSOCIATED COSTS BORNE BY THE CONTRACTOR AT NO COST TO THE OWNER. PROVIDE ANY TEMPORARY FACILITIES REQUIRED TO PERMIT THE OWNER'S USE OF EXISTING FACILITIES AND SYSTEMS TO REMAIN UNDISTURBED. COORDINATE ALL WORK, INCLUDING ALL SHUTDOWNS THAT AFFECT SYSTEMS AND/OR PORTIONS OF THE BUILDING THAT MUST REMAIN IN OPERATION, WITH THE OWNER AND ALL OTHER CONTRACTORS.
12. CONTRACTOR SHALL SECURE AND PAY ALL FEES, LICENSES, INSPECTIONS, AND PERMITS PERTAINING TO THE CONTRACT. SUBMIT TO OWNER DUPLICATE CERTIFICATES OF INSPECTION FROM APPROVED INSPECTION AGENCY.
13. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR WORKMEN'S IDENTIFICATION AND BADGING, SAFETY AND FIRE PROTECTION, BARRICADES, WARNING SIGNS, TRASH REMOVAL, CUTTING AND PATCHING.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RIGGING, HANDLING, AND PROTECTION OF MATERIALS. ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND WITHOUT BLEMISH OR DEFECT. ALL EQUIPMENT INSTALLED SHALL BEAR THE LABEL OF AN APPROVED AGENCY.
16. CONTRACTOR SHALL PROVIDE LABOR TO RECEIVE, UNLOAD, STORE, PROTECT, AND TRANSFER TO POINT OF INSTALLATION FOR ALL FURNISHED ITEMS.
17. WHERE CONDUIT, CABLES, DUCTWORK, OR PIPING PASSES THROUGH FIRE RATED FLOORS OR WALLS, THE PENETRATION SHALL BE COMPLETELY SEALED WITH A FIRE STOP MATERIAL THAT IS UL LISTED AND ACCEPTED BY THE BUILDING DEPARTMENT AND FIRE DEPARTMENT AS BEING SUITABLE FOR THIS SERVICE. THIS MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER TO MAINTAIN THE UL LISTED FIRE RATING OF THE PENETRATED WALL OR FLOOR.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SLAB OPENINGS, WALL OPENINGS, BEAM PENETRATIONS, AND CORING AS IT RELATES TO HIS WORK. CONTRACTOR SHALL SUBMIT SIZE AND LOCATION FOR REVIEW AND APPROVAL.
19. CONTRACTOR SHALL RESTORE EXISTING SYSTEMS, DEVICES, FINISHED, ETC. DAMAGED OR ALTERED BY WORK TO ACCEPTABLE CONDITIONS AS DETERMINED BY THE OWNER, ARCHITECT, AND/OR ENGINEER. EXISTING SYSTEMS AND SERVICES THAT ARE TEMPORARILY DISCONNECTED BUT ARE TO REMAIN IN USE SHALL BE PERMANENTLY RECONNECTED AND RETURNED TO PROPER OPERATION.
20. CONTRACTOR SHALL SUBMIT A SCHEDULE OF SUBMITTALS PRIOR TO SUBMITTING ANY SHOP DRAWINGS, ETC. FOR THIS PROJECT, INCLUDING THE ANTICIPATED DATE OF EACH SUBMISSION. CONTRACTORS SHALL SUBMIT FOUR (4) SETS OF COMPLETE SHOP DRAWINGS AND CATALOG CUTS, WIRING DIAGRAMS AND ASSOCIATED DATA TO THE ENGINEER FOR APPROVAL PRIOR TO PURCHASING EQUIPMENT OR STARTING ANY WORK. CONTRACTOR SHALL SUBMIT FOUR (4) PRINTS OF ALL PIPING AND DUCTWORK FIELD INSTALLATION DRAWINGS FOR EACH SYSTEM TO BE INSTALLED. ENGINEER SHALL RETAIN TWO (2) COPIES FOR RECORD AND RETURN TWO (2) COPIES TO CONTRACTOR VIA CONTRACTUAL REQUIREMENTS. ANY WORK INSTALLED OR EQUIPMENT PURCHASED PRIOR TO RECEIPT OF ENGINEER APPROVED SHOP DRAWINGS THAT REQUIRES CHANGES SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.
21. SUBMIT CATALOG INFORMATION, FACTORY ASSEMBLY DRAWINGS AND FIELD INSTALLATION DRAWINGS AS REQUIRED FOR A COMPLETE EXPLANATION AND DESCRIPTION OF ALL ITEMS TO BE PROVIDED. THE CONTRACTOR SHALL REVIEW AND APPROVE ALL SHOP DRAWINGS. NO SUBMISSION WILL BE ACCEPTED WITHOUT THE SIGNED APPROVAL OF THE CONTRACTOR. THE CONTRACTOR SHALL CHECK AND VERIFY ALL FIELD MEASUREMENTS.
22. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL SUPPLY THE ENGINEER WITH ONE (1) COMPLETE SET OF AS-BUILT DRAWINGS IN ELECTRONIC AUTOCAD SOFTWARE FORMAT AT CONTRACTOR'S EXPENSE AND THREE (3) COMPLETE BOUND COPIES OF OPERATION AND MAINTENANCE MANUALS. THESE SHALL BE PROVIDED TO THE OWNER AT CONTRACTOR'S EXPENSE. CONTRACTOR SHALL INSTRUCT THE OWNER'S PERSONNEL WITH REGARD TO THE PROPER OPERATION OF ALL SYSTEMS TO THE SATISFACTION OF THE OWNER.
23. CONTRACTOR SHALL NOTIFY ENGINEER OF COMPLETION OF ALL WORK, INDICATING THE CONTRACTOR IS READY FOR THE ENGINEER TO PERFORM THE FINAL PUNCHLIST INSPECTION.
24. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF AN INDEPENDENT AABC OR NEBB CERTIFIED BALANCING CONTRACTOR TO ADJUST EQUIPMENT TO ACHIEVE DESIGN AIR AND WATER FLOWS. ALL REQUIRED MEASURED PARAMETERS SHALL BE PRESENTED IN THE BALANCING REPORTS IN ORDER TO PROPERLY EVALUATE THE PERFORMANCE AND CAPACITY AT THE EQUIPMENT. BELTS AND SHEAVES SHALL BE REPLACED AS REQUIRED.
25. THE CONTRACTOR SHALL SUBMIT COPIES OF THE AIR BALANCE REPORT TO THE ENGINEER FOR APPROVAL. UPON APPROVAL, TWO COPIES SHALL BE TURNED OVER TO THE OWNER AND ONE COPY SHALL BE SUBMITTED TO THE TOWNSHIP INSPECTOR AT OR PRIOR TO FINAL INSPECTION.
26. UNLESS MORE STRINGENT REQUIREMENTS ARE SPECIFIED, ALL WORK FURNISHED UNDER THE CONTRACT SHALL BE GUARANTEED AGAINST ANY AND ALL DEFECTS IN WORKMANSHIP AND/OR MATERIALS FOR A PERIOD OF NOT LESS THAN TWO (2) YEARS FROM THE DATE OF FINAL ACCEPTANCE OF THE INSTALLATION. ANY DEFECTS OF WORKMANSHIP DEVELOPING DURING THIS PERIOD SHALL BE REMEDIED AND ANY DEFECTIVE MATERIAL REPLACED WITHOUT ADDITIONAL COST TO THE OWNER. (1)
27. CONTRACTOR SHALL PREPARE FULLY DIMENSIONED FIELD SHEET METAL AND PIPING INSTALLATION DRAWINGS (MIN. 1/4"=1'-0" SCALE). THESE DRAWINGS SHALL BE FORWARDED TO ALL CONTRACTORS. EACH CONTRACTOR SHALL SUBSEQUENTLY IN SUCCESSION DELINEATE HIS RESPECTIVE WORK ON THESE COORDINATION DRAWINGS. WHEN ALL WORK HAS BEEN PROPERLY SHOWN ON THE COORDINATION DRAWINGS, AND ALL CONTRACTORS AGREE THAT THEIR RESPECTIVE WORK CAN BE INSTALLED AND WILL PROPERLY FIT TOGETHER, THEY SHALL SO ACKNOWLEDGE BY ENDORSING THE DRAWING(S). ANY WORK DONE PRIOR TO COMPLETION OF ABOVE COORDINATION PROCESS FOUND IN CONFLICT SHALL BE REMOVED AND REPLACED AT THE RESPECTIVE CONTRACTOR'S EXPENSE.
28. EXISTING WORK THAT IS TO BE REMOVED SHALL BE LEGALLY DISPOSED OF. ALL WORK TO BE DISPOSED OF SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM THE SITE.
29. INSTALLED SYSTEMS SHALL OPERATE UNDER ALL CONDITIONS OF LOAD WITHOUT SOUND OR VIBRATION THAT IS OBJECTABLE TO THE ENGINEER, ARCHITECT, OR THE OWNER. OBJECTABLE SOUND OR VIBRATION CONDITIONS DUE TO WORKMANSHIP SHALL BE CORRECTED IN APPROVED MANNER BY THE CONTRACTOR AT HIS EXPENSE.
30. UPON COMPLETION OF ALL UNFINISHED OR FAULTY WORK NOTED IN ENGINEER FINAL PUNCH LIST, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER IN WRITING A LETTER OF COMPLETION CERTIFYING THAT ALL PUNCH LIST ITEMS HAVE BEEN COMPLETED AND ALL AS-BUILTS, MANUALS, ETC. HAVE BEEN SUBMITTED.

MECHANICAL NOTES

1. MOUNT SENSORS AND SWITCHES AT 4'-0" MAX ABOVE FINISHED FLOOR (2'-10" MAX ABOVE FINISHED FLOOR IN SIDE REACH ACCESSIBLE LOCATIONS). COORDINATE EXACT LOCATIONS W/ARCHITECT. UNLESS OTHERWISE SPECIFIED, CONTRACTOR SHALL PROVIDE CONTROL WIRING FROM SENSORS OR SWITCH TO THE CORRESPONDING HVAC EQUIPMENT AND/OR CONTROL PANEL. ALL LOW VOLTAGE CONTROL WIRING SHALL BE INSTALLED IN A MANNER TO PREVENT PHYSICAL DAMAGE.
2. UNLESS OTHERWISE SPECIFIED, CONTRACTOR SHALL PROVIDE ALL AUTOMATIC TEMPERATURE CONTROLS (ATC) INCLUDING WIRING, DDC SENSORS AND ALL MISCELLANEOUS APPURTENANCES TO MEET THE INTENT OF THESE DOCUMENTS.
3. UNLESS OTHERWISE INDICATED, THE RESPONSIBILITIES OF THE MECHANICAL AND ELECTRICAL CONTRACTORS SHALL BE AS FOLLOWS: MECHANICAL CONTRACTOR SHALL FURNISH COMBINATION MOTOR STARTERS / DISCONNECTS AND/OR DISCONNECT SWITCHES FOR ALL MECHANICAL EQUIPMENT FOR INSTALLATION BY ELECTRICAL CONTRACTOR. ALL CONTROL WIRING FOR ALL MECHANICAL EQUIPMENT SHALL BE FURNISHED THE MECHANICAL CONTRACTOR. ALL DUCT MOUNTED SMOKE DETECTORS SHALL BE LISTED, FURNISHED AND WIRED BY THE ELECTRICAL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL ASSIST THE ELECTRICAL CONTRACTOR IN TESTING THE SMOKE DETECTION SYSTEM.
4. PROVIDE HANGERS, INSERTS, ANCHORS, SUPPLEMENTAL STEEL & SUPPORTS AS REQUIRED TO SUPPORT DUCTWORK, PIPING AND EQUIPMENT FROM STRUCTURE.
5. RUN DUCTS AND PIPING CONCEALED, UNLESS OTHERWISE SPECIFIED AND CLEAR OF CEILING INSERTS.
6. STRUCTURAL WELDING SHALL BE CONTINUOUS 1/4" FILLET UNLESS REQUIRED OTHERWISE.
7. PROVIDE 36" CLEARANCE IN FRONT OF ALL ELECTRIC CONTROL PANELS PER N.E.C. AND MFG. REQUIREMENTS.
8. PITCH PIPING 1" IN 20' IN DIRECTION OF FLOW.
9. PROVIDE TRAPS IN CONDENSATE LINES THAT EXTEND OVER 2".

GENERAL COMPLIANCE - NJ

DESIGN AND PERFORMANCE OF COMPONENTS AND METHODS SPECIFIED HERIN SHALL COMPLY WITH THE LATEST ADOPTED VERSIONS OF THE STATE CODES, STANDARDS, AND MANUFACTURER'S RECOMMENDATIONS OF THE ENTITIES LISTED BELOW BUT NOT LIMITED TO:

IBC	2015 INTERNATIONAL BUILDING CODE
IFGC	2015 INTERNATIONAL FUEL GAS CODE
IMC	2015 INTERNATIONAL MECHANICAL CODE
IECC	ASHRAE 90.1-20.3
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
UL	UNDERWRITER'S LABORATORIES, INC.
FM	FACTORY MUTUAL
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
AMCA	AIR MOVING AND CONDITIONING ASSOCIATION
ARI	AMERICAN REFRIGERATION INSTITUTE
MSS	MANUFACTURER'S STANDARDIZATION SOCIETY OF THE VALVE AND FITTING INDUSTRY

MECHANICAL DEMOLITION NOTES

1. IT IS THE INTENT THAT ALL EXISTING PIPING, DUCTWORK, FIXTURES, AND OTHER EQUIPMENT AND MATERIALS THAT INTERFERE WITH THE ALTERED EXISTING BUILDING ARRANGEMENTS AND NEW SYSTEMS BE REMOVED, RELOCATED, REROUTED, OR ABANDONED. THE DRAWINGS GENERALLY INDICATE MAJOR ITEMS OF EXISTING MATERIALS AND EQUIPMENT THAT ARE TO BE REMOVED, RELOCATED, REROUTED, OR ABANDONED BY EACH TRADE. IT IS NOT POSSIBLE TO INDICATE ALL RELATED ACCESSORIES, SPECIALTIES, AND OTHER MINOR ITEMS. HOWEVER, THEIR REMOVAL, RELOCATION, REROUTING, OR ABANDONMENT SHALL ALSO BE INCLUDED IN THIS CONTRACT AND SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
2. THE DEMOLITION WORK SHALL INCLUDE, PROVIDING ALL MATERIALS, ALL NECESSARY EXTENSIONS, CONNECTIONS, CUTTING, REPAIRING, ADAPTING AND OTHER MECHANICAL WORK REQUIRED, TOGETHER WITH ANY REQUIRED TEMPORARY CONNECTIONS TO MAINTAIN SERVICE PENDING THE COMPLETION OF THE PERMANENT WORK. NOTES AND GRAPHIC REPRESENTATION SHALL NOT LIMIT THE EXTENT OF DEMOLITION REQUIRED. EXTENT OF DEMOLITION WORK SHALL BE COORDINATED WITH THE ARCHITECT AND BUILDING MANAGEMENT.
3. SHOULD A CONTRACTOR REQUIRE REMOVAL, RELOCATION, OR REROUTING OF ANOTHER TRADE'S WORK THAT IS NOT INDICATED ON DRAWINGS, THE CONTRACTOR REQUIRING SUCH WORK SHALL BE RESPONSIBLE FOR THAT WORK, AND PAY ALL REQUIRED COSTS.
4. EXISTING CONCEALED AND EXPOSED EQUIPMENT AND MATERIALS THAT WILL BECOME ABANDONED DUE TO NEW WORK, SHALL BE REMOVED BACK TO RISER OR MAIN AND PROPERLY PLUGGED OR CAPPED BEHIND FINISHED SURFACES.
5. EXISTING CONCEALED EQUIPMENT AND MATERIALS THAT ARE TO REMAIN, BUT BECOME EXPOSED DUE TO NEW WORK, SHALL BE RELOCATED AND RECONNECTED AS DIRECTED BY ARCHITECT/ENGINEER.
6. UNLESS INDICATED OTHERWISE, ABANDONED EXISTING PIPING AND SIMILAR MATERIALS CONCEALED WITHIN FINAL CONSTRUCTION, SUCH AS WITHIN WALLS AND UNDER FLOORS ON GRADE, NEED NOT BE REMOVED, BUT NEED ONLY TO BE PROPERLY SHUTOFF AND PLUGGED BEHIND FINISHED SURFACES, PROVIDED THEY DO NOT INTERFERE WITH THE NEW SYSTEMS, EQUIPMENT, AND BUILDING ARRANGEMENTS.
7. ALL WORK INVOLVING ALTERATIONS TO EXISTING SYSTEMS, EQUIPMENT, AND MATERIALS SHALL BE REVIEWED WITH THE ARCHITECT AND OWNER BEFORE BEGINNING WORK.
8. PROVIDE ADDITIONAL SUPPORT FOR ALL EXISTING DUCTS AND PIPING TO REMAIN WHICH ARE AFFECTED BY DEMOLITION OF EXISTING CEILING AND PARTITIONS.
9. EXISTING WORK THAT IS TO BE REMOVED SHALL BE LEGALLY DISPOSED OF. ALL WORK TO BE DISPOSED OF SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM THE SITE.
10. EQUIPMENT REQUIRED TO BE TURNED OVER TO THE OWNER SHALL BE PLACED IN A MUTUALLY ACCEPTABLE LOCATION. ALL MATERIALS AND EQUIPMENT REMOVED AS A RESULT OF DEMOLITION SHALL BE TAKEN FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS AND ENVIRONMENTAL REGULATIONS.
11. CONTRACTOR SHALL IDENTIFY ALL EXISTING WORK TO REMAIN BY ACCEPTABLE IDENTIFICATION MEANS TO CONFIRM PROPER SCOPE PRIOR TO COMMENCEMENT OF DEMOLITION.

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Project Name	Toilet Room, Classroom Renovations, Doors - Lore Elementary School
Project Owner Name	Ewing Public Schools
Project Location	13 Westwood Drive Ewing Township, NJ 08628
Project Number	5015L2
Project Date	02.08.2019
Checked By	RHG
Drawn By	DMR
Scale	AS NOTED
Drawing Name	MECHANICAL INDEX SHEET

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number

M001

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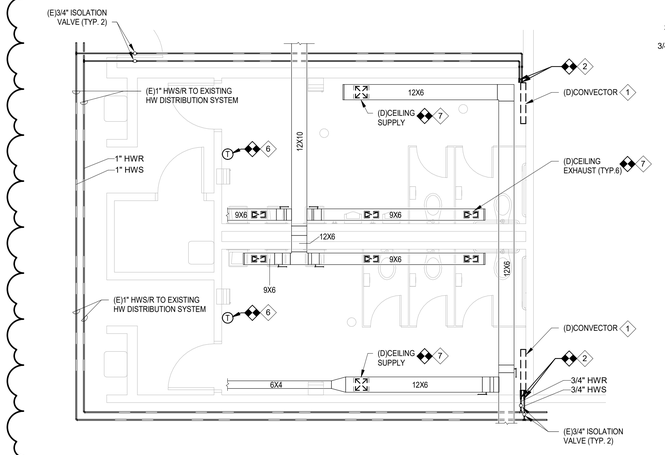
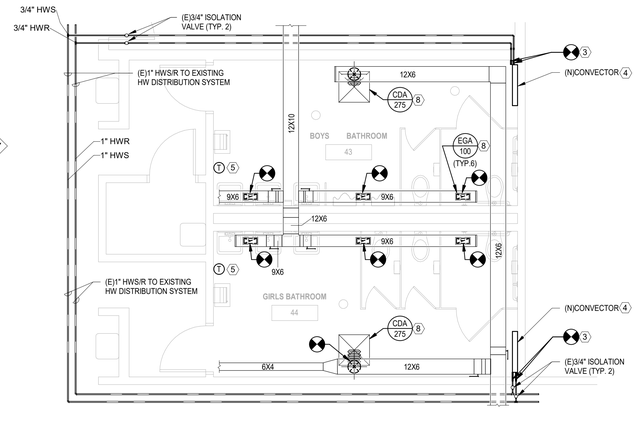


1 M101 MECHANICAL FIRST FLOOR PLAN - BATHROMM 43 & 44 - MECHANICAL DEMOLITION
1/4" = 1'-0"



2 M101 MECHANICAL FIRST FLOOR PLAN - BATHROMM 43 & 44 - PROPOSED MECHANICAL
1/4" = 1'-0"

GENERAL NOTES

1. ALL PIPING WITHIN TOILET ROOMS SHALL BE CONCEALED. UTILIZE EXISTING PIPE CHASES.
2. REBALANCE EXHAUST SYSTEM TO AIRFLOWS SHOWN.

DEMOLITION NOTES

1 DISCONNECT AND REMOVE EXISTING CONVECTOR WHERE INDICATED INCLUDING, BUT NOT LIMITED TO, PIPING, VALVES, WIRING AND CONTROLS.

2 DISCONNECT AND REMOVE EXISTING HOT WATER PIPING WHERE INDICATED INCLUDING, BUT NOT LIMITED TO, PIPE, INSULATION, VALVES, HANGERS AND SUPPORTS.

6 DISCONNECT AND REMOVE EXISTING THERMOSTAT INCLUDING, BUT NOT LIMITED TO, THERMOSTAT, MOUNTING BRACKET AND WIRING. REPAIR AND PAINT AREA TO MATCH EXISTING.

7 DISCONNECT AND REMOVE EXISTING AIR DEVICE WHERE INDICATED. EXISTING DUCTWORK TO REMAIN. SEAL OPENING IN DUCTWORK.

NEW WORK NOTES

3 PROVIDE NEW HOT WATER PIPING WHERE INDICATED.

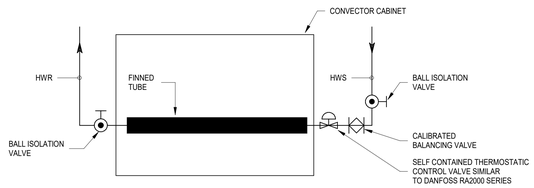
4 PROVIDE NEW 32 INCH L X 30 INCH H X 4 INCH DEEP RECESSED CONVECTOR SIMILAR TO RITTLING PL SERIES OR APPROVED EQUAL: 3,400 BTU, 1.0 GPM AT 200 DEG F EWT AND 65 DEG F EAT. PROVIDE ACCESS DOORS IN FACE OF THE CONVECTOR. REFER TO DETAIL FOR DETAILS.

5 PROVIDE LOCKING COVER OVER THERMOSTAT.

8 PROVIDE NEW AIR DEVICE WHERE INDICATED. EXTEND EXISTING BRANCH DUCTWORK WHERE REQUIRED TO COORDINATE WITH NEW ARCHITECTURAL FINISHES AND CEILING.

PIPE SCHEDULE

PIPE MATERIALS	SERVICE	HOT WATER	
	LOCATION TEMPERATURE	INDOORS	
		120-200 F	
	PIPE MATERIALS	PIPE SIZE	MATERIAL/JOINTS
		3/4" - 2"	ASTM B88 HARD-DRAWN TYPE L COPPER/ANSI B16.22 SOLDER 95/5TA SOLDERED
		2 1/2" & UP	ASTM A53 SCH 40 SEAMLESS STEEL/ANSI B16.9 BUTT WELD
		-	-
	MAX OPERATING PRESSURE	150 PSIG	
	SEAMLESS/ERW	SEAMLESS	
	-	-	
PIPE INSULATION	MINIMUM INSULATION THICKNESS	PIPE SIZE	INSULATION THICKNESS
		3/4" - 1"	1 1/2"
		1 1/2" - 4"	2"
		6"	2"
		8" & UP	2"
		-	-
	INSULATION TYPE	MOLDED FIBERGLASS	
	JACKET	ASJ	
	WEATHERPROOFING	NONE	
	MAXIMUM K-VALUE	Kmax = 0.27 AT 175 DEG F MEAN TEMP	
PIPE VALVES	VALVES	PIPE SIZE	ISOLATION/THROTTLE
		3/4" - 2"	BALL VALVE/BALL VALVE
		2-1/2" & UP	BUTTERFLY VALVE/BALLVALVE
		-	-
REMARKS			



3 M101 CONVECTOR PIPING DETAIL
NOT TO SCALE

1. PROVIDE REMOTE MOUNTED TEMPERATURE SENSOR.

AIR DEVICE SCHEDULE

UNIT NO.	TYPE	FACE SIZE	NECK SIZE	MAX. S.P. in. W.G.	MATERIAL	BASIS OF DESIGN: MANUFACTURER AND MODEL NO.	REMARKS
CDA	LAY-IN	24 x 24	10"Ø	0.1	STEEL	TITUS TDC	SEE NOTES
EGA	CEILING MTD.	14X8	12X6	0.1	STEEL	TITUS 350	SEE NOTES

NOTES:
1. VERIFY NECK SIZES IN FIELD PRIOR TO GENERATING SUBMITTAL
2. PROVIDE ALL AIR DEVICES WITH FACTORY COLOR OF WHITE, UNLESS NOTED OTHERWISE
3. PROVIDE EACH AIR DEVICE WITH THE CORRECT MOUNTING FRAME TYPE TO MATCH CEILING TYPE WHERE INSTALLED. VERIFY MOUNTING TYPE PRIOR TO ORDERING
4. PROVIDE AIR DEVICES WITH NECK-MOUNTED VOLUME CONTROL DAMPER.

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MECHANICAL PARTIAL PLAN

Revisions

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1	03/01/19	ADDENDUM 1

Drawing Number
M101

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ELECTRICAL SYMBOLS LIST
(NOT ALL SYMBOLS ARE NECESSARILY USED ON THIS PROJECT)

ANNOTATION

\# — KEY NOTE

LIGHTING SYMBOLS

A — CEILING MOUNTED DOWNLIGHT
CONNECTED TO NORMAL CIRCUIT
A = FIXTURE TYPE

A — CEILING MOUNTED DOWNLIGHT
CONNECTED TO EMERGENCY/LIFE SAFETY CIRCUIT OR 90 MINUTES BATTERY BACKUP
A = FIXTURE TYPE

A — CEILING MOUNTED DOWNLIGHT
CONNECTED TO CRITICAL/STANDBY CIRCUIT
A = FIXTURE TYPE

A A A — 2'x4'/2'x2'/4'x1' RECESSED CEILING MOUNTED LIGHT FIXTURE
A = FIXTURE TYPE
○ = EQUIPPED WITH INTEGRAL OCCUPANCY SENSOR
□ = EQUIPPED WITH INTEGRAL DAYLIGHT HARVESTING PHOTOCELL

A A A — 2'x4'/2'x2'/4'x1' RECESSED CEILING MOUNTED LIGHT FIXTURE
EQUIPPED CONNECTED TO EMERGENCY/LIFE SAFETY CIRCUIT OR 90 MINUTES BATTERY BACKUP
A = FIXTURE TYPE

A A A — 2'x4'/2'x2'/4'x1' RECESSED CEILING MOUNTED LIGHT FIXTURE
EQUIPPED CONNECTED TO CRITICAL/STANDBY CIRCUIT
A = FIXTURE TYPE

A A B — LIGHT TRACK-TYPE 'A' WITH TRACK MOUNTED FIXTURE TYPE 'B'

A A — WALL/CEILING SURFACE MOUNTED FLUORESCENT STRIP FIXTURE-TYPE AS NOTED
A = FIXTURE TYPE

A — WALL MOUNTED SCONCE LIGHT FIXTURE
A = FIXTURE TYPE

A — ACCENT LIGHT OR WALL WASHER
A = FIXTURE TYPE

A — EXTERIOR LIGHTING FIXTURE (BRACKET TYPE)
A = FIXTURE TYPE

CEILING/WALL MOUNTED EXIT SIGN
SHADED AREAS INDICATE ILLUMINATED FACE/FACES
DIRECTIONAL ARROWS WHERE INDICATED

EMERGENCY BATTERY LIGHT UNIT
A = FIXTURE TYPE

REMOTE LIGHT HEADS FOR EMERGENCY BATTERY LIGHT UNIT TYPE AS NOTED

$3OS S3OS — LINE-VOLTAGE SWITCH / LOW-VOLTAGE SWITCH OR SMART CONTROL SWITCH
FLUSH WALL MOUNTED @ 48" AFF, UON
3 = THREE-WAY
4 = FOUR-WAY
D = INTEGRAL DIMMER
K = KEY OPERATED
T = TIME SWITCH
OS = INTEGRATED OCCUPANCY SENSOR
MM = MOMENTARY SWITCH
R = AUXILIARY RELAY TO CONTROL OTHER THAN LIGHTING LOADS
10V = 0-10V DIMMER

OS R, VS — OCCUPANCY SENSOR/ VACANCY SENSOR. 180° RANGE
WALL MOUNTED @ 10" BELOW FINISHED CEILING
DT = DUAL TECHNOLOGY,
US = ULTRASONIC
R = AUXILIARY RELAY TO CONTROL OTHER THEN LIGHTING LOADS

OS R, VS — OCCUPANCY SENSOR/ VACANCY SENSOR. 360° RANGE
CEILING MOUNTED
R = AUXILIARY RELAY TO CONTROL OTHER THEN LIGHTING LOADS

PC WP, PC DL — PHOTOCELL CONTROL SWITCH - WALL OR CEILING MOUNTED OUTDOOR
WP = WEATHERPROOF FOR OUTDOOR INSTALLATIONS,
DL = DAYLIGHT HARVESTING CONTROL SWITCH

PK — POWER PACK 24VDC FOR LIGHTING SENSORS - UNIVERSAL VOLTAGE (100-277V)

K1 — AUTOMATIC LOAD CONTROL RELAY - PER UL924
WHEN NORMAL POWER IS AVAILABLE, LOAD LIGHTS SHALL BE CONTROLLABLE
WHEN NORMAL POWER FAILS, RELAY SWITCHES TO EMERGENCY POWER SOURCE AND LOAD LIGHTS ARE FORCED ON.

POWER SYMBOLS

J VAV, J VAV — JUNCTION BOX / EQUIPMENT CONNECTION
MOUNTED ABOVE SUSPENDED CEILING / FLUSH WALL MOUNTED,
INSTALLED WITHIN 2' OF EQUIPMENT WHERE REQUIRED AND DEDICATED FOR:
VAV = DEDICATED TO VARIABLE AIR VOLUME BOX CONTROL
SD = DEDICATED TO SMOKE DAMPER
MD = DEDICATED TO MOTORIZED VOLUME DAMPER
F = FURNITURE SYSTEM
HT = HEAT TRACE CABLES
EM = WITH EMERGENCY CIRCUIT
120V, 277V = WITH 120V OR 277V CIRCUIT

M, F — JUNCTION BOX / MOTOR CONNECTION, FRACTIONAL HP EXHAUST FAN

C — 15 or 20A, 125V DUPLEX RECEPTACLE, FLUSH WALL MOUNTED @ 18" AFF, UON
C = GRAY COLORED RECEPTACLE FOR COMPUTERS OR OTHER EQUIPMENT
T = TAMPER PROOF
XP = EXPLOSION PROOF
AFI = ARC FLASH CIRCUIT INERRUPTER

15 or 20A, 125V QUADRUPLEX RECEPTACLE
FLUSH WALL MOUNTED @ 18" AFF, UON

EWC — 20A, 125V, 2P W/G. SINGLE RECEPTACLE
FLUSH WALL MOUNTED @ 18" AFF, UON
EWC = ELECTRIC WATER COOLER

WP — 15 or 20A, 125V DUPLEX RECEPTACLE, GFI TYPE
FLUSH WALL MOUNTED @ 18" AFF, UON
WP = WEATHER PROOF

20A, 125V DUPLEX RECEPTACLE, FLUSH CEILING MOUNTED

20A, 125V DUPLEX RECEPTACLE , FLUSH FLOOR MOUNTED

A — POWER/DATA COMBINATION POKE-THRU, TYPE/NUMBER OF OUTLETS AS INDICATED ON FLOOR PLANS, FLUSH FLOOR MOUNTED
A = TYPE

MULTIOUTLET ASSEMBLY - SURFACE MOUNTED
POWER AND DATA WITH DIVIDER. DEVICES AS INDICATED ON PLANS

EPO — PUSH-BUTTON STATION
WALL MOUNTED @ 48" AFF, UON
EPO = EMERGENCY POWER OFF SWITCH
HOA = HAND-OFF-AUTOMATIC SWITCH
K = KEY OPERATED
P = PANIC BUTTON
HC = HANDICAP DOOR ASSIST

PB — PULLBOX

H — HANDHOLE

5 3 1 PNL — HOMERUN-NUMERAL WHERE USED INDICATES DESIGNATED PANEL AND CIRCUIT NUMBER FOR REFERENCE ONLY. WHERE CONDUIT IS NOT SPECIFIED USE AC OR MC CABLE FOR APPLICATION.
2#12, #12G, 3/4"C HOMERUN, UON
3#12, #12G, 3/4"C HOMERUN, UON
4#12, #12G, 3/4"C HOMERUN, UON
AT 120V AND OVER 100' CIRCUIT LENGTH PROVIDE #10 MINIMUM.
AT 277V AND OVER 200' CIRCUIT LENGTH PROVIDE #10 MINIMUM.

a — DIMMER ZONE HOMERUN

CONDUIT OR RACEWAY TURNING UP

CONDUIT OR RACEWAY TURNING DOWN

CONDUIT WITH CAP

CONDUIT WITH BUSHING

CONDUIT SEAL

CONDUIT SLEEVE

SPLICE (JUNCTION) OF PATHS OF CONDUCTORS OR CABLES.

TAPBOX, SPLICE BOX

INDIVIDUAL RUNS OR FEEDERS ARE BEING COMBINED INTO ONE GROUP.

NEW CONDUIT/EQUIPMENT
DENOTES EXISTING-TO-REMAIN
DENOTES FOR DEMOLITION

T — TRANSFORMER

FLOOR MOUNTED METAL SUPPORT FRAME FOR ELECTRICAL ENCLOSURES

$ 20/1 — MOTOR RATED TOGGLE SWITCH, 20A SINGLE POLE, UON
HORSEPOWER RATED WITH OVERLOAD PROTECTION.

100/60/3 50HP VFD — COMBINATION MOTOR CONTROLLER / DISCONNECT SWITCH
<SWITCH AMPS>/<POLES>, VOLTAGE RATING AS REQUIRED
VFD = VARIABLE FREQUENCY DRIVE
10HP = HORSE POWER RATING OF VFD

100/60/3 50HP VFD — COMBINATION MOTOR CONTROLLER / DISCONNECT SWITCH WITH BYPASS
<SWITCH AMPS>/<POLES>, VOLTAGE RATING AS REQUIRED
VFD = VARIABLE FREQUENCY DRIVE
10HP = HORSE POWER RATING OF VFD

30/3 — UNFUSED DISCONNECT SWITCH
<SWITCH AMPS>/<POLES>, VOLTAGE RATING AS REQUIRED

100/60/3 — FUSED DISCONNECT SWITCH
<SWITCH AMPS>/<FUSE AMPS>/<POLES>, VOLTAGE RATING AS REQUIRED

60/30/3 ST — ENCLOSED CIRCUIT BREAKER
<FRAME AMPS>/<TRIP AMPS>/<POLES>, VOLTAGE RATING AS REQUIRED
ST = SHUNT TRIP

208/120V PANELBOARD
SURFACE MOUNTED

208/120V PANELBOARD
FLUSH MOUNTED

208/120V DISTRIBUTION PANELBOARD
SURFACE MOUNTED

480/277V PANELBOARD
SURFACE MOUNTED

480/277V PANELBOARD
FLUSH MOUNTED

480/277V DISTRIBUTION PANELBOARD
SURFACE MOUNTED

TMGB — GROUND BUS
TMGB = TELECOMMUNICATIONS MAIN GROUNDING BUS
TGB = TELECOMMUNICATIONS GROUNDING BUS

RISER / SINGLE LINE SYMBOLS

460V 500KVA 208/120V — POWER TRANSFORMER
VOLTAGES, WINDINGS AND SIZE AS INDICATED

ATS 100A 480V,4P — TRANSFER SWITCH
ATS = AUTOMATIC TRANSFER
MTS = MANUAL TRANSFER
POLES AND RATING AS NOTED

ATS 100A 480V,4P — TRANSFER SWITCH WITH BYPASS ISOLATION
ATS = AUTOMATIC TRANSFER
MTS = MANUAL TRANSFER
POLES AND RATING AS NOTED

G — GENERATOR

GROUND CONNECTION

100/100 — FUSED SWITCH
<SWITCH AMPS>/<TYPE 'FA' FUSE AMPS>

100 — UNFUSED SWITCH
<SWITCH AMPS>

100/90 — CIRCUIT BREAKER - MOLDED CASE TYPE
<FRAME AMPS>/<TRIP AMPS>

100/90 — CIRCUIT BREAKER - DRAW-OUT TYPE
<FRAME AMPS>/<TRIP AMPS>

M — DIGITAL MULTIMETER WITH POTENTIAL TRANSFORMER

XXX/5 3 — CURRENT TRANSFORMER
NUMBER AND RATIO AS INDICATED

CONTACTS NORMALLY CLOSE.

CONTACTS NORMALLY OPEN.

VOICE / DATA SYMBOLS

VOICE/DATA OUTLET
FLUSH WALL MOUNTED @ 18" AFF UON, WITH 3/4" CONDUIT IN DEMISING WALL, TERMINATED IN A 90° BEND 6" INTO ACCESSIBLE CEILING

VOICE OUTLET
FLUSH WALL MOUNTED @ 18" AFF UON, WITH 3/4" CONDUIT IN DEMISING WALL, TERMINATED IN A 90° BEND 6" INTO ACCESSIBLE CEILING
W = BRACKET MOUNTED @ 44" AFF, UON

DATA OUTLET
FLUSH WALL MOUNTED @ 18" AFF UON, WITH 3/4" CONDUIT IN DEMISING WALL, TERMINATED IN A 90° BEND 6" INTO ACCESSIBLE CEILING

VOICE/DATA OUTLET - FLUSH CEILING MOUNTED

DATA OUTLET - FLUSH CEILING MOUNTED

VOICE/DATA OUTLET - FLUSH FLOOR MOUNTED

VOICE OUTLET - FLUSH FLOOR MOUNTED

DATA OUTLET - FLUSH FLOOR MOUNTED

W — WIRELESS ACCESS POINT

TV — TELEVISION OUTLET
FLUSH WALL MOUNTED @ 18" AFF UON, WITH 3/4" CONDUIT IN DEMISING WALL, TERMINATED IN A 90° BEND 6" INTO ACCESSIBLE CEILING

TELEPHONE BACKBOARD

M — MICROPHONE OUTLET - FLUSH CEILING MOUNTED

IC IC — INTERCOM - FLUSH CEILING / WALL MOUNTED

PA PA — PUBLIC ADDRESS SPEAKER - FLUSH CEILING / WALL MOUNTED

MC MC — CLOCK, CEILING MOUNTED OR WALL MOUNTED @ 90" AFF, UON
MC = MASTER CLOCK

B — DOORBELL

DB — DOOR BUZZER

FIRE ALARM SYMBOLS

S P,F — SPACE/ SPOT SYSTEM SMOKE DETECTOR - CEILING MOUNTED
F = MOUNTED UNDER RAISED FLOOR
C = MOUNTED ABOVE SUSPENDED CEILING
P = PHOTOELECTRIC TYPE
I = IONIZATION TYPE
A = AIR SAMPLING TYPE SMOKE DETECTOR
BT = BEAM TRANSMITTER PROJECTION TYPE SMOKE DETECTOR
BR = BEAM RECEIVER PROJECTION TYPE SMOKE DETECTOR
BT/R = BEAM TRANSMITTER/RECEIVER PROJECTION TYPE SMOKE DETECTOR
RF = BEAM REFLECTOR FOR PROJECTION TYPE SMOKE DETECTOR
D = SMOKE DETECTOR FOR DOOR RELEASE SERVICE
V = VIDEO IMAGE SMOKE DETECTION
R = RELAY BASE
SB = SOUNDER BASE

D — DUCT SMOKE DETECTOR

H R — HEAT DETECTOR - CEILING MOUNTED
R = RATE COMPENSATION HEAT DETECTOR
C = MOUNTED ABOVE SUSPENDED CEILING

SMOKE/ HEAT COMBINATION DETECTOR

W — WATER DETECTOR/ SWITCH

WF — SPRINKLER WATER FLOW DETECTOR/ SWITCH

T — SPRINKLER TAMPER SWITCH

PS L — SPRINKLER PRESSURE DETECTOR WITH SWITCH, NUMBER INDICATES QUANTITIES
H = HIGH PRESSURE
L = LOW PRESSURE

AIM — FIRE ALARM ADDRESSABLE INPUT MONITOR MODULE

AOM — FIRE ALARM ADDRESSABLE OUTPUT CONTROL MODULE

F — FIRE ALARM PULL STATION - WALL MOUNTED @ 48" AFF, UON

F — FIREMAN'S TELEPHONE - WALL MOUNTED @ 48" AFF, UON

15 — FIRE ALARM STROBE
WALL MOUNTED SO THAT ENTIRE LENS IS PLACED BETWEEN 80" & 96" AFF
NUMBER INDICATES CANDELA RATING

15 — FIRE ALARM STROBE - CEILING MOUNTED
NUMBER INDICATES CANDELA RATING

H — FIRE ALARM HORN, WALL MOUNTED @ 84" AFF

H 15 — FIRE ALARM HORN / STROBE COMBINATION, WALL MOUNTED SO THAT ENTIRE LENS IS PLACED BETWEEN 80" & 96" AFF
NUMBER INDICATES CANDELA RATING

S — FIRE ALARM SPEAKER, WALL MOUNTED @ 80" AFF

S — FIRE ALARM SPEAKER, FLUSH CEILING MOUNTED

S 15 — FIRE ALARM SPEAKER / STROBE
WALL MOUNTED SO THAT ENTIRE LENS IS PLACED BETWEEN 80" & 96" AFF
NUMBER INDICATES CANDELA RATING

S 15 — FIRE ALARM SPEAKER / STROBE
CEILING MOUNTED
NUMBER INDICATES CANDELA RATING

SD — MOTORIZED SMOKE DAMPER, INTEGRATED WITH FIRE ALARM SYSTEM

SD D — MOTORIZED SMOKE DAMPER AND ASSOCIATED DUCT SMOKE DETECTOR, INTEGRATED WITH FIRE ALARM SYSTEM. SMOKE DETECTOR SHALL BE INSTALLED IN SMOKE WALL NO MORE THAN 2 FEET FROM ASSOCIATED SMOKE DAMPER.

DH — DOOR HOLDERS - DOOR MAGNETIC HOLD OPEN DEVICE

FAA — FIRE ALARM ANNUNCIATOR

FACP — FIRE ALARM CONTROL PANEL

FAC — FIRE ALARM COMMUNICATOR

FACU — FIRE ALARM CONTROL UNIT

FATC — FIRE ALARM TERMINAL CABINET

PS — POWER SUPPLY

EOL R — END OF LINE SUPERVISORY DEVICE
R = RESISTOR
C = CAPACITOR
D = DIODE
RL OR K = RELAY

GENERAL NOTES

1. DEFINITION: UNLESS OTHERWISE NOTED, ALL WORK SPECIFIED HEREIN OR NOTED ON DRAWINGS, SHALL BE BY THE ELECTRICAL CONTRACTOR. ALL REFERENCES TO "CONTRACTOR" OR "THIS CONTRACTOR" ON DRAWINGS OR SPECIFICATIONS ARE ADDRESSED TO THE ELECTRICAL CONTRACTOR. THE TERM "PROVIDE" WHENEVER ENCOUNTERED ON DRAWINGS OR IN THESE SPECIFICATIONS, SHALL MEAN "FURNISH AND INSTALL."
2. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CONDUIT ROUTING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL BENDS, OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL ALLOW IN HIS PRICE FOR ROUTING OF CONDUIT TO AVOID OBSTRUCTIONS. COORDINATE WITH OTHER TRADES, AS REQUIRED. MAINTAIN HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. THE EXACT LOCATIONS OF DEVICES AND EQUIPMENT ARE SUBJECT TO THE APPROVAL OF THE OWNER, WHO RESERVES THE RIGHT TO MAKE ANY REASONABLE CHANGES IN LOCATION WITHOUT EXTRA COST.
3. SECURE ALL SUPPORTS TO BUILDING STRUCTURE UTILIZING TOGGLE BOLTS (HOLLOW MASONRY), EXPANSION SHIELDS OR INSERTS (CONCRETE AND BRICK), MACHINE SCREWS (METAL), BEAM CLAMPS (FRAMEWORK), WOOD SCREWS (WOOD) OR PAN THRU STRAPS (METAL DECK). NAILS, RAWL PLUGS AND WOOD PLUGS ARE NOT PERMITTED. WHERE REQUIRED BY STRUCTURE, PROVIDE THRU BOLTS AND FISH PLATES. SUPPORT HORIZONTAL RUNS OF METALLIC RACEWAYS NOT MORE THAN 10' APART. SUPPORT RACEWAY RISERS AT EACH FLOOR LEVEL. RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO WALLS. MC AND AC CABLES SHALL BE SECURED EVERY 6' AND WITHIN 12" FROM THE JUNCTION BOX. SUPPORT PANEL, JUNCTION AND PULLBOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.
4. PROVIDE TEMPORARY LIGHT AND POWER SYSTEMS AT EARLIEST POSSIBLE DATE WITHIN THE CONSTRUCTION AREAS FOR THE REQUIREMENTS OF ALL TRADES AS HEREIN DESCRIBED. EXTEND SYSTEMS TO NEW CONSTRUCTION AS SOON AS PHYSICALLY POSSIBLE. MAINTAIN SYSTEM DURING WORKING HOURS OF ALL TRADES. OWNER WILL PAY FOR COST OF ENERGY. PROVIDE ALL REQUIRED MAINTENANCE, INCLUDING LAMPS AND SOCKETS.
5. IN LOCATING BOXES AND OUTLETS TO AVOID INACCESSIBLITY, ALLOW FOR OVERHEAD PIPES, DUCTS AND MECHANICAL EQUIPMENT, VARIATIONS IN FIREPROOFING AND PLASTERING, WINDOW AND DOOR TRIM, PANELING, HUNG CEILINGS AND THE LIKE. CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSE TO OWNER.
6. PASS RACEWAYS OVER WATER, STEAM OR OTHER PIPING WHEN PULL BOXES ARE NOT REQUIRED. NO RACEWAY WITHIN 3" OF STEAM OR HOT WATER PIPES OR APPLIANCES (EXCEPT PIPE CROSSINGS WHERE RACEWAY IS AT LEAST 1" FROM PIPE COVERS AND PARALLEL RUNS WHERE RACEWAY IS AT LEAST 18").
7. CUT CONDUIT ENDS SQUARE. REAM SMOOTH. PAINT MALE THREAD OF FIELD THREADED RACEWAYS WITH GRAPHITE BASE PIPE COMPOUND. DRAW UP TIGHT WITH RACEWAY COUPLING.
8. HORIZONTAL OR CROSS RUNS IN PARTITIONS AND WALLS ARE NOT PERMITTED. DO NOT RUN CONDUIT IN PRECAST ROOF SLABS, IN 2" SLABS OR IN TERRAZZO FLOOR FINISH.
9. MINIMUM CONDUIT SIZE SHALL BE 3/4".
10. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS. RACEWAYS OVER 10' LONG IN WHICH WIRING IS NOT INSTALLED: FURNISH NYLON PULL STRING. FOR ANY RACEWAY OVER 25' PROVIDE PULL STRING WITH CONDUIT MEASURING TAPE AND INDICATE DESIGNATION OF THE RACEWAY ON EACH END.
11. VERIFY LOCATIONS OF OUTLETS AND SWITCHES IN FINISHED ROOMS WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISH. LOCATIONS INDICATED FOR LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS AT OR NEAR DOORS. COORDINATE WITH ARCHITECT AND INSTALL SWITCH ON LOCK/ LATCH SIDE OF DOOR. VERIFY FINAL HINGE LOCATIONS IN FIELD PRIOR TO SWITCH OUTLET INSTALLATION.
12. SET BOXES SQUARE AND TRUE WITH BUILDING FINISH. ERECT WALL AND SWITCH OUTLETS IN ADVANCE OF FURRING AND FIREPROOFING. SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRONS.
13. COVERS OF JUNCTION AND PULLBOXES SHALL BE ACCESSIBLE.
14. PROVIDE PULLBOXES WHERE INDICATED, REQUIRED BY CODE AND WHEREVER NECESSARY TO FACILITATE PULLING OF WIRE. COORDINATE PULLBOX LOCATIONS WITH OTHER TRADES. BOXES SHALL BE ACCESSIBLE AND GENERALLY NOT EXPOSED IN FINISHED SPACES. WHERE NECESSARY, REROUTE RACEWAYS OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT.
15. EMPTY RACEWAY RUNS: PROVIDE PULLBOXES EVERY 100' AND AS INDICATED. COORDINATE LOCATIONS WITH OTHER TRADES. THE PULLBOX SHALL BE INSTALLED EVERY 270° OF TOTAL CONDUIT TURNS.
16. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.
17. CONNECT CONDUIT TO MOTOR TERMINAL BOXES WITH FLEXIBLE CONDUIT OF MINIMUM 18", MAXIMUM 6' LENGTH. (PROVIDE SUFFICIENT WIRING SLACK AT EACH END OF TERMINATION). DO NOT TERMINATE IN OR FASTEN RACEWAYS TO MOTOR FOUNDATION.
18. PROVIDE 2 #14AWG WIRING FOR INDICATING PILOT LIGHT FROM PILOT LIGHT IN CONTROLLER TO LOAD SIDE OF DISCONNECT SWITCH. RUN WIRES IN BRANCH CIRCUIT CONDUIT AND INCREASE CONDUIT SIZE AS REQUIRED.
19. PULL NO THERMOPLASTIC WIRES AT AMBIENT TEMPERATURES LOWER THAN 32°F (0°C). PROVIDE CABLE SUPPORTS FOR WIRE IN RISER CONDUITS AS REQUIRED BY CODE.
20. PROVIDE SEPARATE SYSTEMS AND ENCLOSURES FOR 208/120V AND 480/277V POWER AND CONTROL WIRING AND SEPARATE SYSTEMS FOR EMERGENCY AND NORMAL POWER. THE EMERGENCY AND NORMAL SYSTEMS SHALL NOT BE INSTALLED IN THE SAME RACEWAYS, ENCLOSURES, JUNCTION BOXES, PULLBOXES, TERMINATION CABINETS, EXCEPT IN EQUIPMENT ENCLOSURES DESIGNED TO ACCEPT BOTH SYSTEMS SUCH AS AUTOMATIC TRANSFER SWITCH OR EMERGENCY LIGHTING.
21. CORE BORING OF CONCRETE FLOORS AND/OR WALLS IF REQUIRED, IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL PENETRATIONS THROUGH CONCRETE STRUCTURAL FLOORING SHALL BE SCANNED WITH GROUND PENETRATING RADAR (GPR). SUBMIT FINDINGS TO ENGINEER FOR APPROVAL PRIOR TO PENETRATION.
22. WIRE COLOR CODING: AS PER CODE. WHERE COLOR-CODED CABLE IS NOT AVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION FOR OVERLAP COLOR TAPING OF CONDUCTORS (MINIMUM LENGTH 6") IN ALL ACCESSIBLE LOCATIONS. COLOR CODING, ONCE SELECTED, MUST BE USED CONSISTENTLY FOR THE ENTIRE PROJECT.
480/277V - WAY SYSTEM:
PHASES A = BROWN, B = ORANGE, C = YELLOW, NEUTRAL = GRAY, GROUNDING = GREEN WITH YELLOW STRIPES.
208/120V - WAY SYSTEM:
PHASES A = BLACK, B = REED, C = BLUE, NEUTRAL = WHITE, GROUNDING = GREEN.
240/120V - DELTA SYSTEM WITH HIGH LEG:
PHASES A = BLACK, B (HIGH LEG)= ORANGE, C = RED, NEUTRAL = WHITE, GROUNDING = GREEN.
240/120 V SINGLE PHASE:
PHASES A = BLACK, B = RED, NEUTRAL = WHITE, GROUNDING = GREEN.
DC SYSTEM:
POSITIVE = RED, MID-WIRE = WHITE, NEGATIVE = BLACK,
23. FIRESTOPPING SHALL BE INSTALLED WHENEVER WIRING OR RACEWAYS CROSS FIRE RATED CONSTRUCTION AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER TO MAINTAIN THE UL LISTED FIRE RATING OF THE PENETRATED WALL OR FLOOR ASSEMBLY.
24. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WORK BETWEEN THE TRADES. ANY WORK RESULTING FROM THE LACK OF COORDINATION SHALL BE CORRECTED WITH NO ADDITIONAL COST TO THE OWNER.
25. THE CONTRACTOR IS RESPONSIBLE FOR REPORTING INCONSISTENCIES TO THE ENGINEER IN FORM OF "RFI" REQUEST FOR INFORMATION BEFORE ANY INACCURATE WORK IS EXECUTED.
26. CONTRACTOR SHALL INCLUDE PRICING FOR ARC FLASH STUDY/LABELING AND DEVICE COORDINATION STUDY BY CONTRACTOR OR EQUIPMENT VENDOR.

DEMOLITION NOTES

1. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL COSTS ASSOCIATED WITH REMOVAL AND RELOCATION OF ELECTRICAL WORK AS DESCRIBED IN THE SPECIFICATIONS WITH ALLOWANCES FOR EXPECTED OR UNFORESEEN DIFFICULTIES WHEN CONCEALED WORK HAS BEEN OPENED. NO CLAIMS FOR ADDITIONAL WORK ASSOCIATED WITH DEMOLITION WILL BE ACCEPTED, EXCEPT IN CERTAIN CASES CONSIDERED JUSTIFIABLE BY THE ARCHITECT.
2. THE CONTRACTOR SHALL REMOVE AND/OR RELOCATE ALL EXISTING ELECTRICAL WORK WHICH INTERFERES WITH THE NEW ARCHITECTURAL AND ELECTRICAL LAYOUTS IN FULL COORDINATION WITH THE ARCHITECT'S DEMOLITION PLANS. ALL SYSTEMS WHICH ARE NO LONGER REQUIRED TO FUNCTION SHALL BE DE-ENERGIZED AND DISCONNECTED AT THE SOURCE OF POWER SUPPLY.
3. DEMOLITION AND REMOVAL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. THE CONTRACTOR SHALL PATCH, REPAIR OR OTHERWISE RESTORE ANY DAMAGED INTERIOR OR EXTERIOR BUILDING SURFACE TO ITS ORIGINAL CONDITION. ALL PATCHING SHALL BE OF THE SAME MATERIALS, WORKMANSHIP, AND FINISH, AND SHALL ACCURATELY MATCH ALL SURROUNDING WORK.
4. THE CONTRACTOR SHALL REMOVE ALL ELECTRICAL OUTLETS, SWITCHES AND OTHER DEVICES, COMPLETE WITH ASSOCIATED WIRING AND CONDUITS BACK TO NEAREST JUNCTION BOX THAT IS TO REMAIN OR TO PANELBOARD. WHERE THE REMOVAL OF THESE ITEMS DISRUPTS EXISTING WIRING TO REMAIN, THE CONTRACTOR SHALL INSTALL JUNCTION BOXES AND EXTEND FEEDER WITH MATCHING CABLE TYPE, CONDUCTOR AMPACITY AND CONDUIT SIZES.
5. WHERE IT IS IMPRACTICAL TO REMOVE RACEWAY BACK TO SOURCE, DISCONNECT WIRING AT LOAD (EQUIPMENT) AND AT LINE SIDE, CUT AND CAP, FLUSH TO SURFACE. REMOVE CONDUCTORS FROM EXISTING RACEWAYS TO BE REWIRED. CLEAN RACEWAY AS REQUIRED PRIOR TO REWIRING.

1

6. ALL RACEWAYS WHICH BECOME EXPOSED DURING THE ALTERATION WORK SHALL BE REMOVED AND REROUTED CONCEALED BEHIND FINISHED SURFACES.

8. EXISTING PANEL DIRECTORIES AFFECTED BY THE ALTERATION WORK SHALL BE MODIFIED TO REFLECT THE BRANCH CIRCUIT WIRING CHANGES.
9. INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES. TEMPORARY SHUTDOWNS OF EXISTING SERVICES SHALL BE PERFORMED AT NO ADDITIONAL CHARGES, AT TIMES NOT TO INTERFERE WITH NORMAL OPERATION OF EXISTING FACILITIES AND ONLY WITH WRITTEN CONSENT OF OWNER. NOTIFICATION MUST BE GIVEN AT LEAST 5 DAYS PRIOR TO SHUT DOWN. ALARM AND EMERGENCY SYSTEMS SHALL NOT BE INTERRUPTED. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES AS REQUIRED WITH NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING WORK. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND ACCEPTABLE MANNER. RESTORE EXISTING DISTURBED WORK TO ORIGINAL CONDITION, INCLUDING MAINTENANCE OF WIRING CONTINUITY AS REQUIRED.
10. THE CONTRACTOR SHALL NOTIFY THE OWNER AT THE APPROPRIATE TIME OF THE PROJECTED DEMOLITION AND PHASING SCHEDULE SO THAT REMOVAL OR RELOCATION OF AFFECTED UTILITIES MAY BE CARRIED OUT IN COORDINATION WITH THE PROJECT REQUIREMENTS. THE CONTRACTOR SHALL FOLLOW CLOSELY THE ARCHITECT'S DEMOLITION AND PHASING SCHEDULE AND PROCEED IN THE SPECIFIED SEQUENCE.
11. ALL EXISTING MATERIAL AND EQUIPMENT IN USABLE CONDITION, WHICH IS TO BE REMOVED UNDER THIS CONTRACT, SHALL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF IN A LEGAL MANNER BY THE ELECTRICAL CONTRACTOR, AS DIRECTED BY THE OWNER. ITEMS OF SALVAGE SHALL BE CAREFULLY REMOVED AND STORED AT LOCATIONS DIRECTED BY THE OWNER.
12. ARRANGE TO WORK CONTINUOUSLY, INCLUDING OVERTIME, IF REQUIRED, TO ASSURE THAT SYSTEMS WILL BE SHUT DOWN ONLY DURING THE TIME ACTUALLY REQUIRED TO MAKE THE NECESSARY CONNECTIONS TO THE EXISTING SYSTEMS.
13. PATCH AND PAINTING OF EXISTING WALLS TO REMAIN AFFECTED BY ELECTRICAL DEMOLITION ARE TO COMPLETED UNDER ARCHITECTURAL SPECIFICATION. THERE SHALL BE NO BLANK COVER-PLATES. THE ELECTRICAL WORK SHALL BE ENTIRELY COMPLETED BEFORE PATCHING AND PAINTING.
14. THE CONTRACTOR SHALL SURVEY AND RECORD THE CONDITION OF EXISTING FACILITIES TO REMAIN IN PLACE THAT MAY BE AFFECTED BY DEMOLITION OPERATIONS. THE CONTRACTOR SHALL VERIFY ALL EXISTING SOURCES OF POWER TO EQUIPMENT PRIOR TO FINAL REMOVAL.
15. IF WORK REQUIRES THE INTERRUPTION FIRE ALARM AND FIRE PROTECTION SYSTEMS, ARRANGE WITH OWNER TO CONDUCT A FIRE WATCH WHILE THESE SYSTEMS ARE OUT OF SERVICE. CONSULT WITH FIRE MARSHALL PRIOR TO FIRE WATCH.

ABBREVIATIONS

(NOT ALL ABBREVIATIONS ARE NECESSARILY USED ON THIS PROJECT)

+	MOUNTING HEIGHT AFF.
(E)	EXISTING TO REMAIN
(D)	DEMOLISH
(ER)	EXISTING TO BE RELOCATED
(ERRO)	REMOVED & RETURNED TO OWNER
(N)	NEW
(RE)	RELOCATED EXISTING
(FBO)	FURNISHED BY OTHERS
(PBO)	PROVIDED BY OTHERS
1P	SINGLE POLE
2P	TWO POLE
3P	THREE POLE
A	AMPERE
AC	ARMORED CABLE
AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERE INTERRUPTING CAPACITY
ALT	ALTERNATE
APPROX	APPROXIMATE(LY)
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
BLDG	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
C, CND	CONDUIT
°C	DEGREE CELSIUS
CB, C/B	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CD	CANDELA
CL	CEILING MOUNT
CKT	CIRCUIT
CONT	CONTINUATION
CU	COPPER
CT, C/T	CURRENT TRANSFORMER
DEG	DEGREE
DIA	DIAMETER
DISC	DISCONNECT
DIST	DISTRIBUTION
DIV	DIVISION
DWG	DRAWING
EA	EACH
EC, E.C.	ELECTRICAL CONTRACTOR
ELEC	ELECTRICAL
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
°F	DEGREE FAHRENHEIT
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FATC	FIRE ALARM TERMINATION CABINET
FC	FOOT CANDLE
FDR	FEEDER
FL	FLOOR
FLA	FULL LOAD AMPERES
FLEX	FLEXIBLE
FLUOR	FLUORESCENT
FMC	FLEXIBLE METAL CONDUIT
G, GND	GROUND
GFI	GROUND FAULT INTERRUPTER
GRC	GALVANIZED RIGID CONDUIT
HH	HANDHOLE
HP	HORSE POWER
HZ	HERTZ
IG	ISOLATED GROUND
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
LTG, LTS	LIGHTING, LIGHTS
MC	METAL-CLAD CABLE
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCM	THOUSAND CIRCULAR MILS
MH	MANHOLE
MI	MINERAL INSULATED CABLE
MFR	MANUFACTURER
MLO	MAIN LUGS ONLY
MTD, MTG	MOUNTED, MOUNTING
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
N, NEUT	NEUTRAL
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
P	POLE
Ø	PHASE
PNL	PANEL
PVC	POLYVINYL CHLORIDE CONDUIT
PWR	POWER
RCP	REFLECTED CEILING PLAN
REC	RECEPTACLE
REQ'D	REQUIRED
RMC	RIGID METAL CONDUIT
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
SPD	SURGE PROTECTION DEVICE
SPEC	SPECIFICATION
STBY	STANDBY
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYS	SYSTEMS
TBD	TO BE DETERMINED
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTED POWER SUPPLY
V	VOLTS
VIF	VERIFY IN FIELD
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE
W/	WITH
WP	WEATHERPROOF (NEMA 3R RATING MIN)
XFMR	TRANSFORMER
Y	WYE
Δ	DELTA

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Project Name
Toilet Room, Classroom Renovations, Doors - Lore Elementary School

Project Owner Name
Ewing Public Schools

Project Location
13 Westwood Drive Ewing Township, NJ 08628

Project Number
5015L2

Project Date
02.08.2019

Checked By
RHG

Drawn By
RKM

Scale
AS NOTED

Drawing Name
ELECTRICAL INDEX SHEET

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
E001

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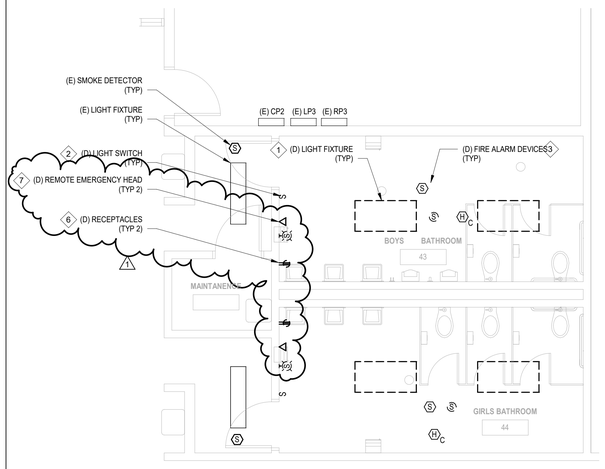
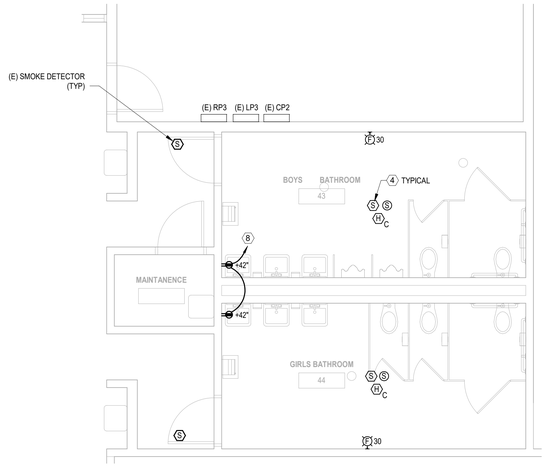
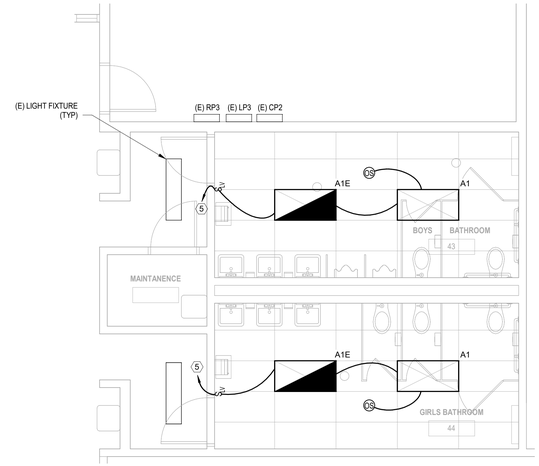


1 E101 BATHROOMS - ELECTRICAL DEMOLITION
1/4" = 1'-0"



2 E101 BATHROOMS - PROPOSED POWER & FIRE ALARM
1/4" = 1'-0"



3 E101 BATHROOMS - REFLECTED CEILING PLAN - PROPOSED LIGHTING
1/4" = 1'-0"

GENERAL NOTES

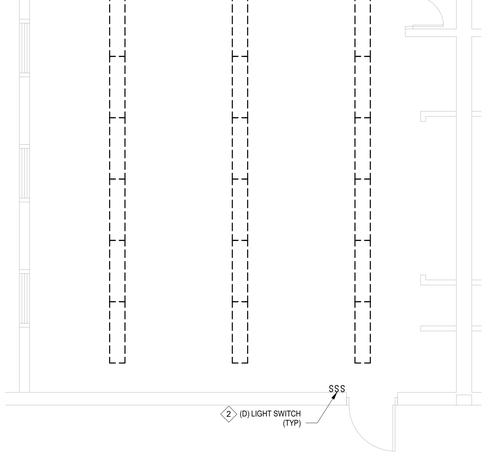
1. DISCONNECT POWER PRIOR TO PERFORMING WORK IN ACCORDANCE WITH NFPA 70E.
2. PROVIDE UNIT PRICING FOR THE FOLLOWING IN ADDITION TO THE BID: UNIT PRICE FOR EACH LUMINAIRE TYPE, UNIT PRICE PER SWITCH, AND UNIT PRICE PER OCCUPANCY/VACANCY SENSOR.

(#) DEMOLITION NOTES

1. DISCONNECT AND REMOVE LIGHT FIXTURE. REMOVE ALL ASSOCIATED EQUIPMENT. TAG BRANCH CIRCUIT FOR REUSE IN NEW WORK PHASE.
2. DISCONNECT AND REMOVE SWITCH. REMOVE ALL ASSOCIATED EQUIPMENT. TAG AND PRESERVE CIRCUIT FOR REUSE IN NEW WORK PHASE.
3. DISCONNECT AND REMOVE FIRE ALARM DEVICES. STORE IN A SAFE LOCATION FOR RECONNECTION IN NEW WORK PHASE. REMOVE ALL ASSOCIATED EQUIPMENT. TAG AND PRESERVE CIRCUIT FOR REUSE IN NEW WORK PHASE.
6. DISCONNECT AND REMOVE RECEPTACLE. REMOVE ALL ASSOCIATED EQUIPMENT. TAG AND PRESERVE CIRCUIT FOR REUSE IN NEW WORK PHASE.
7. DISCONNECT AND REMOVE REMOTE EMERGENCY HEAD. REMOVE ALL ASSOCIATED EQUIPMENT. REMOVE CONDUIT AND WIRE BACK TO SOURCE.

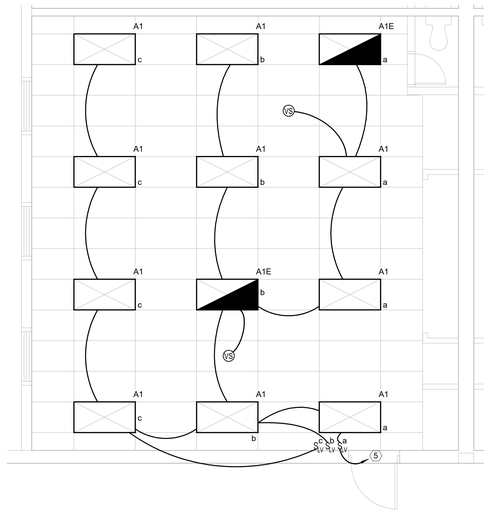
(#) NEW WORK NOTES

4. RECONNECT EXISTING FIRE ALARM DEVICES TO THEIR EXISTING CIRCUITS. EXTEND CIRCUIT TO ACCOMMODATE NEW LOCATION. MATCH EXISTING WIRE AND CONDUIT TYPES.
5. RECONNECT NEW LIGHT FIXTURES TO EXISTING CIRCUIT. EXTEND CIRCUIT TO ACCOMMODATE NEW LOCATION. MATCH EXISTING WIRE AND CONDUIT TYPES.
8. RECONNECT NEW RECEPTACLES TO EXISTING CIRCUIT. EXTEND CIRCUIT TO ACCOMMODATE NEW LOCATION. MATCH EXISTING WIRE AND CONDUIT TYPES.



4 E101 FIRST GRADE 9 - ELECTRICAL DEMOLITION
1/4" = 1'-0"

NOTE: THIS DEMOLITION PLAN IS TYPICAL FOR THE FOLLOWING CLASSROOMS:
5, 6, AND 10.



5 E101 FIRST FLOOR RCP - FIRST GRADE 9 - PROPOSED LIGHTING
1/4" = 1'-0"

NOTE: THIS LIGHTING PLAN IS TYPICAL FOR THE FOLLOWING CLASSROOMS:
5, 6, AND 10.

LIGHTING FIXTURE SCHEDULE

DESIGNATION	DESCRIPTION	LUMENS	TYPE	COLOR	VOLTS	LOAD	MANUFACTURER	CATALOG NO.	MOUNTING
A1	2'X4' LENSED TROFFER	3000 lm	LED	3500 K	UNV	24 VA	LITHONIA	2GTL-4-30L-GZ10-LP835	RECESSED
A1E	2'X4' EMERGENCY LENSED TROFFER	3000 lm	LED	3500 K	UNV	24 VA	LITHONIA	2GTL-4-30L-GZ10-LP835-EL7L	RECESSED

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Project Name
Toilet Room, Classroom Renovations, Doors - Lore Elementary School

Project Owner Name
Ewing Public Schools

Project Location
13 Westwood Drive
Ewing Township, NJ 08628

Project Number
5015L2

Project Date
02.08.2019

Checked By
RHG

Drawn By
RKM

Scale
AS NOTED

Drawing Name
ELECTRICAL PARTIAL PLANS & SCHEDULES

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
E101

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REFERENCED MANUFACTURES NOTE

REFERENCED MANUFACTURES DENOTES A MINIMUM ACCEPTABLE LEVEL OF QUALITY AND
IS NOT INTENDED TO PREVENT SUBMISSION OF EQUIVALENT EQUIPMENT.

PLUMBING GENERAL NOTES

A. SAFETY REQUIREMENTS

1. THE CONTRACTOR SHALL ABIDE AND ENFORCE ALL SAFETY RULES AND REGULATIONS SET FORTH BY THE OWNER. ALL WORKERS AND SUPERVISORS MUST ATTAIN SAFETY TRAINING CLASSES (IF APPLICABLE). THE CONTRACTOR SHALL BE RESPONSIBLE TO FOLLOW ALL VERBAL INSTRUCTIONS GIVEN BY OWNERS REPRESENTATIVES.

B. GENERAL REQUIREMENTS

1. PROVIDE COMPLETE PLUMBING SYSTEMS AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN. VISIT THE SITE AND VERIFY ALL CONDITIONS BEFORE SUBMITTING A BID. "PROVIDE", WHEN USED IN THIS SPECIFICATION SHALL MEAN FURNISH AND INSTALL.
2. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND REGULATORY BODIES HAVING JURISDICTION OVER THIS WORK. PROVIDE ALL PERMITS AND PAY ALL FEES REQUIRED FOR PERMITS.
3. COORDINATE THE INSTALLATION OF ALL WORK WITH THE LOCAL UTILITIES AND OTHER BUILDING TRADES. THE CONTRACTOR SHALL INFORM THE OWNER IN WRITING WHEN HE INTENDS TO SCHEDULE WORK WHICH INVOLVES EXISTING SYSTEMS AND/OR UTILITIES. NOTICE SHALL BE GIVEN ONE WEEK PRIOR TO THE ANTICIPATED WORK. THE CONTRACTOR MUST RECEIVE APPROVAL FROM THE OWNER PRIOR TO PERFORMING SUCH WORK.
4. PLUMBING WORK SHALL BE DONE AT SUCH A TIME AND MANNER THAT WILL LEAST INTERFERE WITH THE MAINTENANCE AND OPERATION OF THE SITE AND OR BUILDING'S ACTIVITIES. PROVISIONS SHALL BE MADE TO PERMIT THE USE OF ALL EXISTING PIPING SYSTEMS AT ALL TIMES. PROVIDE TEMPORARY FACILITIES TO SECURE THESE CONDITIONS AND REMOVE SUCH TEMPORARY FACILITIES WHEN NO LONGER REQUIRED.
5. SHUTDOWN OF WORK SHALL BE AT SUCH A TIME AND MANNER AS DIRECTED BY THE OWNER.
6. WHERE SHUTDOWN PERIODS CANNOT BE OF A DURATION TO ACCOMMODATE THE NEW WORK, THE CONTRACTOR SHALL PERFORM THE WORK IN A SERIES OF PRE-PLANNED STAGES OF MINIMAL ALLOWABLE SHUTDOWN PERIODS. PROVIDE TEMPORARY FACILITIES TO ALLOW REUSE OF SERVICE BETWEEN WORKING STAGES.
7. ONLY WRITTEN CHANGES AND/OR MODIFICATIONS APPROVED BY THE ARCHITECT, CONSULTING ENGINEER OR OWNER'S REPRESENTATIVES WILL BE RECOGNIZED.
8. CONTRACTOR SHALL SUBMIT SCHEDULE OF SUBMITTALS PRIOR TO SUBMITTING ANY SHOP DRAWINGS TO BE SUBMITTED FOR THIS PROJECT, INCLUDING THE ANTICIPATED DATE OF EACH SUBMISSION. PLUMBING CONTRACTOR SHALL SUBMIT (6) SETS OF SHOP DRAWINGS AND EQUIPMENT CUTS TO THE ENGINEER FOR APPROVAL PRIOR TO PURCHASING EQUIPMENT OR THE STARTING OF ANY WORK. ANY WORK INSTALLED OR EQUIPMENT PURCHASED PRIOR TO RECEIPT OF ENGINEER APPROVED SHOP DRAWINGS THAT REQUIRED CHANGES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
9. PROVIDE ONE (1) SET OF REPRODUCIBLE AS-BUILT DRAWINGS AND ONE (1) ELECTRONIC COPY. AS-BUILT DRAWINGS SHALL INDICATE ANY CHANGES TO THE ORIGINAL DRAWINGS INCLUDING ALL PIPING LOCATIONS AND SIZES. (1)
10. ALL MATERIALS, EQUIPMENT AND WORKMENSHIP SHALL BE GUARANTEED IN WRITING FOR A MINIMUM OF TWO (2) YEARS AFTER FINAL ACCEPTANCE BY OWNER. ANY DEFECTS OF WORKMANSHIP DEVELOPING DURING THIS PERIOD SHALL BE REMEDIED AND DEFECTIVE MATERIAL REPLACED WITHOUT ADDITIONAL COST.

C. PROJECT COORDINATION

1. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND COORDINATING ALL WORK WITH ALL TRADES.
2. THE CONTRACTOR SHALL FURNISH A SCHEDULE INDICATING HIS PORTION OF TIME, WITHIN OVER ALL SCHEDULE, REQUIRED TO COMPLETE THE WORK IN CONJUNCTION WITH ALL TRADES.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY FIELD CONDITIONS AT THE SITE PRIOR TO BID. CONTRACTOR TO NOTIFY THE OWNER REPRESENTATIVE OF ANY DISCREPANCIES PRIOR TO COMMENCING WITH WORK.
4. DURING THE CONSTRUCTION OF THIS PROJECT, THE CONTRACTOR SHALL COORDINATE WITH BUILDING REPRESENTATIVES THE TEMPORARY SHUTDOWN OR CAPPING OF ANY PLUMBING SYSTEMS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WARNING SIGNS, RIGGING, HANDLING AND PROTECTION OF MATERIAL. ALL EQUIPMENT, MATERIALS SHALL BE NEW AND WITHOUT BLEMISHES OR DEFECTS. ALL EQUIPMENT INSTALLED SHALL BEAR THE LABEL OF THE APPROVING AGENCY.
6. CONTRACTOR SHALL PROVIDE THE LABOR TO RECEIVE, UNLOAD, STORE, PROTECT AND TRANSFER TO POINT OF INSTALLATION OWNER FURNISHED ITEMS.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SLAB AND WALL OPENINGS, BEAM PENETRATIONS AND CORING DRILLING AS IT RELATES TO HIS WORK. PLUMBING CONTRACTOR SHALL SUBMIT SIZE AND LOCATION TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL.

D. REFERENCED STANDARDS

1. ALL PLUMBING MATERIALS, FIXTURES AND EQUIPMENT SHALL BE LISTED BY THE FOLLOWING APPLICABLE STANDARDS:

* AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
* AMERICAN SOCIETY OF MECHANICAL ENGINEERS (AMSE)
* AMERICAN SOCIETY FOR TESTING MATERIALS (ASTM)
* AMERICAN WATER WORKS ASSOCIATION (AWWA)
* CAST IRON SOIL PIPE INSTITUTE (CISPI)
* MANUFACTURING STANDARDIZATION SOCIETY (MSS)
* NATION FIRE PROTECTION ASSOCIATION (NFPA)
* NATIONAL SANITATION FOUNDATION (NSF)
* UNDERWRITERS LABORATORIES (UL)

E. PROTECTION OF WORK

1. EFFECTIVELY PROTECT ALL MATERIALS AND EQUIPMENT FROM ENVIRONMENTAL AND PHYSICAL DAMAGE UNTIL FINAL ACCEPTANCE. CLOSE AND PROTECT ALL OPENINGS DURING CONSTRUCTION. PROVIDE NEW MATERIALS AND EQUIPMENT TO REPLACE DAMAGED ITEMS AT NO ADDITIONAL LOST TO OWNER.

PIPE INSULATION SCHEDULE

MANUFACTURER	SYSTEM	INSULATION SYSTEM DESCRIPTION
JOHNS MANSVILLE OR APPROVED EQUAL	DOMESTIC WATER	INSULATE HOT, AND COLD WATER PIPING WITH JOHNS MANSVILLE'S "MICRO-LOK" HP ALL SERVICE (ASJ) VAPOR-RETARDER JACKET WITH A SELF-SEALING LOGITUDINAL CLOSURE LAP (SSL) AND BUTT STRIPS & "ZESTON 2000" PVC INSULATED FITTING COVERS AND "HI-LOW TEMPERATURE" FIBER GLASS INSULATED INSERTS WITH PVC "Z-TAPE" PER MANUFACTURER'S RECOMMENDATIONS.
AP ARMAFLEX OR APPROVED EQUAL	TRAP PRIMING	INSULATE ALL "UNDER SLAB" TRAP PRIMING PIPING WITH FLEXIBLE ELASTOMERIC PIPE INSULATION. JACKET SHALL BE PROPERLY SEALED WITH ADHESIVE ALONG ENTIRE SEAM.

LAVATORY ASSEMBLY NOTE

PLUMBING CONTRACTOR TO PROVIDE ALL NEW SUPPLIES, COMPRESSION STOPS, STRAINERS, TAILPIECES, P-TRAPS & INSULATION COVERS FOR A FULLY FUNCTIONAL AND ADA COMPLIANT SYSTEM.

MANUFACTURERS SHALL BE:
MCGUIRE PRODUCTS OR BRASSCRAFT & TRUEBRO

PIPE MATERIAL SCHEDULE

SYMBOL	SYSTEM DESCRIPTION	PIPING SIZE	PIPING MATERIAL	FITTINGS	PIPING JOINTS	MFR & MODEL NO.	INSULATION	NOTES
SAN	SANITARY WASTE BELOW GRADE	2" & LARGER	POLYVINYL CHLORIDE (PVC)	DWV SOCKET	SOLVENT WELD	R&G SLOANE/FISCHER	NO	CONFORM TO NSF
V	SANITARY VENT BELOW GRADE	2" & LARGER	POLYVINYL CHLORIDE (PVC)	DWV SOCKET	SOLVENT WELD	R&G SLOANE/FISCHER	NO	CONFORM TO NSF
SAN	SANITARY WASTE ABOVE GRADE	1 1/2" & LARGER	CAST IRON SOIL PIPE	DWV HUBLESS	STN STL CLAMP	TYLER PIPE	NO	CONFORM TO NSF
V	SANITARY VENT ABOVE GRADE	1 1/2" & LARGER	CAST IRON SOIL PIPE	DWV HUBLESS	STN STL CLAMP	TYLER PIPE	NO	CONFORM TO NSF
CW	DOMESTIC COLD WATER ABOVE GRADE	3" & SMALLER	HARD DRAWN TYPE "L" CU TUBE	XL-C FITTINGS	CRIMPED	MUELLER	YES	ASTM 88
HW	DOMESTIC HOT WATER ABOVE GRADE	3" & SMALLER	HARD DRAWN TYPE "L" CU TUBE	XL-C FITTINGS	CRIMPED	MUELLER	YES	ASTM 88
AW	ACID WASTE	1 1/2" & LARGER	CHLORINATED POLYVINYL CHLORIDE (CPVC)			AW 14015	NO	ASTM F 2618
AWV	ACID WASTE VENT	1 1/2" & LARGER	CHLORINATED POLYVINYL CHLORIDE (CPVC)			AW 14015	NO	ASTM F 2618

NOTE:
DOMESTIC WATER FITTINGS & VALVES SHALL BE MANUFACTURED BY: VIEGA PROPRESS SYSTEM. SEE SPECIFICATIONS ON THIS DRAWING.
ALL ASSOCIATED FITTING FOR ACID WASTE SYSTEM SHALL BE CHARLOTTE CHEMDRAIN SYSTEMS. REFER BACK TO INSTALLATION MANUEL.

PLUMBING FIXTURE SCHEDULE

FIXTURES				ROUGH INS				SUPPORTS, CARRIERS ETC	NOTES OR ACCESSORIES
NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	DRAIN	VENT	CW	HW	MFR & MODEL NO.	SUPPLIES, DRAINS, TRAPS, TOILET SEATS ETC
EWC1	WATER COOLER ♿	ELKAY	LVRCHDBS - STAINLESS STEEL	1-1/4"	1-1/4"	1/2"	-	WALL MOUNTED	PROVIDE WALL MOUNTING BRACKET
L1	LAVATORY	AMERICAN STANDARD	PIAZZA - 0478.001 - CENTER HOLE - WHITE	1-1/4"	1-1/4"	1/2"	1/2"	COUNTERTOP MOUNTED	SEE FAUCET SCHEDULE
UR1	URINAL	SLOAN	SU-1009 .5 GPF - WHITE	2"	2"	3/4"	-	JR SMITH - #0637	COMES WITH "SOLIS" SOLAR POWERED FLUSHOMETER
WC1	WATER CLOSET	AMERICAN STANDARD	2234.001 - 1.28 GPF - WHITE	4"	2"	1-1/4"	-	FLOOR MOUNTED	AMERICAN STANDARD #5901.110 HEAVY DUTY OPEN FRONT LESS COVER TOILET SEAT
WC-1A	WATER CLOSET ♿	AMERICAN STANDARD	3641.001 - 1.28 GPF - WHITE	4"	2"	1-1/4"	-	FLOOR MOUNTED	AMERICAN STANDARD #5901.110 HEAVY DUTY OPEN FRONT LESS COVER TOILET SEAT

NOTES: ♿ HANDICAP COMPLIANT: MEETS THE AMERICAN'S WITH DISABILITIES ACT GUIDELINES

PLUMBING SPECIALTIES SCHEDULE

NO.	DESCRIPTION	MANUFACTURER	MODEL	MATERIALS OF CONSTRUCTION OR ACCESSORIES
FD1	FLOOR DRAIN	JR SMITH	2005-Y-L SERIES	CAST IRON BODY W/ FLASHING COLLAR AND ADJUSTABLE STRAINER
FCO	CLEAN OUT	JR SMITH	4040	CAST IRON BODY WITH ROUND ADJUSTABLE SCORIATED SECURED SQUARE NICKEL BRONZE TOP.
WCO	WALL CLEAN OUT	JR SMITH	4710	STAINLESS STEEL SHALLOW COVER WITH CENTER SCREW.
SA1	SHOCK ABSORBER	JOSAM	75004B	SHOCK ABSORBER WITH STAINLESS STEEL SHELL, HYDRO-PNEUMATIC CUSHION OF NITROGEN, STAINLESS STEEL BELLOWS & STAINLESS STEEL MALE THREADED PIPE NIPPLE.
SA2	SHOCK ABSORBER	JOSAM	75004D	SHOCK ABSORBER WITH STAINLESS STEEL SHELL, HYDRO-PNEUMATIC CUSHION OF NITROGEN, STAINLESS STEEL BELLOWS & STAINLESS STEEL MALE THREADED PIPE NIPPLE.
HB1	HOSE BIBB	WOODFORD	24	CHROME, ANTI-SIPHON, VACUUM BREAKER WALL FAUCET WITH SL-24 STEMLOCK.

NOTE: INSTALL ALL FLOOR DRAINS WITH A DEEP SEALING P-TRAP.

FAUCET & FLUSHOMETER SCHEDULE

FIXTURE	ITEM	MANUFACTURER	MODEL NO.	DESCRIPTION AND OR ACCESSORIES
WC-1	FLUSHOMETER	SLOAN	SOLIS 8111-1.28-OR "HIGH EFFICIENCY" (1.28 GPF)	POLISHED CHROME FINISHED BODY, BATTERY OPERATED W/ "LOW BATTERY" FLASHING LED. ADA COMPLIANT - "NO HANDS OPERATION", MANUAL OVERRIDE BUTTON, DIAPHRAGM VALVE
WC-1A	FLUSHOMETER	SLOAN	SOLIS 8111-1.28-OR "HIGH EFFICIENCY" (1.28 GPF)	
UR-1	FLUSHOMETER	SLOAN	SOLIS 8186-0.5 "HIGH EFFICIENCY" (0.5 GPF)	
L-1	FAUCET	SLOAN	SF-2350-BAT-BDT- CP-0.5GPM-MLM-IR-FCT	POLISHED CHROME, BATTERY POWERED, SENSOR OPERATED FAUCET, .5GPM, 4"CENTERS, BELOW DECK THERMOSTATIC MIXING VALVE (SET @ 110 DEG.)

PLUMBING CODE REQUIREMENTS

PLUMBING CONTRACTOR TO CONFORM TO ALL LOCAL CODES AND ANY OTHER AUTHORITY HAVING JURISDICTION INCLUDING:

2015 NATIONAL STANDARD PLUMBING CODE
UNIFORM CONSTRUCTION CODE (N.J.A.C. 5:23)
REHABILITATION SUB CHAPTERS 6 & 7 "BARRIER FREE"

LEGEND

	TO BE DEMOLISHED
	VENT PIPING
	COLD WATER PIPING
	HOT WATER PIPING
	HOT WATER RETURN PIPING
AWV	ACID WASTE VENT PIPING
AW	ACID WASTE PIPING
RWC	RAIN WATER CONDUCTOR
	SANITARY PIPING
WCO	WALL CLEAN OUT
	POINT OF CONNECTION BETWEEN NEW & EXISTING
	POINT OF DEMOLITION
	DIRECTION OF FLOW
	PIPE DROP
	PIPE OFFSET
	BALL VALVE
C.V.	CHECK VALVE
♿	HANDICAP COMPLIANT (MEETS THE AMERICAN'S WITH DISABILITIES ACT GUIDELINES)
X / X	DETAIL NUMBER / DETAIL CALL OUT / DRAWING NUMBER
FCO	FLOOR CLEAN OUT
	SHOCK ABSORBER
	HOSE BIBB
ADA	AMERICAN WITH DISABILITIES ACT
AW	ACID WASTE
AWV	ACID WASTE VENT
CW	COLD WATER
CV	CHECK VALVE
CLG	CEILING
DFU	DRAINAGE FIXTURE UNIT
DN	DOWN
(E)	EXISTING
FD	FLOOR DRAIN
F.F.	FINISHED FLOOR
HDCP	HANDICAP
HW	HOT WATER
HWR	HOT WATER RETURN
LAV	LAVATORY
M.S.	MOP SINK
(N)	NEW
NSF	NATIONAL SANITARY FOUNDATION
(R)	REMOVE
RPZ	REDUCED PRESSURE DETECTOR
S	SANITARY PIPING
SK	SINK
UR	URINAL
WC	WATER CLOSET
WCO	WALL CLEANOUT
WHA	WATER HAMMER ARRESTER
WSFU	WATER SUPPLY FIXTURE UNIT
V	VENT
V.I.F.	VERIFY IN FIELD
VTR	VENT THROUGH ROOF

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Project Name
Toilet Room, Classroom Renovations, Doors - Lore Elementary School

Project Owner Name
Ewing Public Schools

Project Location
13 Westwood Drive Ewing Township, NJ 08628

Project Number
5015L2

Project Date
02.08.2019

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Drawn By
DMR

Scale
AS NOTED

Drawing Name
PLUMBING INDEX SHEET

Revisions

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1	03/01/19	ADDENDUM 1

Drawing Number
P001

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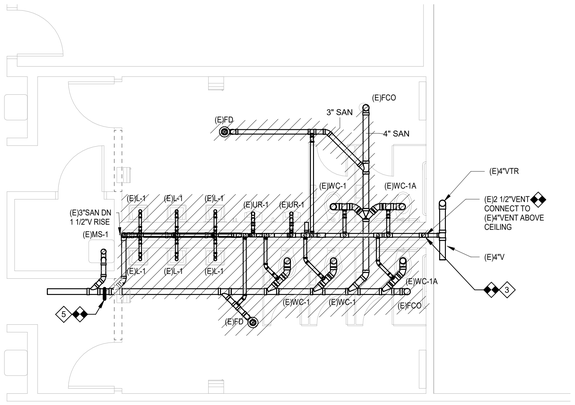
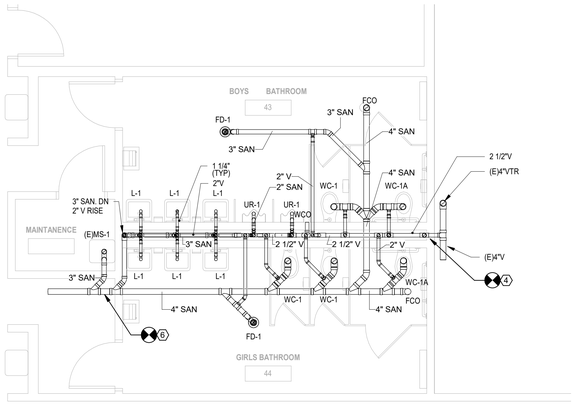


1 P101 FIRST FLOOR PLAN - BATHROOM 43 SANITARY DEMOLITION
1/4" = 1'-0"



6 P101 FIRST FLOOR PLAN - BATHROOM 43 PROPOSED SANITARY
1/4" = 1'-0"

3 P101 FIRST FLOOR PLAN - BATHROOM 43 DOMESTIC WATER DEMOLITION
1/4" = 1'-0"

7 P101 FIRST FLOOR PLAN - BATHROOM 43 PROPOSED DOMESTIC WATER
1/4" = 1'-0"

GENERAL NOTES:

1. GENERAL PHASING - PERFORM TEMPORARY SHUT-DOWN TO DEMOLISH AND INSTALL NEW ISOLATION VALVES ON DCW AND DHW ENTERING BATHROOMS. ONCE NEW VALVES ARE INSTALLED OPEN THE WATER SYSTEM TO THE REMAINDER OF THE BUILDING AND WORK BEHIND NEW ISOLATION VALVES.

GENERAL DEMOLITION NOTES:

1. CONTRACTOR SHALL REMOVE ALL EXISTING FIXTURES, FIXTURE SUPPORTS, SANITARY AND VENT PIPING, DOMESTIC WATER, PURE WATER, GAS PIPING, SUPPORTS AND VALVES, AND ALL OTHER RELATED PLUMBING EQUIPMENT UNLESS NOTED OR SHOWN OTHERWISE ON FLOOR PLANS.
2. UNLESS OTHERWISE NOTED, PIPING TO BE DEMOLISHED SHALL BE REMOVED BACK TO ACTIVE MAIN AND CAPPED AIR/WATER TIGHT .
3. THIS DRAWING PRIMARILY IS INTENDED TO SHOW GENERAL PLUMBING DEMOLITION AREAS OF WORK.
4. COORDINATE ALL DEMOLITION REQUIREMENTS WITH THE OWNER. SECURE OPEN FLAME PERMITS FROM THE OWNER SO ALARM SYSTEMS AND FIRE WATCH PERSONNEL CAN BE EMPLOYED AS NECESSARY.
5. ANY SHUTDOWNS OF EXISTING PLUMBING MECHANICAL SYSTEMS SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE AND SHALL BE BRIEF, OCCUR WHEN USAGE IS NONEXISTENT OR VERY LIGHT, OR METHODS SHALL BE EMPLOYED WHICH PERMIT SYSTEMS TO STAY IN OPERATION AVOIDING SHUTDOWNS ALTOGETHER. THE OWNER SHALL DETERMINE WHEN AND IF AN EXISTING SYSTEM MAY BE SHUTDOWN.
6. ALL PLUMBING FIXTURES, BACKFLOW PREVENTERS, VALVES, OR EQUIPMENT INDICATED TO BE DEMOLISHED SHALL FIRST BE OFFERED TO THE OWNER. THE SCOPE OF DEMOLITION WORK, HOWEVER, SHALL INCLUDE THE DISPOSAL OF ALL DEMOLISHED EQUIPMENT. THE DISPOSAL SHALL BE OFF-SITE AND IN A SAFE & LEGAL MANNER.
7. WHERE EXISTING CEILINGS REMAIN, CAREFULLY REMOVE AND REINSTALL EXISTING CEILING TILES, AS REQUIRED, IN ORDER TO GAIN ACCESS TO DEMOLITION WORK. REPLACE DAMAGED TEE BARS, TILE ETC. IF DAMAGED.
8. REFER TO AND COORDINATE PLUMBING DEMOLITION WORK WITH ALL OTHER DISCIPLINES AS SHOWN ON ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DEMOLITION DRAWINGS.
9. CAP THE OPEN END OF EXISTING PIPING AND EQUIPMENT IMMEDIATELY AFTER OPENING PIPE/EQUIPMENT CONNECTIONS TO PREVENT DEBRIS FROM CONTAMINATING EXISTING-TO-REMAIN ITEMS AND TO PREVENT SEWER GASES FROM ENTERING INTO THE INTERIOR OF THE BUILDING.
10. ANY SHAFT OR WALL OPENING CREATED TO IMPLEMENT PIPE DEMOLITION OR CREATED BY REMOVED PIPE OR FIXTURES SHALL BE REPAIRED BY THE CONTRACTOR. FILL OPENINGS WITH THE SAME MATERIAL AS THE WALL OR FLOOR. FINISH FLUSH TO THE EXISTING SURFACE.
11. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2009 NATIONAL STANDARD PLUMBING CODE.
12. CONTRACTORS SHALL VERIFY THE EXISTING CONDITIONS AND LOCATIONS FOR NEW CONNECTIONS PRIOR TO START OF WORK.
13. PIPING/RISERS WHICH SERVE OTHER AREAS, ENTERING AND PASSING THROUGH THE AREA WHERE DEMOLITION WORK IS INDICATED, SHALL REMAIN.

DEMOLITION NOTES:

1. DISCONNECT AND REMOVE EXISTING ISOLATION VALVE.
3. DISCONNECT AND REMOVE EXISTING FIXTURE AND ASSOCIATED ROUGH-IN PIPING BACK TO POINT OF DISCONNECTION FROM MAIN OR STACK.
5. DISCONNECT AND REMOVE BRANCH PIPING BACK TO POINT OF DISCONNECTION.
7. REMOVE ROUGH-IN PIPING TO EXISTING FIXTURE TO REMAIN.

NEW WORK NOTES:

2. INSTALL NEW FULL LINE SIZE ISOLATION VALVE.
4. INSTALL NEW FIXTURE AND ASSOCIATED ROUGH-IN PIPING UP TO POINT OF NEW CONNECTION TO MAIN OR STACK.
6. INSTALL NEW BRANCH PIPING BACK TO POINT OF CONNECTION.
8. INSTALL ROUGH-IN PIPING TO EXISTING FIXTURE TO REMAIN.

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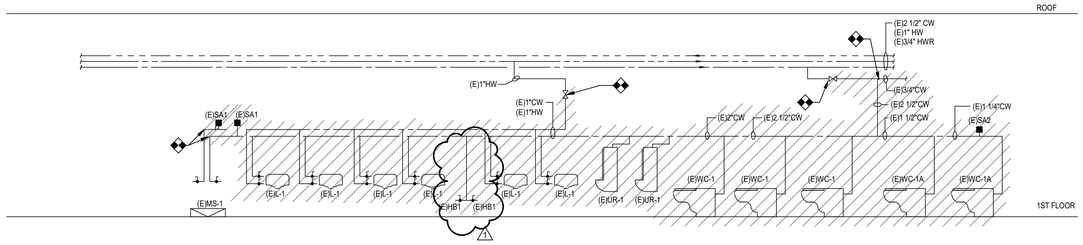
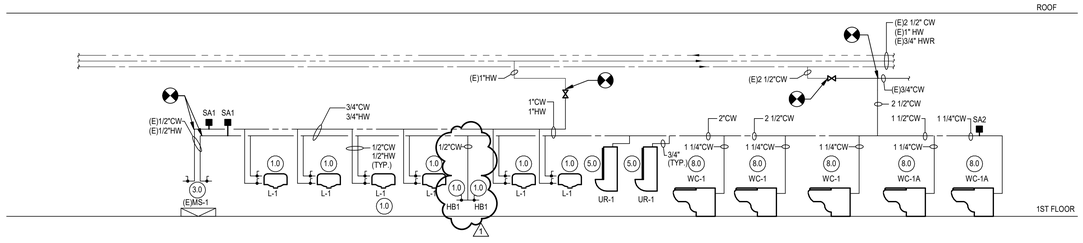


1 P200 EXISTING DOMESTIC RISER BOYS/GIRLS 43
NOT TO SCALE



2 P200 PROPOSED DOMESTIC RISER BOYS/GIRLS 43
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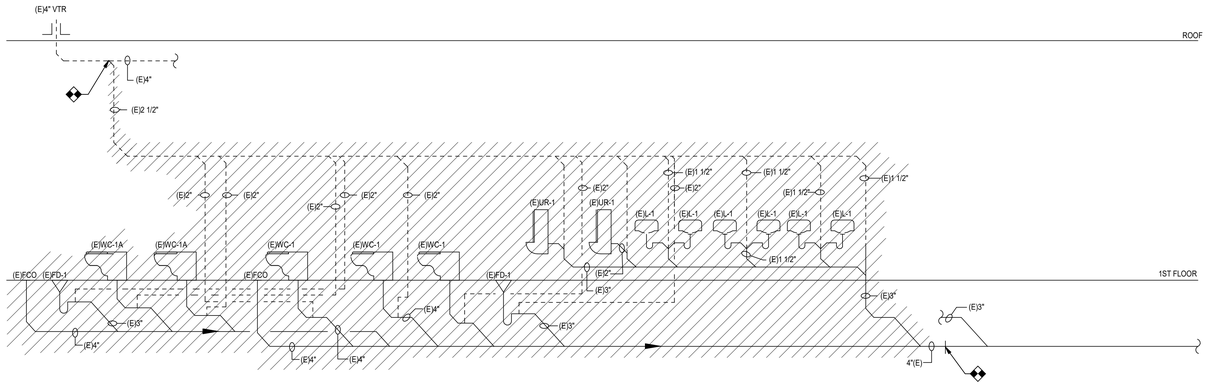
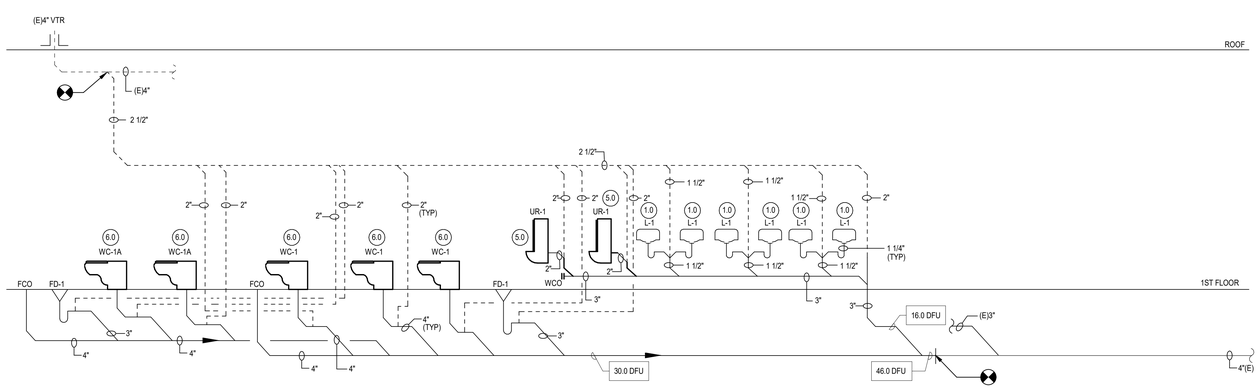


3 P200 EXISTING SANITARY RISER BOYS/GIRLS 43
NOT TO SCALE



4 P200 PROPOSED SANITARY RISER BOYS/GIRLS 43
NOT TO SCALE

NOTES:

1. PLUMBING CONTRACTOR TO COORDINATE THE LOCATION OF NEW ACCESS PANELS WITH LOCATIONS OF ALL TRAP PRIMERS & SHOCK ABSORBERS. PLUMBING CONTRACTOR SHALL COORDINATE WITH OTHER TRADES THE INSTALLATION OF ALL HARDWARE OR DEVICES BEING INSTALLED ON WALL. ACCESS PANEL SHALL BE INSTALLED SO THAT PANEL IS FULLY ACCESSIBLE.

   MANUFACTURER TO BE: MIFAB - SERIES UA (12"x12") OR APPROVED EQUAL.

2. ALL UNDERGROUND TRAP PRIMING PIPING SHALL BE INSULATED WITH A FLEXIBLE ELASTOMERIC THERMAL INSULATION.

   MANUFACTURER SHALL BE: ARMACELL ENGINEERED FOAMS OR APPROVED EQUAL.

WATER SUPPLY FIXTURE UNITS
PLUMBING CODE TABLE

FIXTURE	VALUE (WSFU)
WATER CLOSET (WC)	8.0
URINAL (UR)	5.0
LAVATORY (L)	1.0
SHOWER (SH)	2.0
WASHER SUPPLY BOX (WSB)	2.0
MOP SINK (MS)	3.0
ELECTRIC WATER COOLER (EWC)	0.5
FLOOR DRAIN (FD)	X
HOSE BIBB (HB)	1.0

DRAINAGE FIXTURE UNITS
PLUMBING CODE TABLE

FIXTURE	VALUE (DFU)
WATER CLOSET (WC)	6.0
URINAL (UR)	5.0
LAVATORY (L)	1.0
SHOWER (SH)	2.0
WASHER SUPPLY BOX (WSB)	2.0
MOP SINK (MS)	3.0
ELECTRIC WATER COOLER (EWC)	0.5
FLOOR DRAIN (FD)	X

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Corporate: 1515 Lower Ferry Road - Trenton - New Jersey 08628
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Project Name
Toilet Room, Classroom Renovations, Doors - Lore Elementary School

Project Owner Name
Ewing Public Schools

Project Location
13 Westwood Drive
Ewing Township, NJ
08628

Project Number
5015L2

Project Date
02.08.2019

Checked By
OT

Drawn By
DMR

Scale
AS NOTED

Drawing Name
PLUMBING RISER DIAGRAMS

Revisions

No.	Date	Description
1	03/01/19	ADDENDUM 1

Drawing Number
P200

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2/5/2019 3:59:53 PM BIM 360://FVHDA18001 - EWING TOWNSHIP SCHOOL DISTRICT\LORE ES_R18.rvt