A D D E N D U M N O. 2

Elm Road Elementary School – Classroom Addition

Penn High School Instructional and Activity Space Addition

Penn-Harris-Madison School Corporation
Mishawaka, Indiana

Project No. 223211.00/223213.00

Index of Contents

Addendum No. 2, 12 items, 4 pages
New Project Manual Section: 05 52 13 – Pipe and Tube Railings

Revised Drawing Sheets for Elm Road Elementary School - Classroom Addition:
C200, C400, C600, S1.00, A1.01, A1.02, A1.03, A2.01, A5.01, A5.02, A6.01, A9.01, A10.1, M6.01, E5.03, E5.04, E7.01, ET-11, ET-51, T1-01, and T1-11

Revised Drawing Sheets for Penn High School Instructional and Activity Space Addition:
C300, S0.05, S1.01, S3.01, S5.02, S5.06, A1.00, A1.01, A2.01, A3.01, A5.03, A6.01, A7.01, A10.01, MD.01, M2.02, M3.01, M6.01, FP101, E1.2, E4.01, ET-11, T1-01, T1-11, and T5-01

PHM Drawing Sets for Reference available for download (per Contractor's Request):
1956 Penn HS – Structural Construction Documents
1987 Penn HS – Architectural Construction Documents
1987 - Structural Construction Documents (Part 1 of 2)
1987 - Structural Construction Documents (Part 2 of 2)
1985 Elm Road ES – Construction Documents

June 25, 2025

I hereby certify that this Addendum was prepared by me or under my direct supervision and that I am a duly registered Architect/Engineer under the Laws of the State of Indiana.

FANNING/HOWEY ASSOCIATES, INC.
ARCHITECTS/ENGINEERS/CONSULTANTS

Paul A. Miller, License No. AR10800161
Expiration Date: 12/31/2025

TO: ALL BIDDERS OF RECORD

ADDENDUM NO. 2 to Drawings and Project Manual, dated April 10, 2025, for Penn-Harris-Madison School Corporation, 55900 Bittersweet Road, Mishawaka, Indiana 46545; as prepared by Fanning/Howey Associates, Inc., Indianapolis, Indiana.
This Addendum shall hereby be and become a part of the Contract Documents the same as if originally bound thereto.

The following clarifications, amendments, additions, revisions, changes, and modifications change the original Contract Documents only in the amount and to the extent hereinafter specified in this Addendum.

Each bidder shall acknowledge receipt of this Addendum in his proposal or bid.

NOTE: Bidders are responsible for becoming familiar with every item of this Addendum. (This includes miscellaneous items at the very end of this Addendum.)

RE: ALL BIDDERS

ITEM NO. 1. NEW PROJECT MANUAL SECTION

A. New Project Manual Section 05 52 13 – Pipe and Tube Railings is included with and hereby made a part of this Addendum.

ITEM NO. 2. PROJECT MANUAL, SECTION 00 31 00 - AVAILABLE PROJECT INFORMATION

A. Add 1.1, C., as follows:

"C. Existing Building Information: Existing Building drawings are being provided for reference by the Bidders. This information is not part of the Construction Contract Documents and is for informational use only. Information provided is not a warrant or guarantee by the owner or Project Consultant of in place conditions."

ITEM NO. 3. PROJECT MANUAL, SECTION 01 21 00 - ALLOWANCES

A. Add 3.1, A., 3., and 4., as follows:

"3. Base Bid No. 1: Elm Road Elementary School, Allowance No. 5 (Security and Technology not shown in documents): $30,000.00
4. Base Bid No. 2: Penn High School, Allowance No. 6 (Security and Technology not shown in documents): $20,000.00"

ITEM NO. 4. PROJECT MANUAL, SECTION 08 71 00 – DOOR HARDWARE

A. Article 3.05, D., Hardware Sets: Make the following changes:

1. Hardware Group No. 01: Change the "2 Dummy Push Bar X Pull Trim" to "2 Fire Exit Hardware 9927-L-BE-F-LBR-03-449F" and Delete the "2 Silencer SR64".

2. Hardware Group No. 04:

a. Change the "1 DBL CYL Dead Lock" to "1 DBL SYL Store W/DB L9466BDC 03B"
b. Change Permanent Core from "1" to "2"
c. Add "1 Gasketing – 488SBK PSA, BK, ZER".
d. Delete the "3 Silencer SR64", "1 Push Plate" and "1 Pull Plate".

ITEM NO. 5. PROJECT MANUAL, SECTION 09 51 13 – ACOUSTICAL PANEL CEILINGS

A. Replace 3.5, A., 1., as follows:

"1. ACT Type 1: Wet formed, mineral fiber, ASTM E 1264, Type III, Form 2, Pattern CE, 24 by 24 by 5/8 - 7/8 inch, square lay-in, 15/16 inch grid, with NRC of 0.70-0.75, CAC of 21 minimum, humidity sag resistant, light reflectance of 0.78 minimum and >.45 pound/sq.ft. Factory applied vinyl latex paint, color - white, unless otherwise noted.
a. Products: Subject to compliance with requirements, provide one of the following products specified:
1) Item No. 1754, Fine Fissured (High NRC); Armstrong.
2) HHF-457 HNRC, Fine Fissured High NRC; CertainTeed.
3) Item No. 22320, Radar Open Plan Climaplus; USG Interiors."

B. Add 3.5, A., 7., as follows:

"7. ACT Type 7: Wet formed, high density mineral fiber, ASTM E 1264, Type III, Form 2, Pattern CE, 24 by 24 by 1/2 - 5/8 inch, square lay-in, 15/16 inch grid, with NRC of 0.40-0.60, CAC of 21-40, Class A, antimicrobial treatment, humidity sag resistant, impact and scratch resistant, light reflectance of 0.80 minimum. Factory applied vinyl latex paint with scuff resistant spatter coat, color - white, unless otherwise noted.
a. Products: Subject to compliance with requirements, provide one of the following products specified:
1) Item No. 301, Tundra; Armstrong.
2) Item FFSB-157, School Board; CertainTeed.
3) Item No. 5893, Touchstone Climaplus; USG Interiors."

ITEM NO. 6. PROJECT MANUAL, SECTION 09 65 19 – RESILIENT TILE FLOORING

A. Replace 2.3, C., as follows:

"C. Thickness: Manufacturer's standard for the product indicated in the List of Finishes."

B. Delete subparagraph 2.3, C., 1., in its entirety.

ITEM NO. 7. PROJECT MANUAL, SECTION 10 28 00 – TOILET, BATH, AND LAUNDRY ACCESSORIES

A. Add 1.1, A., 4., as follows:

"4. Warm Air Dryers."

B. Add 2.4, E., as follows:

"E. High-Speed Air Hand Dryer:
2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
a. XLerator XL-W with noise-reducing nozzle; Excel.
3. Description: High-speed warm-air hand dryer for rapid hand drying.

4. Mounting: Surface mounted
5. Operation: Infrared-sensor activated with timed power cutoff switch.
a. Average Dry Time: Less than 15 seconds.
b. Automatic Shutoff: At 60 seconds.
6. Maximum Sound Level: 75 dB
7. Cover Material and Finish: Steel, with white enamel finish.
8. Electrical Requirements: 115V, 13A, 1500W.

ITEM NO. 8. PROJECT MANUAL, SECTION 23 21 13 – HYDRONIC PIPING

A. Delete 3.9, C., and D., in their entirety.

ITEM NO. 9. PROJECT MANUAL, SECTION 23 82 29 – UNIT HEATERS

A. Add 2.2, I., as follows:

"I. Provide ceiling trim kit for ceiling mounted units."

ITEM NO. 10. ACCEPTABLE MANUFACTURERS

The following manufacturers are to be considered acceptable manufacturers (suppliers and fabricators) for the Sections of the Specifications listed. Listed manufacturers are required to bid on products equal in type and design, size, function, and quality to that originally specified. Final decision as to equality of products specified versus those proposed shall be made by the Architect.

Section 05 73 00 – Decorative Metal Railings
- Superior Aluminum Products, Russia, Ohio (Series 5)

Section 07 54 23 – Thermoplastic Polyolefin (TPO) Roofing
- Dura-Last Inc., Saginaw, Michigan

Section 09 67 23 – Decorative Resinous Flooring (Aggregate)
- Dex-O-Tex, Roselle Park, New Jersey

Section 23 72 00 – Air to Air Energy Recovery
- RenewAire, Waunakee, Wisconsin

Section 23 82 39 – Unit Heaters
- Indeeco (Paragraphs 2.1, A., and 2.2, A.)

ITEM NO. 11. REVISED DRAWING SHEETS – ELM ROAD ES – CLASSROOM ADDITION:

A. Drawing Sheets: C200, C400, C600, A1.01, A1.02, A1.03, A2.01, A5.01, A5.02, A6.01, A9.01, A10.1, M6.01, E5.03, E5.04, E7.01, ET-11, ET-51, T1-01, and T1-11 have been revised, dated 6/25/25, and are included with and hereby made a part of this Addendum. These Drawings supersede the original documents.

ITEM NO. 12. REVISED DRAWING SHEETS - PENN HS INST. AND ACTIVITY SPACE ADDITION:

A. Drawing Sheets: C300, S0.05, S1.01, S3.01, S5.02, S5.06, A1.00, A1.01, A2.01, A3.01, A5.03, A6.01, A7.01, A10.01, MD.01, M2.02, M3.01, M6.01, FP101, E1.02, E4.01, ET-11, T1-01, T1-11, and T5-01 have been revised, dated 6/25/25, and are included with and hereby made a part of this Addendum. These Drawings supersede the original documents.

END OF ADDENDUM

SECTION 05 52 13 - PIPE AND TUBE RAILINGS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Aluminum pipe and tube railings (exterior).

B. Mark furnished but installed under other Sections:
   1. Furnish sleeves and anchors to be cast in concrete to Division 03 Section “Cast-in-Place Concrete”.

C. Related Sections include the following:
   1. Division 05 Section "Metal Fabrications" for additional requirements for chemical anchors.

1.2 COORDINATION AND SCHEDULING

A. Coordinate installation of anchorages for railings. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

1.3 ACTION SUBMITTALS

A. Product Data: For the following:
   1. Manufacturer's product lines of mechanically connected railings.
   2. Grout, anchoring cement, and paint products.
   3. Railing brackets.

B. Shop Drawings: For all railing systems, including:
   1. Splices and attachments.
   2. Identify location of all railing systems.
   3. Indicate railing systems in related and dimensional position, with elevations at scale of 1/4 inch equals 12 inches and details at scale of 3 inch equals 12 inch (1:5) or larger.
   4. Show all details and dimensions not governed by field conditions.
   5. Indicate all required field measurements.

1.4 QUALITY ASSURANCE

A. Welding: Qualify procedures and personnel according to the following:
   1. AWS D1.2, "Structural Welding Code--Aluminum."

B. Engineer Qualifications: Professional engineer legally authorized to practice in the jurisdiction where Project is located and experienced in providing engineering services of the kind indicated for handrails and railing systems similar to this Project in material, design, and extent, and that have a record of successful in-service performance.

1.5 FIELD CONDITIONS

A. Field Measurements: Verify actual locations of walls and other construction contiguous with railings by field measurements before fabrication and indicate measurements on Shop Drawings.

1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating railings without field measurements. Coordinate wall and other contiguous construction to ensure that actual dimensions correspond to established dimensions.
2. Provide allowance for trimming and fitting at site.

1.6 DELIVERY, STORAGE, AND HANDLING

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

B. Deliver materials to the job site in good condition and properly protected against damage to finished surfaces.

C. Storage on Site
1. Store material in a location and in a manner to avoid damage. Stacking shall be done in a way which will prevent bending.
2. Store aluminum, bronze, and stainless steel components and materials in a clean, dry location, away from uncured concrete and masonry. Cover with waterproof paper, tarpaulin or polyethylene sheeting in a manner that will permit circulation of air inside the covering.

D. Keep handling on site to a minimum. Exercise particular care to avoid damage to finishes of materials.
1. Refer to NAAMM Manual AMP 555-92, Code of Standard Practice for the Architectural Metal Industry, Sections 6 and 7.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

B. Products of other manufacturers will be considered for acceptance provided they equal or exceed the material requirements and functional qualities of the specified product. Requests for Architect/Engineer's approval must be accompanied by the "Substitution Request Form" and complete technical data for evaluation. All materials for evaluation must be received by the Project Manager and Specification Department at least 10 days prior to bid due date. Additional approved manufacturers will be issued by Addendum.

2.2 PERFORMANCE REQUIREMENTS

A. Delegated Design: Design railings, posts, and attachments to adjoining construction, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

B. General: In engineering railings and posts to withstand structural loads indicated, determine allowable design working stresses of railing materials based on the following:
1. Aluminum: The lesser of minimum yield strength divided by 1.65 or minimum ultimate tensile strength divided by 1.95.

C. Structural Performance: Provide railings capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
1. Handrails and Top Rails of Guards:
a. Uniform load of 50 lbf/ ft. applied in any direction.

b. Concentrated load of 200 lbf applied in any direction.
c. Uniform and concentrated loads need not be assumed to act concurrently.

2. Infill of Guards:
a. Concentrated load of 50 lbf applied horizontally on an area of 1 sq. ft.
b. Infill load and other loads need not be assumed to act concurrently.

D. Thermal Movements: Provide exterior railings that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

E. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

2.3 METALS, GENERAL

A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.

B. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails, unless otherwise indicated.
1. Provide bracket that provides 1-1/2 inch clearance from inside face of handrail to finished wall surface.

2.4 ALUMINUM

A. Aluminum, General: Provide alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with not less than the strength and durability properties of alloy and temper designated below for each aluminum form required.

B. Extruded Bars and Tubing: ASTM B 221, Alloy 6063-T5/T52.

C. Extruded Structural Pipe and Round Tubing: ASTM B 429, Alloy 6063-T6.
1. Provide Standard Weight (Schedule 40) pipe, unless otherwise indicated.
2. Where required by loading and performance requirements, provide Schedule 80 pipe for vertical posts and horizontal members.

D. Drawn Seamless Tubing: ASTM B 210, Alloy 6063-T832.

E. Plate and Sheet: ASTM B 209, Alloy 6061-T6.

F. Die and Hand Forgings: ASTM B 247, Alloy 6061-T6.

G. Castings: ASTM B 26, Alloy A356.0-T6.

2.5 FASTENERS

A. General: Provide the following:
1. Aluminum Railings: Type 304 stainless-steel fasteners.
2. Provide exposed fasteners with finish matching appearance, including color and texture, of railings.

B. Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction indicated and capable of withstanding design loads.

C. Fasteners for Interconnecting Railing Components:
   1. Provide concealed fasteners for interconnecting railing components and for attaching them to other work, unless otherwise indicated.

D. Post-Installed Anchors: Provide chemical, anchors, fabricated from corrosion-resistant materials with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry and equal to four times the load imposed when installed in concrete, as determined by testing per ASTM E 488 conducted by a qualified independent testing agency.
   1. Refer to Division 05 Section "Metal Fabrications."

E. Brackets, Flanges, Fittings and Anchors: Provide wall brackets, end closures, flanges, miscellaneous fittings, and anchors for interconnections of pipe and attachment of handrails and guards to other work. Furnish inserts and other anchorage devices for connecting handrails and guards to concrete and masonry work.
   1. Wall Bracket: Castaluminum wall mount handrail bracket with a projection of 2-1/2 inch. Bracket shall have one 3/8 – 16 tapped hole for concealed mounting and universal saddle with two countersunk mounting holes.
      a. Manufacturers
         1) Julius Blum & Co.
         2) R&B Wagner, Inc.
         3) J.G. Braun Co.
   2. At brackets and fittings fastened to plaster or gypsum board partitions, provide fillers made from crush resistant material, or other means to transfer wall loads through wall finishes to structural supports and prevent bracket of fitting rotation and crushing of substrate.
   3. Ease corners and edges of brackets. Brackets shall not have sharp edges.

2.6 MISCELLANEOUS MATERIALS

A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
   1. For aluminum railings, provide type and alloy as recommended by producer of metal to be welded and as required for color match, strength, and compatibility in fabricated items.

B. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.

C. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for exterior applications.

D. Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound.
   1. Water-Resistant Product: Provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended by manufacturer for exterior use.

2.7 FABRICATION

A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.

B. Shop assemble railings to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations.
   1. Clearly mark units for reassembly and coordinated installation.

2. Use connections that maintain structural value of joined pieces equally spaced per code requirements between top rail and finish floor or nosing line of tread.
3. Locate intermediate rails.

C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch, unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

D. Form work true to line and level with accurate angles and surfaces.

E. Fabricate connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water or condensation may accumulate.
1. Weeps should be set such that the post base does not hold water. A pourable sealer can be used within the post to fill the hollow portion of the post up to the level of the weep or provide condensation sleeves or diverters.

F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.

G. Connections: Fabricate railings with either welded or nonwelded connections, unless otherwise indicated.

H. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.
1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove flux immediately.
4. Weld exposed corners and seams continuously, unless otherwise indicated.
5. At exposed connections, finish exposed welds to comply with NOMMA's "Voluntary Joint Finish Standards" for Type 2 welds; completely sanded joint, some undercutting and pinholes okay.

I. Nonwelded Connections: Connect members with concealed mechanical fasteners and fittings. Fabricate members and fittings to produce flush, smooth, rigid, hairline joints.
1. Fabricate splice joints for field connection using an epoxy structural adhesive if this is manufacturer's standard splicing method.

J. Form changes in direction as follows:
1. By bending or by inserting prefabricated elbow fittings.

K. Form simple and compound curves by bending members in jigs to produce uniform curvature for each repetitive configuration required; maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.

L. Close exposed ends of railing members with prefabricated end fittings or by welding metal closure in place.

M. Provide wall returns at ends of wall-mounted handrails, unless otherwise indicated. Close ends of returns unless clearance between end of rail and wall is 1/4 inch or less.

N. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work, unless otherwise indicated.
1. At brackets and fittings fastened to plaster or gypsum board partitions, provide fillers made from crush-resistant material, or other means to transfer wall loads through wall finishes to structural supports and prevent bracket or fitting rotation and crushing of substrate.

O. Provide inserts and other anchorage devices for connecting railings to concrete or masonry work.
   1. Fabricate anchorage devices capable of withstanding loads imposed by railings.
   2. Coordinate anchorage devices with supporting structure.

2.8 ALUMINUM FINISHES

A. 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.

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

C. Class I, Color Anodic Finish: AA-M12C22A42/A44 or AA-M10C21A41 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, integrally colored or electrolytically deposited color coating 0.018 mm or thicker) complying with AAMA 611.
   1. Color: Dark bronze.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine gypsum board assemblies, where reinforced to receive anchors, to verify that locations of concealed reinforcements have been clearly marked for Installer. Locate reinforcements and mark locations if not already done.

3.2 INSTALLATION, GENERAL

A. Fit exposed connections together to form tight, hairline joints.

B. Perform cutting, drilling, and fitting required for installing railings.
   1. Set railings accurately in location, alignment, and elevation; measured from established lines and levels.
   2. Fit exposed connections together to form tight, hairline joints.
   3. Install railings level, plumb, square, true to line; without distortion, warp, or rack.
   4. Do not weld, cut, or abrade surfaces of railing components that have been coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
   5. Set posts plumb within a tolerance of 1/16 inch in 3 feet.
   6. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet.

C. Corrosion Protection: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.
   1. Coat concealed surfaces of aluminum that will be in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.

D. Adjust railings before anchoring to ensure matching alignment at abutting joints.

E. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.

3.3 RAILING CONNECTIONS

A. Nonwelded Connections: Use mechanical or adhesive joints for permanently connecting railing components. Use wood blocks and padding to prevent damage to railing members and fittings. Seal recessed holes of exposed locking screws using plastic cement filler colored to match finish of railings.

B. Welded Connections: Use fully welded joints for permanently connecting railing components. Comply with requirements for welded connections in Part 2 "Fabrication" Article whether welding is performed in the shop or in the field.

C. Expansion Joints: Install expansion joints at locations indicated but not farther apart than required to accommodate thermal movement. Provide slip-joint internal sleeve extending 2 inches beyond joint on either side, fasten internal sleeve securely to 1 side, and locate joint within 6 inches of post.
   1. Steel: Provide expansion joints on straight runs exceeding 40 feet.
   2. Aluminum: Provide expansion joints on straight runs exceeding 20 feet.

3.4 ANCHORING POSTS

A. Tolerance: Set posts plumb and aligned to within 1/4 inch in 12 feet.

B. Setting Posts, General:
   1. Clean dust and foreign matter from sleeves/holes.
   2. Moisten interior of holes and surrounding surfaces with clean water.
   3. Prepare and use grout in accordance with manufacturer’s directions.
   4. Place posts in position and brace until grout sets.
   5. Pour mixture into annular space until it overflows the hole.
   6. Wipe off excess and leave 1/8 inch build-up sloped away from post.

C. Form or core-drill holes not less than 5 inches deep and 3/4 inch larger than OD of post for installing posts in concrete. Clean holes of loose material, insert posts, and fill annular space between post and concrete with nonshrink, nonmetallic grout or anchoring cement, mixed and placed to comply with anchoring material manufacturer's written instructions.
   1. Exterior Locations: Use anchoring cement.

D. Leave anchorage joint exposed; wipe off surplus anchoring material; and leave 1/8-inch buildup, sloped away from post.

3.5 ANCHORING RAILING ENDS

A. Tolerances: Set rails horizontal or parallel to rake of steps or ramp to within 1/4 inch in 12 feet.

B. Anchor railing ends to concrete and masonry with round flanges connected to railing ends and anchored to wall construction with anchors and bolts.

C. Anchor railing ends to metal surfaces with flanges bolted to metal surfaces and welded to railing ends or connected to railing ends using nonwelded connections.

3.6 ATTACHING HANDRAILS TO WALLS

A. Attach handrails to wall with wall brackets. Provide brackets with 1-1/2-inch clearance from inside face of handrail and finished wall surface.
   1. Use type of bracket with flange tapped for concealed anchorage to threaded hanger bolt.
   2. Use type of bracket with predrilled hole for exposed bolt anchorage.

B. Locate brackets as indicated or, if not indicated, at spacing required to support structural loads.
   1. Aluminum Pipe: Spacing shall not be more than 5 feet.

C. Secure wall brackets to building construction as follows:
   1. For concrete and solid masonry anchorage, use drilled-in expansion shields and hanger or lag bolts.
   2. For hollow masonry anchorage, use toggle bolts.
   3. For steel-framed gypsum board partitions, fasten brackets either directly to steel framing or concealed steel reinforcements using self-tapping screws of size and type required to support structural loads or with toggle bolts installed through flanges of steel framing or through concealed steel reinforcements or use hanger or lag bolts set into fire-retardant-treated wood backing between studs.

3.7 ADJUSTING AND CLEANING

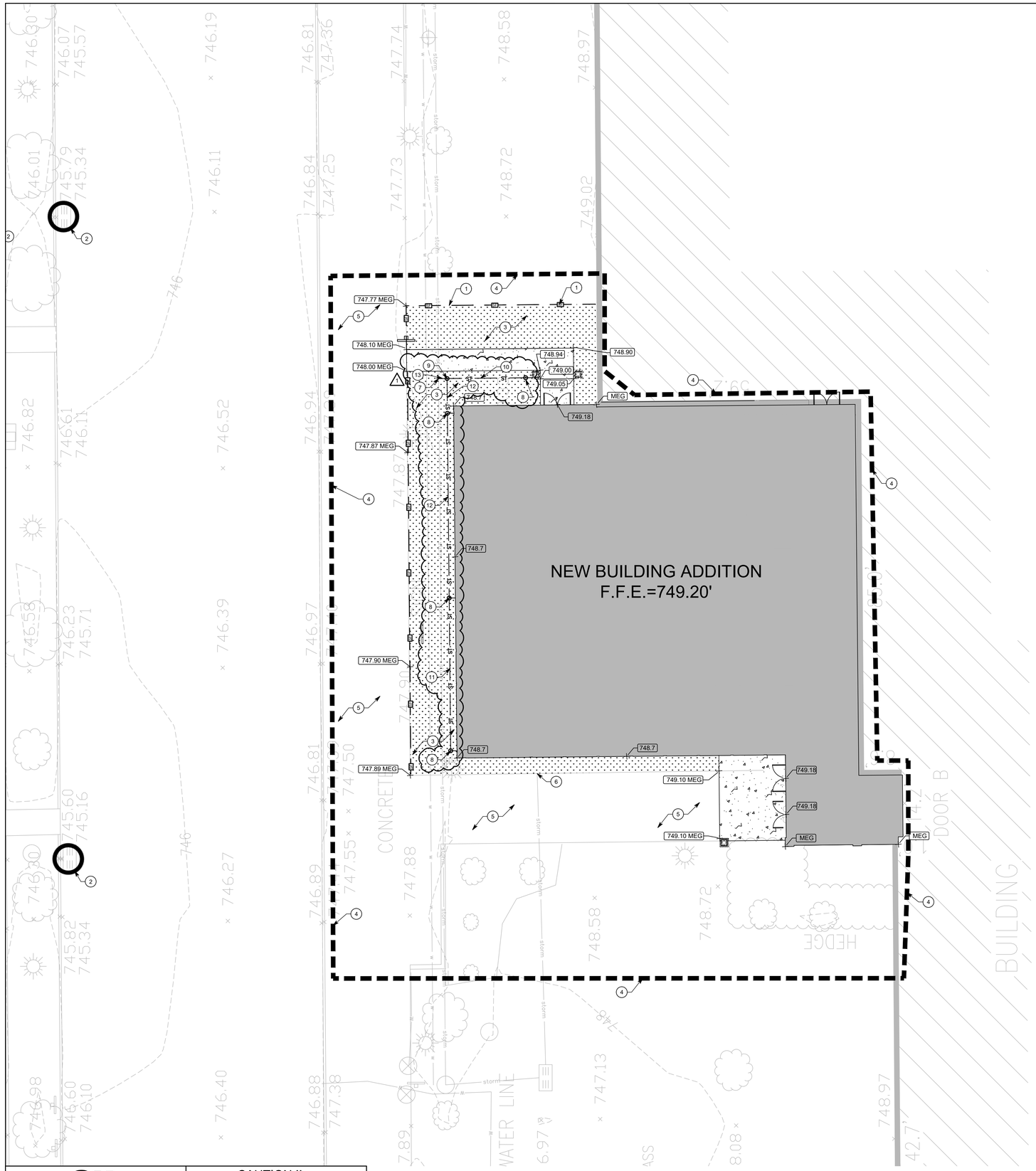
A. Clean aluminum by washing thoroughly with clean water and soap and rinsing with clean water.
   1. Do not use acid solution, steel wood or other harsh abrasives.

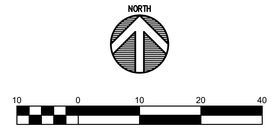
3.8 PROTECTION

A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.

B. Restore finishes damaged during installation and construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units.

END OF SECTION 05 52 13





GENERAL NOTES

1. SEE DRAWING C001 FOR GENERAL NOTES AND ADDITIONAL LEGEND.
2. TOPOGRAPHIC CONDITIONS AND EXISTING UTILITIES SHOWN WERE PROVIDED BY THE OWNER. THE ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.
3. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE PROJECT AREA INCLUDING UNDERGROUND UTILITY CONDITIONS, LOCATION AND DEPTH PRIOR TO ANY OTHER SITE CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER.

SHEET KEYNOTES

1. SILT FENCE. SEE DETAIL C/C600
2. INLET SEDIMENT PROTECTION. SEE DETAIL D/C600
3. SEED DISTURBED AREAS
4. CONSTRUCTION LIMITS
5. DURING CONSTRUCTION KEEP PAVEMENT AND SIDEWALKS CLEAN AND WORK AREAS IN AN ORDERLY CONDITION. CLEAN WHEELS OF VEHICLES BEFORE LEAVING SITE TO AVOID TRACKING SOIL ONTO ROADS OR OTHER PAVED AREAS.
6. REMAINING EXISTING STORM LINE TO BE CAPPED
7. CONNECT 8" HDPE STORM LATERAL TO EXISTING STORM LINE. INV.=737.30
8. CLEANOUT PER PLUMBING PLANS
9. CLEANOUT PER DETAIL F/C600 AT INV.=737.86
10. 4" HDPE PIPE @ 29.40% SLOPE PER DETAIL E/C600
11. 6" HDPE PIPE @ 6.6% SLOPE PER DETAIL E/C600
12. 8" HDPE PIPE @ 6.6% SLOPE PER DETAIL E/C600
13. 8" HDPE PIPE @ 29.5% SLOPE PER DETAIL E/C600

SHEET LEGEND

+728.30	EXISTING SPOT ELEVATION
MEG	MATCH EXISTING GRADE
TC	TOP OF CURB
BC	BOTTOM OF CURB
730	EXISTING CONTOUR W/ ELEVATION
750.65	PROPOSED SPOT ELEVATION
TC / BC	PROPOSED CURB ELEVATION
	SEDIMENT BAG INLET PROTECTION
	APPROXIMATE LIMITS OF CONSTRUCTION
	APPROXIMATE LIMITS OF TEMPORARY SEEDING
SF	SILT FENCE

PENN HIGH SCHOOL BUILDING EXPANSION

56100 BITTERSWEET RD,
MISHAWAKA, IN 46545

PENN HARRIS MADISON SCHOOL CORPORATION

FANNING HOWEY
317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST. SUITE 300 INDIANAPOLIS, IN 46204

N

CONSTRUCTION DOCUMENTS

PROJECT MANAGER: CNK
DRAWN BY: CDL
PROJECT NUMBER: 2024-254
PROJECT ISSUE DATE: 04-17-2025

REV. NO.	DESCRIPTION	DATE
1	REVISIONS TO STORM LINE	06-05-2025

GRADING, UTILITY, & EROSION CONTROL PLAN

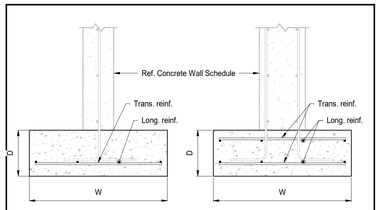
C300

811 Know what's below. Call before you dig.
Call 811 or 1-800-382-5544 Before You Begin Any Digging Project.
Call 48 hours or 2 working days before you dig.
It's Fast, It's Easy and It's the Law in the state of Indiana!

CAUTION !!

THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (INCLUDING, BUT NOT LIMITED TO, MANHOLES, INLETS, VALVES, AND MARKS MADE UPON THE GROUND BY OTHERS) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

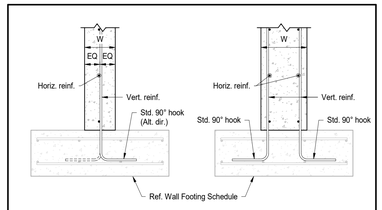
File Path
1/28/2013 12:04:04 PM



Type A Type B

Wall Footing Schedule

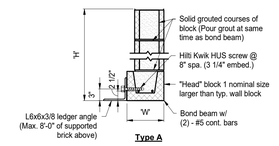
Mark	Size		Reinforcing		Type	Notes
	Width (W)	Depth (D)	Longitudinal	Transverse		
WF24	2'-0"	1'-6"	(3) - #5	#5 @ 1'-6" spa.	A	
WF42	3'-6"	1'-6"	(4) - #5	#5 @ 1'-6" spa.	A	
WF60	5'-0"	2'-0"	(4) - #5	#5 @ 1'-6" spa.	B	



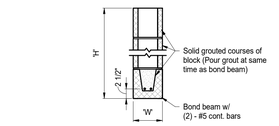
Type A Type B

Concrete Wall Schedule

Mark	Width (W)	Reinforcing		Type	Notes
		Horizontal	Vertical		
CW6	6"	#4 @ 1'-0"	#4 @ 1'-0"	A	



Type A

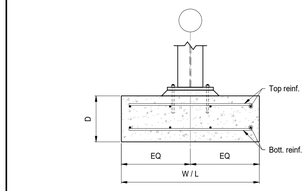


Type B

Notes:
1. 'W' and 'H' dimensions for Type A and Type B lintels are nominal dimensions.
2. All lintels bear 8" onto supporting walls, UNO.
3. All steel lintels and shelf angles in exterior walls shall be galvanized.
4. Bottom plates shall extend the full-length of the lintel, including bearing length, UNO.
5. At CMU infill (soaps) at steel lintels, provide metal anchorage at every course @ 1'-4" spa. to tie CMU to steel.
6. Provide the following loose angle lintels for brick/masonry veneer openings, except where shelf angles are used (Ref Arch. drawings for veneer masonry types & locations):
   a. L3 1/2x3 1/2x5/16 for openings less than 4'-0" wide.
   b. L6x3 1/2x5/16 for openings from 4'-0" to 6'-8" wide.

Lintel Schedule

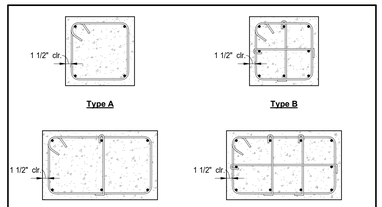
Mark	CMU Size	Type	Notes
L1	8 x 8	B	
L2	8 x 16	B	
L3	8 x 16	A	
L5	10 x 16	A	
L6	10 x 24	A	



Notes:
1. Ref. typical details for additional information.

Column Footing Schedule

Mark	Size			Reinforcing		Notes
	Length	Width	Depth	Bottom	Top	
F3	3'-0"	3'-0"	1'-6"	#4 @ 1'-0" spa. e.w.	-	
F4	4'-0"	2'-0"	1'-6"	#4 @ 1'-0" spa. e.w.	-	



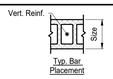
Type A Type B Type C Type D

Notes:
1. Provide (3) ties @ 3" spa. at top of each pedestal. Tie size to match typ. pedestal reinf. Provide ties @ spa. indicated in schedule for remainder of pedestal length.

Pedestal Schedule

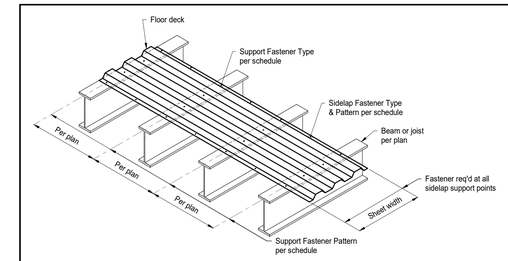
Mark	Size		Offset		Reinforcing			Notes
	Length	Width	L1	W1	Type	Vert.	Ties	
P1	1'-3"	1'-6"	1 1/2"	0"	A	(4) - #5	#3 @ 1'-0" spa.	
P2	2'-0"	2'-0"	0"	0"	B	(8) - #5	#3 @ 1'-0" spa.	

Notes:
1. See the structural drawings, architectural drawings & specifications for required horizontal (bond beam and joint) reinforcement and required additional vertical reinforcement.
2. Provide matching hooked dowels into the foundation for all vertical reinforcement. Grout solid all cells containing vertical reinforcement.

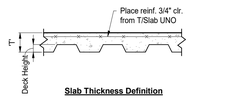


Masonry Wall Reinforcement Schedule

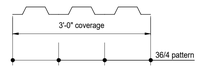
Mark	Size	Vert. Reinf.	Notes
MW6	6 x 8	-	
MW8	8 x 8	#5 @ 48" spa.	
MW10	10 x 8	#6 @ 32" spa.	



Fastener Pattern Diagram



Slab Thickness Definition

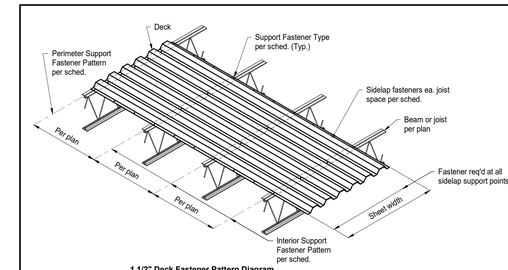


Support Fastener Pattern Definition

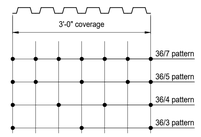
Notes:
1. Concrete to be normal-weight UNO.
2. Fasten through multiple sheets at all end and side laps.
3. End laps shall occur only at support points.
4. Deck shall be installed in minimum three span condition UNO.
5. Where sidelap fasteners are not noted, provide the following minimum attachments:
   a. For deck spans ≤ 6'-0", provide one sidelap fastener at mid-span of each joist or beam space.
   b. For deck spans > 6'-0", provide sidelap fasteners at 3'-0" max. spa.
6. See Framing Plan for slab locations & and framing spacing.

Slab-on-Deck Schedule

Mark	Deck Height	Gauge	Type	Finish	Slab T	Slab Reinforcing	Support Fastener Type	Support Fastener Pattern	Sidelap Fastener Type	Sidelap Fastener Pattern	Notes
SOD1	1 1/2"	20 ga.	VL Composite	Galv.	4 3/4"	WWF 6x6-W1.4xW1.4	5/8" puddle welds	36/4	#10 screws	12" spa.	



1 1/2" Deck Fastener Pattern Diagram

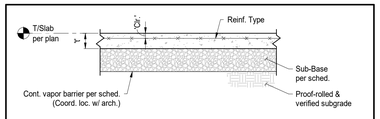


Support Fastener Pattern Definition

Notes:
1. Fasten through multiple sheets at all end and side laps.
2. End laps shall occur only at support points.
3. Deck shall be installed in minimum 3-span condition UNO.

Deck Schedule

Mark	Deck T	Gauge	Type	Finish	Support Fastener Type	Perimeter Support Fastener Pattern	Interior Support Fastener Pattern	Sidelap Fastener Type	Sidelap Fastener Pattern	Notes
D1	1 1/2"	20 ga.	Type B Deck	Galv.	5/8" puddle welds	36/4	36/4	#10 screws	12" spa.	

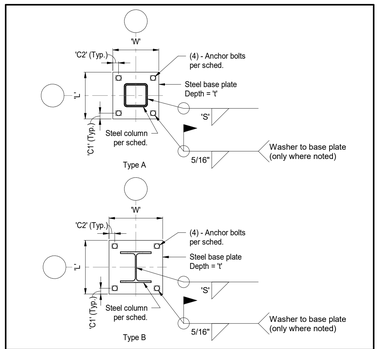


Slab-on-Grade Diagram

Notes:
1. Locate WWF in upper 1/3rd of slab. Support on bolsters, chairs, or conc. bricks.
2. Lap WWF a min. of one full mesh spacing.
3. Use of nylon or polypropylene fiber in lieu of WWF as a secondary reinforcement is not permissible UNO.
4. See plans, notes & specifications for additional requirements such as finish, jointing, curing, etc.

Slab-on-Grade Schedule

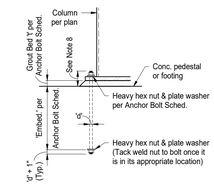
Mark	Thickness (t)	Reinforcing		Sub-Base	Notes
		Type	Cover (Clr.)		
SOG4	4"	WWF 6x6-W1.4xW1.4	1 1/4"	6" compacted drainage fill	



Base Plate Schedule

Mark	Type	Length (L)	Width (W)	Depth (t)	Edge Dist. (C1)	Edge Dist. (C2)	Weld Size (S)	Anchor Bolt	Notes
BP1	A	10"	10"	3/4"	1 1/2"	1 1/2"	1/4	AB1	

Notes:
1. Ref. Anchor Bolt Schedule for additional information.



Notes:
1. Location of anchor bolts must not vary more than 1/8" o.c. of any two bolts within an anchor bolt group.
2. Hold max. deviation of 1/4" o.c. of adjacent anchor bolt groups.
3. Hold elev. of the top of the anchor bolts to ±1/2".
4. Hold max. deviation of 1/4" from the center of any anchor bolt group to the established column line through that group.
5. Refer to the AISC code of Standard Practice for additional information.
6. It is the Contractor's responsibility to provide sufficient temp. support of column base plates using leveling plates, leveling nuts/washers or steel shims (or combination thereof) prior to placement and curing of non-shrink grout.
7. Grout bed shall be packed with non-shrink non-metallic grout (Ref. specifications where available).
8. Anchor bolts shall project above conc. pedestal or footing surface a sufficient length such that the anchor bolt nut will be fully engaged, at a minimum. Contractor shall consider applicable installation tolerances and materials (grout thickness, base plate thickness, plate washers, etc.) when determining anchor bolt projection length. When column base is encased in concrete, a mimimum 1 1/2" cover shall be provided over the top of the anchor bolts. Contractor shall trim tops of anchor bolts as required to attain minimum cover while maintaining full engagement of anchor bolt nut.

Anchor Bolt Schedule

Anchor Bolts			Washers		Grout Bed Thickness (t)	Base Plate Hole Dia.	Remarks
Mark	Dia. (d)	Embed.	Size (Min.)	Thickness (Min.)			
AB1	3/4"	9"	2"	1/4"	2"	1 5/16"	

Notes:
1. Washers may be round or square.

Concrete Schedule

Class	28-Day Compressive Strength	Air Content	Concrete Placement	Notes
A	3,000 psi	Optional	Footings	Water reducing admixture required.
B	3,500 psi	4.5% to 1.5%	Foundation walls & pedestals	Normal-weight concrete. High-range water reducing admixture required.
C	4,000 psi	0% to 3%	Interior slabs-on-grade	Mid-range water reducing admixture required.
D	4,000 psi	5.5% ±1.5%	Exterior concrete exposed to freezing	Mid-range water reducing admixture required.

Notes:
1. Any concrete not indicated in the schedule shall be Class C.
2. Include an air-entraining admixture in mix designs for concrete exposed to freezing & thawing during service, and for concrete exposed to cold weather during construction, before attaining its required 28-day compressive strength.

Concrete Reinforcing Steel Lap Splice Charts

Horizontal Foundation Bottom Bar Splice Lengths

Bar Size	Splice Length f'_c = 3,000 psi	Splice Length f'_c = 4,000 psi
#4	1'-1"	1'-0"
#5	1'-7"	1'-5"
#6	2'-3"	1'-11"
#7	3'-7"	3'-1"
#8	4'-6"	3'-11"
#9	5'-7"	4'-10"
#10	6'-7"	5'-9"
#11	7'-10"	6'-10"

Notes:
1. Applies only to fndn. bott. reinf. w/ <1'-0" of conc. cast beneath the bars.
2. Min. conc. cover (side, bott. or top) shall be at least 1 1/2" for #5 & smaller & 2" for #6 & larger.
3. Min. center-to-center spacing of parallel bars shall be 6".

Vertical Bar Splice Lengths

Bar Size	Splice Length f'_c = 3,000 psi	Splice Length f'_c = 4,000 psi
#4	1'-6"	1'-3"
#5	2'-2"	1'-11"
#6	3'-0"	2'-7"
#7	4'-10"	4'-2"
#8	6'-0"	5'-2"
#9	6'-11"	5'-10"
#10	7'-6"	6'-6"
#11	8'-3"	7'-2"

Notes:
1. Min. conc. cover (side, bott. or top) shall be the larger of 1" or d_b.
2. Min. center-to-center spacing of parallel bars shall be 4 1/2".
3. Typ. UNO on plans.

Horizontal Bar Splice Lengths

Bar Size	Splice Length f'_c = 3,000 psi	Splice Length f'_c = 4,000 psi
#4	1'-11"	1'-8"
#5	2'-10"	2'-5"
#6	3'-10"	3'-4"
#7	8'-1"	5'-5"
#8	10'-1"	6'-9"
#9	11'-5"	7'-8"
#10	12'-8"	8'-6"
#11	13'-11"	9'-4"

Notes:
1. Min. conc. cover (side, bott. or top) shall be the larger of 1" or d_b.
2. Min. center-to-center spacing of parallel bars shall be 4 1/2".
3. Applies to all horiz. bars except bott. layer fndn. reinf. w/ <1'-0" of conc. cast beneath the bars UNO on plans.

Masonry Reinforcing Steel Lap Splice Chart

Bar Size	Minimum Lap Splice based on: Bars Centered in Grouted Cells				Clear Cover	
	6" CMU	8" CMU	10" CMU	12" CMU	1 1/2"	2"
#3	1'-0"	1'-0"	1'-0"	1'-0"	1'-5"	1'-1"
#4	1'-6"	1'-1"	1'-0"	1'-0"	2'-6"	1'-10"
#5	2'-4"	1'-8"	1'-4"	1'-1"	3'-9"	2'-11"
#6	4'-5"	3'-2"	2'-5"	2'-0"	4'-6"	4'-6"
#7	NP	4'-4"	3'-4"	2'-9"	5'-3"	5'-3"
#8	NP	6'-0"	5'-1"	4'-2"	6'-0"	6'-0"
#9	NP	NP	6'-6"	5'-4"	6'-9"	6'-9"

Notes:
1. Chart is based on masonry unit compressive strength of f'_m = 2,000 psi.
2. Chart is based on ASTM A615, Grade 60 reinforcement (f_y = 60,000 psi).
3. One bar per grouted cell for vertical bars.
4. Clear spacing between bars shall be greater than or equal to the clear cover.
5. NP = Not Permitted.

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

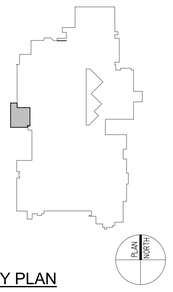
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

TROY A. MAZLEN REGISTERED No. PE10100188 STATE OF IND PROFESSIONAL ENGINEER

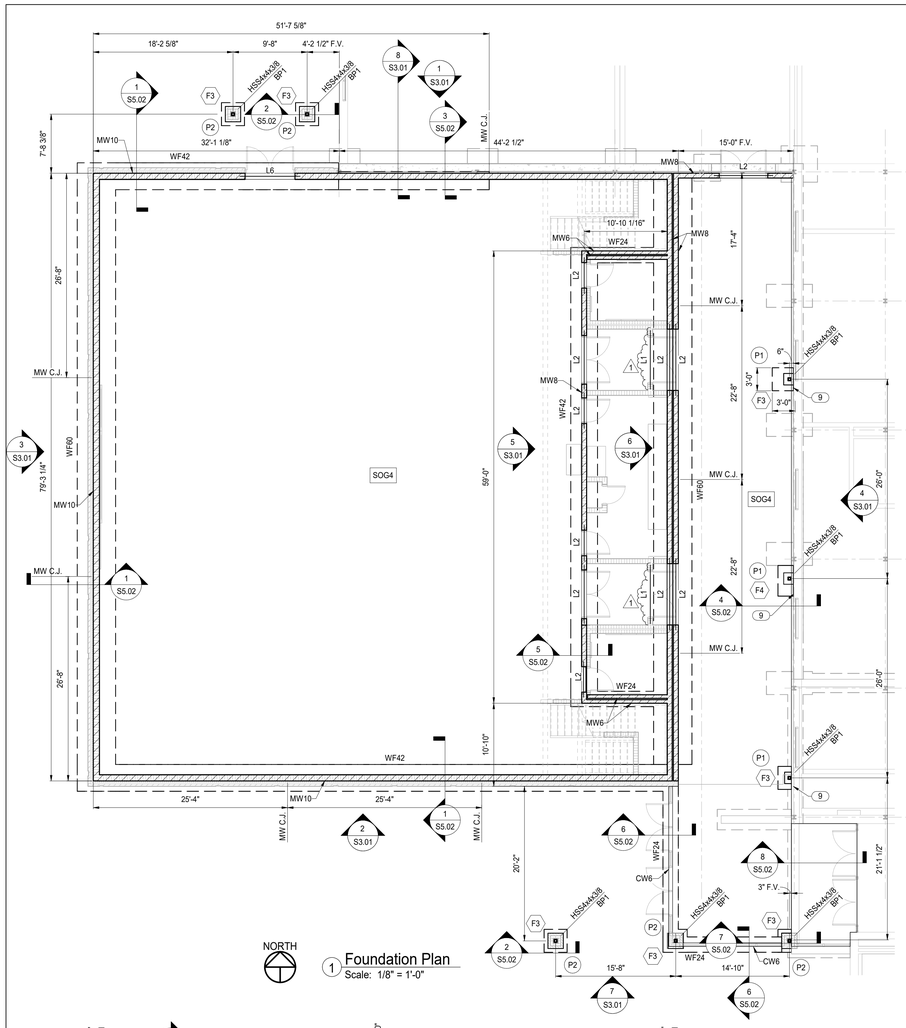
DRAWN BY: LWT
PROJECT NUMBER: 223213.00
PROJECT ISSUE DATE: 04/09/2025

REV. NO.	DESCRIPTION	DATE
	ISSUED FOR CONSTRUCTION	04/09/2025
1	ADDENDUM NO. 2	06/25/2025

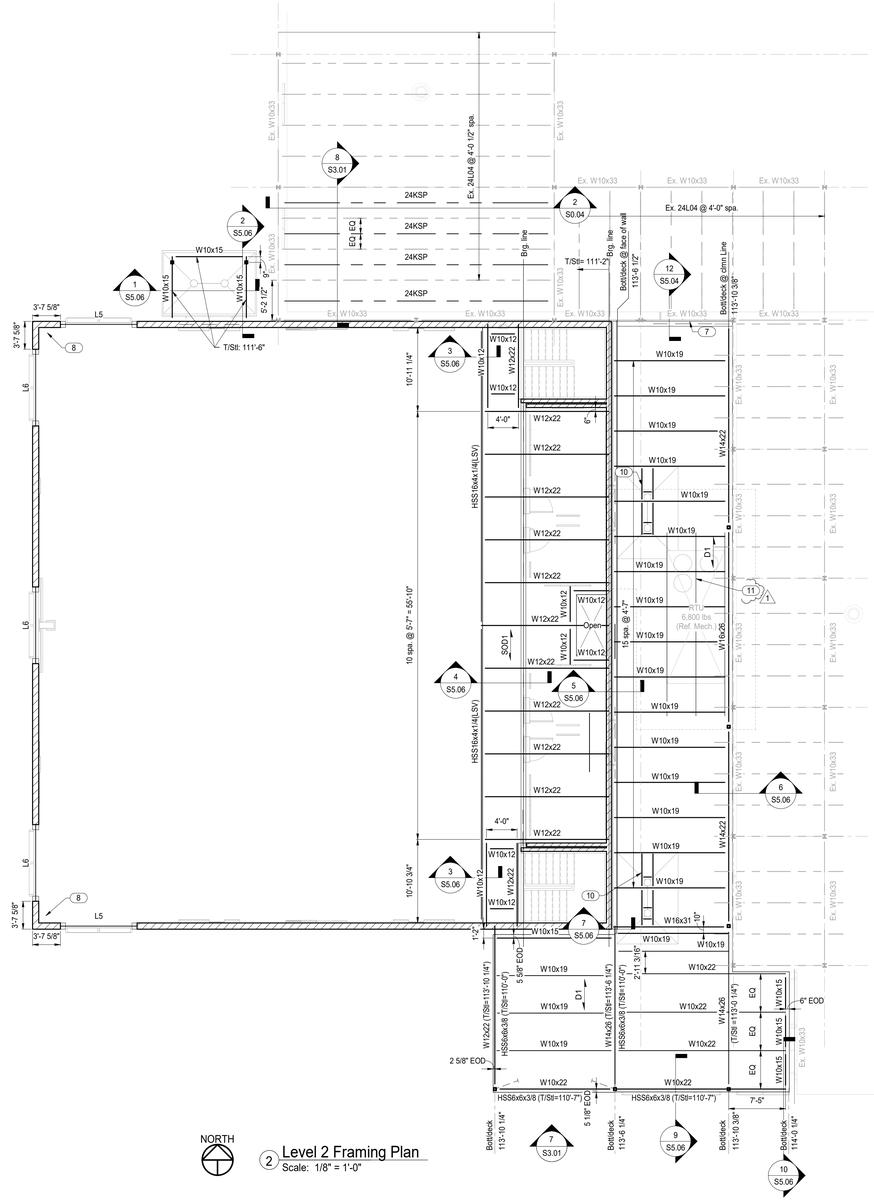
SCHEDULES

S0.05

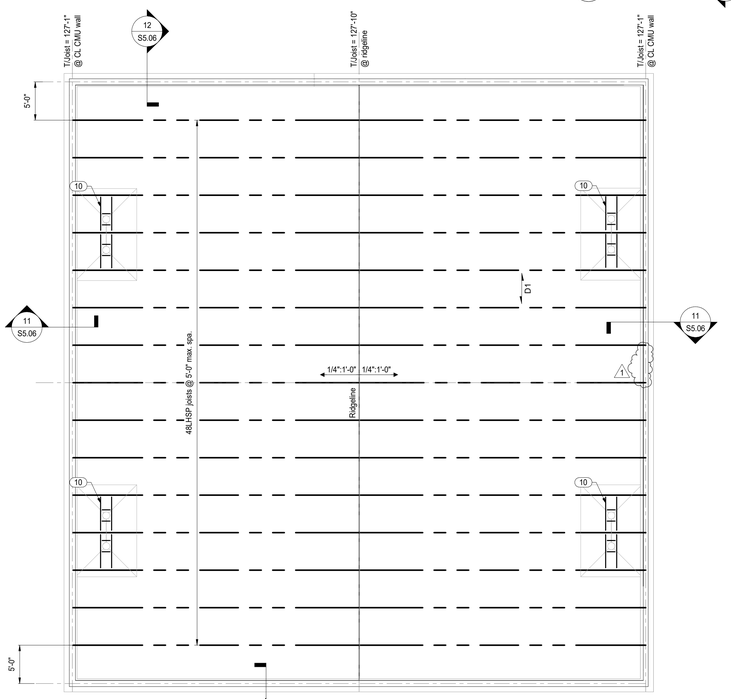
C:\Autodesk\Revit\Local Files\PHS Perform Arts Add_Struc_RVT23_TylerMadlem.rvt
6/25/2025 5:10:51 PM
model is in 221096.00



1 Foundation Plan
Scale: 1/8" = 1'-0"



2 Level 2 Framing Plan
Scale: 1/8" = 1'-0"



3 Roof Framing Plan
Scale: 1/8" = 1'-0"

Plan Notes:

1. Reference elevation = 100'-0" (749.00' USGS).
2. Refer to Architectural drawings for all dimensions not shown. Contractor shall verify all dimensions & elevations prior to construction and notify Architect & SEOR of any discrepancies.
3. All walls shall be laid out from the arch. drawings.
4. All contractor's shall coord. their work w/ all disciplines to avoid conflicts & identify all req'd materials and work.
5. Coord. exact size & location of all mech. openings in floor slabs, roof decks & walls w/ the Mech. Contractor. Location & size of all duct openings, louvers, etc. shall be verified prior to construction.
6. Typical Elevations (UNO):
   a. T/Slab = 100'-0"
   b. T/Pedestal = 99'-4"
   c. T/Ftg. @ Int. Columns = 99'-4"
   d. T/Ftg. @ Ext. Columns = 98'-0"
   e. T/Ftg. @ Int. Walls = 99'4"
   f. T/Ftg. @ Ext/ Walls = 98'-0"
7. Masonry wall to extend to sloping bottom of deck elevation above. Bond beam course shall be sloped and full-depth, cut course below as required to achieve slope
8. Reduce vert. reinf. spa. in masonry wall to 1'-4" in the corner region noted.
9. Field verify bearing elevation matches adjacent exist. footing. Dowel bars from new footing 9" into adjacent exist. footings and grade beams where present.
10. Provide framing around roof penetrations per Detail 2/S5.04.
11. Provide curb support framing per Detail 4/S5.04. Coordinate support requirements with curb supplied.
12. Duct penetrations through CMU walls requiring an opening width greater than 1'-4" require an L1 lintel, UNO. Reference Mechanical drawings for duct locations.

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

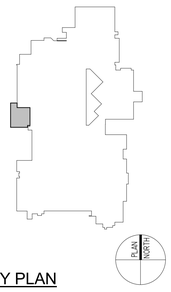
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

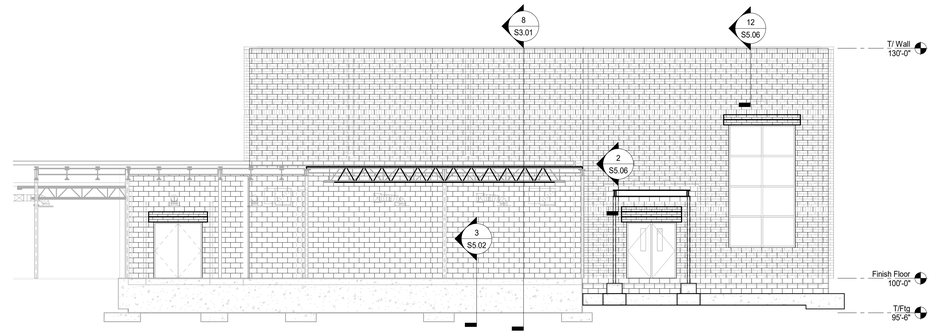
DRAWN BY: LWT
PROJECT NUMBER: 223213.00
PROJECT ISSUE DATE: 04/09/2025

REV. NO.	DESCRIPTION	DATE
	ISSUED FOR CONSTRUCTION	04/09/2025
1	ADDENDUM NO. 2	06/25/2025

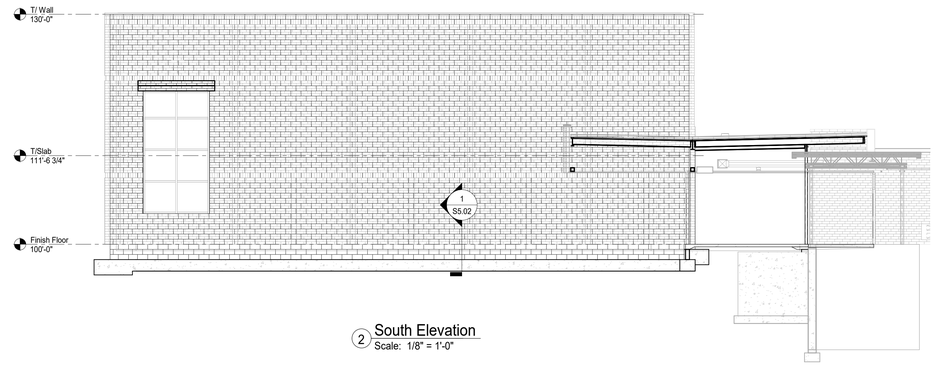
FLOOR PLANS

S1.01

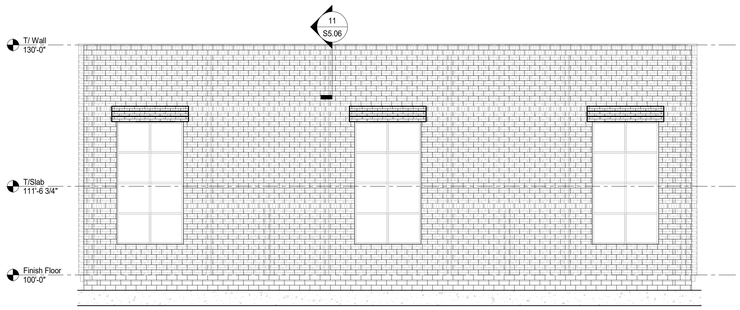
C:\Autodesk\Revit\Local Files\PHS Perform Arts Add_Struc_RVT23_TylerMadlem.rvt
6/25/2025 5:10:56 PM
model is in 223086.00



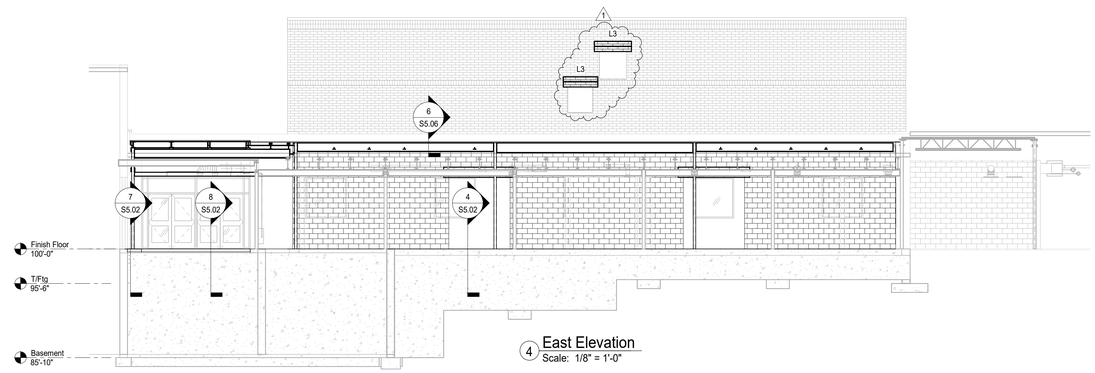
1 North Elevation
Scale: 1/8" = 1'-0"



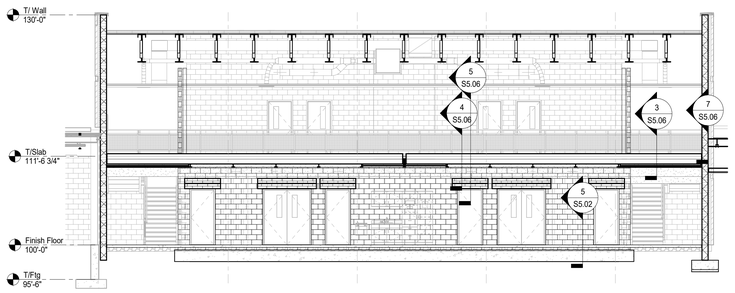
2 South Elevation
Scale: 1/8" = 1'-0"



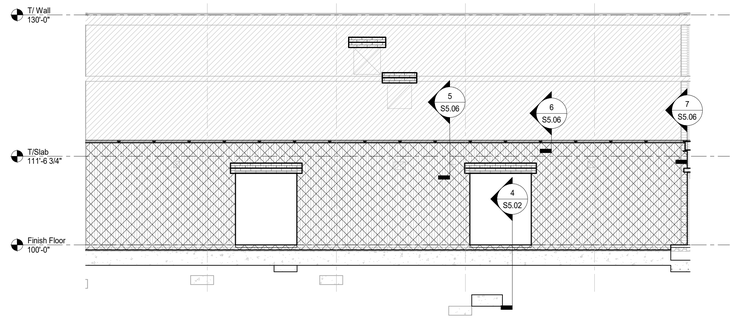
3 West Elevation
Scale: 1/8" = 1'-0"



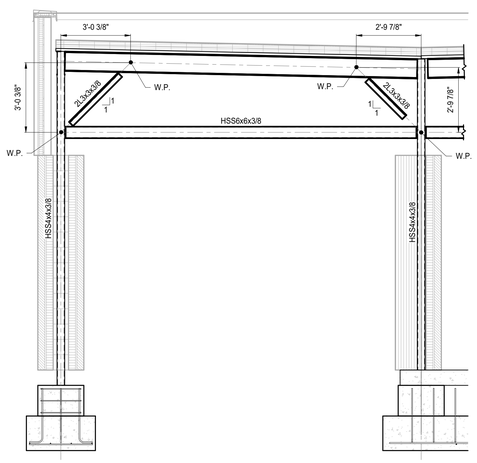
4 East Elevation
Scale: 1/8" = 1'-0"



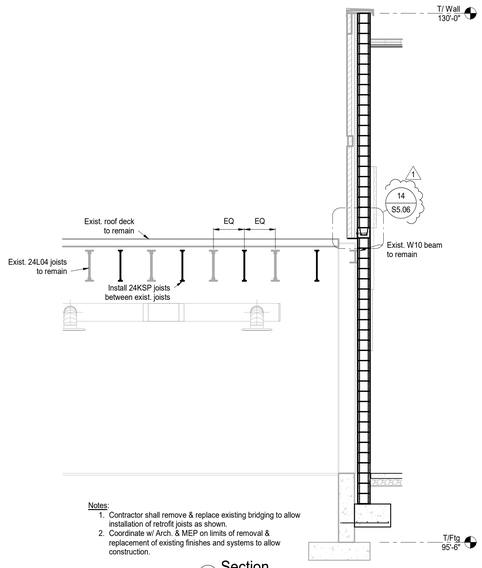
5 Interior Band Room Wall
Scale: 1/8" = 1'-0"



6 Interior Stair Elevation
Scale: 1/8" = 1'-0"



7 Framing Elevation
Scale: 3/8" = 1'-0"



Notes:
1. Contractor shall remove & replace existing bridging to allow installation of retrofit joists as shown.
2. Coordinate w/ Arch. & MEP on limits of removal & replacement of existing finishes and systems to allow construction.

8 Section
Scale: 1/4" = 1'-0"

C:\Autodesk\Revit\Local Files\PHS Perform Arts Add_Struc_RVT23_TylerMadlem.rvt
6/25/2025 5:11:00 PM
model is in 223096.00

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

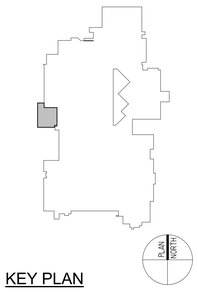
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

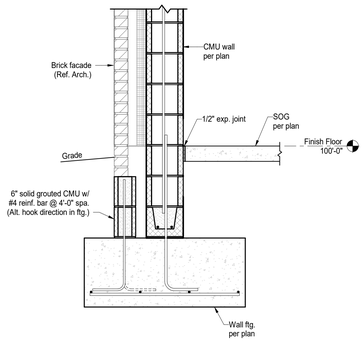
Construction Documents

DRAWN BY: LWT
PROJECT NUMBER: 223213.00
PROJECT ISSUE DATE: 04/09/2025

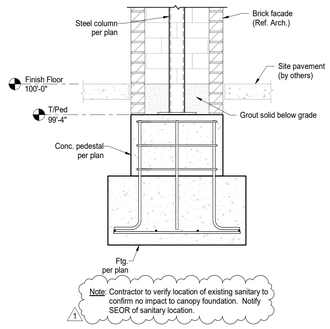
REV. NO.	DESCRIPTION	DATE
	ISSUED FOR CONSTRUCTION	04/09/2025
1	ADDENDUM NO. 2	06/25/2025

ELEVATIONS

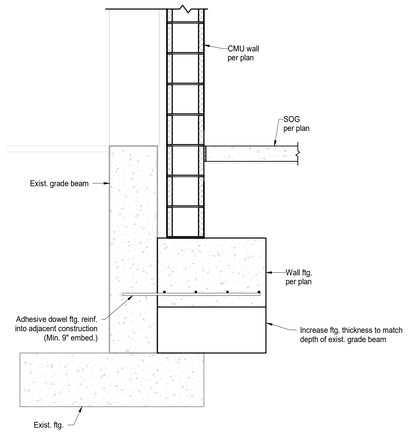
S3.01



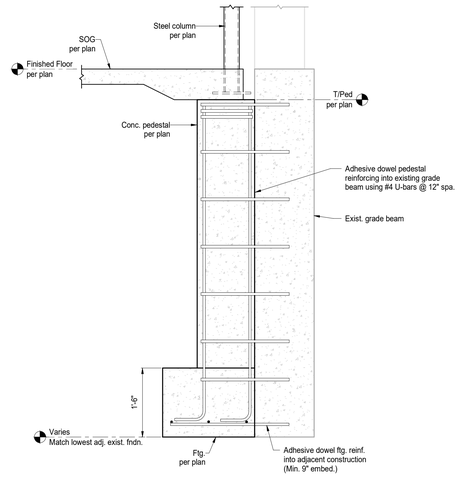
1 Section
Scale: 3/4" = 1'-0"



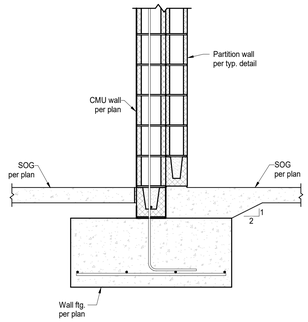
2 Section
Scale: 3/4" = 1'-0"



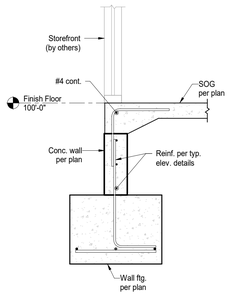
3 Section
Scale: 3/4" = 1'-0"



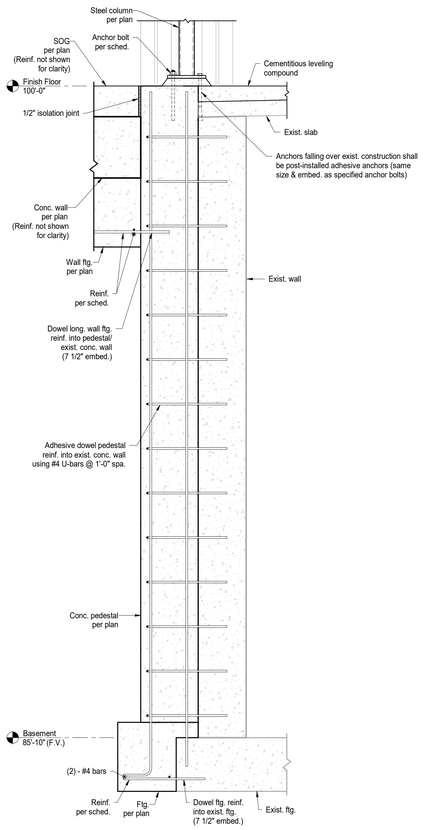
4 Section
Scale: 3/4" = 1'-0"



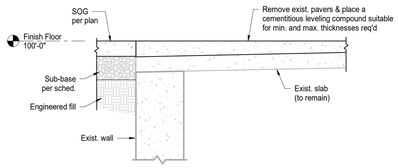
5 Section
Scale: 3/4" = 1'-0"



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



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



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

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

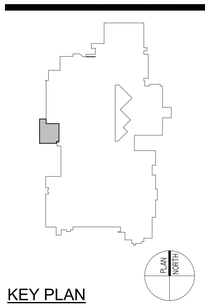
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

TROY A. MAZELIN
REGISTERED
No.
PE10100188
STATE OF
INDIANA
PROFESSIONAL ENGINEER

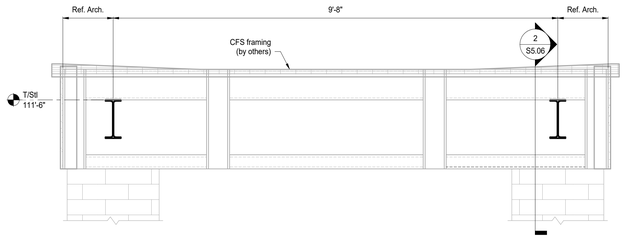
DRAWN BY: LWT
PROJECT NUMBER: 223213.00
PROJECT ISSUE DATE: 04/09/2025

REV. NO.	DESCRIPTION	DATE
	ISSUED FOR CONSTRUCTION	04/09/2025
1	ADDENDUM NO. 2	06/25/2025

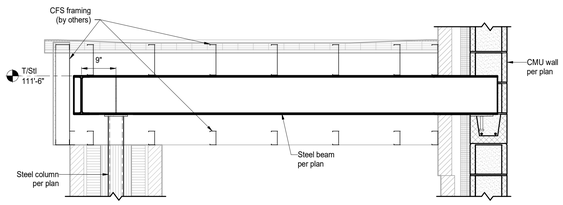
FOUNDATION/CONC. DETAILS

S5.02

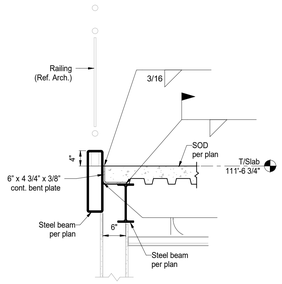
C:\Autodesk\Revit\Local Files\PHS Perform Arts Add_Struc_RVT23_TylerMadisen.rvt
6/25/2025 5:11:05 PM
model is in 223106.00



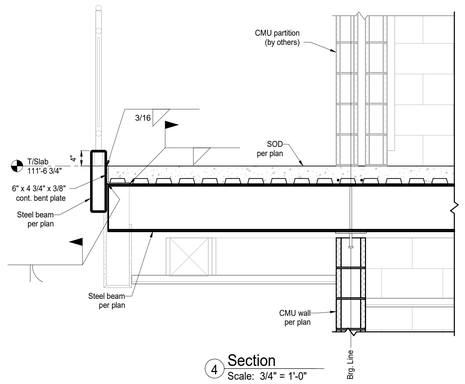
1 Section
Scale: 3/4" = 1'-0"



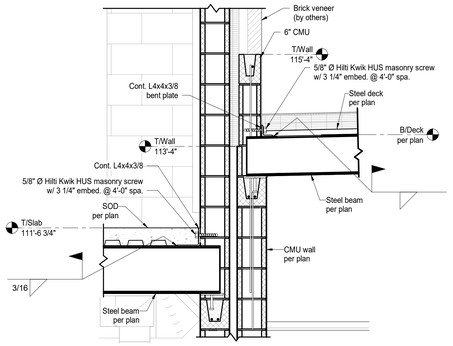
2 Section
Scale: 3/4" = 1'-0"



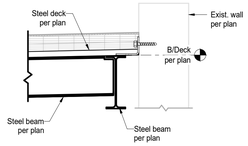
3 Section
Scale: 3/4" = 1'-0"



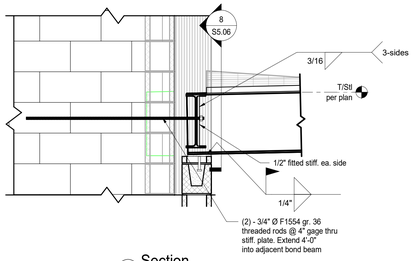
4 Section
Scale: 3/4" = 1'-0"



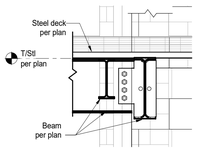
5 Section
Scale: 3/4" = 1'-0"



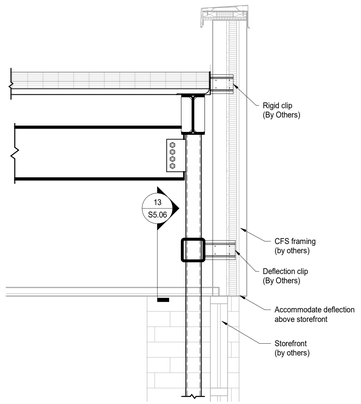
6 Section
Scale: 3/4" = 1'-0"



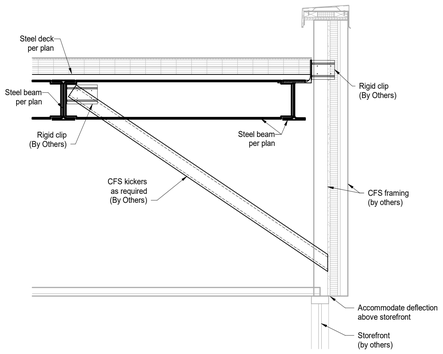
7 Section
Scale: 3/4" = 1'-0"



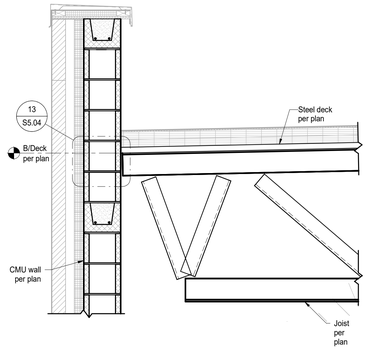
8 Section
Scale: 3/4" = 1'-0"



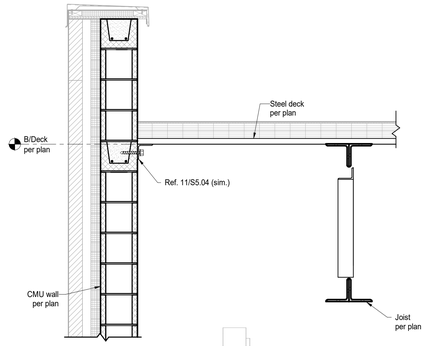
9 Section
Scale: 3/4" = 1'-0"



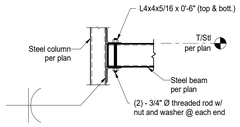
10 Section
Scale: 3/4" = 1'-0"



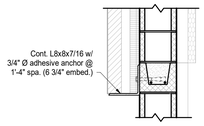
11 Section
Scale: 3/4" = 1'-0"



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



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



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

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

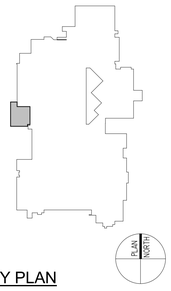
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

TROY A. MAZZILLI
REGISTERED
No.
PE10100188
STATE OF
INDIANA
PROFESSIONAL ENGINEER

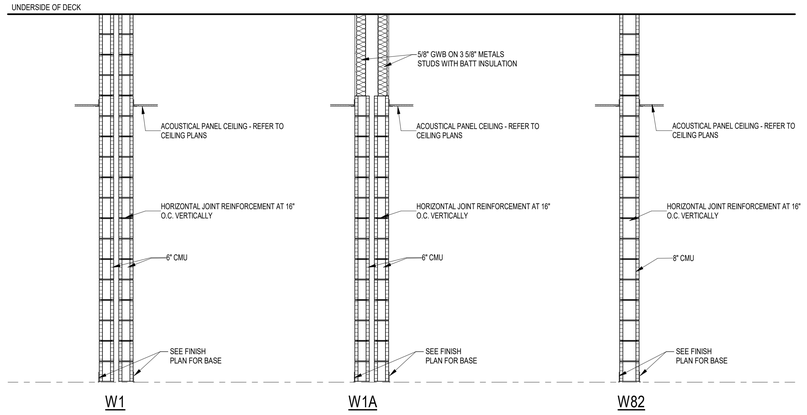
DRAWN BY: TCM
PROJECT NUMBER: 223213.00
PROJECT ISSUE DATE: 04/09/2025

REV. NO.	DESCRIPTION	DATE
	ISSUED FOR CONSTRUCTION	04/09/2025
1	ADDENDUM NO. 2	06/25/2025

STEEL FRAMING DETAILS

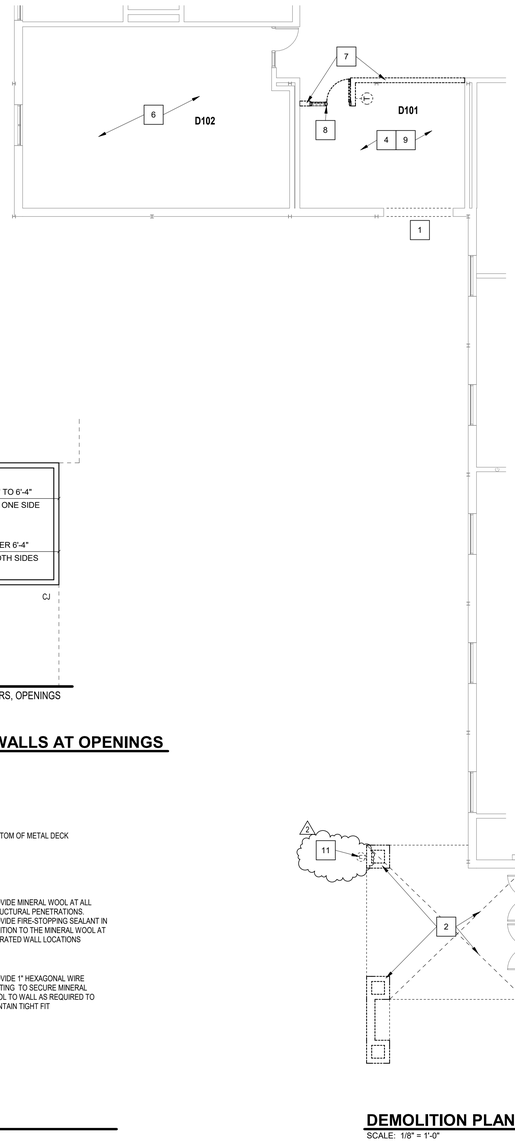
S5.06

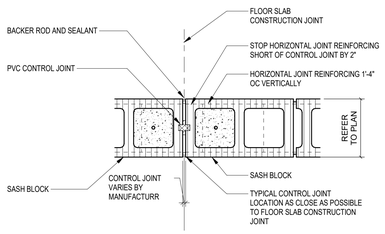
C:\Autodesk\Revit\Local Files\PHS Perform Arts Add_Struc_RVT23_TylerMadlem.rvt
6/25/2025 5:11:09 PM
model is in 221096.00



WALL TYPES - project

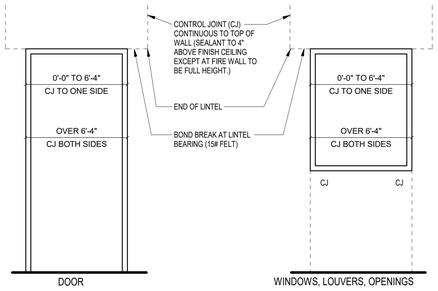
SCALE: 1/2" = 1'-0"





TYPICAL CONTROL JOINT

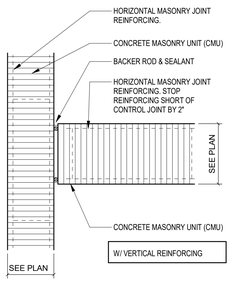
SCALE: 1 1/2" = 1'-0"



NOTE: INTERIOR CONCRETE MASONRY WALLS ONLY

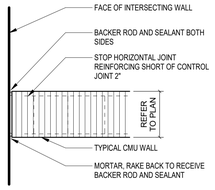
TYPICAL PLACEMENT OF CONTROL JOINTS IN CMU WALLS AT OPENINGS

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



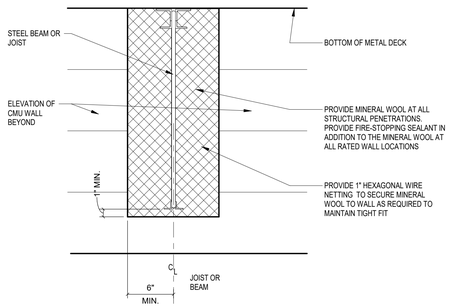
TYPICAL CONTROL JOINT

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



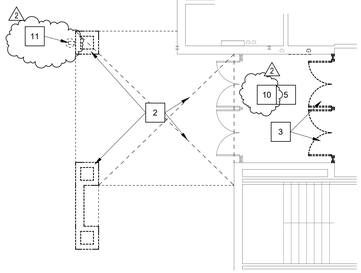
TYPICAL CONTROL JOINT

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



STRUCTURAL/WALL PENETRATION

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



DEMOLITION PLAN

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

ARCHITECTURAL DEMOLITION GENERAL NOTES

A. DEMOLITION IS TO FOLLOW ESTABLISHED CONSTRUCTION SEQUENCE. CONTRACTOR IS TO VERIFY THEIR WORK IN THE FIELD WITH THE DEMOLITION DRAWINGS, NEW CONSTRUCTION DRAWINGS, AND THE EXISTING IN-FIELD CONDITIONS. REPORT DISCREPANCIES TO THE ARCHITECT.
B. "FLOORING" DENOTES FLOOR COVERING MATERIALS INCLUDING BACKINGS, ADHESIVES, BASES, DOWN TO BUT EXCLUSIVE OF FLOOR SLABS AND STRUCTURAL MATERIALS, UNLESS NOTED OTHERWISE.
C. "CEILING" DENOTES CEILING MATERIALS INCLUDING SUSPENSION SYSTEMS ADHESIVE RESIDUES, MOLDINGS, UP TO BUT EXCLUSIVE OF STRUCTURAL MATERIALS.
D. WHEN OPENINGS ARE CUT INTO AN EXISTING WALL, THE OPENING SHALL BE A MINIMUM OF 1'-4" LONGER THAN THE FINISHED OPENING REQUIRED TO ALLOW FOR 8" (MIN) OF NEW CMU TOOTHED-IN AT EDGES.
E. AFTER THE DEMOLITION OF MATERIALS, THE RESULTING EXPOSED SURFACE SHALL BE SMOOTH AND FLUSH WITH EXISTING CONDITIONS.
F. MECHANICAL AND ELECTRICAL ITEMS THAT ARE CAPPED AND ABANDONED SHALL BE LOCATED BEHIND FINAL FINISH SYSTEMS.
G. COORDINATE THIS WORK WITH DEMOLITION WORK ON PLUMBING, MECHANICAL, AND ELECTRICAL.
H. PROVIDE INTERIOR AND EXTERIOR SHORING, BRACING, OR SUPPORT TO PREVENT MOVEMENT OR SETTLEMENT OF EXISTING STRUCTURES.
I. CONTRACTOR TO FIELD VERIFY PORTIONS OR SECTIONS OF EXISTING WALLS TO BE FILLED IN AND SALVAGE NECESSARY MATERIAL.
J. MATERIALS OF DEMOLITION SHALL BE DISPOSED OF OFF-SITE UNLESS OTHERWISE DIRECTED BY OWNER.
K. ITEMS TO BE PATCHED. REMOVE ALL LOOSE OR DAMAGED MATERIAL. REFINISH TO LIKE NEW CONDITION, OR IF CONDITION WARRANTS REPLACE IN ENTIRETY.
L. THE OWNER SHALL RESERVE RIGHT TO CLAIM ANY MATERIALS THAT ARE BEING DEMOLISHED PRIOR TO THE CONTRACTOR DISPOSING OF THEM OFF SITE.
M. ITEMS MADE OBSOLETE TO ACCOMODATE NEW CONSTRUCTION OR RENOVATION SHALL BE REMOVED.
N. ITEMS TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY.
O. AFTER REMOVAL OF ITEMS, THE EXISTING WALL SURFACES (IF EXPOSED) SHALL BE REPAIRED/PATCHED AS REQUIRED TO RECEIVE NEW FINISHES.

ARCHITECTURAL DEMOLITION NOTES X

1. REMOVE PORTION OF EXISTING BRICK / STUD WALL AS INDICATED.
2. REMOVE CANOPY AND EXTERIOR WALL STRUCTURE CONSTRUCTION.
3. REMOVE ALUMINUM ENTRY CONSTRUCTION
4. REMOVE LAY-IN CEILING
5. REMOVE ENTRANCE CARPET TILE (ECT) FROM VESTIBULE
6. REMOVE LAY-IN CEILING (FOR INSTALLATION OF NEW STRUCTURAL ELEMENTS) - REMOVE AND REINSTALL ALL CEILING MOUNTED ITEMS SUCH AS LIGHTING FIXTURES, SPEAKERS, ETC. AND REINSTALL AFTER INSTALLATION OF NEW CEILING.
7. REMOVE CMU WALL AS INDICATED.
8. REMOVE DOOR AND HM FRAME AS INDICATED.
9. REMOVE CARPET TILES AND RESILIENT BASE.
10. REMOVE PLASTER CEILING AND SUPPORT SYSTEM.
11. REMOVE OUTDOOR CAMERA / WALL MOUNT BRACKET AND STORE AWAY FROM CONSTRUCTION SO IT CAN BE REUSED ON THE NEW ADDITION. REMOVE THE EXISTING NETWORK WIRING BACK TO THE NETWORK CLOSET.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

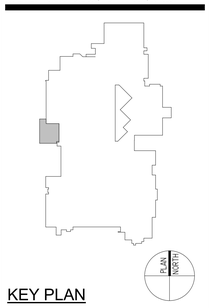
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

CHECKED BY: MKS

DRAWN BY: RLG

PROJECT NUMBER: 223213.00

PROJECT ISSUE DATE: 04-10-2025

REV. NO.	DESCRIPTION	DATE
2	Addm#2	6-25-2025

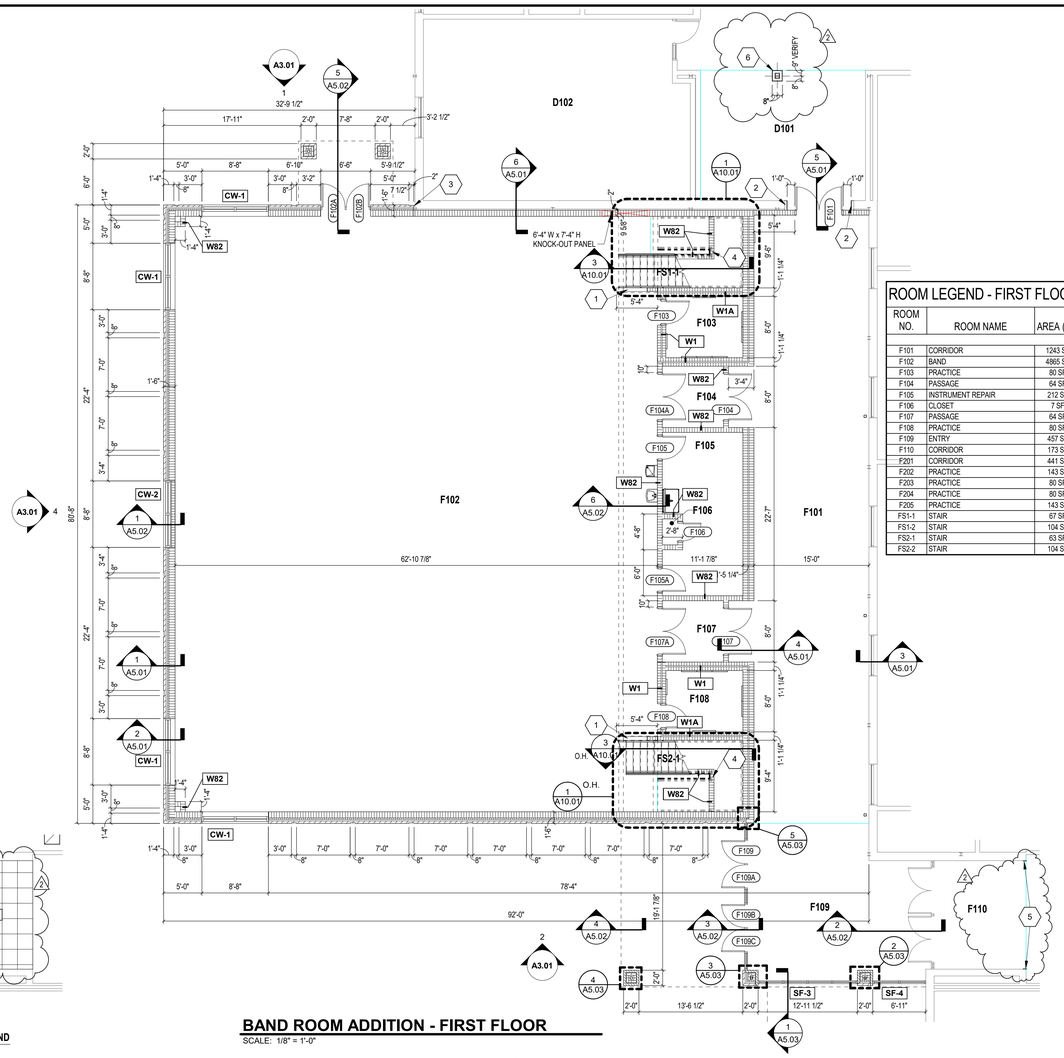
DEMOLITION PLAN AND DETAILS

A1.00

C:\Users\rgambill\Documents\2023_Penn HS_Arch_Classroom Addition_223213.00_rgambill.rvt
6/25/2025 2:44:42 PM
model is in 221096.00

FIRST FLOOR - REFLECTED CEILING PLAN

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



BAND ROOM ADDITION - FIRST FLOOR

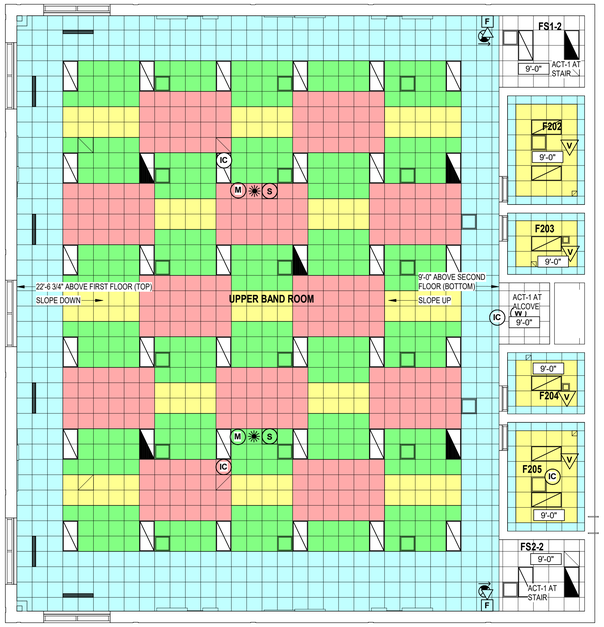
SCALE: 1/8" = 1'-0"

ROOM LEGEND - FIRST FLOOR

ROOM NO.	ROOM NAME	AREA (SF)
F101	CORRIDOR	1243 SF
F102	BAND	4865 SF
F103	PRACTICE	80 SF
F104	PASSAGE	64 SF
F105	INSTRUMENT REPAIR	212 SF
F106	CLOSET	7 SF
F107	PASSAGE	64 SF
F108	PRACTICE	80 SF
F109	ENTRY	457 SF
F110	CORRIDOR	173 SF
F201	CORRIDOR	441 SF
F202	PRACTICE	143 SF
F203	PRACTICE	80 SF
F204	PRACTICE	80 SF
F205	PRACTICE	143 SF
FS1-1	STAIR	67 SF
FS1-2	STAIR	104 SF
FS2-1	STAIR	63 SF
FS2-2	STAIR	104 SF

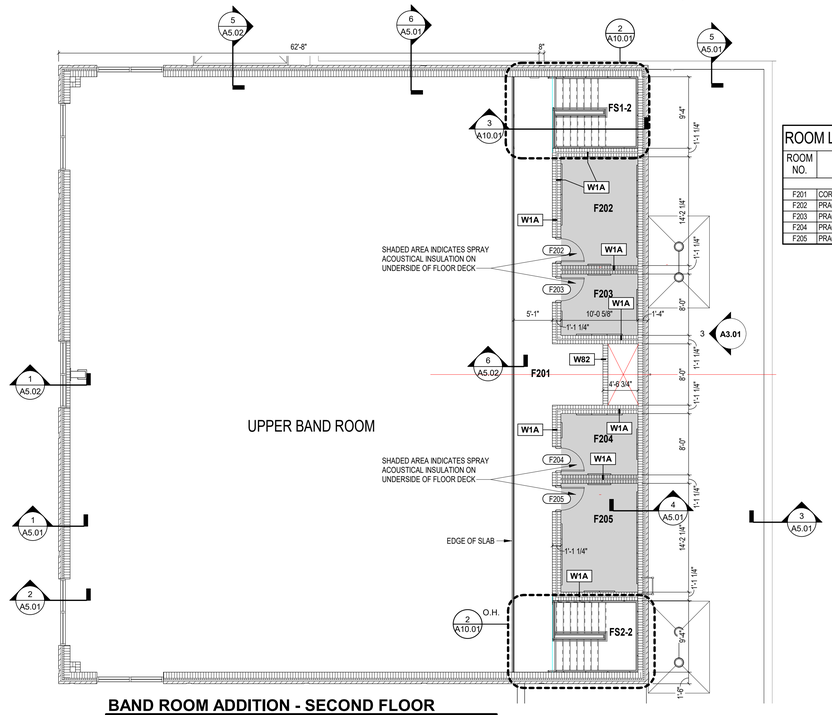
MUSIC ACT TYPE LEGEND

- ACT-3
- ACT-4
- ACT-5
- ACT-6
- ACT-1, ACT-2 (SEE EQUIPMENT / FINISH PLAN)



SECOND FLOOR REFLECTED CEILING PLAN

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



BAND ROOM ADDITION - SECOND FLOOR

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

ROOM LEGEND - SECOND FLOOR

ROOM NO.	ROOM NAME	AREA (SF)
F201	CORRIDOR	441 SF
F202	PRACTICE	143 SF
F203	PRACTICE	80 SF
F204	PRACTICE	80 SF
F205	PRACTICE	143 SF

ARCHITECTURAL PLAN GENERAL NOTES

A. ALL CMU WALLS THAT DO NOT LAY OUT IN FULL OR HALF LENGTHS SHOULD BE BALANCED SO AS NOT TO HAVE ANY PIECES LESS THAN 4" IN SIZE EXPOSED TO VIEW.
B. WHERE DISSIMILAR FLOOR MATERIALS MEET, THEY SHALL DO SO UNDER THE CENTERLINE OF THE DOOR, UNLESS NOTED OTHERWISE.
C. THE BASE FLOOR ELEVATION INDICATED FOR THE PROJECT IS 100'-0". REFER TO SITE PLAN FOR CORRELATION TO USGS DATUM.
D. ALL INTERIOR MASONRY WALLS THAT RUN TO UNDERSIDE OF DECK ABOVE SHALL HAVE A 2" JOINT (U.N.O.) AT THE DECK TO BE FILLED WITH FIRE STOPPING AT RATED WALLS PER PROJECT MANUAL, AND MINERAL WOOL AT THE NON-RATED WALLS, TO ALLOW FOR DEFLECTION.
E. FOR TYPICAL COMMON JOINT DETAILS AND CONSTRUCTION MOVEMENT JOINT DETAILS REFER TO DETAILS ON SHEET A1.00.
F. ALL DIMENSIONS ON FLOOR PLANS ARE TO FINISH FACE OF CMU, CONCRETE, BRICK OR FINISH FACE OF GWB AT METAL STUD WALLS, UNLESS NOTED OTHERWISE. EXCEPTION: EXTERIOR METAL STUD WALLS ARE TO FACE OF METAL STUDS.
G. HINGE SIDE DOOR JAMB AT WALLS WILL TYPICALLY BE LOCATED 4" MINIMUM FROM ADJACENT WALL UNLESS NOTED OTHERWISE.
H. ALL EXPOSED CONCRETE MASONRY UNITS (CMU) CORNERS ARE TO BE BULLNOSE, EXCEPT AT WINDOW JAMBS, BULKHEADS, WINDOW AND DOOR HEADS.
I. SEE REFLECTED CEILING PLANS FOR BULKHEAD LOCATIONS AND DETAIL REFERENCES.
J. REFER TO ROOM FINISH SCHEDULE OR PLAN AND EQUIPMENT PLANS FOR LOCATION AND EXTENT OF FINISH FLOOR MATERIALS.
K. REFER TO MASTER/CODE PLANS FOR CODE INFORMATION AND FIRE RATED WALL LOCATIONS.
L. PROVIDE SPRAY FOAM INSULATION AND THERMAL BARRIER CONTINUOUS AT INTERSECTION OF EXTERIOR WALLS AND DECK.
M. PROVIDE ACOUSTICAL JOINT SEALANT AT TOP OF CMU WALLS AT INTERSECTION WITH FLOOR AND ROOF DECK AND ALL WALL AND FLOOR PENETRATIONS.

ARCHITECTURAL PLAN NOTES (X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

—— W## INDICATES WALL TYPE. REFER TO DRAWING A1.00 FOR WALL THICKNESS, HEIGHT AND COMPOSITION

1. 6" CMU SLOPING LOW WALL - SEE SHEET A10.01
2. 5/8" GWB ON 3 5/8" METAL STUDS TO 4" ABOVE CEILING
3. PREFORMED JOINT SEAL
4. CMU WALL TO BOTTOM OF STAIR STRUCTURE
5. 1x6 WOOD TRIM FROM FLOOR TO CEILING TO MATCH EXISTING. ALIGN TRIM WITH EDGE OF ADJACENT EXISTING WOOD TRIM.
6. 5/8" GWB ON 3 5/8" METAL STUDS TO 4" ABOVE CEILING. PROVIDE RESILIENT BASE AND HIGH IMPACT WALL COVERING (SEE 6-A7.01). ALIGN NORTH FACE OF WALL WITH ADJACENT EXISTING WALLS.

NOTE: ALL INTERIOR CMU WALL ARE TO EXTEND TO FLOOR OR ROOF DECK ABOVE. PROVIDE ACOUSTICAL JOINT SEALANT AT THE TOP OF ALL INTERIOR CMU WALLS AT THE INTERSECTION WITH FLOOR DECK AND ROOF DECK.

REFLECTED CEILING GENERAL NOTES

A. BULKHEAD FRAMING SHALL BE ATTACHED TO STRUCTURAL SUPPORTS AND NOT TO THE ROOF DECK

REFLECTED CEILING PLAN NOTES (X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

1. MODIFY AND EXTEND EXISTING CEILING TO NEW CMU WALL
2. NEW CEILING TO BE INSTALLED A THE SAME HEIGHT AS THE EXISTING. REINSTALL ALL LIGHT FIXTURES, DIFFUSERS, SPEAKERS, ETC.
3. GWB BULKHEAD AT 8'-11" - SEE 7-A10.1
4. GWB CEILING AT BOTTOM OF STAIR

REFLECTED CEILING PLAN LEGEND

- 9'-0" INDICATES CEILING HEIGHT
- LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- MECHANICAL DIFFUSER - REFER TO MECHANICAL DRAWINGS
- MECHANICAL RETURN AIR GRILLE - REFER TO MECHANICAL DRAWINGS
- MECHANICAL UNIT HEATER - REFER TO MECHANICAL DRAWINGS
- IC RECESSED CEILING SPEAKER
- CEILING MOUNTED EXIT LIGHT
- CAM CEILING MOUNTED CAMERA
- F FIRE ALARM HORN STROBE
- V FIRE ALARM STROBE
- P FIRE ALARM SMOKE DETECTOR
- ACOUSTICAL CEILING TILE (ACT)
- GYPSUM WALL BOARD BULKHEAD / CEILING EXTERIOR FINISH SYSTEM (E.F.S.) EXTERIOR INSULATION FINISH SYSTEM (E.I.F.S.)
- METAL SOFFIT PANELS

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

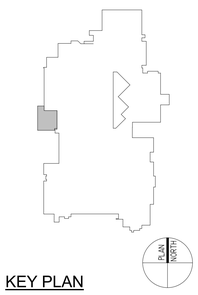
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

PAUL A. MILLER REGISTERED No. A1300161 STATE OF INDIANA ARCHITECT

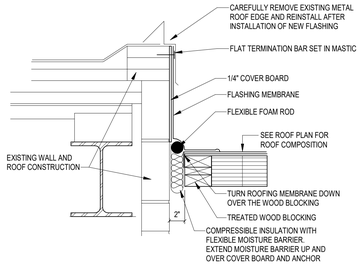
CHECKED BY: MKS
DRAWN BY: RLG
PROJECT NUMBER: 223213.00
PROJECT ISSUE DATE: 04-10-2025

REV. NO.	DESCRIPTION	DATE
2	Addm#2	6-25-2025

BAND ADDITION FLOOR PLANS

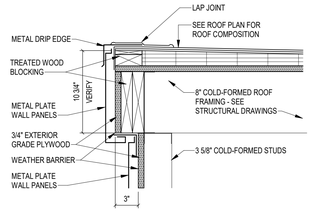
A1.01

C:\Users\rgambill\Documents\2023_Penn HS_Arch_Classroom Addition_223213.00_rgambill.rvt
6/25/2025 1:15:32 PM
model is in 221096.00



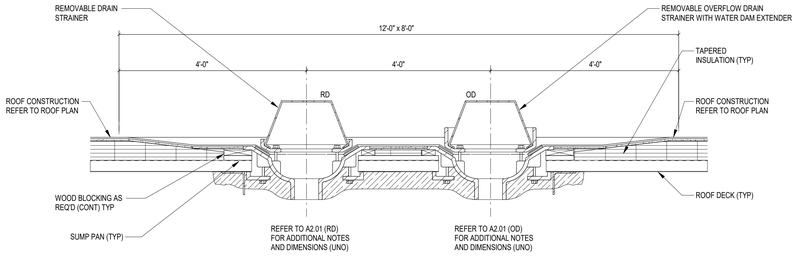
5 FLASHING

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



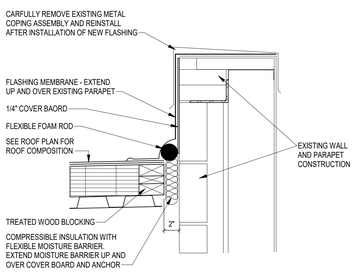
1 FASCIA - NORTH CANOPY

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



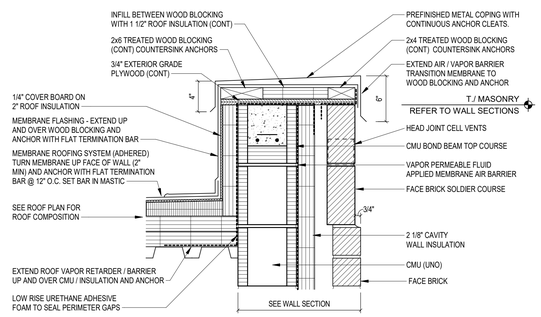
SECTION - ROOF DRAIN (RD) / OVERFLOW DRAIN (OD)

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



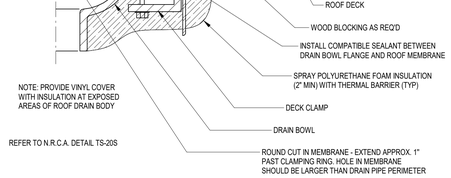
6 FLASHING

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



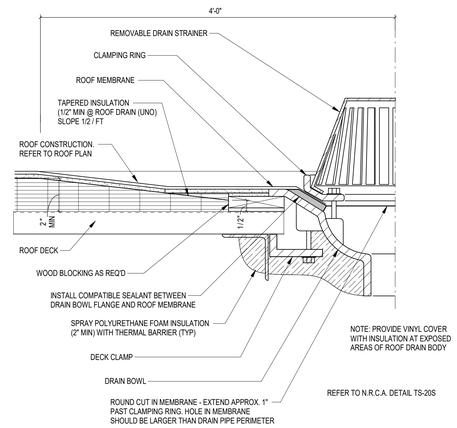
2 COPING

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



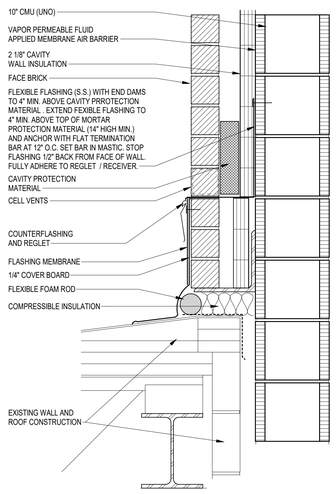
OVERFLOW DRAIN (OD)

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



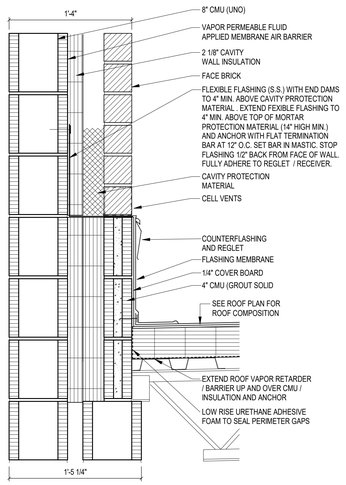
ROOF DRAIN (RD)

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



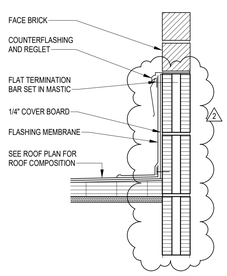
7 FLASHING / EXPANSION JOINT

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



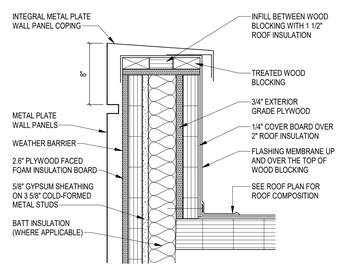
3 FLASHING

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



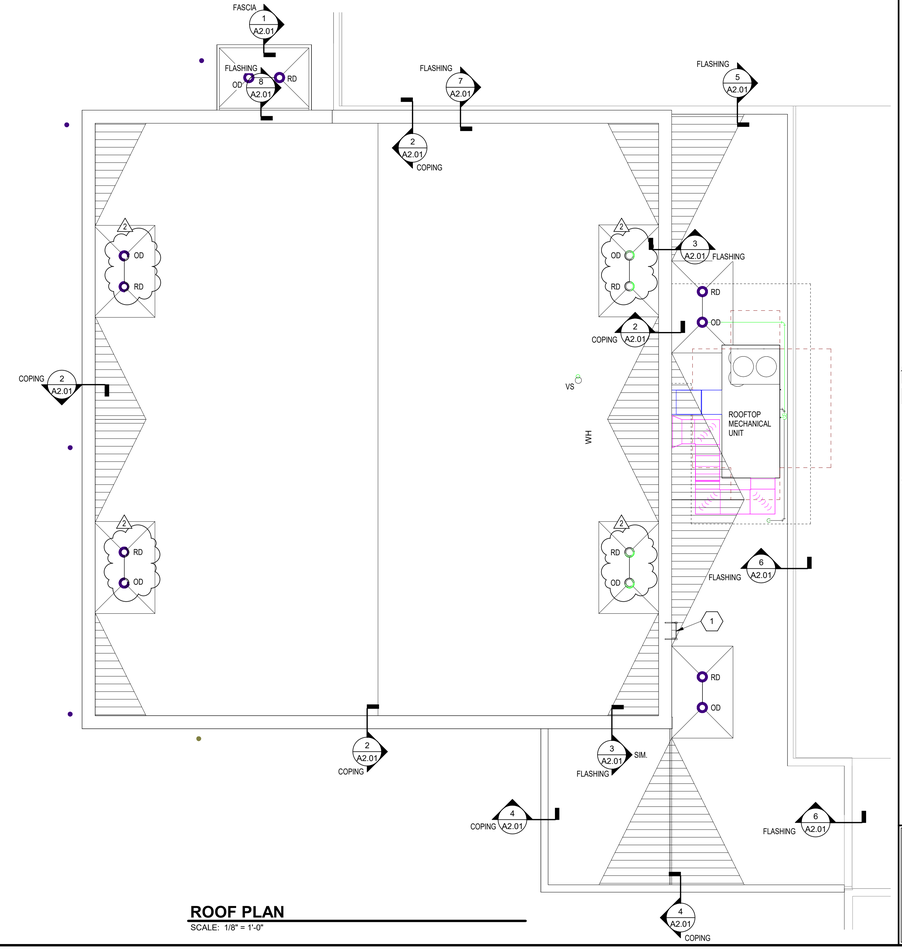
8 FLASHING

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



4 COPING

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



ROOF PLAN

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

ROOF PLAN GENERAL NOTES

A. ALL DETAILS SHOWN ARE FOR GENERAL INFORMATION. ALL FINAL FLASHING CONDITIONS SHALL BE THE RESPONSIBILITY OF THE ROOF INSTALLER, AND SHALL MEET APPROVAL OF ROOF MANUFACTURER.
B. ALL DETAIL MODIFICATIONS MUST HAVE SHOP DRAWINGS APPROVAL. CONTRACTOR SHALL INSPECT AND VERIFY ALL EXISTING FIELD CONDITIONS, CLEARANCES, AND DIMENSIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF EXISTING CONDITIONS. SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT ARCHITECT BEFORE PROCEEDING WITH ANY FURTHER WORK.
C. OPENINGS IN ROOF WILL BE CUT BY ROOF CONTRACTOR. MECHANICAL CONTRACTOR TO COORDINATE LOCATION OF OPENING IN ROOF WITH ROOF CONTRACTOR. CURB TO BE PROVIDED BY MECHANICAL CONTRACTOR AND INSTALLED BY ROOF CONTRACTOR.
D. PROVIDE FLASHING AND SADDLES FOR ALL EQUIPMENT PROVIDED UNDER MECHANICAL.
E. SADDLES AND TAPERED INSULATION SYMBOLS INDICATE DESIGN INTENT TO SLOPE TO DRAIN. CONTRACTOR SHALL PROVIDE SUBMITTAL DRAWINGS FOR TAPERED INSULATION AND SADDLES TO INSURE POSITIVE SLOPE.
F. THE ROOF CONTRACTOR SHALL PROTECT ALL ROOF DRAINS, SCUPPERS, AND DOWNSPOUTS FROM DEBRIS CREATED DURING DEMOLITION AND CONSTRUCTION. THE ROOF CONTRACTOR SHALL INSPECT AND CLEAR ALL DRAINS, SCUPPERS, AND DOWNSPOUTS PRIOR TO COMPLETION OF WORK AND TO ENSURE THAT THEY ARE FREE OF DEBRIS AND ARE FUNCTIONING PROPERLY.

ROOF PLAN NOTES

X

* MECHANICAL, ELECTRICAL AND PLUMBING INFORMATION SHOWN ON THIS PLAN IS GENERAL IN NATURE. REFER TO P, M AND E DRAWINGS FOR FURTHER INFORMATION AND COORDINATE ALL REQUIRED ROOF OPENINGS OR ROOF MOUNTED EQUIPMENT.

1. PREFABRICATED ROOF ACCESS LADDER - SEE 5-A3.01

ROOF COMPOSITION

ROOF TYPE: ROOFING MEMBRANE (ADHERED) ON 1/4" COVER BOARD ON ROOF INSULATION (4" BASE) ON VAPOR RETARDER ON SLOPING METAL DECK

ROOF PLAN SYMBOL LEGEND

12'-0" (UNO) — 8'-0" (UNO) — INDICATES ROOF DRAIN (RD) AND OVERFLOW DRAIN (OD). (FLASH IN ACCORDANCE WITH ROOF MEMBRANE MANUFACTURER'S RECOMMENDATION.) REFER TO SHEET A2.01

VS — INDICATES VENT STACK - REFER TO PLUMBING DRAWINGS AND FLASHING SHEET A3.01

INDICATES MECHANICAL EQUIPMENT - REFER TO MECHANICAL DRAWINGS AND CURB SHEET A3.01

INDICATES ROOF SADDLE - REFER TO PROJECT MANUAL.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

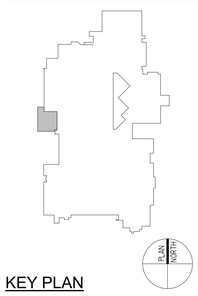
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

PAUL A. MILLER REGISTERED No. AR13300161 STATE OF INDIANA ARCHITECT

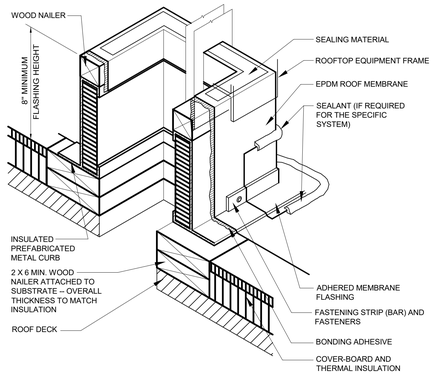
CHECKED BY: MKS
DRAWN BY: RLG
PROJECT NUMBER: 223213.00
PROJECT ISSUE DATE: 04-10-2025

REV. NO.	DESCRIPTION	DATE
2	Addmt#2	6-25-2025

ROOF PLAN

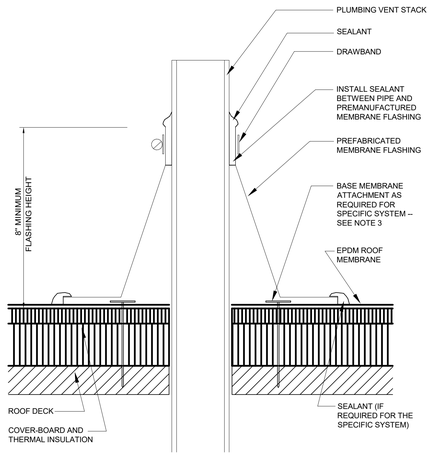
A2.01

C:\Users\rgambill\Documents\2023_Penn HS_Arch_Classroom Addition_223213.00_rgambill.rvt
6/25/2025 12:51:26 PM
model is in 221096.00



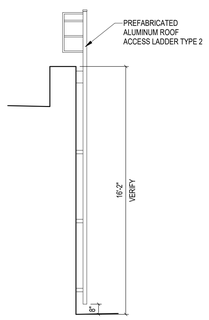
INSULATED PREFABRICATED METAL CURB

SCALE: 12" = 1'-0"



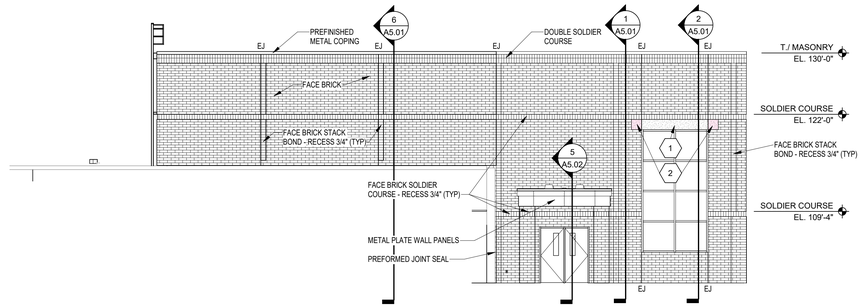
PLUMBING VENT (PREMANUFACTURED BOOT)

SCALE: 12" = 1'-0"



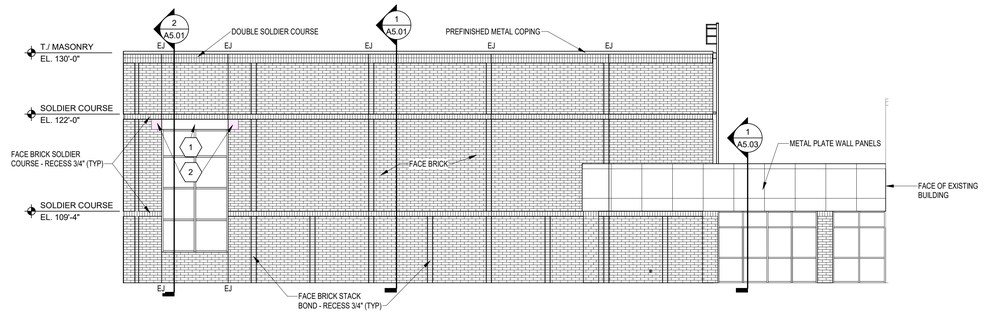
5 ROOF LADDER

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



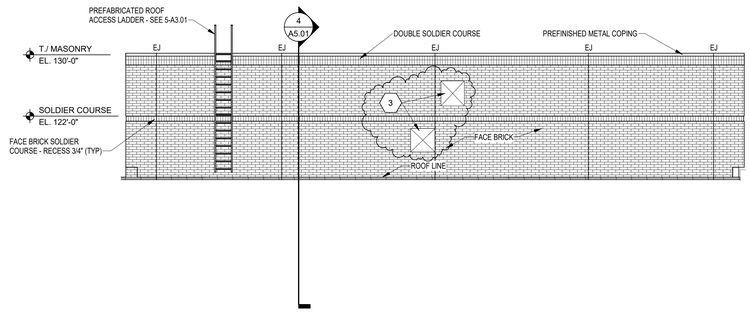
1 NORTH ELEVATION

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



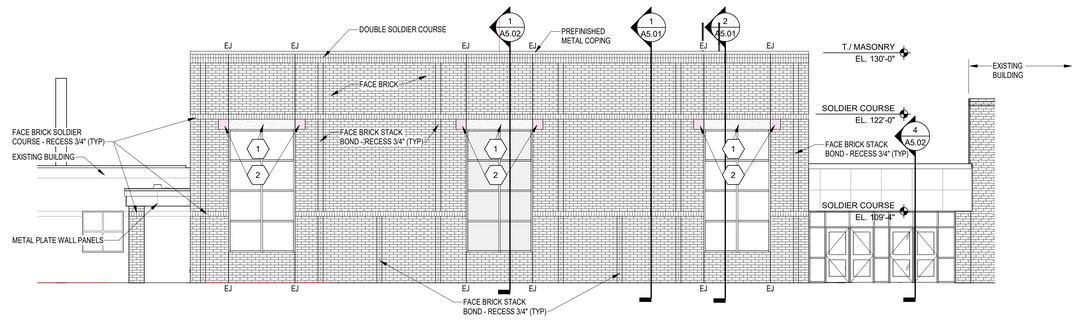
2 SOUTH ELEVATION

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



3 EAST ELEVATION

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



4 WEST ELEVATION

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

ELEVATION GENERAL NOTES

1. REFER TO THE ELECTRICAL AND TECHNOLOGY DRAWINGS FOR CAMERA, LOCATIONS, SECURITY DEVICES, RECEPTACLES, LIGHT FIXTURES, ETC. COORDINATE LOCATIONS WITH VENEER COURSING TO PROVIDE CONSISTENT MOUNTING HEIGHTS.
2. REFER TO PLUMBING DRAWINGS FOR EXTERIOR WALL HYDRANTS, SECONDARY ROOF DRAIN OUTLETS, ETC. COORDINATE PENETRATIONS THROUGH EXTERIOR ENVELOPE WITH OTHER TRADES. PROVIDE TRANSITION MEMBRANE TO MAINTAIN AIR BARRIER SYSTEM.
3. REFER TO MECHANICAL DRAWINGS FOR EXTERIOR LOUVER LOCATIONS LOCATED IN EXTERIOR WALL AND EXTERIOR SOFFITS. COORDINATE PENETRATIONS THROUGH EXTERIOR ENVELOPE WITH OTHER TRADES. PROVIDE TRANSITION MEMBRANE TO MAINTAIN AIR BARRIER SYSTEM.
4. THE BRICK PATTERN IS INTENDED TO MATCH AND ALIGN WITH EXISTING

BUILDING ELEVATION NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

1. CAST STONE PANEL - 16" HIGH (NOM)
2. GRANITE PANEL - 16"x16" (NOM)
3. MECHANICAL DUCT PENETRATIONS. WALL DETAILS SIMILAR TO H2, J2 AND S1 ON A6.01

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

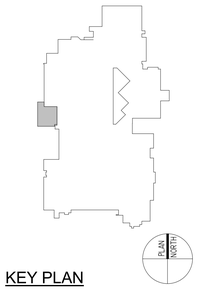
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

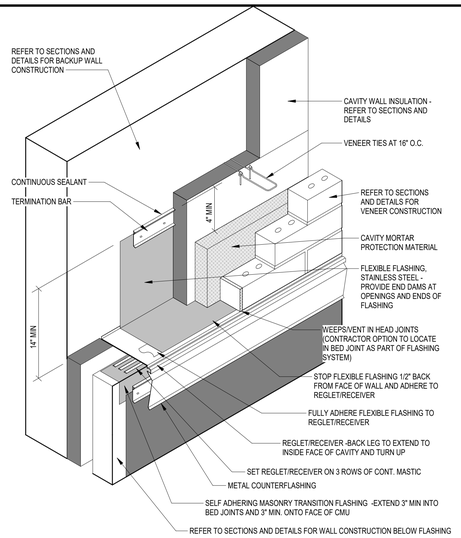
CHECKED BY: MKS
DRAWN BY: RLG
PROJECT NUMBER: 223213.00
PROJECT ISSUE DATE: 04-10-2025

REV. NO.	DESCRIPTION	DATE
2	Addm#2	6-25-2025

BUILDING ELEVATIONS

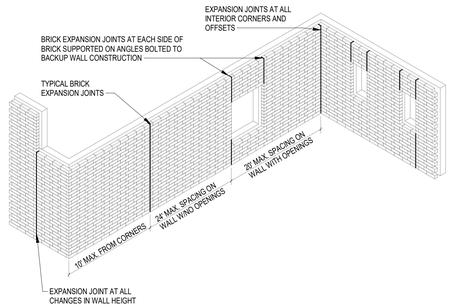
A3.01

C:\Users\gamblil\Documents\2023_Penn HS_Arch_Classroom Addition_223213.00_gamblil.rvt
6/25/2025 12:51:34 PM
model is in 22\106.00

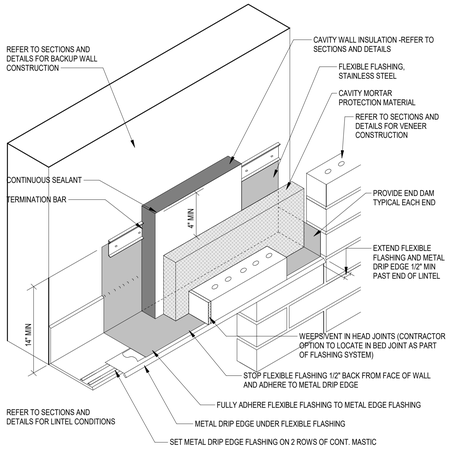


ISOMETRIC CUTAWAY VIEW

TYPICAL CAVITY WALL FLASHING AT ROOF TO WALL

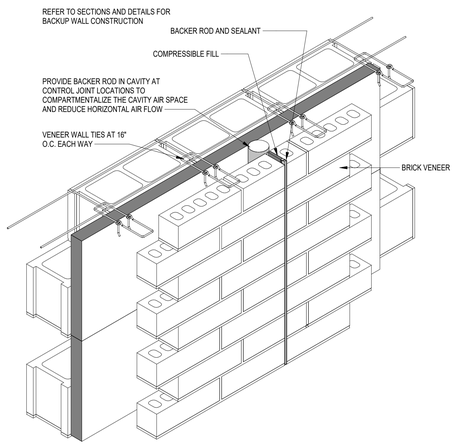


TYPICAL BRICK EXPANSION JOINT (EJ) LOCATIONS

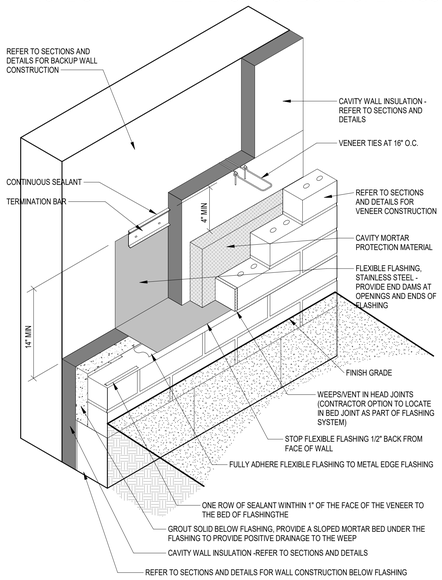


ISOMETRIC CUTAWAY VIEW

TYPICAL CAVITY WALL FLASHING ABOVE OPENINGS

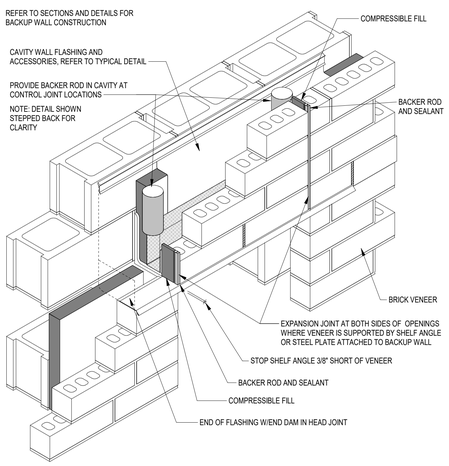


TYPICAL BRICK EXPANSION JOINT DETAIL



ISOMETRIC CUTAWAY VIEW

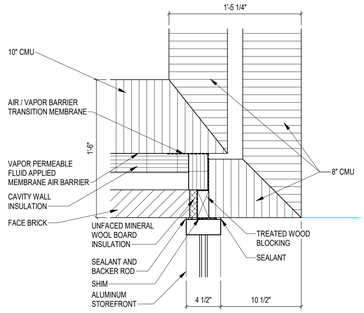
TYPICAL CAVITY WALL FLASHING AT BASE OF WALL



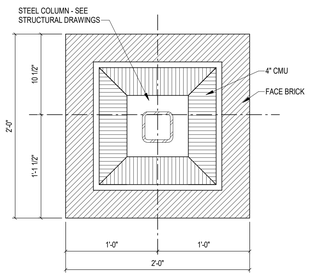
TYPICAL BRICK EXPANSION JOINT AT OPENINGS

TYPICAL CAVITY WALL FLASHINGS
SCALE: 1 1/2" = 1'-0"

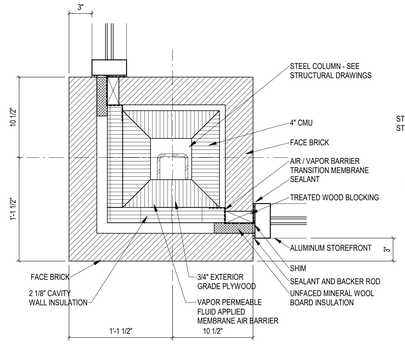
TYPICAL BRICK EXPANSION JOINTS
SCALE: 1 1/2" = 1'-0"



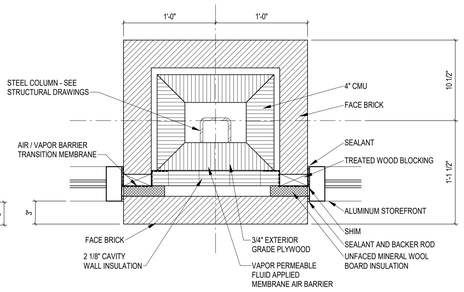
5 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"



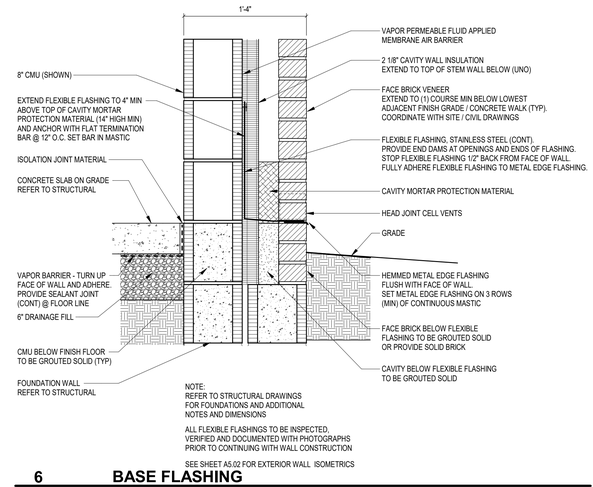
4 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"



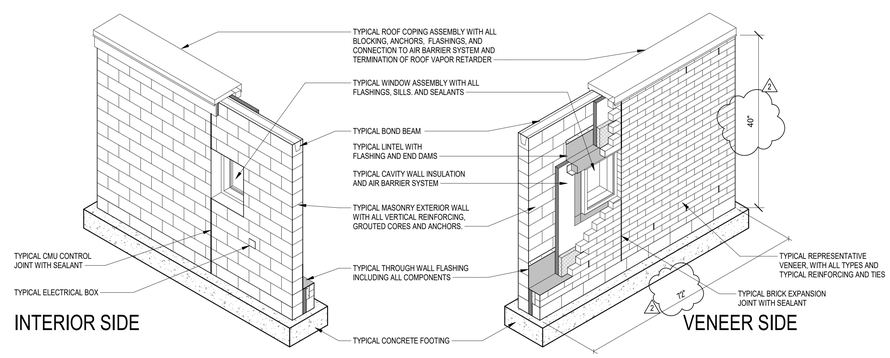
3 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"



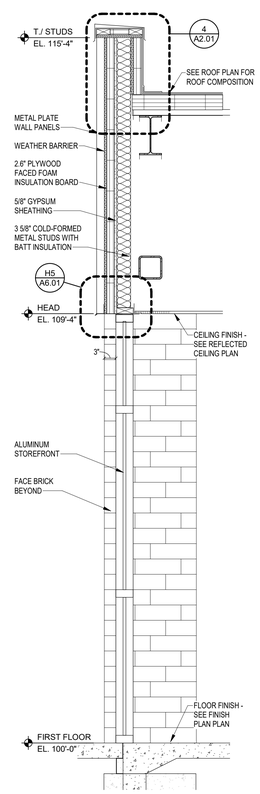
2 PLAN DETAIL
SCALE: 1 1/2" = 1'-0"



6 BASE FLASHING
SCALE: 1 1/2" = 1'-0"



EXTERIOR WALL MOCK-UP
SCALE: 3/8" = 1'-0"



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

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

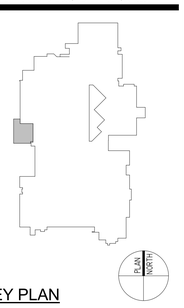
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

PAUL A. MILLER REGISTERED No. A1300161 STATE OF INDIANA ARCHITECT

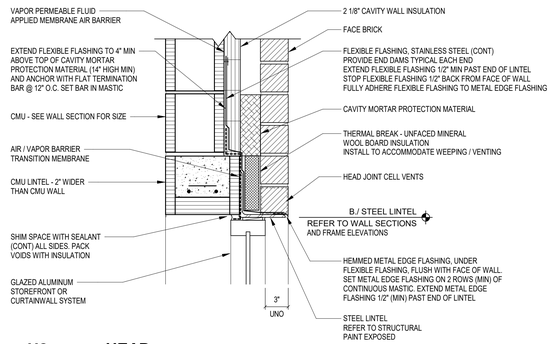
CHECKED BY: MKS
DRAWN BY: RLG
PROJECT NUMBER: 223213.00
PROJECT ISSUE DATE: 04-10-2025

REV. NO.	DESCRIPTION	DATE
2	Addm#2	6-25-2025

WALL SECTIONS

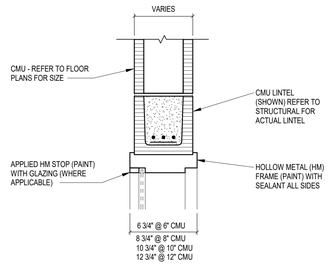
A5.03

C:\Users\rgamblit\Documents\2023_Penn HS_Arch_Classroom Addition_223213.00_rgamblit.rvt
6/25/2025 12:51:49 PM
model is in 22 1096.00



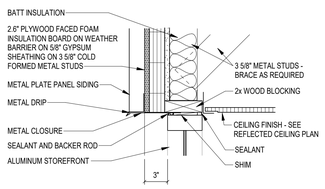
H2 HEAD

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



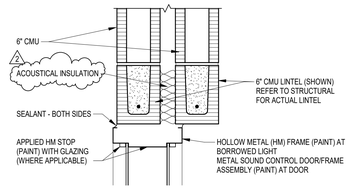
H1 HEAD

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



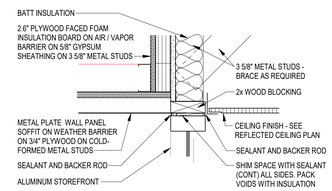
H5 HEAD

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



H4 HEAD

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

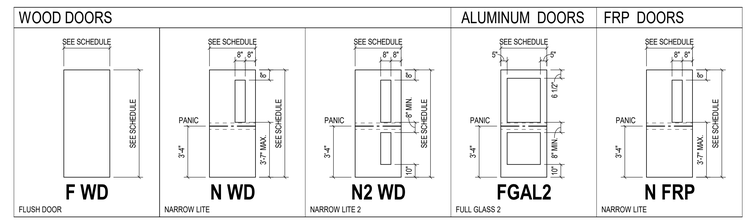


H3 HEAD

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

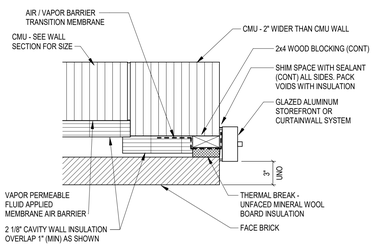
DOOR AND FRAME SCHEDULE

DOOR NUMBER	DOORS: DOOR SIZE (WxH)	DOORS: DOOR TYPE	FRAME: FRAME MATERIAL	FRAME: FRAME ELEVATION	FRAME: JAMB DEPTH	FRAME: DETAILS: HEAD	FRAME: DETAILS: JAMB	FRAME: DETAILS: SILL	FIRE RATING IN MINS.	HARDWARE: SET NO.	HARDWARE: KEYSIDE ROOM	STC RATING	REMARKS
F101	PR 3'-0" x 7'-2"	N WD	HM	HM2	8 3/4"	H1	J1	-	-	19	D101		
F102A	3'-0" x 7'-2"	N FRP	AL	SF-1	4 1/2"	H2	J2	S2	-	15	EXT	-	ELECTRONIC ACCESS
F102B	3'-0" x 7'-2"	N FRP	AL	SF-1	4 1/2"	H2	J2	S2	-	17	EXT	-	
F103	3'-0" x 7'-2"	N WD	HM	HM1	9"	H4	J4	-		03	F103	51	SOUND CONTROL DOOR ASSEMBLY
F104	PR 3'-0" x 7'-2"	N WD	HM	HM2	8 3/4"	H1	J1	-	-	18	F101	40	
F104A	PR 3'-0" x 7'-2"	N WD	HM	HM2	8 3/4"	H1	J1	-	-	02	F104	-	
F105	3'-0" x 7'-2"	F WD	HM	HM1	8 3/4"	H1	J1	-	-	10	F105	-	
F105A	3'-0" x 7'-2"	F WD	HM	HM1	8 3/4"	H1	J1	-	-	10	F105	-	
F106	2'-4" x 7'-2"	F WD	HM	HM1	8 3/4"	H1	J1	-	-	09	F105	-	
F107	PR 3'-0" x 7'-2"	N WD	HM	HM2	8 3/4"	H1	J1	-	-	18	F101	40	
F107A	PR 3'-0" x 7'-2"	N WD	HM	HM2	8 3/4"	H1	J1	-	-	02	F107	-	
F108	3'-0" x 7'-2"	N WD	HM	HM1	9"	H4	J4	-		08	F108	51	SOUND CONTROL DOOR ASSEMBLY
F109	3'-0" x 7'-2"	FGAL2	AL	SF-2	4 1/2"	H3	3-A5.03,5-A5.03	S2		16	EXT		
F109A	3'-0" x 7'-2"	FGAL2	AL	SF-2	4 1/2"	H3	3-A5.03,5-A5.03	S2		16	EXT		
F109B	3'-0" x 7'-2"	FGAL2	AL	SF-2	4 1/2"	H3	3-A5.03,5-A5.03	S2		16	EXT		
F109C	3'-0" x 7'-2"	FGAL2	AL	SF-2	4 1/2"	H3	3-A5.03,5-A5.03	S2		13	EXT		ELECTRONIC ACCESS - AUTO-OPENER
F202	3'-0" x 7'-2"	N WD	HM	HM1	9"	H4	J4	-	-	08	F201	51	SOUND CONTROL DOOR ASSEMBLY
F203	3'-0" x 7'-2"	N WD	HM	HM1	9"	H4	J4	-	-	08	F201	51	SOUND CONTROL DOOR ASSEMBLY
F204	3'-0" x 7'-2"	N WD	HM	HM1	9"	H4	J4	-	-	08	F201	51	SOUND CONTROL DOOR ASSEMBLY
F205	3'-0" x 7'-2"	N WD	HM	HM1	9"	H4	J4	-	-	08	F201	51	SOUND CONTROL DOOR ASSEMBLY



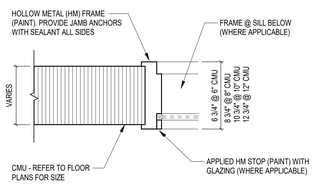
DOOR TYPES

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



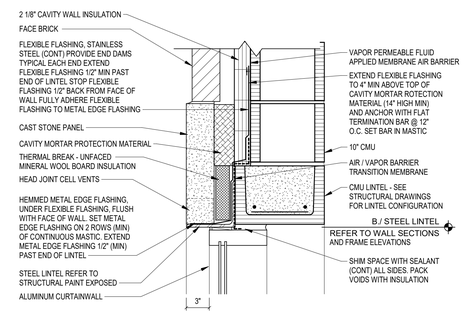
J2 JAMB

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



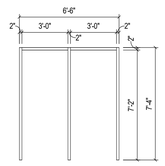
J1 JAMB

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



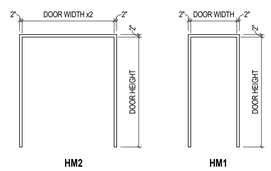
H6 HEAD

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



Elevation SF-1

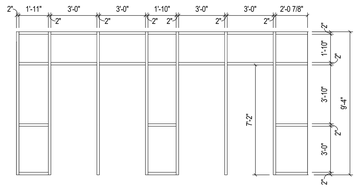
SCALE: 1/4" = 1'-0"



(HM) HOLLOW METAL FRAME ELEVATIONS

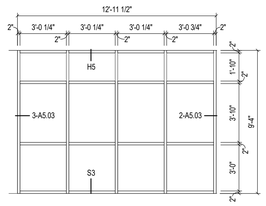
SCALE: 1/4" = 1'-0"

HOLLOW METAL



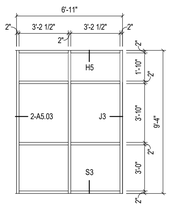
Elevation SF-2

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



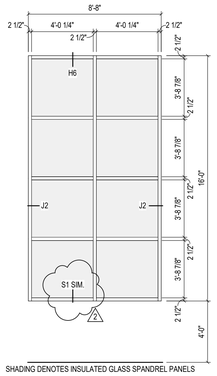
Elevation SF-3

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



Elevation SF-4

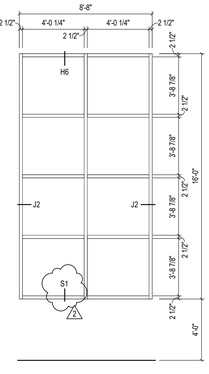
SCALE: 1/4" = 1'-0"



SHADING DENOTES INSULATED GLASS SPANDREL PANELS

Elevation CW-2

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

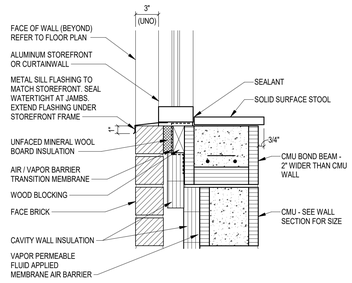


Elevation CW-1

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

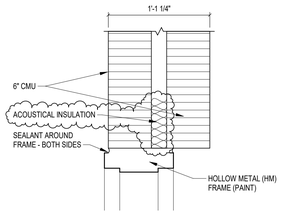
ALUMINUM STOREFRONT

ALUMINUM CURTAINWALL



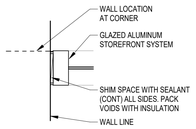
S1 SILL

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



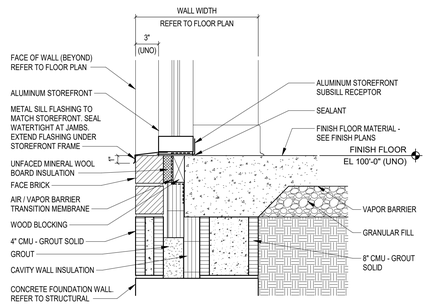
J4 JAMB

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



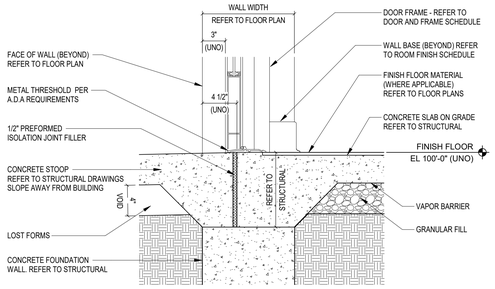
J3 JAMB

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



S3 SILL

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



NOTE:
PROVIDE SHIM SPACE WITH SEALANT (CONT) ALL SIDES. PACK VOIDS WITH INSULATION. TYP AT SIDELIGHTS (WHERE APPLICABLE)

NOTE:
PROVIDE ANTI-SPALLING SEALER ON EXPOSED CONCRETE (TYP)

S2 SILL

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

C:\Users\rgamble\Documents\2023_Penn HS_Arch_Classroom Addition_223213.00_rgamble.rvt
6/25/2025 12:52:00 PM
model is in 22106.00

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

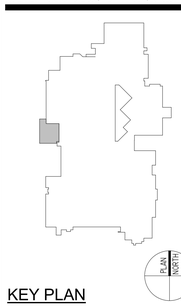
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

PAUL A. MILLER REGISTERED NO. A1300161 STATE OF INDIANA ARCHITECT

CHECKED BY: MKS
DRAWN BY: RLG
PROJECT NUMBER: 223213.00
PROJECT ISSUE DATE: 04-10-2025

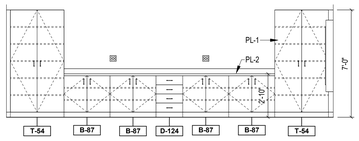
REV. NO.	DESCRIPTION	DATE
2	Addm#2	6-25-2025

DOOR SCHEDULE, CURTAINWALLS, STOREFRONTS

A6.01

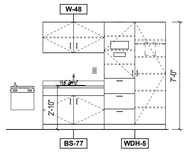
EDUCATIONAL CASEWORK SCHEDULE

TYPE	NO	SIZE W	SIZE D	SIZE H	DESCRIPTION
B	87	3'-0"	2'-0"	2'-10"	BASE UNIT WITH TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS.
BS	77	4'-0"	2'-0"	2'-10"	SINK BASE UNIT WITH TWO HINGED DOORS AND ONE BLANK DRAWER PANEL.
D	124	1'-0"	2'-0"	2'-10"	DRAWER UNIT WITH FOUR EQUAL DRAWERS. 4-1/2 INCHES DEEP INSIDE.
T	54	3'-0"	2'-0"	7'-0"	TALL UNIT WITH FIVE ADJUSTABLE SHELVES AND TWO HINGED DOORS.
W	48	4'-0"	1'-2"	2'-0"	WALL UNIT WITH ONE VERTICAL DIVIDER, TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS.
WDH	5	4'-0"	2'-0"	7'-0"	TALL TEACHER WARDROBE UNIT WITH ONE FIXED SHELF, ROD, THREE ADJUSTABLE SHELVES, 10 INCH X 12 INCH MIRROR, PIN TRAY, TWO FILE DRAWERS, AND TWO HINGED DOORS, WITH GLASS INSERT AND TWO VENTS IN DOOR. CABINET IS LOCKABLE.



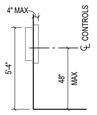
3 F105 EAST

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



4 F102 EAST

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



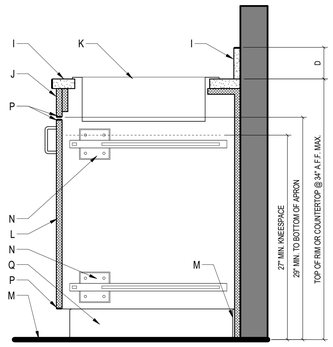
FIRE EXTINGUISHER CABINETS

5 FEC MOUNTING HEIGHT

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

* DEPTH OF UNIT MAY VARY. REFER TO CASEWORK ELEVATIONS FOR ADDITIONAL INFORMATION.

A. COORDINATE LOCATION AND SIZE OF LAVATORY/SINK TO AVOID CONFLICT WITH CABINET. MAXIMUM SINK DEPTH OF 6-1/2", HOWEVER ACCESSIBLE LAVS. AND SINKS CANNOT ENCROACH INTO THE REQUIRED KNEE AND TOE CLEARANCES, HOWEVER THE DIP OF THE OVERFLOW SHALL NOT BE CONSIDERED IN DETERMINING KNEE AND TOE CLEARANCES.
B. PROVIDE WOOD BLOCKING AS REQUIRED.
C. REFER TO CASEWORK ELEVATIONS FOR WIDTH OF UNIT (30" MIN. INSIDE CLEARANCE REQUIRED).
D. TOP OF BACKSPLASH TO ALIGN WITH TOP OF ADJACENT BACKSPLASH. PROVIDE 4"H BACKSPLASH IF NO ADJACENT BACKSPLASH.
E. 24" NOMINAL DEPTH, UNLESS NOTED OTHERWISE, OR ALIGN FACE OF APPROACH WITH FACE OF CABINET BEYOND.
F. PLUMBING CONTRACTOR TO PROVIDE INSULATED PIPES.
G. OFFSET GRID STRAINER, DRAIN, AND PIPING TOWARDS REAR OF SINK TO AVOID POTENTIAL CONFLICT WITH ACCESSIBLE CABINET.
H. THE 3/4" DIMENSION IS TO THE HIGHEST SURFACE, THE COUNTERTOP OR THE RIM OF THE PLUMBING FIXTURE.
I. PLASTIC LAMINATE COUNTERTOP AND BACKSPLASH WITH 3MM VINYL PVC EDGE AT ALL EXPOSED EDGES, U.N.O.
J. PLASTIC LAMINATE.
K. SINK. REFER TO PLUMBING DRAWINGS.
L. PLASTIC LAMINATE POCKET DOORS.
M. FINISH FLOOR MATERIAL AND WALL BASE. REFER TO FINISH PLANS, LIST OF FINISHES, AND PROJECT MANUAL.
N. POCKET DOOR HARDWARE BY BLUM (B270E-5500-04R, RIGHT HAND/B270E-5500-05L, LEFT HAND).
O. WALL BASE BEYOND.
P. 3MM VINYL PVC EDGE AT ALL EXPOSED EDGES, TYP.



ADA ACCESSIBLE SINK (BS-77)

- NOT TO SCALE
- REFER TO EQUIPMENT PLANS AND CASEWORK ELEVATIONS FOR LOCATIONS

LIST OF FINISHES

REFER TO A8 ARCH. DWG. SHEETS

FLOOR MATERIALS

CARPET TILE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
CART-1	INTERFACE / WIND II 1383202500	PLATEAU (9229) / 50CM X 50CM

ENTRY CARPET TILE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
ECT-1	FLOR / INDUSTRIOUS	TO BE SELECTED / 50CM X 50CM

LUXURY VINYL TILE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
LVT-1	INTERFACE / BRUSHED LINES	SANDALWOOD / 25CM X 1M / ASHLAR
LVT-2	INTERFACE / DRAWN LINES	ONYX / 25CM X 1M / ASHLAR W/ MITERED CORNERS, SEE DETAIL
LVT-3	INTERFACE / TEXTURED STONES	POLISHED CEMENT / 50CM X 50CM / QUARTER TURN

BASE MATERIALS

RESILIENT BASE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
RB-1	JOHNSONITE	BLACK 40 / 4"H COVE

WALL FINISHES

ACOUSTICAL WALL TREATMENTS

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
AWT-A	DESIGNTEX / GAMUT 3468	COLOR 204 - FINCH
AWT-B	DESIGNTEX / GAMUT 3468	COLOR 813 - SHALE
AWT-C	DESIGNTEX / GAMUT 3468	COLOR 810 - GRAPHITE / 2" THICK
AWT-D	DESIGNTEX / GAMUT 3468	COLOR 812 - CARBON / 3" THICK
AWT-E	DESIGNTEX / CHECK 3054	COLOR 201 - GOLDENROD / 1" THICK
AWT-F	DESIGNTEX / GAMUT 3468	COLOR 801 - MIST / 3" THICK
AWT-G	CARNEGIE / XOREL - HAZE 6041	COLOR 11 - 2" THICK

PAINT

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
P-1 (WALL FIELD)	SHERWIN WILLIAMS	SW7029 AGREEABLE GRAY
P-2 (HOLLOW METAL FRAMES)	SHERWIN WILLIAMS	SW6258 TRICORN BLACK
P-3 (BULKHEADS)	SHERWIN WILLIAMS	SW7006 EXTRA WHITE
P-4 (ACCENT)	SHERWIN WILLIAMS	TO BE SELECTED (PrIM GOLD)
P-5 (ACCENT)	SHERWIN WILLIAMS	SW9170 ACIER

CEILING FINISHES

ACOUSTICAL CEILING TILE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
ACT-1	REFER TO SPECIFICATIONS	WHITE / 2'X2' / SQUARE EDGE
ACT-2	REFER TO SPECIFICATIONS	WHITE / 2'X2' / SQUARE EDGE
ACT-3	REFER TO SPECIFICATIONS	WHITE / 2'X2' / SQUARE EDGE
ACT-4	REFER TO SPECIFICATIONS	WHITE / 2'X2' / SQUARE EDGE
ACT-5	REFER TO SPECIFICATIONS	WHITE / 2'X2' / SQUARE EDGE
ACT-6	REFER TO SPECIFICATIONS	WHITE / 2'X2' / SQUARE EDGE

MISCELLANEOUS FINISHES

RESILIENT STAIR ACCESSORIES

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
RSA-1	ROPPE / VANTAGE RUBBER STAIR TREAD W/O RISER #98 AND ABRASIVE STRIP	BLACK 100 TREAD WITH RAISED CIRCULAR DESIGN OCEAN GRAY ABRASIVE STRIP

RUBBER FLOOR TILE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
RFT-1	ROPPE / VANTAGE TILE	BLACK 100 / #996 RAISED CIRCULAR PATTERN / 50CM X 50CM

EQUIPMENT FINISHES

ELECTRONIC ROLLER WINDOW SHADES

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
ERWS	REFER TO SPECIFICATIONS	TO BE SELECTED

HP PLASTIC LAMINATE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
PL-1	FORMICA / WILSONART / NEVAMAR	STANDARD, TO BE SELECTED
PL-2	FORMICA / WILSONART / NEVAMAR	STANDARD, TO BE SELECTED

MARKERBOARD

WHITE

TACKBOARDS

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
TB	REFER TO SPECIFICATIONS	TO BE SELECTED

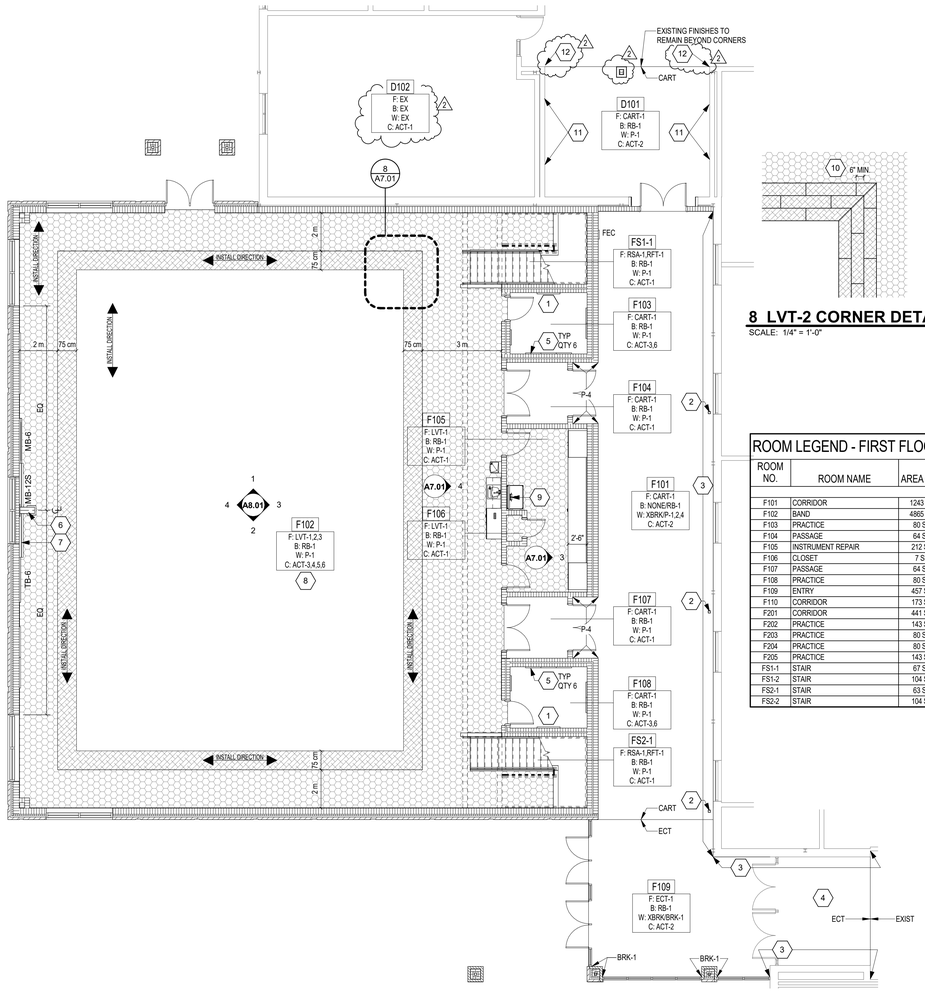
GENERAL NOTES

FLOORING
A. CENTER FLOORING TILE AND PATTERN IN ROOM UNLESS OTHERWISE INDICATED ON FINISH PLANS.
B. ALIGN EDGE OF FINISHED FLOOR MATERIAL WITH EDGE OF WALL OR CASEWORK.
C. FLOOR FINISH MATERIAL TRANSITIONS SHALL OCCUR UNDER THE CENTER OF THE DOOR UNLESS OTHERWISE INDICATED, WHERE THE FLOORING MATERIAL CHANGES FROM ROOM TO ROOM.
D. EXTEND FLOOR MATERIAL AND PATTERN UNDER ALL OPEN TO THE FLOOR CASEWORK AND FURNITURE.
E. COORDINATE CONTROL JOINTS IN CONCRETE SLAB WITH STRUCTURAL DRAWINGS AND FINISH FLOORING INSTALLER.
F. PROVIDE RSA ON ALL STAIRS. INCLUDE RFT ON ALL STAIR LANDINGS. REFER TO FINISH PLANS FOR MATERIAL/COLOR TO BE INSTALLED.
G. AT BUILDING EXPANSION JOINTS (IF APPLICABLE) PROVIDE PRE-FABRICATED MOVEMENT PROFILE SYSTEM IN MORTAR BED. PROVIDE SCHLUTER DILEX-EDP OR APPROVED EQUAL. TYPICAL AT ALL LOCATIONS.

WALL BASE
A. RUBBER BASE (RB-1) TO BE INSTALLED AT ALL LOCATIONS UNLESS OTHERWISE INDICATED. ALL RB BASE TO BE COVED.
B. DO NOT INSTALL BASE ON BRICK WALLS.
C. PROVIDE PREFORMED BASE TO MATCH 1"RADIUS AT ALL LOCATIONS WHERE BASE COVERS MASONRY BULLNOSE. REFER TO FINISH SCHEDULE FOR BASE MATERIAL TYPE. TYPICAL AT ALL LOCATIONS. AT RB LOCATIONS PROVIDE PREFORMED OUTSIDE CORNERS, AND USE MANUFACTURER'S RECOMMENDED ADHESIVE (CONTACT CEMENT) FOR PROPER ADHESION WITH NO GAPS.

PAINT & STAIN
A. PAINT ALL WALLS UNLESS OTHERWISE INDICATED ON FINISH PLANS.
B. DO NOT PAINT BRICK WALLS.
C. STAIN TO MATCH EXISTING WOOD TRIM.

CASEWORK
A. HIGH PRESSURE PLASTIC LAMINATE CABINETS/VERTICAL SURFACES ARE TO BE PL-1, UNLESS OTHERWISE NOTED.
B. INTERIOR MELAMINE TO BE WHITE
C. 3MM AND 1MM PVC EDGES ON CASEWORK ARE TO MATCH PL-1.
D. HANDLES & HINGES TO BE BRUSHED CHROME.
E. COUNTERTOPS TO BE PL-2.



BAND ROOM EQUIPMENT / FINISH PLAN - FIRST FLOOR

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

8 LVT-2 CORNER DETAIL

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

ROOM LEGEND - FIRST FLOOR		
ROOM NO.	ROOM NAME	AREA (SF)
F101	CORRIDOR	1243 SF
F102	BAND	4865 SF
F103	PRACTICE	80 SF
F104	PASSAGE	64 SF
F105	INSTRUMENT REPAIR	212 SF
F106	CLOSET	7 SF
F107	PASSAGE	64 SF
F108	PRACTICE	80 SF
F109	ENTRY	457 SF
F110	CORRIDOR	173 SF
F201	CORRIDOR	441 SF
F202	PRACTICE	143 SF
F203	PRACTICE	80 SF
F204	PRACTICE	80 SF
F205	PRACTICE	143 SF
FS1-1	STAIR	67 SF
FS1-2	STAIR	104 SF
FS2-1	STAIR	63 SF
FS2-2	STAIR	104 SF

EQUIPMENT GENERAL NOTES

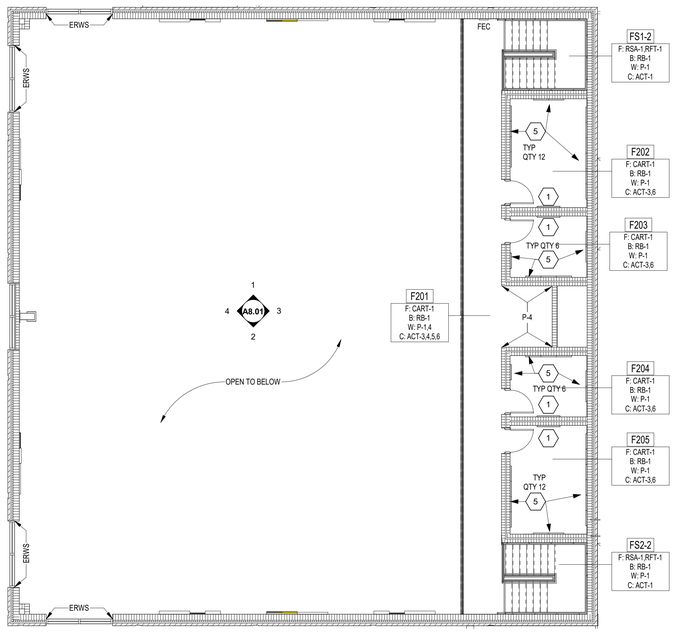
A. ALL COUNTERTOPS TO HAVE CONTINUOUS 4" HIGH BACKSPLASHES AND ENDSPLASHES UNLESS NOTED OTHERWISE.
B. PROVIDE FILLER STRIPS BETWEEN CASEWORK UNITS AND WALL OR BETWEEN ANY UNIT AS REQUIRED. EXTEND COUNTER TO FACE OF WALL ON ADJACENT TALL CABINET.
C. ALL CASEWORK DOORS AND DRAWERS SHALL BE LOCKABLE.
D. ALL EXPOSED ENDS AND BACKS OF CASEWORK SHALL BE FINISHED.
E. CASEWORK INSTALLER SHALL CUT CASEWORK AS REQUIRED FOR PLUMBING/ELECTRICAL LINES.
F. CASEWORK INSTALLER SHALL CAULK BETWEEN COUNTERS, BACKSPLASHES, AND WALLS.
G. ALL WALL-MOUNTED CASEWORK SHALL BE MOUNTED WITH THE TOP AT 7'-0" AFF UNLESS OTHERWISE NOTED.
H. (MB) INDICATES 4' HIGH MARKERBOARD; LENGTH AS INDICATED. MOUNT AT 3'-0"AFF.
I. (MB-XS) INDICATES 4' HIGH MARKERBOARD WITH STAFF LINES; LENGTH AS INDICATED. MOUNT AT 3'-0"AFF.
J. (TB) INDICATES 4' HIGH TACKBOARD; LENGTH AS INDICATED. MOUNT AT 3'-0"AFF.
K. (FEC) FIRE EXTINGUISHER / CABINET - SEE MOUNTING HEIGHT DIAGRAM 5/A7.01.
L. SEALANT SHALL BE APPLIED AT ALL MATERIAL TRANSITIONS, BACKSPLASHES, AND DOOR FRAMES - ALL LOCATIONS WHERE NEW FINISH ABUTS A DISSIMILAR MATERIAL.
M. PROVIDE NEW RESILIENT TRANSITION STRIPS AT EXPOSED EDGE OF NEW FLOOR FINISH TO EXISTING FLOOR FINISH.
N. PAINT ALL SIDES (VERT. AND HORZ.) OF BULKHEAD/SOFFIT COLOR INDICATED (UNO).
O. PATCH AND REPAIR ALL HOLES AND IMPERFECTIONS, TO RECEIVE NEW FINISHES.

FINISH & EQUIPMENT NOTES (X)

1. 36"X72" MIRROR; MOUNT CENTERED ON WALL AS SHOWN AND 4" ABOVE FLOOR
2. PAINT STEEL COLUMN, P-2; DO NOT INSTALL RB-1
3. EXISTING BRICK WALL; DO NOT PAINT, DO NOT INSTALL RB-1
4. INSTALL NEW ECT-1; EXISTING WALL AND CEILING FINISHES TO REMAIN
5. 2'X6' ACOUSTICAL TILES, AWT-G, MOUNTED 16"AFF. CENTER ON WALL SPACE AS SHOWN.
6. SHORT-THROW PROJECTOR; BASIS OF DESIGN IS EPSON BRIGHTLINK 770FI/ EB-770FI. REFER TO ELEVATION.
7. 165" DIAGONAL WALL-MOUNTED ELECTRIC PROJECTION SCREEN. BASIS OF DESIGN IS DRAPER PREMIER 101642 WITH MATTE WHITE SURFACE. REFER TO ELEVATION
8. INSTALL NEW ACOUSTICAL WALL TILES AROUND CLASSROOM - REFER TO ELEVATIONS 1-4/A8.01
9. FREE-STANDING SINK, REFER TO PLUMBING DRAWINGS
10. LVT-2 TO BE INSTALLED SO THAT NO MITERED CORNER PIECE IS LESS THAN 6" IN LENGTH.
11. HIGH IMPACT RESISTANT WALL COVERING - SEE 6-A7.01
12. TIE INTO EXISTING WOOD TRIM HIGH IMPACT RESISTANT WALL COVERING OUTSIDE CORNER

FLOOR PATTERN LEGEND

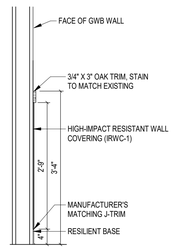
LVT-1 LVT-3 LVT-2



BAND ROOM EQUIPMENT / FINISH PLAN - SECOND FLOOR

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

ROOM LEGEND - SECOND FLOOR		
ROOM NO.	ROOM NAME	AREA (SF)
F201	CORRIDOR	441 SF
F202	PRACTICE	143 SF
F203	PRACTICE	80 SF
F204	PRACTICE	80 SF
F205	PRACTICE	143 SF



6 HIGH IMPACT RESISTANT WALLCOVERING

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

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

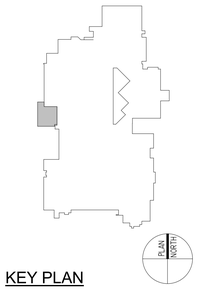
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

PAUL A. MILLER REGISTERED No. A-1200161 STATE OF INDIANA ARCHITECT

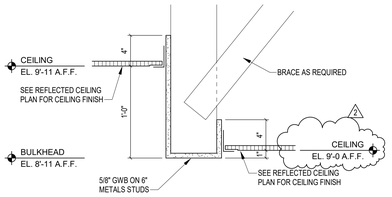
CHECKED BY: MKS
DRAWN BY: AML
PROJECT NUMBER: 223213.00
PROJECT ISSUE DATE: 04-10-2025

REV. NO.	DESCRIPTION	DATE
2	Addm#2	6-25-2025

EQUIPMENT / FINISH PLANS

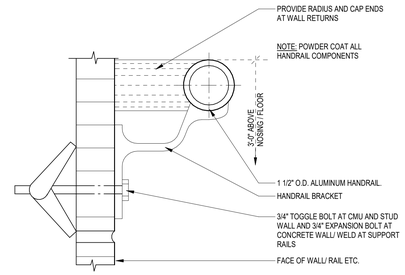
A7.01

C:\Users\rgambill\Documents\2023_Penn HS_Arch_Classroom Addition_223213.00_rgambill.rvt
6/25/2025 1:26:06 PM
model is in 22 1096.00



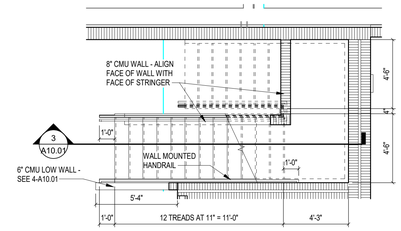
7 BULKHEAD

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



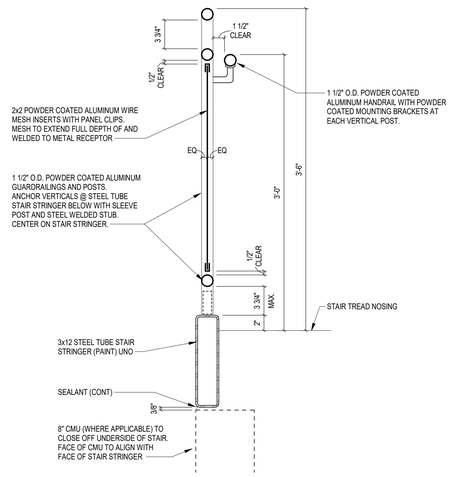
6 TYP. WALL MOUNTED HANDRAIL

SCALE: 6" = 1'-0"



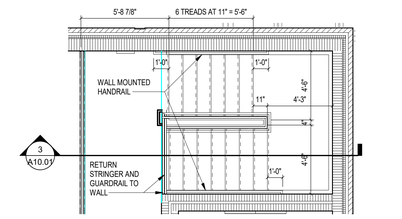
1 STAIR FS1 - FIRST FLOOR

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



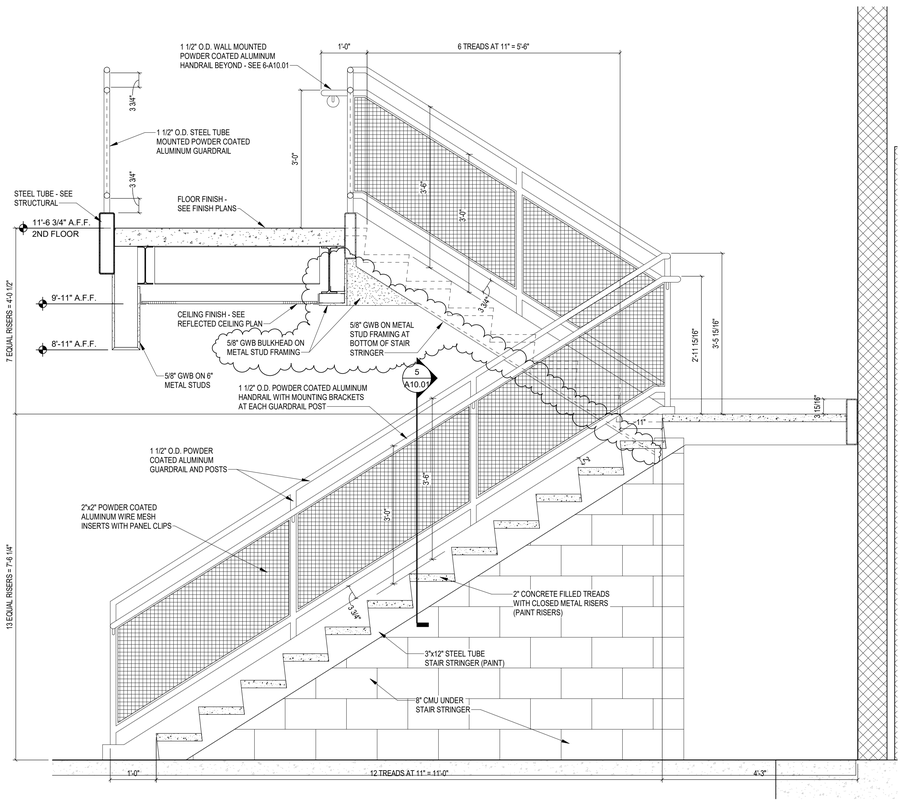
5 GUARDRAIL / HANDRAIL

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



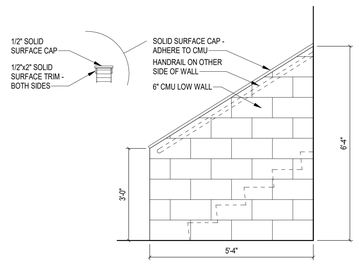
2 STAIR FS1 - SECOND FLOOR

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



3 STAIR SECTION

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



4 LOW WALL

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

NOTE: STAIR FS2 IS OPPOSITE HAND

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

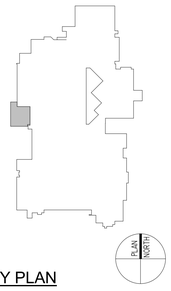
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

PAUL A. MILLER REGISTERED ARCHITECT No. 11300161 STATE OF INDIANA

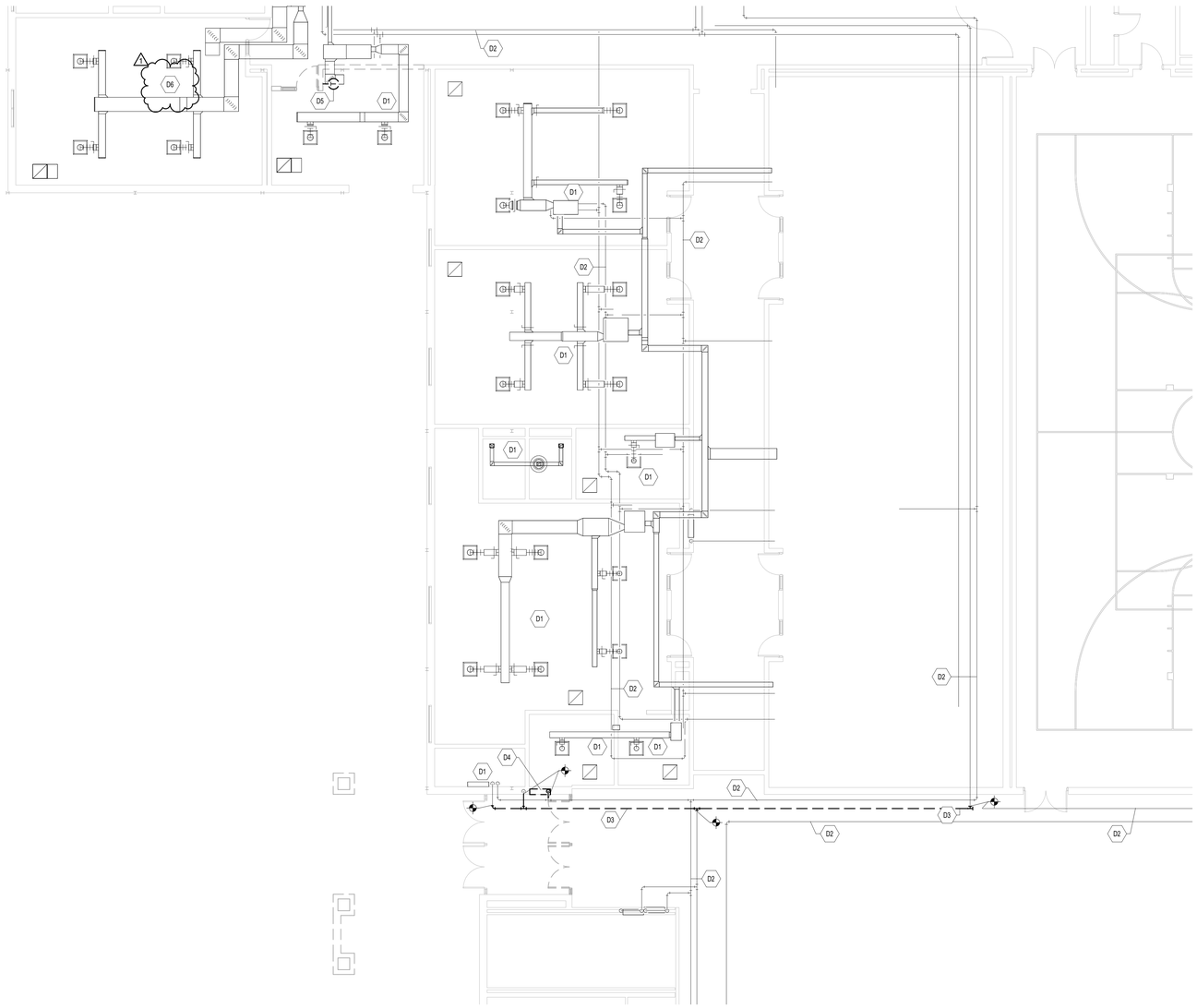
CHECKED BY: MKS
DRAWN BY: RLG
PROJECT NUMBER: 223213.00
PROJECT ISSUE DATE: 04-10-2025

REV. NO.	DESCRIPTION	DATE
2	Addm#2	6-25-2025

VERTICAL CIRCULATION

A10.01

C:\Users\rgamble\Documents\2023_Penn HS_Arch_Classroom Addition_223213.00_rgamble.rvt
6/25/2025 12:51:18 PM
model is in 221096.00



UNIT F - FIRST FLOOR DEMOLITION PLAN

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

MECHANICAL DEMOLITION PLAN GENERAL NOTES

A. THE DIVISION 23 CONTRACTOR SHALL VISIT THE PROJECT AND DETERMINE THE EXACT EXTENT OF THE DEMOLITION WORK REQUIRED BEFORE BIDDING THE PROJECT.

B. WHERE BUILDING SURFACES ARE DAMAGED BY THE REMOVAL OF OLD WORK, SAME SHALL BE PATCHED TO MATCH THE ADJACENT SURFACES BY THIS CONTRACTOR.

C. EXISTING OPENINGS WHICH ARE TO BE REUSED SHALL NOT BE REMOVED AND SHALL BE MODIFIED OR ENLARGED AS NEED BE TO SUIT THE NEW SYSTEMS. PROVIDE ALL REQUIRED CUTTING AND PATCHING TO MATCH ADJACENT SURFACES.

D. IF ASBESTOS IS PRESENT CONTACT THE CONSTRUCTION MANAGER, IT WILL BE REMOVED OR RENDERED HARMLESS UNDER SEPERATE CONTRACT BY THE OWNER.

E. THE OWNER SHALL HAVE THE RIGHT TO CLAIM ANY MATERIALS THAT ARE BEING DEMOLISHED PRIOR TO THE CONTRACTOR DISPOSING OF THEM OFF SITE. CONTRACTOR IS REQUIRED TO VERIFY THAT THE OWNER DOES NOT WANT TO CLAIM AN ITEM BEFORE DISPOSING THEM OFF SITE.

F. ALL FLOOR, WALL AND ROOF CUTTING WORK TO BE DONE BY DIVISION 23-HVAC CONTRACTOR UNLESS OTHERWISE NOTED. PATCH ALL FLOOR, WALL AND ROOF OPENINGS THAT ARE NOT REUSED TO MATCH ADJACENT CONSTRUCTION.

G. DIVISION 23 CONTRACTOR IS RESPONSIBLE TO REMOVE EXISTING CEILINGS TO DO WORK ABOVE THE CEILINGS AND REINSTALL THOSE CEILINGS AFTER COMPLETION OF WORK. IF ANY CEILING PADS OR GRIDS ARE DAMAGED, THIS CONTRACTOR SHALL REPLACE WITH NEW.

MECHANICAL DEMOLITION PLAN NOTES (X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
D1	EXISTING DUCTWORK, DIFFUSERS, GRILLES AND EQUIPMENT TO REMAIN.
D2	EXISTING CHILLED WATER PIPING, HOT WATER PIPING, HEAT RECOVERY PIPING, VALVES, INSULATION, SUPPORTS, HANGERS, ETC. SHALL REMAIN UNLESS NOTED OTHERWISE.
D3	REMOVE EXISTING PIPING BACK TO THE POINT INDICATED. REFER TO THE NEW WORK PLAN FOR CONNECTION OF PIPING. DISPOSE OF MATERIAL OFF SITE
D4	EXISTING CABINET UNIT HEATER TO BE REMOVED AND DISPOSE OF OFF SITE. REMOVE PIPING BACK TO THE MAIN AND CAP WATER-TIGHT.
D5	EXISTING TEMPERATURE SENSOR TO BE REMOVED AND RELOCATED. REFER TO TEMERATURE CONTROL DRAWING FOR LOCATION.
D6	EXISTING DUCTWORK, DIFFUSERS AND GRILLES TO BE REMOVED AND STORED FOR ABOVE CEILING STRUCTURAL WORK IN ROOM D102. RE-INSTALL AFTER STRUCTURAL IS COMPLETE. MECHANICAL CONTRACTOR IS TO COORDINATE AND VERIFY AMOUT OF REMOVAL WITH STRUCTURAL WORK TO BE COMPLETED. BEFORE REMOVAL, MECHANICAL CONTRACTOR TO VERIFY SUPPLY CFM AND AFTER RE-INSTALL, BALANCE TO SAME CFM.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

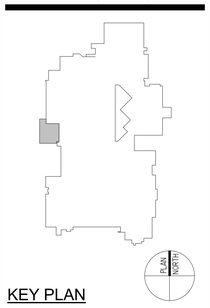
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

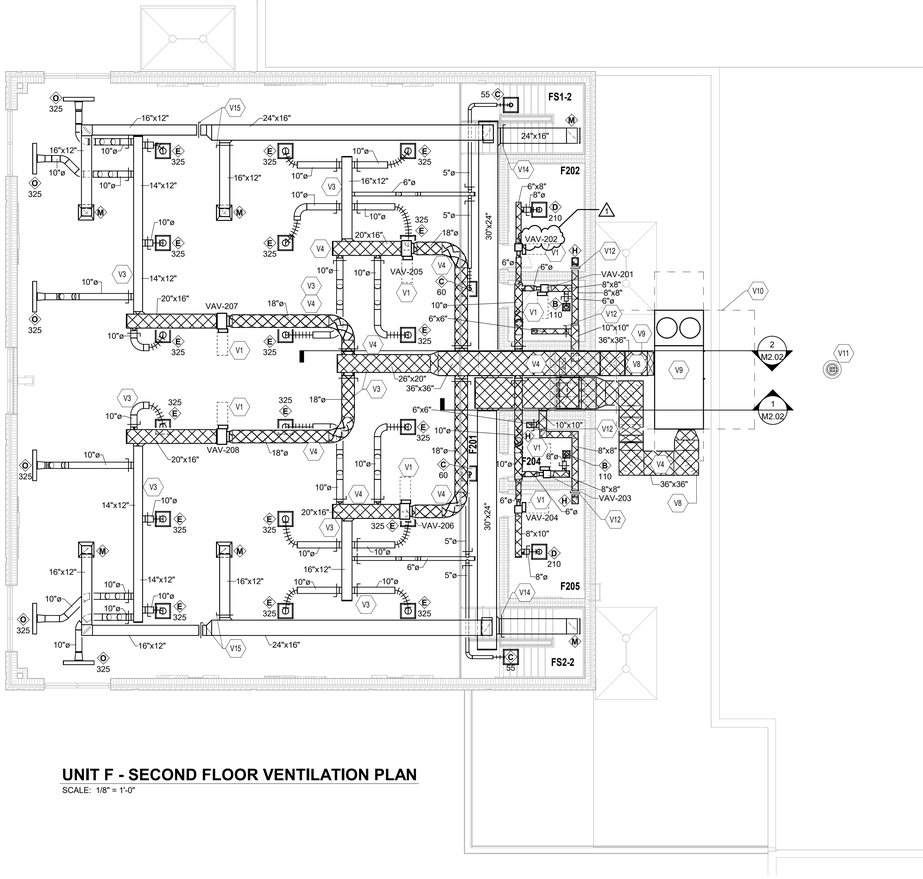
PROJECT MANAGER: MKS
DRAWN BY: ECG
PROJECT NUMBER: 223213.00
PROJECT ISSUE DATE: 4/10/2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #2	06/25/25

FIRST FLOOR DEMOLITION - UNIT F

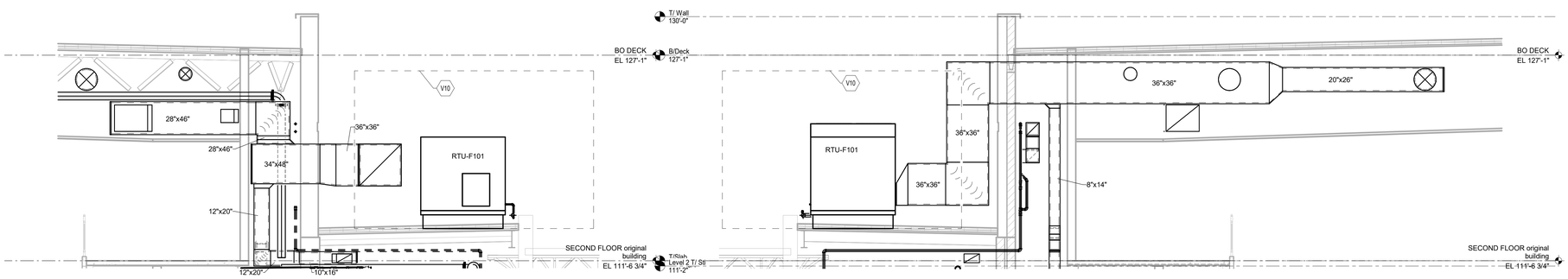
MD.01

ROOM LEGEND - SECOND FLOOR UNIT F		
ROOM NO.	ROOM NAME	AREA (SF)
F201	CORRIDOR	441 SF
F202	PRACTICE	143 SF
F203	PRACTICE	80 SF
F204	PRACTICE	80 SF
F205	PRACTICE	143 SF



UNIT F - SECOND FLOOR VENTILATION PLAN

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



1 BUILDING SECTION - RETURN

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

2 BUILDING SECTION - SUPPLY

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

VENTILATION PLAN GENERAL NOTES

A. ALL DUCTWORK, PIPING AND VALVES SHALL BE CONCEALED ABOVE THE CEILING AND WITHIN WALLS, UNLESS OTHERWISE NOTED.
B. REFER TO THE SPECIFICATIONS FOR REQUIREMENTS RELATED TO EQUIPMENT QUALITY, CONSTRUCTION AND FINISH OF MATERIALS.
C. ARRANGE DUCTWORK, PIPING, ETC. TO ALLOW FOR EASY ACCESS TO COILS, VALVES, DAMPERS AND CONTROLS. KEEP AREAS ADJACENT TO ACCESS PANELS FREE AND CLEAR OF ANY OBSTRUCTIONS.
D. SEAL DUCT PENETRATIONS THROUGH THE FLOOR AND/OR WALLS IN ACCORDANCE WITH MECHANICAL CODE AND SMACNA REQUIREMENTS. SEAL DUCT PENETRATIONS THROUGH FIRE RATED FLOORS AND/OR WALLS WITH A MATERIAL HAVING SAME FIRE RATING AS THE WALL AND/OR FLOOR.
E. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR HIS RESPECTIVE WORK FOR REPAIRING AND PATCHING TO MATCH EXISTING SURFACES, SIDEWALKS, STREETS, FLOORS, WALLS, ROOFS, CEILING AND PAVEMENT.
F. ALL RECTANGULAR SHEET METAL DUCT SIZES SHOWN ARE INSIDE FREE AREA DIMENSIONS. ALL ROUND DUCT SIZES SHOWN ARE INSIDE DIAMETERS.
G. PROVIDE BALANCING DAMPER AT EACH DUCT BRANCH, SERVING DIFFUSER, GRILLE AND REGISTER.
H. INSTALL WALL THERMOSTATS, TEMPERATURE SENSORS, HUMIDISTATS, ETC. 44" ABOVE THE FINISH FLOOR IN ACCORDANCE WITH ADA REQUIREMENTS.
I. COORDINATE ALL REQUIRED WALL, ROOF AND FLOOR OPENINGS (BOTH DIMENSIONS AND LOCATIONS) WITH ALL OTHER TRADES.
J. COORDINATE MECHANICAL SYSTEM INSTALLATION WITH STRUCTURE, FIRE PROTECTION, PLUMBING AND LIGHTING LAYOUT.
K. PROVIDE ALL NECESSARY TRANSITIONS TO EQUIPMENT FROM SIZES SHOWN ON PLAN.

VENTILATION PLAN NOTES (X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
V1	DASHED LINE INDICATED APPROXIMATE CLEARANCE REQUIRED IN FRONT OF VARIABLE VOLUME TERMINAL UNIT CONTROL PANEL. COORDINATE LOCATION WITH ALL TRADES.
V3	ROUTE DUCTWORK BETWEEN/THROUGH STRUCTURAL STEEL. COORDINATE EXACT LOCATION WITH STRUCTURAL CONTRACTOR AND ALL OTHER TRADES.
V4	DUCTWORK WITH HATCH PATTERN TO BE PROVIDED WITH INTERNAL LINED INSULATION.
V8	EXTERIOR DUCTWORK SHALL BE PROVIDED WITH EXTERNAL BOARD INSULATION WITH FIELD APPLIED JACKET AND WITH INTERNAL LINED INSULATION. REFER TO SPECIFICATIONS. SIZES SHOWN IDENTIFIES MINIMUM INSIDE FREE AREA REQUIRED
V9	UNIT LOCATED ON THE ROOF AND INSTALLED ON INSULATED VIBRATION ISOLATION ROOF CURB.
V10	CLEARANCE REQUIRED FOR AIR HANDLING UNIT COIL PULLS.
V11	EXISTING DUCTWORK, DIFFUSERS, GRILLES AND EQUIPMENT TO REMAIN.
V12	BALANCE RETURN AIR DAMPER TO MATCH SPACE SUPPLY AIR.
V14	BALANCE RETURN AIR DAMPER TO 1305 CFM.
V15	BALANCE RETURN AIR DAMPER TO 1355 CFM.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

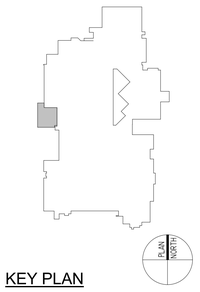
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

MARK Z. HOFF REGISTERED No. PE 12000001 STATE OF INDIANA PROFESSIONAL ENGINEER

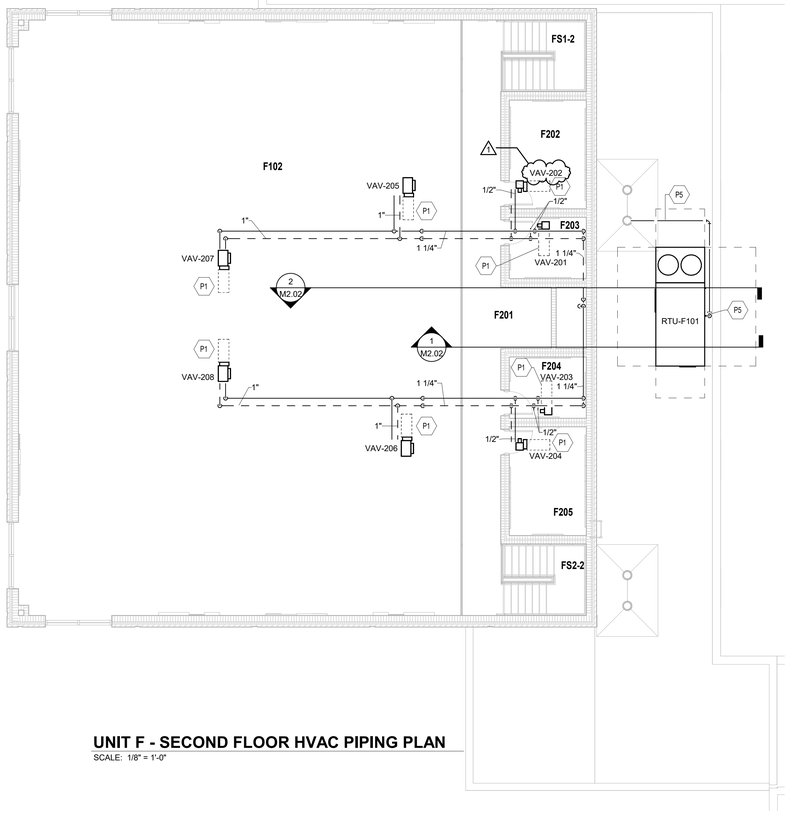
PROJECT MANAGER: MKS
DRAWN BY: ECG
PROJECT NUMBER: 223213.00
PROJECT ISSUE DATE: 4/10/2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #2	06/25/25

SECOND FLOOR VENTILATION PLAN - UNIT F

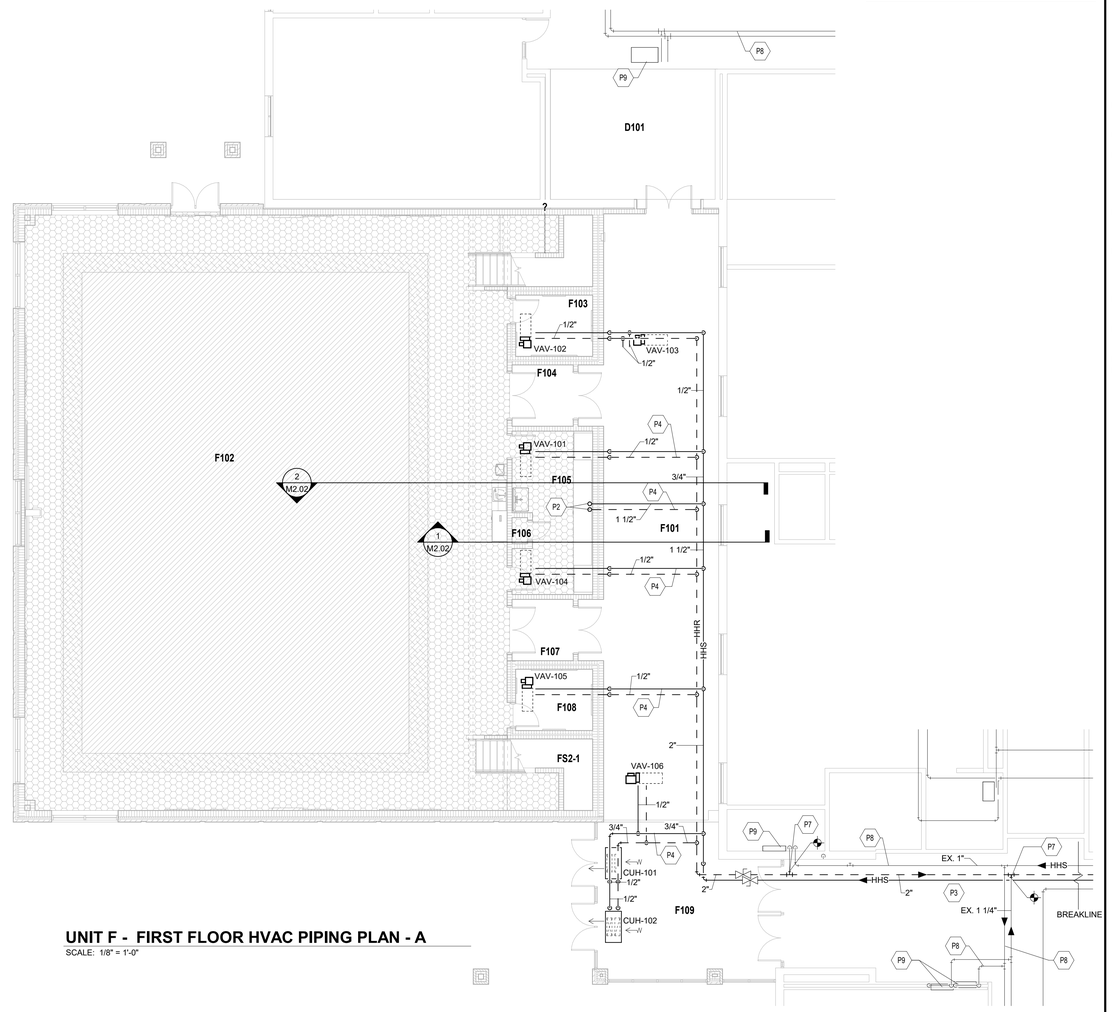
M2.02

\\data1\citrixprofiles$\andrew\My Documents\2023_Penn HS_Mech_Classroom Addition_223213.00_andrew.rvt
6/24/2025 7:07:50 AM



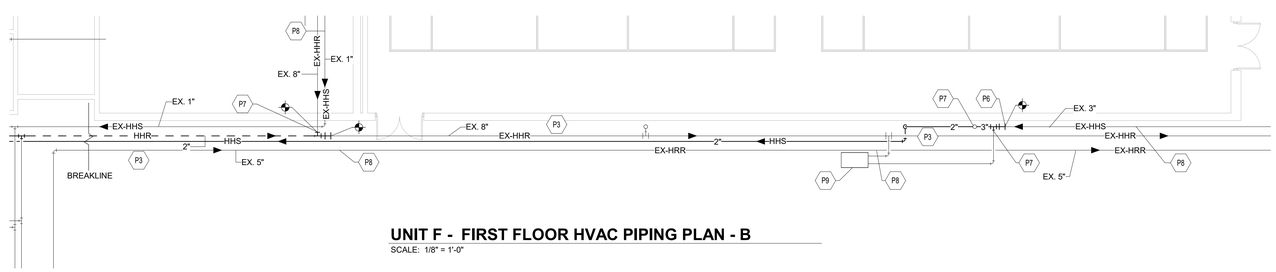
UNIT F - SECOND FLOOR HVAC PIPING PLAN

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



UNIT F - FIRST FLOOR HVAC PIPING PLAN - A

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



UNIT F - FIRST FLOOR HVAC PIPING PLAN - B

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

ROOM LEGEND - FIRST FLOOR UNIT F

ROOM NO.	ROOM NAME	AREA (SF)
F101	CORRIDOR	1243 SF
F102	BAND	4865 SF
F103	PRACTICE	80 SF
F104	PASSAGE	64 SF
F105	INSTRUMENT REPAIR	212 SF
F106	STORAGE	Not Placed
F106	CLOSET	7 SF
F107	PASSAGE	64 SF
F108	PRACTICE	80 SF
F109	ENTRY	457 SF

ROOM LEGEND - SECOND FLOOR UNIT F

ROOM NO.	ROOM NAME	AREA (SF)
F201	CORRIDOR	441 SF
F202	PRACTICE	143 SF
F203	PRACTICE	80 SF
F204	PRACTICE	80 SF
F205	PRACTICE	143 SF

HVAC PIPING PLAN GENERAL NOTES

A. ALL PIPING AND VALVES SHALL BE CONCEALED ABOVE THE CEILING AND WITHIN WALLS, UNLESS OTHERWISE NOTED.
B. REFER TO THE SPECIFICATIONS FOR REQUIREMENTS RELATED TO EQUIPMENT QUALITY, CONSTRUCTION AND FINISH OF MATERIALS.
C. ARRANGE PIPING, ETC. TO ALLOW FOR EASY ACCESS TO COILS, VALVES, DAMPERS AND CONTROLS. KEEP AREAS ADJACENT TO ACCESS PANELS FREE AND CLEAR OF ANY OPSTRUCTIONS.
D. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR HIS RESPECTIVE WORK FOR REPAIRING AND PATCHING TO MATCH EXISTING SURFACES, SIDEWALKS, STREETS, FLOORS, WALLS, ROOFS, CEILING AND PAVEMENT.
E. HYDRONIC SUPPLY AND RETURN PIPING SHALL BE THE SAME SIZE UNLESS OTHERWISE NOTED.

HVAC PIPING PLAN NOTES (X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
P1	DASHED LINE INDICATES APPROXIMATE CLEARANCE REQUIRED IN FRONT OF CONTROL PANEL TO VARIABLE VOLUME TERMINAL.
P2	PIPING ROUTED UP TO ABOVE SECOND FLOOR CEILING.
P3	CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING THE PIPING ABOVE THE EXISTING CEILING. COORDINATE EXACT ROUTING WITH EXISTING FIELD CONDITIONS. CONTRACTOR SHALL REPAIR/REPLACE ANY CEILING GRID OR TILES DAMAGED DURING HIS WORK.
P4	HOT WATER PIPING SHALL BE ROUTED THROUGH STEEL JOISTS IN AREA. COORDINATE EXACT LOCATION WITH STRUCTURAL CONTRACTOR AND ALL OTHER TRADES.
P5	CONDENSATE DRAIN PIPING WITH WATER SEAL TRAP FROM UNIT TO NEAREST ROOF DRAIN. CONDENSATE DRAIN PIPING AND TRAP SIZED PER MANUFACTURERS REQUIREMENTS. REFER TO DETAIL.
P6	CONNECT TO EXISTING PIPING AT THIS APPOXIMATE LOCATION. MAKE MODIFICATIONS AS NECESSARY.
P7	CONNECT EXISTING PIPING TO NEW PIPING AT THIS APPOXIMATE LOCATION. MAKE MODIFICATIONS AS NECESSARY.
P8	EXISTING PIPING TO REMAIN.
P9	EXISTING EQUIPMENT TO REMAIN.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

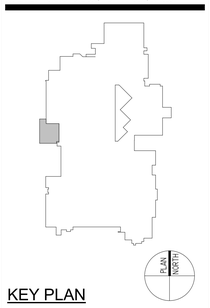
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

MARK Z. HOFF REGISTERED No. PE 12000001 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: MKS
DRAWN BY: ECG
PROJECT NUMBER: 223213.00
PROJECT ISSUE DATE: 4/10/2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #2	06/25/25

FIRST AND SECOND FLOOR HVAC PIPING PLAN - UNIT F

M3.01

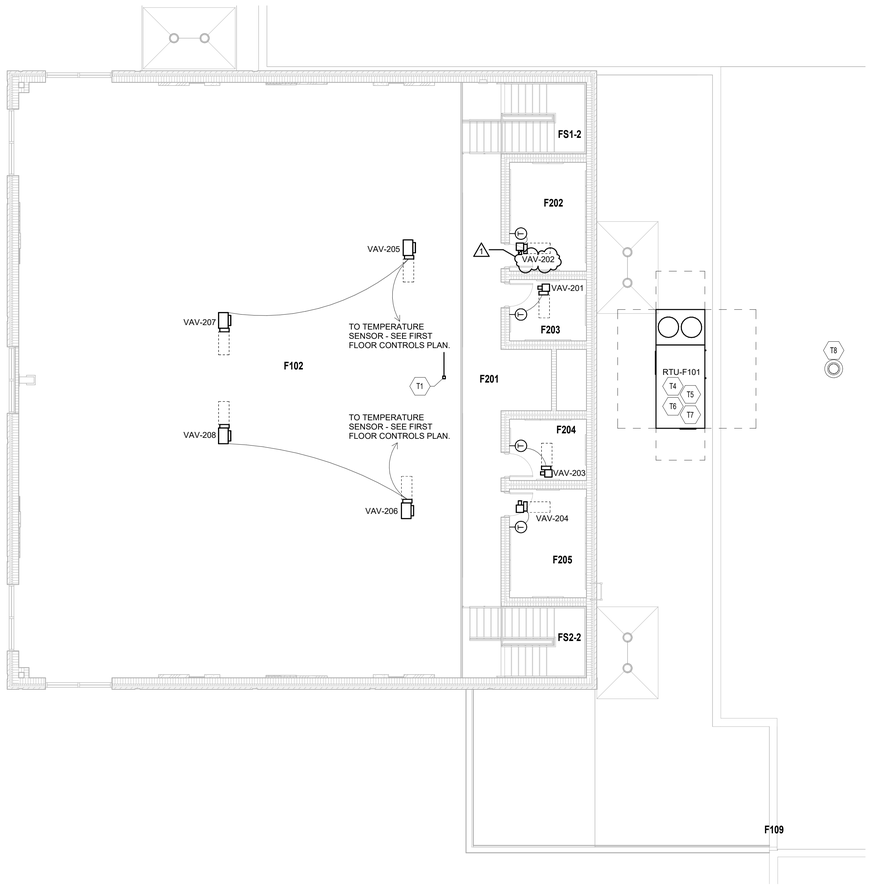
\\data1\cltrprofiles$\andrew\My Documents\2023_Penn HS_Mech_Classroom Addition_223213.00_andrew.rvt
6/24/2025 7:07:53 AM

ROOM LEGEND - FIRST FLOOR UNIT F

ROOM NO.	ROOM NAME	AREA (SF)
F101	CORRIDOR	1243 SF
F102	BAND	4865 SF
F103	PRACTICE	80 SF
F104	PASSAGE	64 SF
F105	INSTRUMENT REPAIR	212 SF
F106	STORAGE	Not Placed
F106	CLOSET	7 SF
F107	PASSAGE	64 SF
F108	PRACTICE	80 SF
F109	ENTRY	457 SF

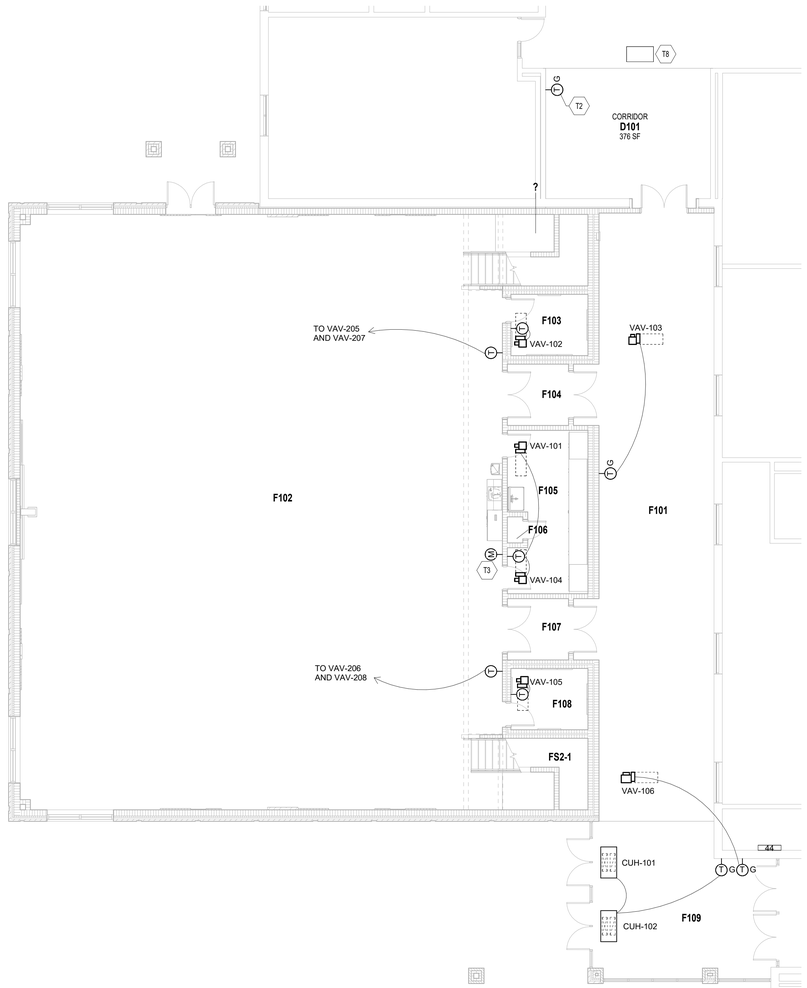
ROOM LEGEND - SECOND FLOOR UNIT F

ROOM NO.	ROOM NAME	AREA (SF)
F201	CORRIDOR	441 SF
F202	PRACTICE	143 SF
F203	PRACTICE	80 SF
F204	PRACTICE	80 SF
F205	PRACTICE	143 SF



UNIT F - SECOND FLOOR TEMPERATURE CONTROL PLAN

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



UNIT F - FIRST FLOOR TEMPERATURE CONTROL PLAN

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

TEMPERATURE CONTROL PLAN GENERAL NOTES

A. ALL THERMOSTAT/SENSORS TO BE MOUNTED WITH BOTTOM AT 44" AFF UNLESS OTHERWISE NOTED. COORDINATE EXACT LOCATION WITH ALL TRADES.

B. WHEN (2) OR MORE SENSORS/SWITCHES/DEVICES ARE LOCATED IN THE SAME AREA, PROVIDE BETWEEN 2" AND 4" INCHES OF SPACE BETWEEN EACH DEVICE. NO LESS, NO MORE.

C. NEW EQUIPMENT TO TIE INTO EXISTING BUILDING AUTOMATION SYSTEM. TEMPERATURE CONTROL CONTRACTOR TO VERIFY LOCATION OF EXISTING CONTROLS FOR NEW EQUIPMENT CONNECTIONS.

TEMPERATURE CONTROL PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
T1	APPROXIMATE LOCATION DUCT STATIC PRESSURE SENSOR PROVIDED BY THE TEMPERATURE CONTROL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. COORDINATE EXACT LOCATION WITH ALL TRADES.
T2	RELOCATED EXISTING THERMOSTAT CONTROLS. RECONNECT TO MAINTAIN CONTROL OF EXISTING EQUIPMENT REMAINING IN PLACE.
T3	TEMPERATURE CONTROL CONTRACTOR SHALL PROVIDE CARBON MONOXIDE DETECTOR. REFER TO PROJECT MANUAL. COORDINATE EXACT LOCATION WITH ALL OTHER TRADES.
T4	TEMPERATURE CONTROL CONTRACTOR SHALL PROVIDE INTERCONNECTING CONTROL WIRING TO PACKAGED ROOFTOP UNIT RTU-F101.
T5	OUTSIDE AIR CONTROL DAMPER SHALL BE FACTORY MOUNTED IN AIR HANDLING UNIT. DAMPER OPERATORS PROVIDED BY TEMPERATURE CONTROL CONTRACTOR.
T6	RETURN AIR CONTROL DAMPER SHALL BE FACTORY MOUNTED IN AIR HANDLING UNIT. DAMPER OPERATORS PROVIDED BY TEMPERATURE CONTROL CONTRACTOR.
T7	EXHAUST AIR CONTROL DAMPER SHALL BE FACTORY MOUNTED IN AIR HANDLING UNIT. DAMPER OPERATORS PROVIDED BY TEMPERATURE CONTROL CONTRACTOR.
T8	EXISTING EQUIPMENT TO REMAIN.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

Penn-Harris-Madison School Corporation

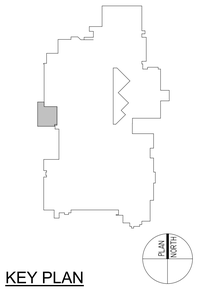
PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM

350 E. NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

Construction Documents

PROJECT MANAGER: MKS

DRAWN BY: ECG

PROJECT NUMBER: 223213.00

PROJECT ISSUE DATE: 4/10/2025

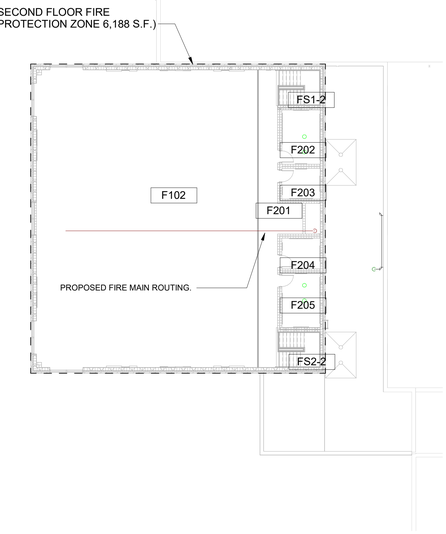
REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #2	06/25/25

FIRST AND SECOND FLOOR TEMPERATURE CONTROL PLAN

M6.01

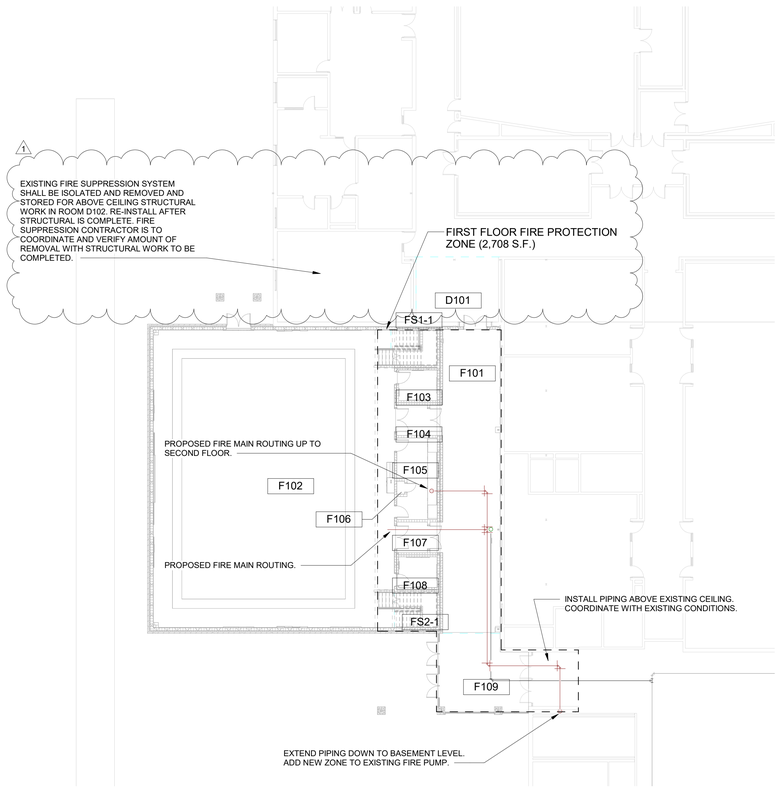
\\data1\cltnprofiles$\gandrew\My Documents\2023_Penn HS_Mech_Classroom Addition_223213.00_gandrew.rvt
6/24/2025 7:07:55 AM

ROOM LEGEND - MASTER LIST		
ROOM NO.	ROOM NAME	AREA (SF)
D101	CORRIDOR	376 SF
D102	CLASSROOM	805 SF
F101	CORRIDOR	1243 SF
F102	BAND	4865 SF
F103	PRACTICE	80 SF
F104	PASSAGE	64 SF
F105	INSTRUMENT REPAIR	212 SF
F106	CLOSET	7 SF
F107	PASSAGE	64 SF
F108	PRACTICE	80 SF
F109	ENTRY	457 SF
FS1-1	STAIR	67 SF
FS2-1	STAIR	63 SF
F201	CORRIDOR	441 SF
F202	PRACTICE	143 SF
F203	PRACTICE	80 SF
F204	PRACTICE	80 SF
F205	PRACTICE	143 SF
FS1-2	STAIR	104 SF
FS2-2	STAIR	104 SF



2 NEW ADDITION SECOND FLOOR FIRE PROTECTION PLAN

SCALE: 1/16" = 1'-0"



1 NEW ADDITION FIRST FLOOR FIRE PROTECTION PLAN

SCALE: 1/16" = 1'-0"

GENERAL FIRE PROTECTION NOTES

A. ALL FIRE PROTECTION WORK PERFORMED ON THIS PROJECT SHALL BE SIZED PER HYDRAULIC CALCULATIONS. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ALL DUCTWORK, RACEWAYS, CABLE TRAYS, CONDUITS, STRUCTRUAL MEMBERS, PIPING, ARCHITECTURAL CEILING HEIGHTS, EXISTING CONDITIONS AND DESIGN INTENT. ALL FIRE PROTECTION WORK SHALL BE DONE IN ACCORDANCE WITH NFPA 13, ALL APPLICABLE STATE AND LOCAL CODES AND THE AUTHORITY HAVING JURISDICTION TO DELIVER A PENALTY FREE SYSTEM.

B. REFER TO DIVISION 21 SPECIFICATIONS FOR ALL AUTOMATIC WET PIPE SPRINKLER SYSTEM REQUIREMENTS.

C. ALL SPRINKLER PIPING SYSTEM INSTALLATIONS SHALL BE COORDINATED WITH OTHER TRADES AS IT RELATES TO ACCESS AND SERVICEABILITY OF THAT TRADES EQUIPMENT (I.E.: MECHANICAL UNITS, LIGHTS, ETC.) ANY SPRINKLER SYSTEM PIPING DETERMINED BY THE ENGINEER TO BE IN CONFLICT WITH OTHER TRADES WILL BE RELOCATED WITH ALL COST TO BE BORNE BY THE FIRE PROTECTION CONTRACTOR.

D. REFER TO ARCHITECTURAL BUILDING SECTIONS, WALL SECTIONS AND STRUCTURAL DRAWINGS FOR STRUCTURAL STEEL ELEVATIONS AND SPACE AVAILABLE ABOVE THE FINISHED CEILING. PROVIDE ALL APPROPRIATE SUPPORT AND BRACING TO THE BUILDING STRUCTURE AS REQUIRED FOR INSTALLATION OF PIPING WITHIN THE GIVEN CONDITIONS.

E. PROVIDE SPRINKLER HEADS ABOVE AND BELOW ALL CLOUD CEILINGS. COORDINATE CLOUD CEILING LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING DRAWINGS.

F. DIVISION 21 CONTRACTOR IS RESPONSIBLE TO REMOVE CEILINGS TO DO WORK ABOVE THE EXISTING CEILINGS AND RE-INSTALL THOSE CEILINGS AFTER COMPLETION OF WORK. IF ANY CEILING PADS OR CEILING GRIDS ARE DAMAGED, THIS CONTRACTOR SHALL REPLACE WITH NEW TO MATCH EXISTING.

G. SPRINKLER HEADS SHALL NOT BE LOCATED IN THE SOUND ABSORBING CEILING UNITS, ACT 5 AND 6. REFER TO DRAWING A1.01 FOR LOCATION OF THE ACOUSTICAL CEILING LOCATIONS.

1

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Road, Mishawaka, Indiana 46545

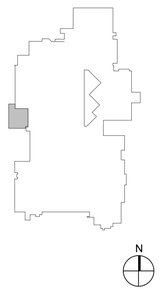
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



Construction Documents

MARK Z. HOFF REGISTERED No. PE 12000601 STATE OF INDIANA PROFESSIONAL ENGINEER

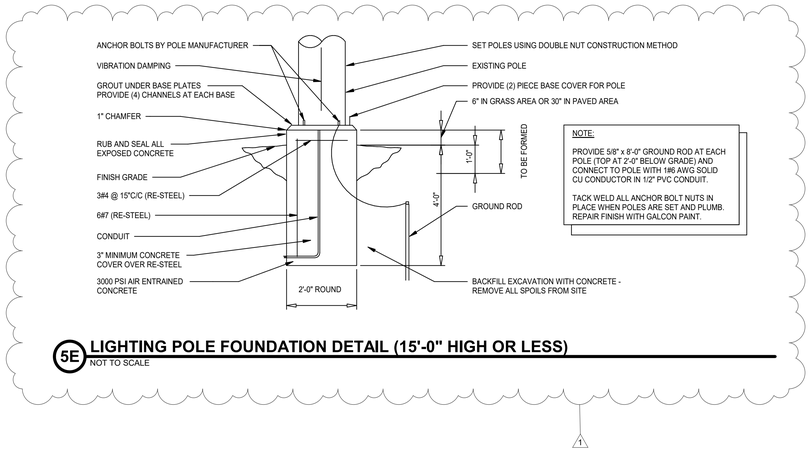
PROJECT MANAGER: MKS
DRAWN BY: MZH
PROJECT NUMBER: 223213.00
PROJECT ISSUE DATE: 04/10/2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #2	05/25/25

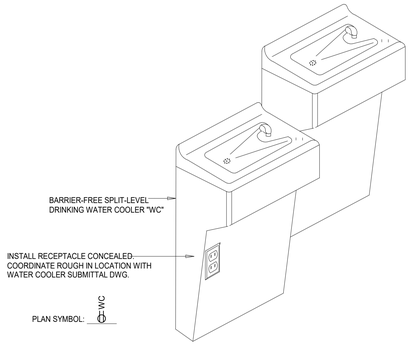
FIRST FLOOR FIRE PROTECTION PLAN

FP101

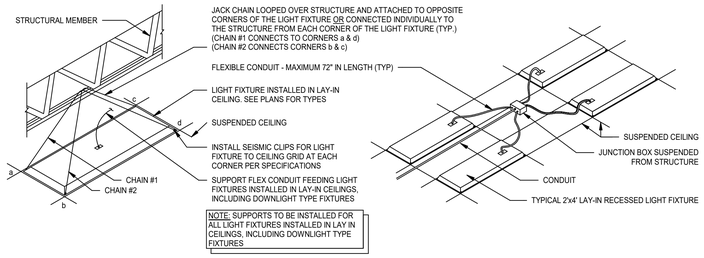
\\data1\sdrive\office$\mhoff\My Documents\2023_Penn HS_Plum_Classroom Addition_223213.00_mhoffKYNJQ.rvt
6/24/2025 11:36:01 AM



5E LIGHTING POLE FOUNDATION DETAIL (15'-0" HIGH OR LESS)
NOT TO SCALE

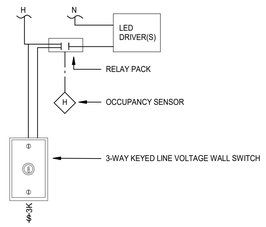


3E TYPICAL WATER COOLER (WC) WIRING DETAIL
NOT TO SCALE



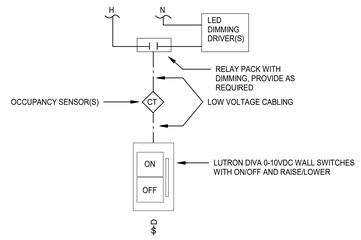
2E RECESSED LIGHT FIXTURE SUPPORT
NOT TO SCALE

1. SYSTEM SHALL BE SET UP SUCH THAT LIGHTING IS SWITCHED ON BY OCCUPANCY SENSOR AND SWITCHED OFF AFTER 15 MINUTES OF VACANCY.
2. HALLWAY LIGHTS SHALL BE CONTROLLED IN ZONES WITH ONE OCCUPANCY SENSOR PER ZONE.
3. SWITCH SHALL OVERRIDE FIXTURES ON/OFF.
4. EMERGENCY FIXTURES SHALL OPERATE AS DESCRIBED ABOVE DURING NORMAL OPERATIONS. IN EMERGENCY SCENARIO, FIXTURES WILL COME ON AT 100% OUTPUT. THIS CAN BE ACHIEVED WITH FULL CIRCUIT GENERATOR TRANSFER DEVICE.



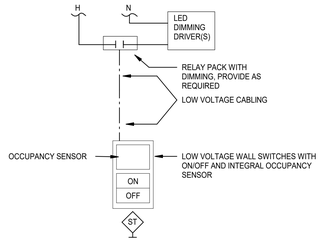
3B LIGHTING CONTROLS - CORRIDOR
NOT TO SCALE

1. SYSTEM SHALL BE SET UP SUCH THAT LIGHTING IS AUTOMATICALLY SWITCHED ON UPON OCCUPANCY AND AUTOMATICALLY SWITCHED OFF BY OCCUPANCY SENSOR AFTER 15 MINUTES OF ROOM VACANCY.
2. RAISE AND LOWER CONTROL TO OVERRIDE SETTINGS UNTIL OCCUPANCY SENSOR TIME OUT.
3. EMERGENCY FIXTURES SHALL OPERATE AS DESCRIBED ABOVE DURING NORMAL OPERATIONS. IN EMERGENCY SCENARIO, FIXTURES WILL COME ON AT 100% OUTPUT. THIS CAN BE ACHIEVED WITH FULL CIRCUIT GENERATOR TRANSFER DEVICE.



2B LIGHTING CONTROLS - BAND ROOM
NOT TO SCALE

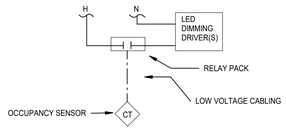
1. SYSTEM SHALL BE SET UP SUCH THAT LIGHTING IS AUTOMATICALLY SWITCHED ON UPON OCCUPANCY. LIGHTING IS THEN EITHER SWITCHED OFF MANUALLY OR BY OCCUPANCY SENSOR AFTER 15 MINUTES OF ROOM VACANCY.
2. ONCE LIGHTING IS SWITCHED ON, LIGHTS MAY BE DIMMED THROUGH RAISE/LOWER BUTTONS ON WALL SWITCH.
3. EMERGENCY FIXTURES SHALL OPERATE AS DESCRIBED ABOVE DURING NORMAL OPERATIONS. IN EMERGENCY SCENARIO, FIXTURES WILL COME ON AT 100% OUTPUT. THIS CAN BE ACHIEVED WITH FULL CIRCUIT GENERATOR TRANSFER DEVICE.



1B LIGHTING CONTROLS - PRACTICE ROOMS
NOT TO SCALE

LIGHTING SEQUENCE OF OPERATIONS - STAIRWELL:

1. SYSTEM SHALL BE SET UP SUCH THAT LIGHTING IS AUTOMATICALLY SWITCHED ON UPON OCCUPANCY. LIGHTING IS SWITCHED OFF BY OCCUPANCY SENSOR AFTER 15 MINUTES OF ROOM VACANCY.
2. EMERGENCY FIXTURES SHALL OPERATE AS DESCRIBED ABOVE DURING NORMAL OPERATIONS. IN EMERGENCY SCENARIO, FIXTURES WILL COME ON AT 100% OUTPUT. THIS CAN BE ACHIEVED WITH FULL CIRCUIT GENERATOR TRANSFER DEVICE.



2A LIGHTING CONTROL - STAIRWELL
NOT TO SCALE

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

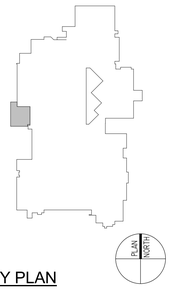
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

CONSTRUCTION DOCUMENTS

DRAWN BY: ISD

PROJECT NUMBER: 223213.00

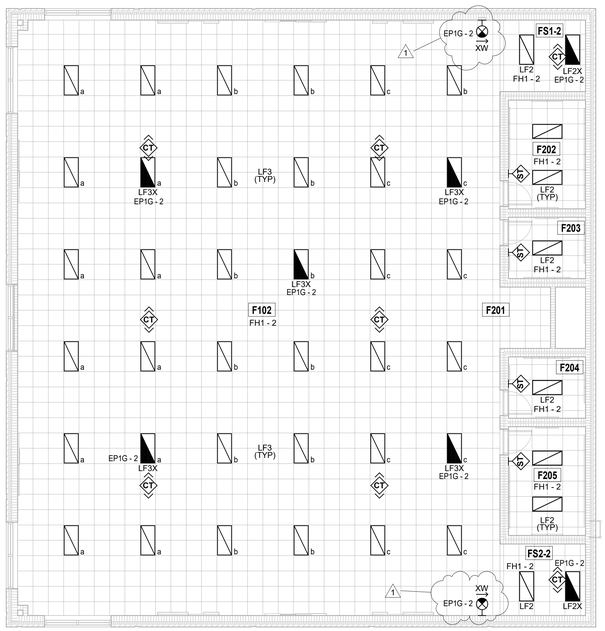
PROJECT ISSUE DATE: 04.10.2025

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	06.25.2025

ELECTRICAL DETAILS

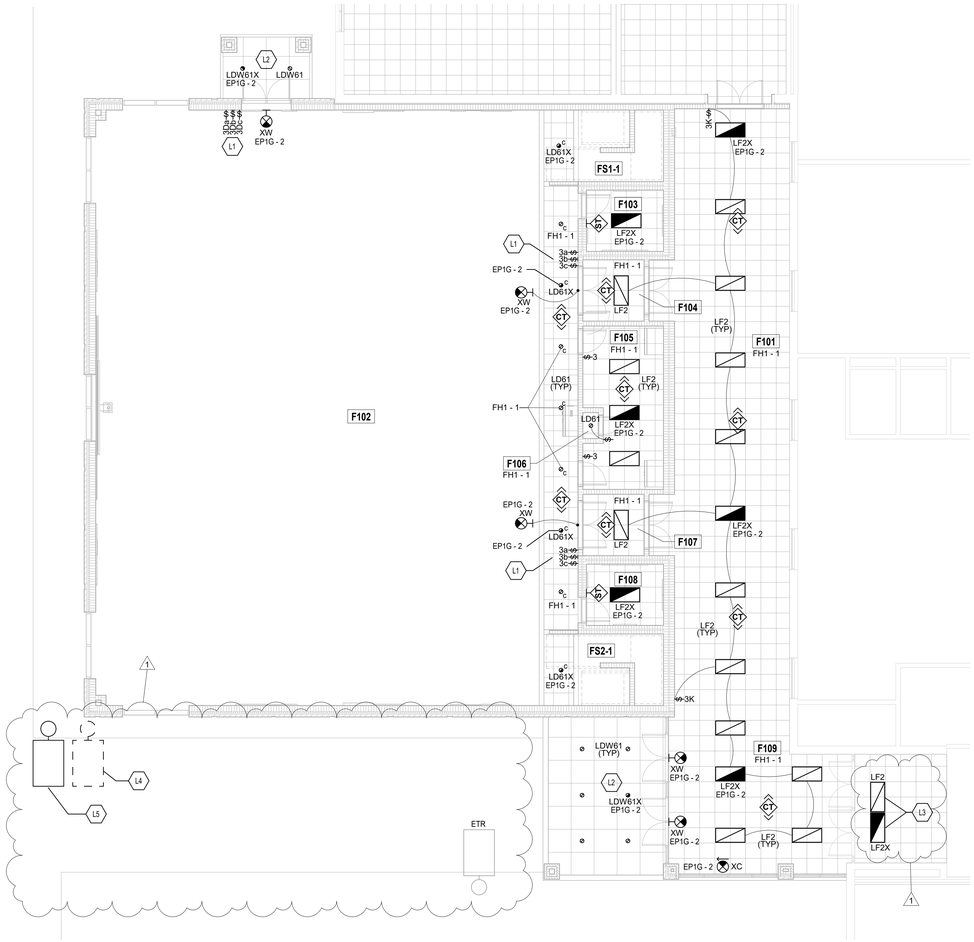
E1.02

C:\Users\dickson\Documents\2023_Penn HS_Elec_Classroom Addition_223213.00_dickson\EWS2T.rvt
6/25/2025 2:51:53 PM
model is in 221096.00



SECOND FLOOR LIGHTING PLAN

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



FIRST FLOOR LIGHTING PLAN

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

ROOM LEGEND

ROOM NO.	ROOM NAME	AREA (SF)
D101	CORRIDOR	376 SF
D102	CLASSROOM	805 SF
F101	CORRIDOR	1243 SF
F102	BAND	4865 SF
F103	PRACTICE	80 SF
F104	PASSAGE	64 SF
F105	INSTRUMENT REPAIR	212 SF
F106	CLOSET	7 SF
F107	PASSAGE	64 SF
F108	PRACTICE	80 SF
F109	ENTRY	457 SF
F110	CORRIDOR	173 SF
F201	CORRIDOR	441 SF
F202	PRACTICE	143 SF
F203	PRACTICE	80 SF
F204	PRACTICE	80 SF
F205	PRACTICE	143 SF
FS1-1	STAIR	67 SF
FS1-2	STAIR	104 SF
FS2-1	STAIR	63 SF
FS2-2	STAIR	104 SF

LIGHTING PLAN GENERAL NOTES

1. GENERATOR TRANSFER DEVICE TO TAKE FIXTURES TO 100% IN EMERGENCY CONDITION.
2. FINAL CONNECTION TO RECESSED LUMINAIRES SHALL BE WITH FLEXIBLE METALLIC CONDUIT, MC CABLE OR MANUFACTURED WIRING SYSTEM.
3. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATION OF LUMINAIRES. COORDINATE LOCATION OF LUMINAIRES, LOUDSPEAKERS, DIFFUSERS, GRILLES, AND OTHER CEILING INSTALLED ELEMENTS WITH THEIR RESPECTIVE INSTALLERS.
4. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN AND ROOM FINISH SCHEDULE TO DETERMINE PROPER TYPE OF LUMINAIRE TRIM REQUIRED FOR CEILING TYPE PRIOR TO ORDERING LUMINAIRES. PROVIDE LUMINAIRES COMPATIBLE WITH CEILING TYPE.
5. RECESSED LUMINAIRE IN GRID CEILING SYSTEMS SHALL BE PROVIDED WITH SEISMIC CLIPS OR PROVIDE ATTACHMENT TO CEILING GRID SYSTEM AND SUPPORTED PER PROJECT MANUAL AND DETAIL **"2D/E1.02"**.
6. LUMINAIRE TYPE IS SHOWN ONLY ONCE, AS "TYP." IN EVERY ROOM. PROVIDE SAME TYPE OF LUMINAIRE THROUGH-OUT SAME ROOM UNLESS OTHERWISE INDICATED.
7. PROVIDE NO. 10 AWG, MINIMUM, CONDUCTORS FOR EXIT SIGNS AND SECURITY LIGHT CIRCUITS.

LIGHTING PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

SHEET KEYNOTES

L1	CONNECT EACH SWITCH TO FIXTURES LABELED WITH RESPECTIVE LETTER (a/b/c).
L2	CONNECT EXTERIOR LIGHT FIXTURES TO NEAREST EXISTING EXTERIOR LIGHTING CIRCUIT. FIXTURES SHALL BE CONTROLLED BY EXISTING EXTERIOR LIGHTING CONTROLS SERVING THIS BUILDING. CONNECT NEW EMERGENCY EXTERIOR LIGHT FIXTURE TO INDICATED EMERGENCY CIRCUIT. DURING NORMAL OPERATION, EMERGENCY FIXTURES SHALL BE CONTROLLED BY EXISTING EXTERIOR LIGHTING CONTROLS SERVING THIS BUILDING. IN EMERGENCY SCENARIO OR WHEN FIRE ALARM IS TRIGGERED, EMERGENCY FIXTURES WILL COME ON AT 100% OUTPUT.
L3	DISCONNECT AND REMOVE EXISTING LIGHT FIXTURES IN EXISTING CEILING TO BE REPLACED. TIE BACK EXISTING CIRCUIT AND SWITCH WIRING. CONNECT NEW LIGHT FIXTURES TO EXISTING CIRCUIT AND SWITCH WIRING.
L4	DISCONNECT AND REMOVE EXISTING SITE LIGHTING FIXTURE AND POLE. PROTECT AND STORE FOR REINSTALLATION. EXTEND CIRCUIT TO NEW SITE LIGHTING LOCATION. MATCH EXISTING CONDUIT AND WIRE SIZE.
L5	INSTALL SITE LIGHTING FIXTURE AND POLE IN NEW LOCATION. CONNECT TO EXISTING CIRCUIT EXTENDED TO THIS LOCATION. SEE DETAIL 5/E1.02 FOR POLE FOUNDATION REQUIREMENTS.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

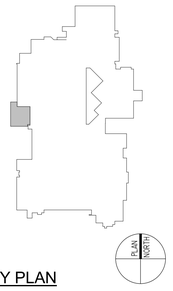
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

CONSTRUCTION DOCUMENTS

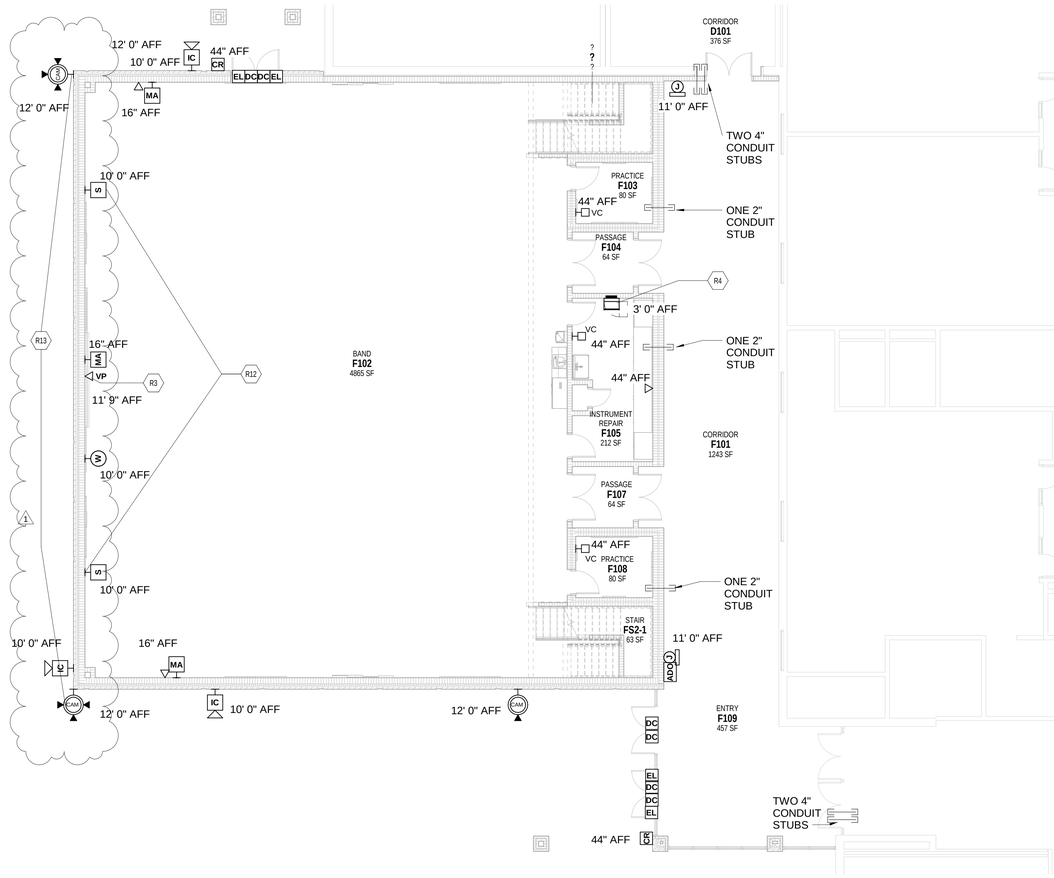
DRAWN BY: ISD
PROJECT NUMBER: 223213.00
PROJECT ISSUE DATE: 04.10.2025

REV. NO.	DESCRIPTION	DATE
1	Addendum #1	06.25.2025

BAND ADDITION LIGHTING PLANS

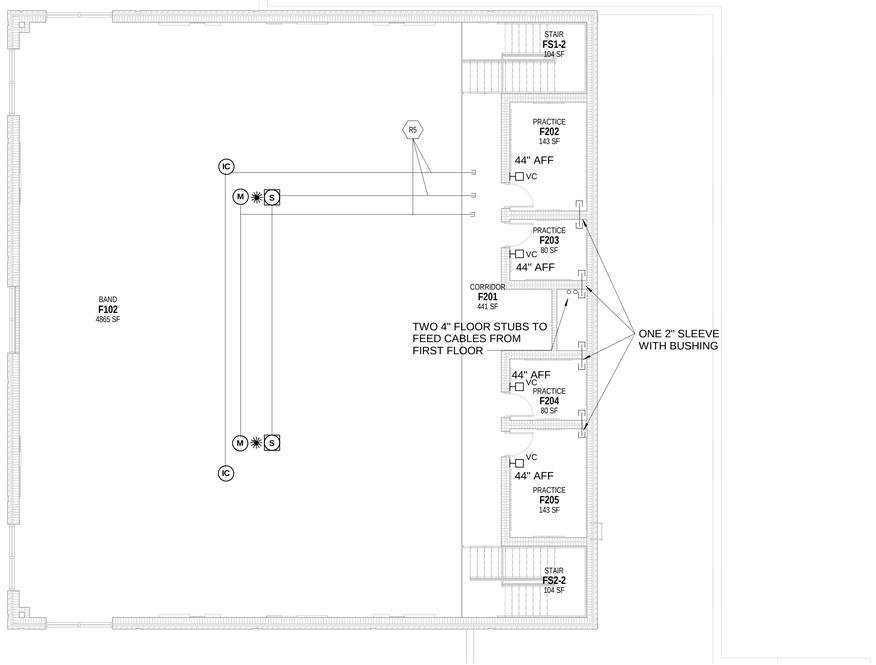
E4.01

C:\Users\dickson\Documents\2023_Penn HS_Elec_Classroom Addition_223213.00_dickson\EWS2T.rvt
6/25/2025 2:51:55 PM
model is in 221096.00



1 FIRST FLOOR TECHNOLOGY ROUGH-IN PLANS

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



2 SECOND FLOOR TECHNOLOGY ROUGH-IN PLANS

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

ROOM LEGEND

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
FIRST FLOOR			
D101		CORRIDOR	376 SF
D102		CLASSROOM	805 SF
F101		CORRIDOR	1243 SF
F102		BAND	4865 SF
F103		PRACTICE	80 SF
F104		PASSAGE	64 SF
F105		INSTRUMENT REPAIR	212 SF
F106		CLOSET	7 SF
F107		PASSAGE	64 SF
F108		PRACTICE	80 SF
F109		ENTRY	457 SF
FS1-1		STAIR	67 SF
FS2-1		STAIR	63 SF
SECOND FLOOR original building			
F201		CORRIDOR	441 SF
F202		PRACTICE	143 SF
F203		PRACTICE	80 SF
F204		PRACTICE	80 SF
F205		PRACTICE	143 SF
FS1-2		STAIR	104 SF
FS2-2		STAIR	104 SF

TECHNOLOGY ROUGH-IN GENERAL NOTES

A. DEVICES SHALL BE INSTALLED AT LOCATIONS SHOWN ON DRAWINGS. LOCATIONS OF DEVICES SHALL BE COORDINATED WITH OTHER ELECTRICAL DEVICES/ CASEWORK/ ARCHITECTURAL FEATURES AND OTHER TRADES PRIOR TO ROUGH-IN. IF RELOCATION OF DEVICES IS REQUIRED DUE TO LACK OF COORDINATION BETWEEN ELECTRICAL DRAWINGS AND OTHER TRADES, ANY ASSOCIATED COSTS SHALL BE RESPONSIBILITY OF ELECTRICAL CONTRACTOR.

ROUGH-IN PLAN NOTES

X

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

#	NOTE
R3	PROVIDE POWER FOR PROJECTOR LOCATION. CONFIRM LOCATION WITH DIV27 CONTRACTOR.
R4	PROVIDE POWER AND ROUGH INS FOR SOUND SYSTEM CABINET. REFER TO CABINET DETAIL ON ET51.
R5	SEE DETAILS FOR INSTRUCTIONAL AND ACTIVITY SPACE SOUND SYSTEM CONDUIT RISER DIAGRAM AS SHOWN ON ET501.
R12	SPEAKERS ON THE WEST WALL OF THE BAND ROOM TO BE LOCATED BETWEEN THE AWST (ACOUSTICAL WALL TREATMENT) AND THE EXTERIOR CURTAINWALL.
R13	CAMERA LOCATIONS SHALL BE CORNER MOUNTED. REFER TO ET-51 DETAIL #6 FOR DETAILS.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

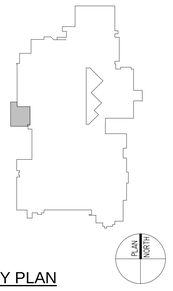
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM
350 E New York St # 300, Indianapolis, IN 46204



KEY PLAN

CONSTRUCTION DOCUMENTS

PROJECT MANAGER: MS

DRAWN BY: CDT

PROJECT NUMBER: 223213.00

PROJECT ISSUE DATE: 04.10.2025

REV. NO.	DESCRIPTION	DATE
1	Addendum #2	6.25.2025

BAND ADDITION TECHNOLOGY ROUGH-IN PLAN

ET-11

\\data1\cinnprofiles$\dthomas\My Documents\2023_Penn HS_Tech_Classroom Addition_223213.00_dthomas6KVKJ.rvt
6/23/2025 2:16:42 PM

1 FIRST FLOOR TECHNOLOGY OVERALL PLAN

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

TECHNOLOGY PLAN GENERAL NOTES

A. DEVICES SHALL BE INSTALLED AT LOCATIONS SHOWN ON DRAWINGS. LOCATIONS OF DEVICES SHALL BE COORDINATED WITH OTHER ELECTRICAL DEVICES/ CASEWORK/ ARCHITECTURAL FEATURES AND OTHER TRADES PRIOR TO ROUGH-IN. IF RELOCATION OF DEVICES IS REQUIRED DUE TO LACK OF COORDINATION BETWEEN ELECTRICAL DRAWINGS AND OTHER TRADES, ANY ASSOCIATED COSTS SHALL BE RESPONSIBILITY OF ELECTRICAL CONTRACTOR.

TECHNOLOGY PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

#	NOTE
T14	CAMERAS SHALL BE CORNER MOUNTED.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

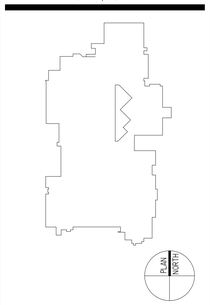
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM
350 E New York St # 300, Indianapolis, IN 46204



CONSTRUCTION DOCUMENTS

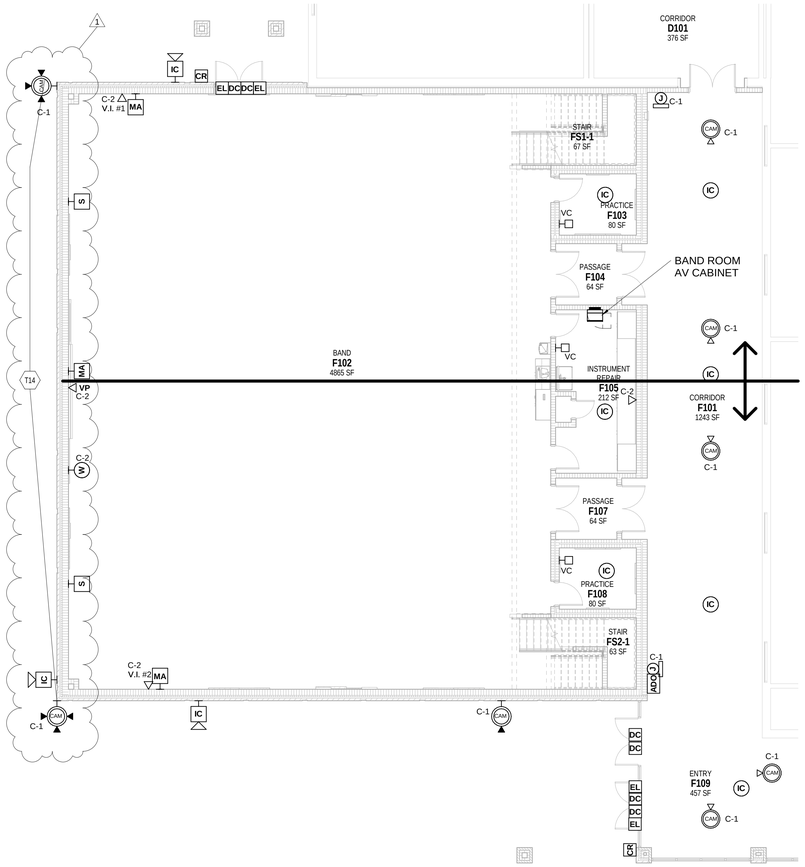
PROJECT MANAGER: MS
DRAWN BY: CDT
PROJECT NUMBER: 223213.00
PROJECT ISSUE DATE: 04.10.2025

REV. NO.	DESCRIPTION	DATE
1	Addendum #2	6.25.2025

OVERALL FIRST FLOOR TECHNOLOGY PLAN

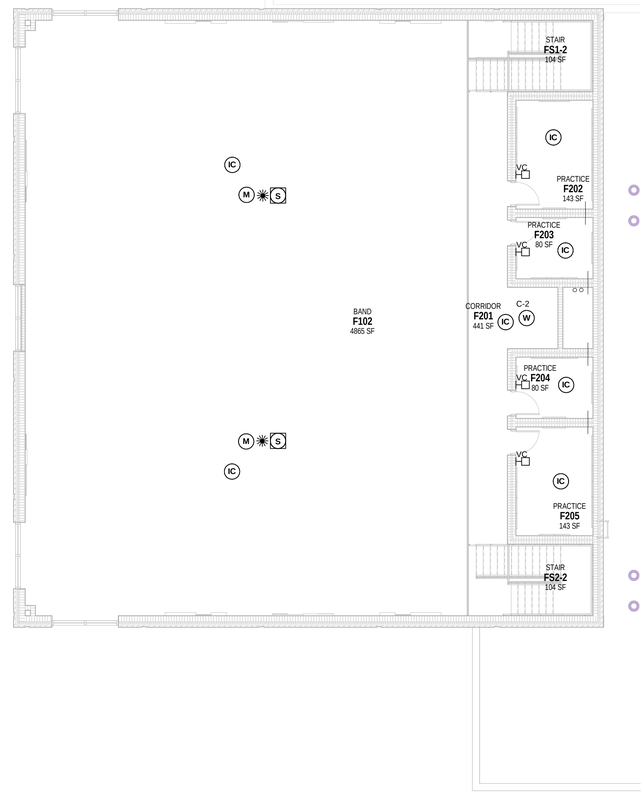
T1-01

\\data1\cdrive\profiles$\cthomas\My Documents\2023_Penn HS_Tech_Classroom Addition_223213.00_cthomas6KVKJ.rvt
6/23/2025 2:16:45 PM



1 BAND ADDITION FIRST FLOOR TECHNOLOGY PLAN

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



2 BAND ADDITION SECOND FLOOR TECHNOLOGY PLAN

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

ROOM LEGEND

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
FIRST FLOOR			
D101		CORRIDOR	376 SF
D102		CLASSROOM	805 SF
F101		CORRIDOR	1243 SF
F102		BAND	4865 SF
F103		PRACTICE	80 SF
F104		PASSAGE	64 SF
F105		INSTRUMENT REPAIR	212 SF
F106		CLOSET	7 SF
F107		PASSAGE	64 SF
F108		PRACTICE	80 SF
F109		ENTRY	457 SF
FS1-1		STAIR	67 SF
FS2-1		STAIR	63 SF
SECOND FLOOR original building			
F201		CORRIDOR	441 SF
F202		PRACTICE	143 SF
F203		PRACTICE	80 SF
F204		PRACTICE	80 SF
F205		PRACTICE	143 SF
FS1-2		STAIR	104 SF
FS2-2		STAIR	104 SF

TECHNOLOGY PLAN GENERAL NOTES

A. DEVICES SHALL BE INSTALLED AT LOCATIONS SHOWN ON DRAWINGS. LOCATIONS OF DEVICES SHALL BE COORDINATED WITH OTHER ELECTRICAL DEVICES/ CASEWORK/ ARCHITECTURAL FEATURES AND OTHER TRADES PRIOR TO ROUGH-IN. IF RELOCATION OF DEVICES IS REQUIRED DUE TO LACK OF COORDINATION BETWEEN ELECTRICAL DRAWINGS AND OTHER TRADES, ANY ASSOCIATED COSTS SHALL BE RESPONSIBILITY OF ELECTRICAL CONTRACTOR.

TECHNOLOGY PLAN NOTES

(X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

#	NOTE
T14	CAMERAS SHALL BE CORNER MOUNTED.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

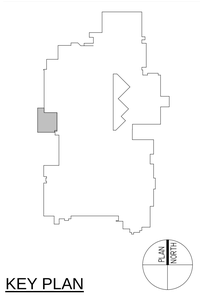
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM
350 E New York St # 300, Indianapolis, IN 46204



KEY PLAN

CONSTRUCTION DOCUMENTS

PROJECT MANAGER: MS

DRAWN BY: CDT

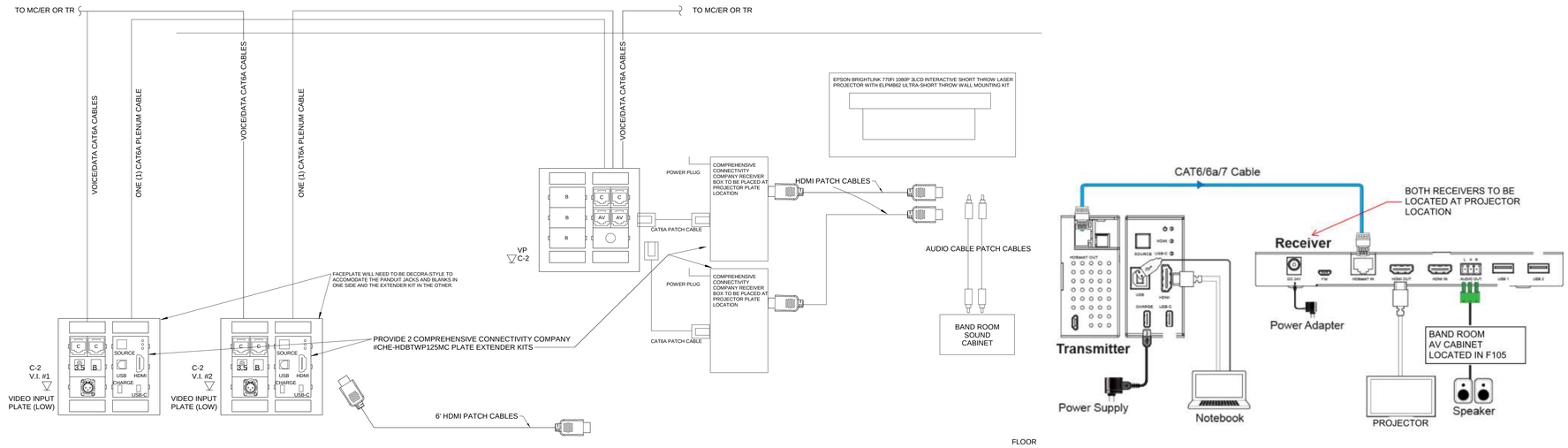
PROJECT NUMBER: 223213.00

PROJECT ISSUE DATE: 04.10.2025

REV. NO.	DESCRIPTION	DATE
1	Addendum #2	6.25.2025

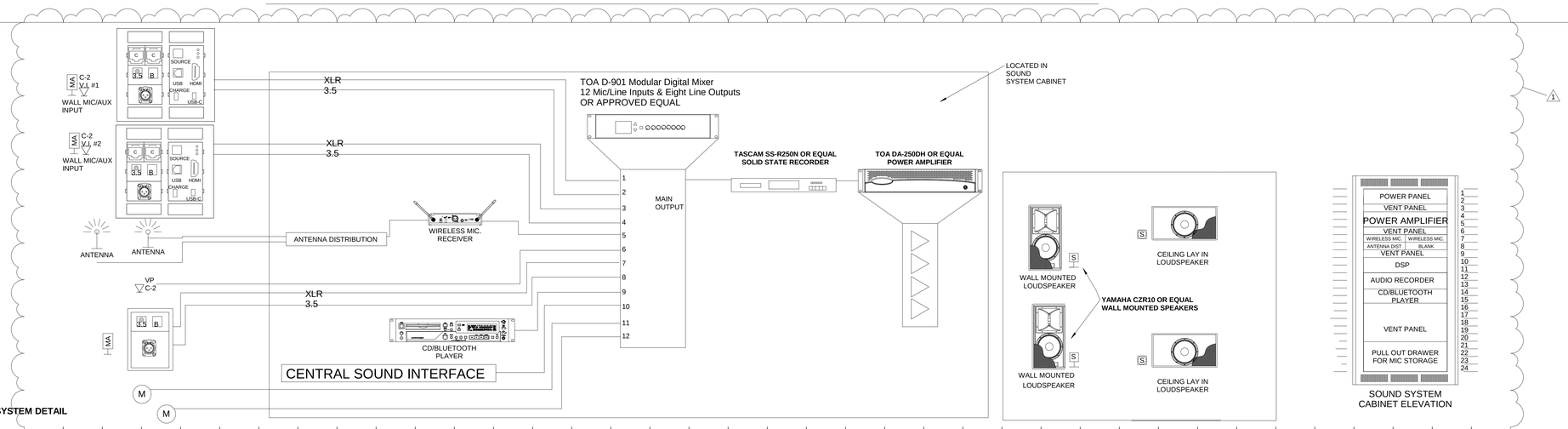
BAND ADDITION TECHNOLOGY PLAN

T1-11



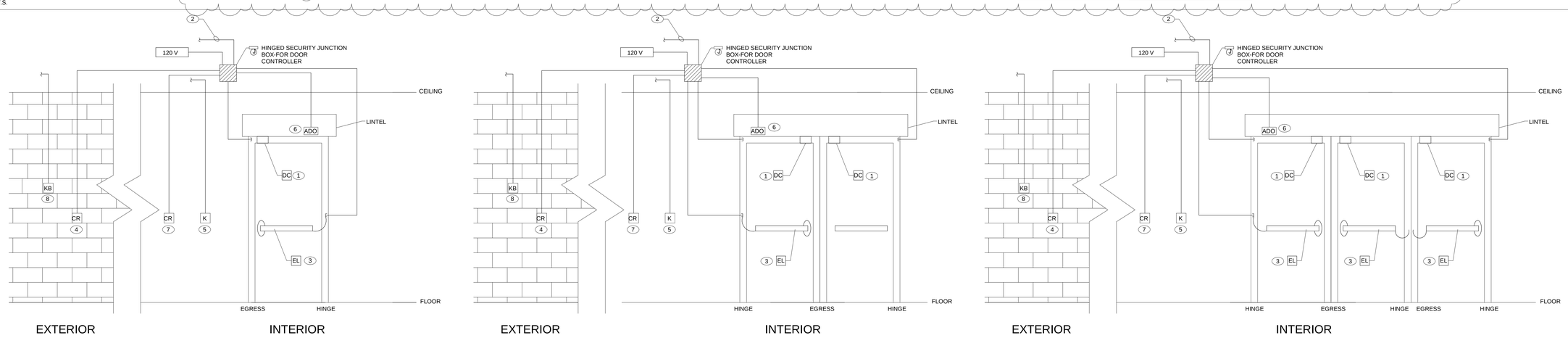
CLASSROOM AV WIRING - VIDEO INPUT, PROJECTOR AUDIO AND ROOM SOUND SYSTEM

3
N.T.S.



BAND ROOM SOUND SYSTEM DETAIL

2
N.T.S.



DOOR SECURITY WIRING LEGEND

1. PROVIDE 22/2 AWG FOR DOOR CONTACT TO HINGED SECURITY JUNCTION BOX.
2. PROVIDE 4PR UTP FROM HINGED SECURITY JUNCTION BOX TO NEAREST TR OR MC/ER.
3. PROVIDE 18/6 AWG FOR POWER TRANSFER/ELECTRIC LATCH & REQUEST FOR EXIT MICRO SWITCH TO HINGED SECURITY JUNCTION BOX.
4. PROVIDE 22/6 AWG FOR CARD READER TO HINGED SECURITY JUNCTION BOX.
5. PROVIDE 22/6 AWG FOR KEYPAD TO NEAREST TR OR MC/ER.
6. PROVIDE 22/4 AWG FROM ADO OPERATOR TO HINGED SECURITY JUNCTION BOX.
7. PROVIDE 22/6 AWG FOR CARD READER TO HINGED SECURITY JUNCTION BOX. INTERFACE CARD READER WITH INTRUSION DETECTION SYSTEM TO DISABLE ALARM SYSTEM.
8. PROVIDE 22/2 AWG FROM FIRE DEPARTMENT KNOX BOX TO SECURITY SYSTEM IN THE NEAREST TR.

NOTE: TYPICAL DOOR WIRING DETAILS BY THE SECURITY SYSTEM CONTRACTOR. REFER TO FLOOR PLANS FOR EXACT QUANTITIES AND DOOR CONFIGURATIONS

1
N.T.S.

DOOR SECURITY HARDWARE WIRING DETAILS

\\atlas1\cirroprofiles$\cthomas\My Documents\2023_Penn HS_Tech_Classroom Addition_223213.00_cthomas6KVKJ.rvt
6/23/2025 2:16:52 PM

Penn High School: Instructional and Activity Space Addition

55900 Bittersweet Rd.
Mishawaka, Indiana 46545

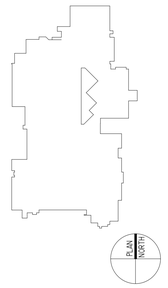
Penn-Harris-Madison School Corporation

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317.848.0966 WWW.FHAI.COM
350 E New York St # 300, Indianapolis, IN 46204



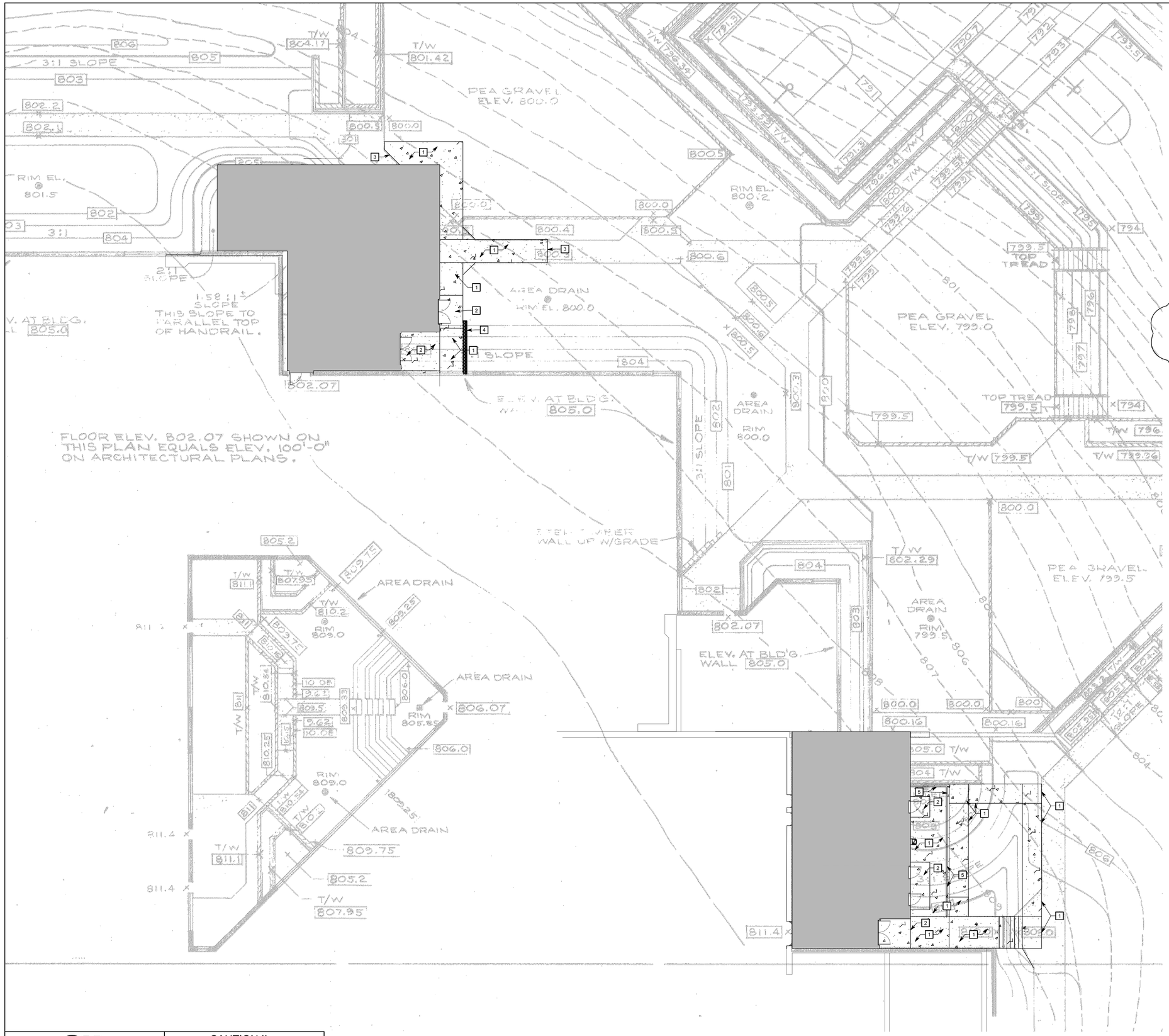
CONSTRUCTION DOCUMENTS

PROJECT MANAGER: MS
DRAWN BY: CDT
PROJECT NUMBER: 223213.00
PROJECT ISSUE DATE: 04.10.2025

REV. NO.	DESCRIPTION	DATE
1	Addendum #2	6.25.2025

TECHNOLOGY DETAILS

T5-01



NORTH

10 0 10 20 40

GENERAL NOTES

1. SEE DRAWING C001 FOR GENERAL NOTES AND ADDITIONAL LEGEND.
2. TOPOGRAPHIC CONDITIONS AND EXISTING UTILITIES SHOWN WERE PROVIDED BY THE OWNER. THE ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.
3. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE PROJECT AREA INCLUDING UNDERGROUND UTILITY CONDITIONS, LOCATION AND DEPTH PRIOR TO ANY OTHER SITE CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER.

☐ SITE KEYNOTES

1. CONCRETE SIDEWALK - SEE DETAIL A/C600
2. CONCRETE STOOP - SEE DETAIL B/C600
3. EXPANSION JOINT AT INTERFACE BETWEEN NEW TO EXISTING CONCRETE PAVEMENT. SEE DETAIL E/C600
4. For 12"W Concrete Retaining Wall, See Detail H on C600 (similar). Top of wall to be 4" above grade w/ no railing.
5. For Curb with Retaining Wall and Stair, See Details G and H on C600

1

PROPOSED SITE LEGEND

BUILDING

CONCRETE SIDEWALK/PAVEMENT

DESIGN IS BASED ON ORIGINAL DESIGN DRAWINGS. CONTRACTOR TO VERIFY EXISTING CONDITIONS INCLUDING GRADE ELEVATIONS PRIOR TO BEGINNING ANY WORK. REPORT ALL DISCREPANCIES TO ENGINEER.

Know what's **below.**
Call before you dig.
Call 811 or 1-800-382-5544 Before You Begin Any Digging Project.
Call 48 hours or 2 working days before you dig.
It's Fast, It's Easy and it's the Law in the state of Indiana!

CAUTION !!

THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (INCLUDING, BUT NOT LIMITED TO, MANHOLES, INLETS, VALVES, AND MARKS MADE UPON THE GROUND BY OTHERS) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

File Path
1/28/2013 12:24:04 PM

ELM ROAD ELEMENTARY SCHOOL BUILDING EXPANSION

59400 ELM RD, MISHAWAKA, IN 46544

PENN HARRIS MADISON SCHOOL CORPORATION

PENN HARRIS MADISON SCHOOL CORPORATION

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST. SUITE 300 INDIANAPOLIS, IN 46204

N

CHAD N. KINCAID REGISTERED No. 11300453 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: CNK
DRAWN BY: CDL
PROJECT NUMBER: 2024-254
PROJECT ISSUE DATE: Project Issue Date

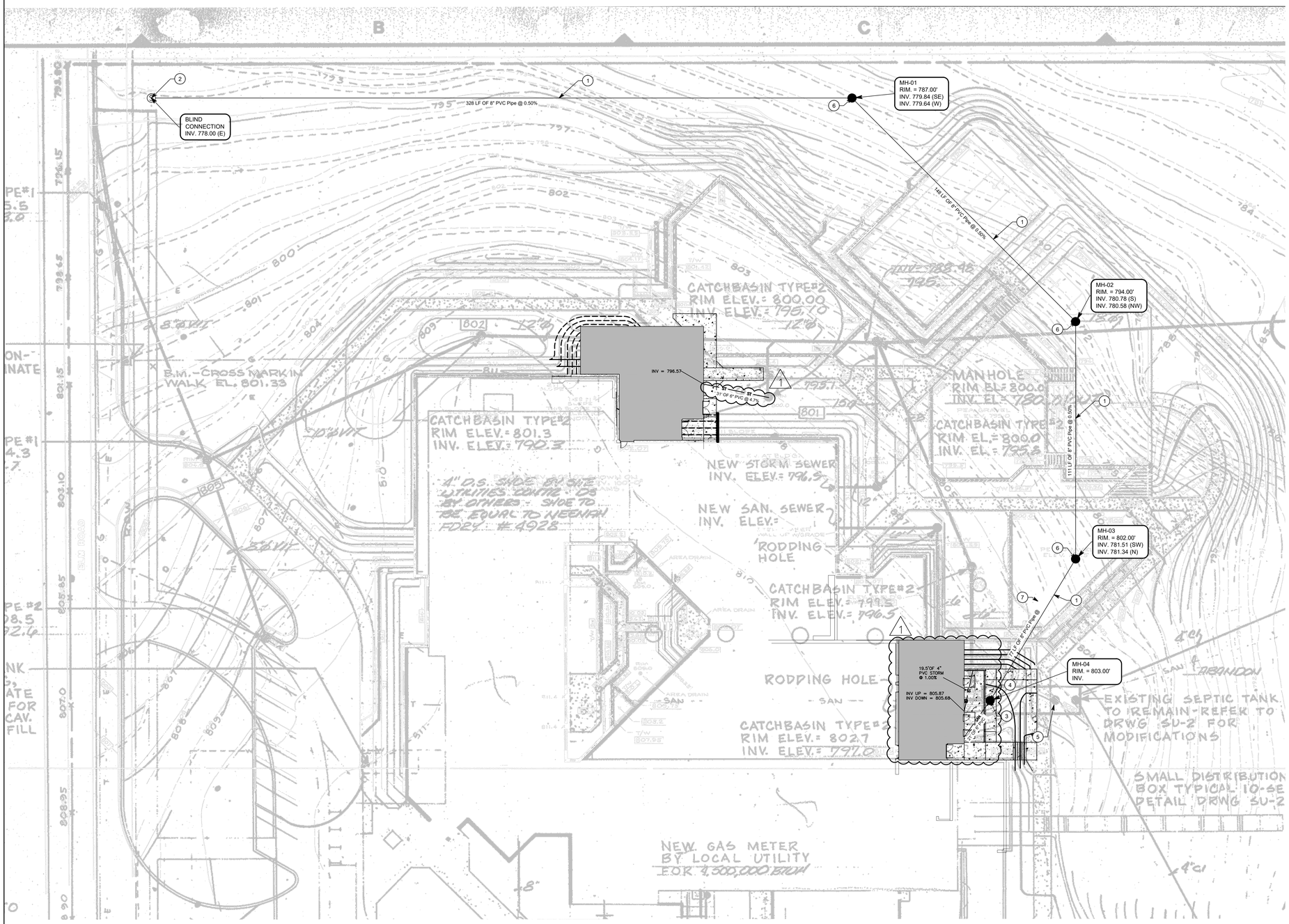
REV. NO. △	DESCRIPTION	DATE
1	Addendum #2	06/25/'25

SITE PLAN

C200

NORTH

20 0 20 40 60



GENERAL NOTES

1. SEE DRAWING C001 FOR GENERAL NOTES AND ADDITIONAL LEGEND.
2. TOPOGRAPHIC CONDITIONS AND EXISTING UTILITIES SHOWN WERE PROVIDED BY THE OWNER. THE ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.
3. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE PROJECT AREA INCLUDING UNDERGROUND UTILITY CONDITIONS, LOCATION AND DEPTH PRIOR TO ANY OTHER SITE CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER.

◯ SHEET KEYNOTES

1. NEW 8" PVC SANITARY MAIN
2. CONNECT NEW SANITARY LINE TO EXISITNG SANITARY LINE. CONTRACTOR TO VERIFY EXACT LOCATION OF SANITARY LINE AND EXISTENCE OF SANITARY STUB ORIGINALLY INTENDED FOR FUTURE ATTACHMENTS.
3. PRIOR TO ANY CONSTRUCTION, CONTRACTOR TO FIND AND REPORT TO ENGINEER EXACT LOCATION, INVERT ELEVATION, & CONDITION OF EXISTING SANITARY LINE FLOWING INTO EXISTING SANITARY TANK.
4. CONTRACTOR TO PREPARE EXISTING SANITARY LINE TO BE CONNECTED TO BY NEW SANITARY LINE.
5. EXISTING SEPTIC TANK TO BE PUMPED OUT AND DECOMMISSIONED AS REQUIRED.
6. CONTRACTOR TO REPORT SPOT ELEVATIONS TO ENGINEER OF SANITARY CASTING LOCATIONS.
7. PIPE SLOPE TO BE GIVEN TO CONTRACTOR WHEN EXISTING SANITARY INVERT IS REPORTED TO ENGINEER. SEE KEYNOTE 3

ELM ROAD ELEMENTARY SCHOOL BUILDING EXPANSION

59400 ELM RD, MISHAWAKA, IN 46544

PENN HARRIS MADISON SCHOOL CORPORATION

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST, SUITE 300 INDIANAPOLIS, IN 46204

N

CHAD N. KINCAID REGISTERED No. 11300453 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: CNK

DRAWN BY: CDL

PROJECT NUMBER: 2024-254

PROJECT ISSUE DATE: Project Issue Date

REV. NO.△	DESCRIPTION	DATE
1	ADDENDUM 2	06/25/2025

UTILITY PLAN

C400

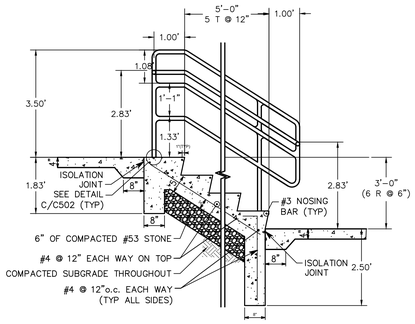
811 Know what's below. Call before you dig.

Call 811 or 1-800-382-5544 Before You Begin Any Digging Project. Call 48 hours or 2 working days before you dig. It's Fast, It's Easy and It's the Law in the state of Indiana!

CAUTION !!

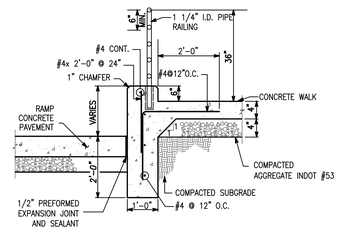
THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (INCLUDING, BUT NOT LIMITED TO, MANHOLES, INLETS, VALVES, AND MARKS MADE UPON THE GROUND BY OTHERS) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHALL BE VERIFIED BY CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

File Path
1/28/2015 12:04:04 PM



CONCRETE STAIR & GUARD RAIL – DETAIL G

NO SCALE

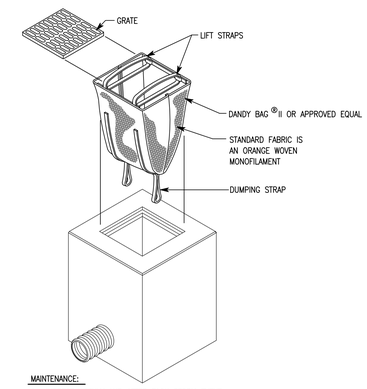


NOTES:

1. POUR RETAINING WALL AND WALK MONOLITHICALLY.
2. PROVIDE 1/2" EXPANSION JOINT MATERIAL AND SEALANT WHERE WALK INTERFACES WITH NEW BUILDING ADDITION.
3. CONCRETE PAVEMENT TO BE REINFORCED WITH SYNTHETIC FIBERS, SEE SPECIFICATIONS.

RETAINING WALL & WALK SECTION @ RAMP–DETAIL H

NOT TO SCALE

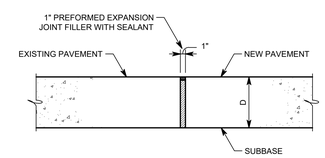


MAINTENANCE:

1. INSPECT WEEKLY AND AFTER EACH STORM EVENT.
2. IF FABRIC IS TORN OR DETERIORATED, REPLACE IMMEDIATELY.
3. REMOVE SEDIMENT ON A REGULAR SCHEDULE
4. AFTER DRAINAGE AREA IS STABILIZED, REMOVE SEDIMENT BAG

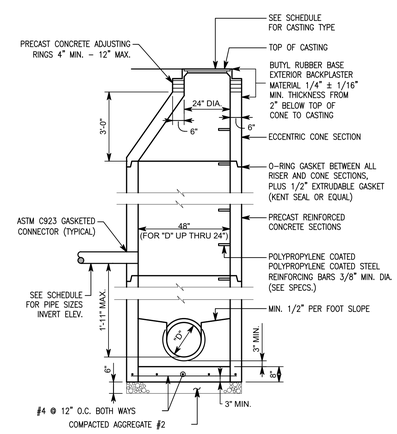
AREA INLET SEDIMENT BAG - DETAIL D

NONE



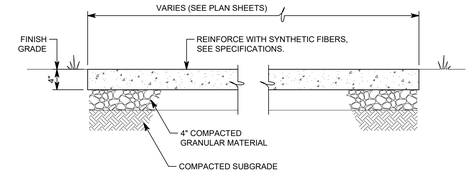
EXPANSION JOINT - DETAIL E

1" = 1'-0"



SANITARY MANHOLE - DETAIL F

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

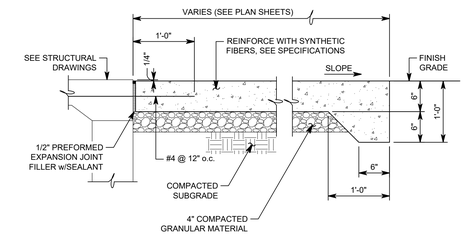


NOTES:

1. PROVIDE CONTROL JOINTS AT 6' MAX. SPACING; PROVIDE EXPANSION JOINTS AT 48' MAX. SPACING.
2. PROVIDE EXPANSION JOINT WHERE SIDEWALK ABUTS BUILDING OR WALLS, AT INTERSECTION WITH ANOTHER SIDEWALK, AND AT OTHER LOCATIONS INDICATED ON THE DRAWINGS.
3. CONTROL JOINTS AND EDGES OF SIDEWALK SHALL BE HAND-TOOLED AFTER EACH FINISHING OPERATION.

CONCRETE SIDEWALK WITH FIBER - DETAIL A

1" = 1'-0"



NOTES:

1. CONCRETE TURN DOWN IS ON ALL SIDES EXCEPT ALONG BUILDING FACE.

CONCRETE STOOP - DETAIL B

1" = 1'-0"

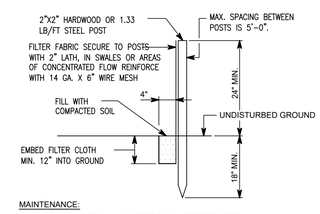
END SECTION DETAIL (PLAN VIEW)

GEOTEXTILE SHALL BE FOLDED AROUND TWO POSTS ONE FULL TURN. SECURE GEOTEXTILE TO POST WITH THREE STAPLES (1/2") MINIMUM.

JOINING SECTION DETAIL (PLAN VIEW)

FOLD GEOTEXTILE AROUND EACH POST ONE FULL TURN. SECURE GEOTEXTILE TO POST WITH THREE STAPLES (1/2") MINIMUM.

POSTS SHALL BE TIGHTLY ABUTTED WITH NO GAPS TO PREVENT POTENTIAL FLOW–THROUGH OF SEDIMENT AT JOINT.



MAINTENANCE:

1. INSPECT WEEKLY AND AFTER EACH STORM EVENT.
2. IF FABRIC IS TORN OR DETERIORATED, REPLACE SECTION IMMEDIATELY.
3. REMOVE SEDIMENT WHEN HEIGHT REACHES 1/3 OF OF THE HEIGHT OF THE FENCE OR IS CAUSING FABRIC TO BULGE.
4. TAKE CARE NOT TO UNDERMINE THE ENTRENCHED FABRIC.
5. AFTER DRAINAGE AREA IS STABILIZED, REMOVE FENCE AND SEDIMENT, BRING DISTURBED AREA TO GRADE AND STABILIZE IT.
6. SILT FENCE USED AT TOE OF SLOPE SHALL BE PLACED 5' TO 18' BEYOND THE TOE OF SLOPE TO PROVIDE STORAGE CAPACITY.
7. SILT FENCE SHALL BE PLACED ON THE CONTOUR, WITH ENDS FLARED UPSLOPE.

SILT FENCE - DETAIL C

NOT TO SCALE

ELM ROAD ELEMENTARY SCHOOL BUILDING EXPANSION

59400 ELM RD, MISHAWAKA, IN 46544

PENN HARRIS MADISON SCHOOL CORPORATION

FANNING HOWEY

317-848-0966 WWW.FHAI.COM

350 E. NEW YORK ST, SUITE 300 INDIANAPOLIS, IN 46204

N

CHAD N. KINCAID REGISTERED No. 11300453 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: CNK

DRAWN BY: CDL

PROJECT NUMBER: 2024-254

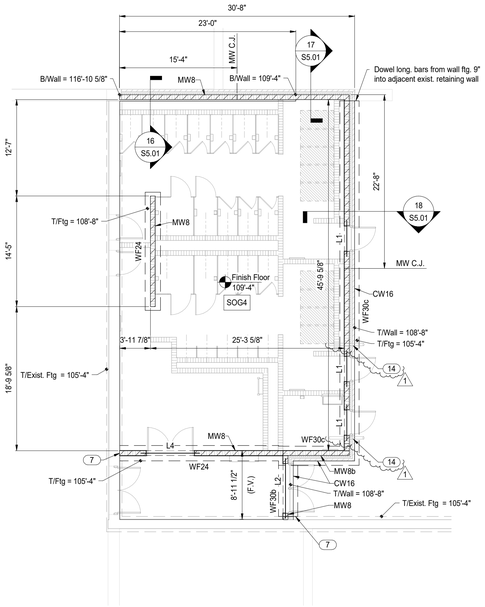
PROJECT ISSUE DATE: Project Issue Date

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM 2	06/25/2025

SITE DETAILS

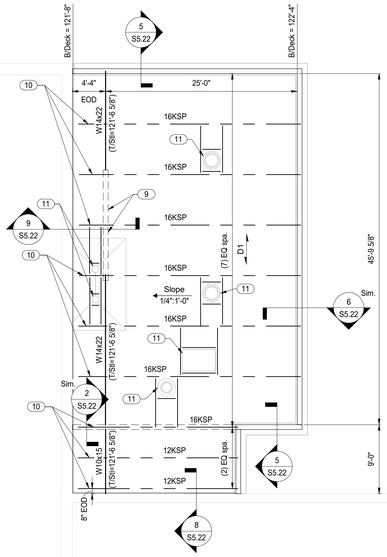
C600

File Path
1/02/2013 12:34:04 PM



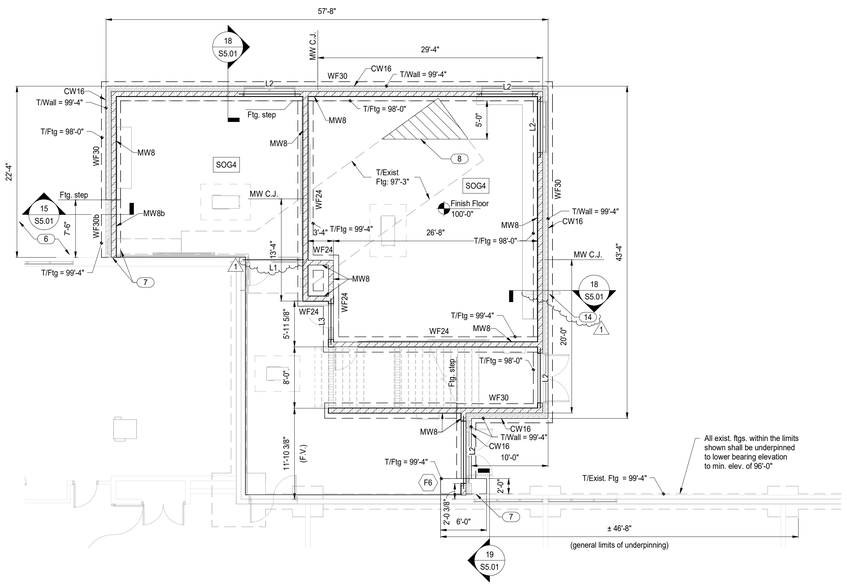
NORTH

1 Unit A Foundation Plan
Scale: 1/8" = 1'-0"



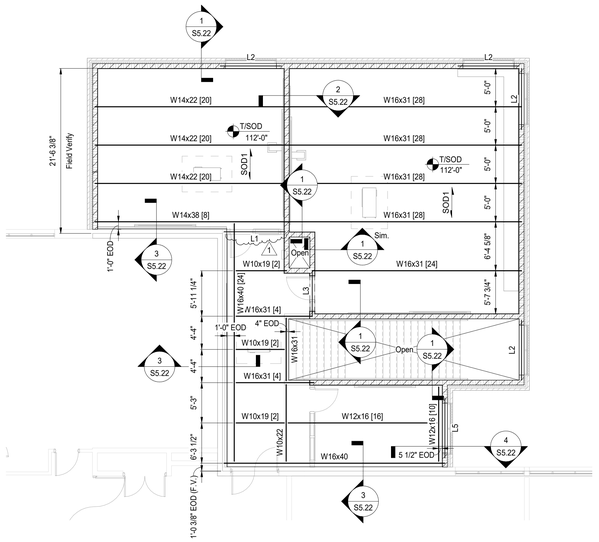
NORTH

2 Unit A Roof Framing Plan
Scale: 1/8" = 1'-0"



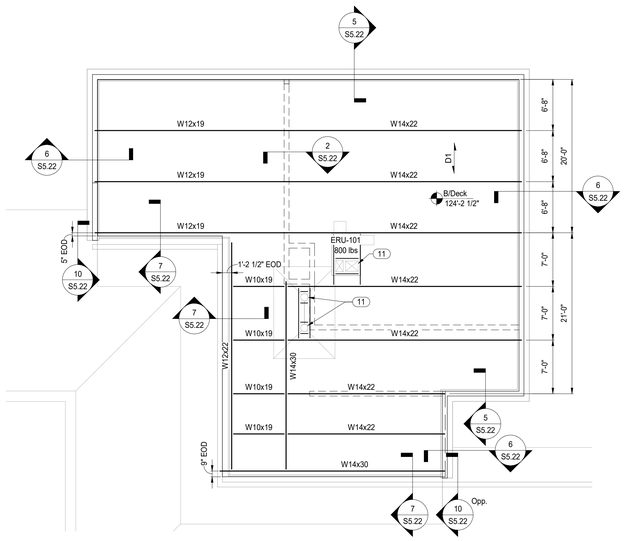
NORTH

3 Unit C Lower Level Foundation Plan
Scale: 1/8" = 1'-0"



NORTH

4 Unit C First Floor Framing Plan
Scale: 1/8" = 1'-0"



NORTH

5 Unit C Roof Framing Plan
Scale: 1/8" = 1'-0"

Plan Notes:

1. Reference elevation = 100'-0" (Exist. finish floor).
2. Refer to Architectural drawings for all dimensions not shown. Contractor shall verify all dimensions & elevations prior to construction and notify Architect & SEOR of any discrepancies.
3. All walls shall be laid out from the arch. drawings.
4. All contractor's shall coord. their work w/ all disciplines to avoid conflicts & identify all req'd materials and work.
5. Coord. exact size & location of all mech. openings in floor slabs, roof decks & walls w/ the Mech. Contractor. Location & size of all duct openings, louvers, etc. shall be verified prior to construction.
6. Shallow burial depth of adjacent existing foundation requires exterior finished grade to be 1'-6" above finish floor (min.). See Civil plans for final grading plan and coord. w/ SEOR if min. grade noted above is not achieved.
7. Field verify bearing elevation matches adjacent exist. wall ftg. Dowel long. bars from new wall footing 9" into adjacent exist. wall ftg.
8. Demolish exist. foundation to within 5'-0" of new foundation.
9. Provide 36/4 roof deck fastening pattern to steel bent plates below; see section marked in plan.
10. Provide Type R top chord joist extension at locations indicated.
11. Provide framing for roof openings per 9/S5.21. Coordinate size and location of opening with Mechanical drawings.
12. Underpinning requirements:
    a. Per Structural Notes Section 1.6 on sheet S0.03 the Contractor shall employ a licensed Professional Engineer (Component Engineer) in the state of which the project is located to design and detail the temporary excavation support, underpinning, and proprietary foundation systems.
    b. The Contractor shall schedule and host a Pre-Excavation Conference at the project site including the Owner, SEOR, and Architect to establish responsibilities and lines of communication prior to commencement of any underpinning construction activities.
    c. The sequencing of underpinning activities shall be done such that the exist. structure (to remain) shall be protected. Any exist. structure that is removed or damaged during underpinning activities shall be replaced to a level at least equivalent to what was present prior to construction activities, as approved by the Owner.
    d. The Contractor shall provide pre-construction inspection services documenting the condition of the exist. structure. All findings from the inspection shall be shared with the Owner, SEOR, and Architect prior to the Pre-Excavation Conference, and any findings of concern shall be discussed during the conference. No underpinning activities shall commence until all exist. conditions have been reviewed and agreed upon by the Contractor, Owner, SEOR, and Architect.
    e. The exist. structure shall be monitored for movement throughout the underpinning process. If structure settlement is observed, Contractor shall halt further excavation activities, notify the Underpinning Component Engineer, SEOR, and Architect, and await further direction prior to commencing with work.
13. Duct penetrations through CMU walls requiring an opening width greater than 1'-4" require an L1 lintel. Reference drawing M2.01 for duct locations.
14. Sleeve pipe penetration through/under footing per Detail 4/S5.01

Elm Road Elementary School - Classroom Addition

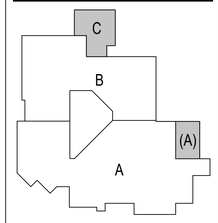
59400 ELM ROAD,
MISHAWAKA, IN. 46544

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 EAST NEW YORK ST. SUITE 300 INDIANAPOLIS



KEY PLAN

PROJECT MANAGER: TAM

DRAWN BY: TCM

PROJECT NUMBER: 223211.00

PROJECT ISSUE DATE: 04/10/2025

REV. NO.	DESCRIPTION	DATE
	ISSUED FOR CONSTRUCTION	04/10/2025
1	ADDENDUM NO. 2	06/25/2025

MAGNUS ENGINEERING
STRENGTH | TRUST | COMMITMENT
1415 Lincolnway West, Ste D, Osceola, IN 46561
contactus@MagnusEng.com
www.MagnusEng.com

PLAN SHEET

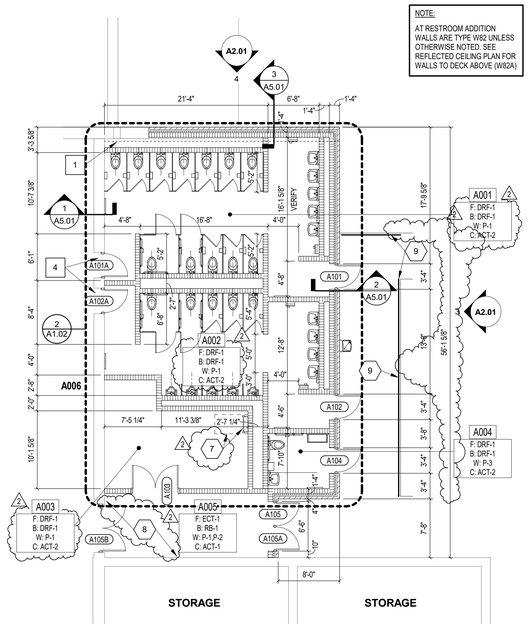
S1.00

C:\Autodesk\Revit\Local Files\Elm Roof Elementary - Struc_RVT23_TylerMaiden.rvt
6/25/2025 1:26:23 PM

ROOM LEGEND - FIRST FLOOR UNIT A	
ROOM NO.	ROOM NAME
A001	GIRLS
A002	BOYS
A003	STORAGE
A004	TOILET
A005	VESTIBULE
A006	GYMNASIUM

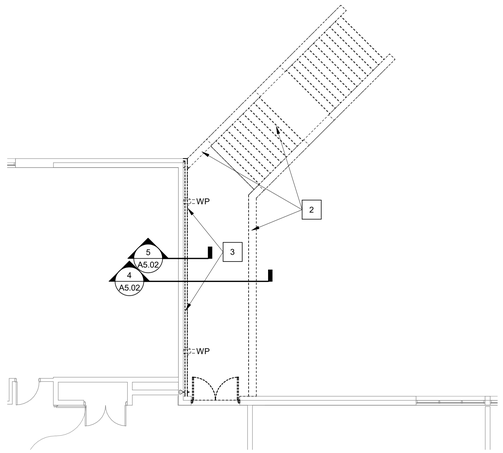
NOTE:

AT RESTROOM ADDITION WALLS ARE TYPE W82 UNLESS OTHERWISE NOTED. SEE REFLECTED CEILING PLAN FOR WALLS TO DECK ABOVE (W82A)



UNIT A - RESTROOM ADDITION DEMOLITION AND FLOOR PLAN

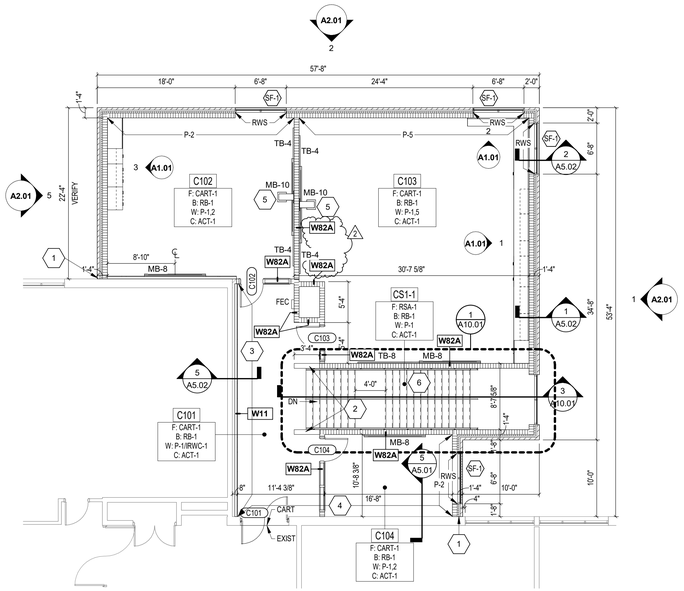
SCALE: 1/8" = 1'-0"



UNIT C - FIRST FLOOR DEMOLITION PLAN

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

ROOM LEGEND - FIRST FLOOR UNIT C	
ROOM NO.	ROOM NAME
C101	CORRIDOR
C102	RESOURCE
C103	CLASSROOM
C104	CONFERENCE
CS1-1	STAIR

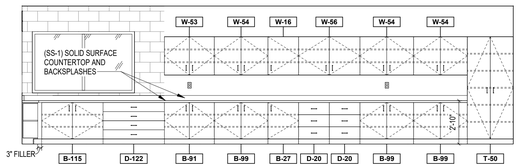


UNIT C - FIRST FLOOR PLAN

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

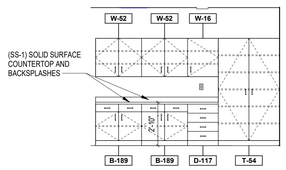
CASEWORK SCHEDULE

TYPE	NO.	SIZE W	SIZE D	SIZE H	DESCRIPTION
B	27	2'-0"	2'-0"	2'-10"	BASE UNIT WITH TWO ADJUSTABLE SHELVES AND ONE HINGED DOOR.
B	91	3'-3"	2'-0"	2'-10"	BASE UNIT WITH TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS.
B	99	3'-6"	2'-0"	2'-10"	BASE UNIT WITH ONE VERTICAL DIVIDER, FOUR ADJUSTABLE SHELVES AND TWO HINGED DOORS.
B	115	4'-0"	2'-0"	2'-10"	BASE UNIT WITH ONE VERTICAL DIVIDER, FOUR ADJUSTABLE SHELVES AND TWO HINGED DOORS.
B	189	3'-0"	2'-0"	2'-10"	BASE UNIT WITH TWO DRAWERS, ONE ADJUSTABLE SHELF AND TWO HINGED DOORS.
BO	35	3'-0"	1'-1"	2'-10"	OPEN BASE UNIT WITH ONE ADJUSTABLE SHELF.
D	20	2'-0"	2'-0"	2'-10"	DRAWER UNIT WITH THREE EQUAL DRAWERS. 6-1/2 INCHES DEEP INSIDE.
D	117	2'-0"	2'-0"	2'-10"	DRAWER UNIT WITH FOUR EQUAL DRAWERS. 4-1/2 INCHES DEEP INSIDE.
D	122	4'-0"	2'-0"	2'-10"	DRAWER UNIT WITH FOUR EQUAL DRAWERS. 4-1/2 INCHES DEEP INSIDE.
T	50	3'-0"	2'-0"	7'-0"	TALL UNIT WITH FIVE ADJUSTABLE SHELVES AND TWO HINGED DOORS.
T	54	4'-0"	2'-0"	7'-0"	TALL UNIT WITH FIVE ADJUSTABLE SHELVES AND TWO HINGED DOORS.
W	16	2'-0"	1'-2"	2'-6"	WALL UNIT WITH ONE ADJUSTABLE SHELF AND ONE HINGED DOOR.
W	52	3'-0"	1'-2"	2'-6"	WALL UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS.
W	53	3'-3"	1'-2"	2'-6"	WALL UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS.
W	54	3'-6"	1'-2"	2'-6"	WALL UNIT WITH ONE VERTICAL DIVIDER, TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS.
W	56	4'-0"	1'-2"	2'-6"	WALL UNIT WITH ONE VERTICAL DIVIDER, TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS.



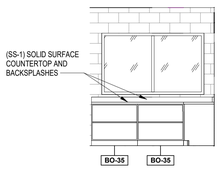
1 C003 & C103 EAST

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



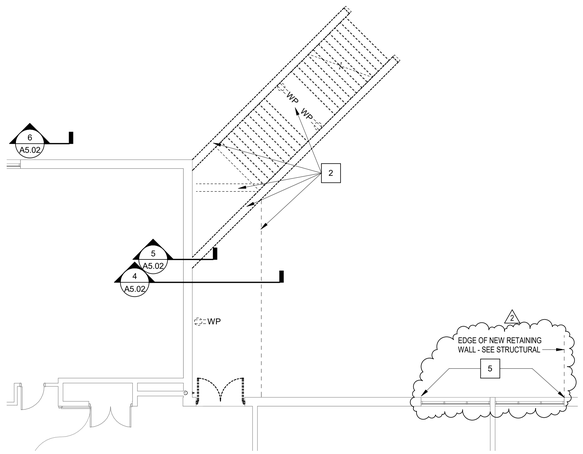
3 C002 & C102 WEST

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



2 C003 & C103 NORTH

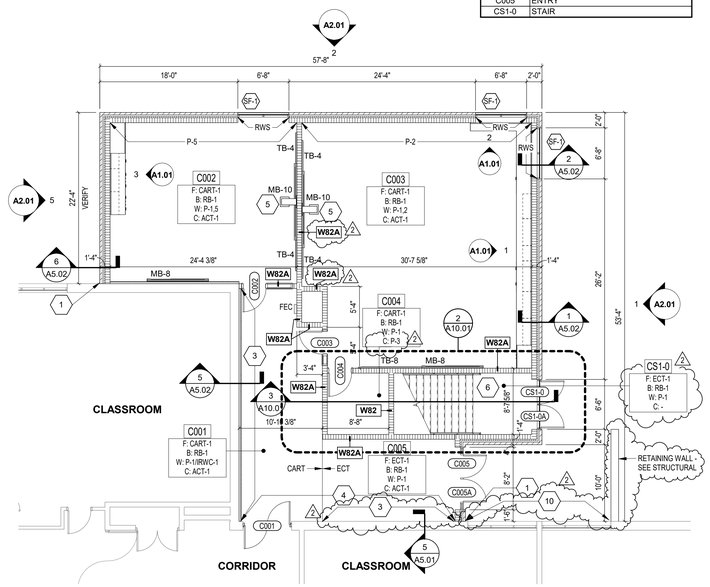
SCALE: 1/4" = 1'-0"



UNIT C - LOWER LEVEL DEMOLITION PLAN

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

ROOM LEGEND -LOWER LEVEL UNIT C	
ROOM NO.	ROOM NAME
C001	CORRIDOR
C002	RESOURCE
C003	MUSIC
C004	STORAGE
C005	ENTRY
CS1-0	STAIR



UNIT C - LOWER LEVEL FLOOR PLAN

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

ARCHITECTURAL DEMOLITION GENERAL NOTES

A. DEMOLITION IS TO FOLLOW ESTABLISHED CONSTRUCTION SEQUENCE. CONTRACTOR IS TO VERIFY THEIR WORK IN THE FIELD WITH THE DEMOLITION DRAWINGS, NEW CONSTRUCTION DRAWINGS, AND THE EXISTING IN-FIELD CONDITIONS. REPORT DISCREPANCIES TO THE ARCHITECT.
B. "FLOORING" DENOTES FLOOR COVERING MATERIALS INCLUDING BACKINGS, ADHESIVES, BASES, DOWN TO BUT EXCLUSIVE OF FLOOR SLABS AND STRUCTURAL MATERIALS, UNLESS NOTED OTHERWISE.
C. "CEILING" DENOTES CEILING MATERIALS INCLUDING SUSPENSION SYSTEMS ADHESIVE RESIDUES, MOLDINGS, UP TO BUT EXCLUSIVE OF STRUCTURAL MATERIALS.
D. WALLS TO BE REMOVED SHALL BE REMOVED TO A POINT 2" (MIN.) BELOW THE EXISTING FLOOR SLAB (UNLESS SETTING ON SLAB). PATCH WITH NEW CONCRETE TO BE FLUSH WITH THE EXISTING FLOOR SLAB.
E. WHEN OPENINGS ARE CUT INTO AN EXISTING WALL, THE OPENING SHALL BE A MINIMUM OF 1'-4" LONGER THAN THE FINISHED OPENING REQUIRED TO ALLOW FOR 8" (MIN) OF NEW CMU TOOTHED-IN AT EDGES.
F. AFTER THE DEMOLITION OF MATERIALS, THE RESULTING EXPOSED SURFACE SHALL BE SMOOTH AND FLUSH WITH EXISTING CONDITIONS.
G. MECHANICAL AND ELECTRICAL ITEMS THAT ARE CAPPED AND ABANDONED SHALL BE LOCATED BEHIND FINAL FINISH SYSTEMS.
H. COORDINATE THIS WORK WITH DEMOLITION WORK ON SITE, STRUCTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL.
I. PROVIDE INTERIOR AND EXTERIOR SHORING, BRACING, OR SUPPORT TO PREVENT MOVEMENT OR SETTLEMENT OF EXISTING STRUCTURES.
J. CONTRACTOR TO FIELD VERIFY PORTIONS OR SECTIONS OF EXISTING WALLS TO BE FILLED IN AND SALVAGE NECESSARY MATERIAL.
K. MATERIALS OF DEMOLITION SHALL BE DISPOSED OF OFF-SITE UNLESS OTHERWISE DIRECTED BY OWNER.
L. ITEMS TO BE PATCHED. REMOVE ALL LOOSE OR DAMAGED MATERIAL. REFINISH TO LIKE NEW CONDITION, OR IF CONDITION WARRANTS REPLACE IN ENTIRETY.
M. THE OWNER SHALL RESERVE RIGHT TO CLAIM ANY MATERIALS THAT ARE BEING DEMOLISHED PRIOR TO THE CONTRACTOR DISPOSING OF THEM OFF SITE.
N. ITEMS MADE OBSOLETE TO ACCOMODATE NEW CONSTRUCTION OR RENOVATION SHALL BE REMOVED.
O. ITEMS TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY.
P. AFTER REMOVAL OF ITEMS, THE EXISTING WALL SURFACES (IF EXPOSED) SHALL BE REPAIRED/PATCHED AS REQUIRED TO RECEIVE NEW FINISHES.

DEMOLITION PLAN NOTES

X

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

1. DASHED LINE DENOTES BRICK TO BE REMOVED ON THIS SIDE OF RETAINING WALL WHERE NEW WALL IS BEING INSTALLED
2. REMOVE CONCRETE AND MASONRY OUTDOOR STAIRWAY AND UPPER FLOOR WALKWAY.
3. REMOVE BRICK AND INSULATION ON THIS FACE OF WALL ONLY ABOVE EXISTING EXTERIOR WALKWAY. SEE WALL SECTION.
4. REMOVE WALL AS REQUIRED FOR INSTALLATION OF NEW DOOR, FRAME AND LINTEL.
5. REMOVE 4" CMU 5 COURSES BELOW BRICK AND INSTALL SALVAGED BRICK IN IT'S PLACE.

ARCHITECTURAL PLAN GENERAL NOTES

A. ALL CMU WALLS THAT DO NOT LAY OUT IN FULL OR HALF LENGTHS SHOULD BE BALANCED SO AS NOT TO HAVE ANY PIECES LESS THAN 4" IN SIZE EXPOSED TO VIEW.
B. WHERE DISSIMILAR FLOOR MATERIALS MEET, THEY SHALL DO SO UNDER THE CENTERLINE OF THE DOOR, UNLESS NOTED OTHERWISE.
C. THERE SHALL BE PERIMETER INSULATION CONTINUOUS AROUND THE ENTIRE PERIMETER OF THE BUILDING EXTENDING 2'-0" MINIMUM BELOW GRADE.
D. THE BASE FLOOR ELEVATION INDICATED FOR THE PROJECT IS 100'-0". REFER TO SITE PLAN FOR CORRELATION TO USGS DATUM.
E. ALL INTERIOR MASONRY WALLS THAT RUN TO UNDERSIDE OF DECK ABOVE SHALL HAVE A 2" JOINT (U.N.O.) AT THE DECK TO BE FILLED WITH FIRE STOPPING AT RATED WALLS PER PROJECT MANUAL , AND MINERAL WOOL AT THE NON-RATED WALLS, TO ALLOW FOR DEFLECTION.
F. FOR TYPICAL COMMON JOINT DETAILS AND CONSTRUCTION MOVEMENT JOINT DETAILS REFER TO DETAILS ON SHEET A1.02 AND A1.03.
G. ALL DIMENSIONS ON FLOOR PLANS ARE TO FINISH FACE OF CMU, CONCRETE, BRICK OR FINISH FACE OF GWB AT METAL STUD WALLS, UNLESS NOTED OTHERWISE. EXCEPTION: EXTERIOR METAL STUD WALLS ARE TO FACE OF METAL STUDS.
H. HINGE SIDE DOOR JAMB AT WALLS WILL TYPICALLY BE LOCATED 4" MINIMUM FROM ADJACENT WALL UNLESS NOTED OTHERWISE.
I. ALL EXPOSED CONCRETE MASONRY UNITS (CMU) CORNERS ARE TO BE BULLNOSE. EXCEPT AT WINDOW JAMBS, BULKHEADS, WINDOW AND DOOR HEADS.
J. SEE REFLECTED CEILING PLANS FOR BULKHEAD LOCATIONS AND DETAIL REFERENCES.
K. REFER TO ROOM FINISH SCHEDULE OR PLAN AND EQUIPMENT PLANS FOR LOCATION AND EXTENT OF FINISH FLOOR MATERIALS.
L. REFER TO MASTER CODE PLANS FOR CODE INFORMATION AND FIRE RATED WALL LOCATIONS.
M. PROVIDE SPRAY FOAM INSULATION AND THERMAL BARRIER CONTINUOUS AT INTERSECTION OF EXTERIOR WALLS AND DECK.

ARCHITECTURAL PLAN NOTES

X

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

—— W### INDICATES WALL TYPE. REFER TO DRAWING A1.02 FOR WALL THICKNESS, HEIGHT AND COMPOSITION.

1. PREFORMED JOINT SEAL CONTINUOUS FULL HEIGHT (2" VERTICAL JOINT)
2. 3'-4" HIGH 8" CMU PARTITION WITH SOLID SURFACE CAP WITH 1/2" OVERHANGS. SEE 3-A1.02
3. HIGH IMPACT WALL COVERING. IRWC-1. SEE DETAIL 1-A1.02
4. PAINT EXISTING BRICK WALL. P-1, AND INSTALL RB-1 BASE
5. PROJECTOR, BASIS OF DESIGN IS EPSON BRIGHTLINK 770Fi ULTRA-SHORT THROW PROJECTOR
6. INSTALL RSA-1 TREADS, PAINT RISERS, STRINGERS, AND RAILINGS P-4; LANDING TO BE RUBBER TILE TO MATCH RESILIENT TILE.
7. ROOF HATCH AND LADDER - SEE A2.01
8. DO NOT PAINT BRICK
9. ALUMINUM RAILING - SEE 2-A1.02
10. INSTALL SALVAGED BRICK WHERE EXISTING CMU IS REMOVED.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

Elm Road Elementary School - Classroom Addition

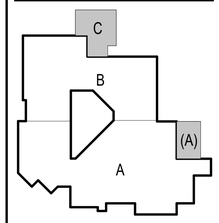
59400 ELM ROAD,
MISHAWAKA, IN. 46544

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 EAST NEW YORK ST. SUITE 300 INDIANAPOLIS



KEY PLAN

PLAN NORTH

PAUL A. MILLER REGISTERED No. A-1900161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: MKS

DRAWN BY: RLG

PROJECT NUMBER: 223211.00

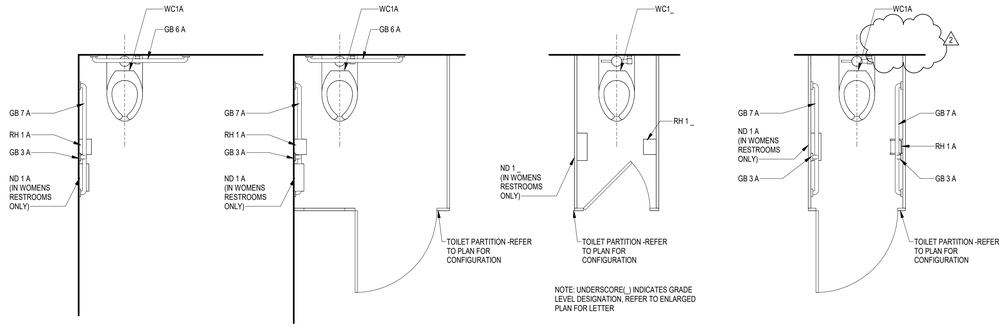
PROJECT ISSUE DATE: 04-10-2025

REV. NO.	DESCRIPTION	DATE
2	Addendum #2	6/25/2025

DEMOLITION PLANS AND FLOOR PLANS

A1.01

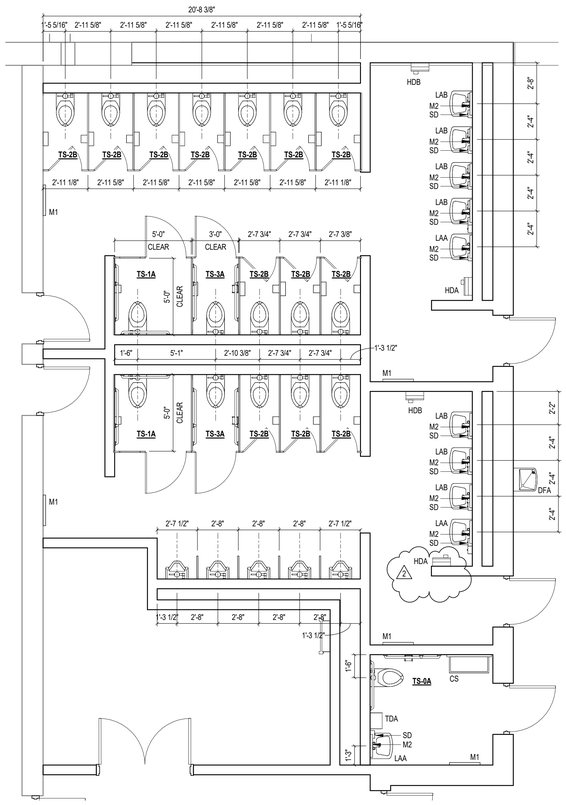
C:\Users\rgambill\Documents\2023_Arch_Elm Road_Addition 223211.00_rgambill.rvt
6/25/2025 12:01:06 PM



TOILET STALL TS 0 A | TOILET STALL TS 1 A | TOILET STALL TS 2 B | TOILET STALL TS 3 A

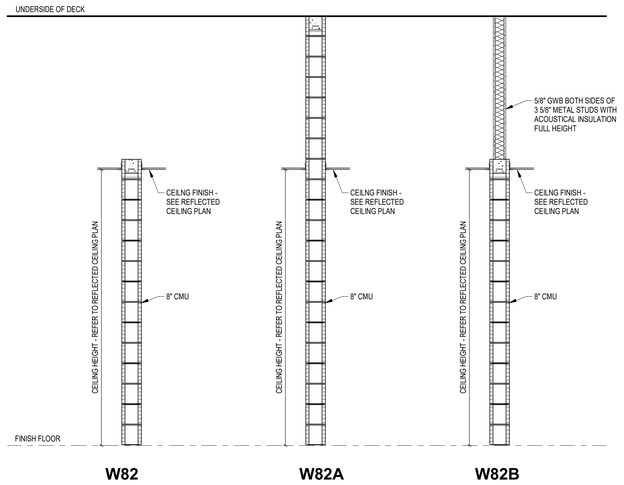
TOILET AND SHOWER STALL LEGEND

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



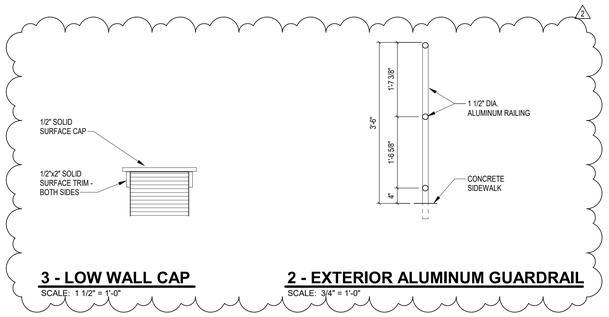
UNIT A - RESTROOM LAYOUTS

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



WALL TYPES

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

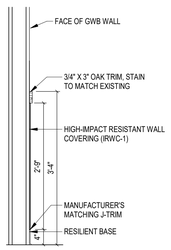


3 - LOW WALL CAP

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

2 - EXTERIOR ALUMINUM GUARDRAIL

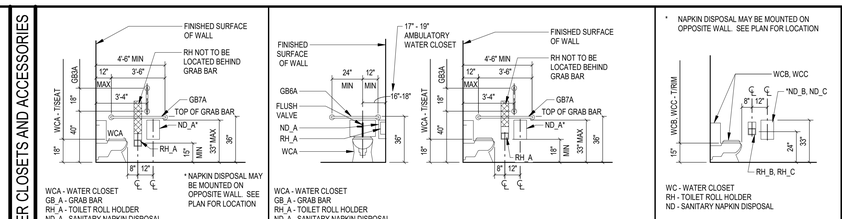
SCALE: 3/4" = 1'-0"



1 - HIGH IMPACT WALL COVERING

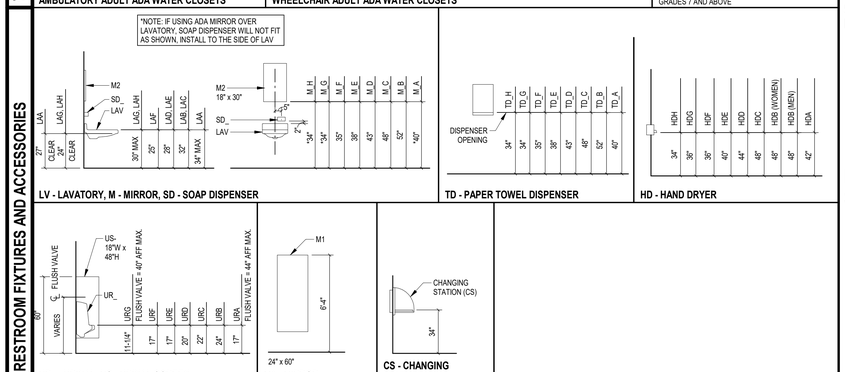
SCALE: 3/4" = 1'-0"

WATER CLOSETS AND ACCESSORIES



AMBULATORY ADULT ADA WATER CLOSETS | WHEELCHAIR ADULT ADA WATER CLOSETS | STANDARD WATER CLOSETS (GRADES 7 AND ABOVE)

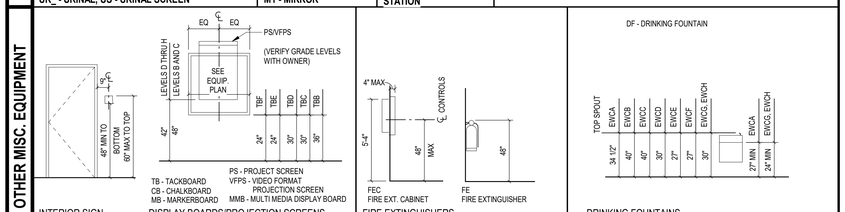
RESTROOM FIXTURES AND ACCESSORIES



LV - LAVATORY, M - MIRROR, SD - SOAP DISPENSER | TD - PAPER TOWEL DISPENSER | HD - HAND DRYER

UR_ - URINAL, US - URINAL SCREEN | M1 - MIRROR | CS - CHANGING STATION

OTHER MISC. EQUIPMENT



INTERIOR SIGN | DISPLAY BOARDS/PROJECTION SCREENS | FIRE EXTINGUISHERS | DRINKING FOUNTAINS

MOUNTING HEIGHT NOTES:

1. MOUNTING HEIGHTS ARE BASED UPON THE FOLLOWING: TOILET, BATH AND LAUNDRY EQUIPMENT (ACCESSORIES), BOBRICK WASHROOM EQUIPMENT, INC. ; LAVATORIES, URINALS AND WATER CLOSETS, AMERICAN STANDARD, INC. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE MOUNTING HEIGHTS OF TOILET ACCESSORIES SUPPLIED BY OTHER MANUFACTURERS.
2. MOUNTING HEIGHT DRAWING INDICATES A TWO PIECE GRAB BAR. GRAB BAR MAY BE A ONE PIECE OR A TWO PIECE GRAB BAR. REFER TO SPECIFICATIONS FOR SPECIFIC TYPE OF GRAB BAR TO BE USED.
3. UNDERSCORE (_) REFER TO ENLARGED PLANS FOR MISSING NUMBER IDENTIFYING THE SPECIFIC TYPE OF TOILET ACCESSORY

GRAB BAR SCHEDULE
(ALL SIZES MAY NOT BE USED ON THIS PROJECT)

GB1 - 36" x 54" TWO WALL
GB2 - 36"x36" TWO WALL
GB3 - 18" STRAIGHT (VERTICAL)
GB4 - 24" STRAIGHT
GB5 - 30" STRAIGHT
GB6 - 36" STRAIGHT
GB7 - 42" STRAIGHT
GB8 - 48" STRAIGHT

MIRROR SCHEDULE
(ALL SIZES MAY NOT BE USED ON THIS PROJECT)

M1 - 24"W x 60"H
M2 - 18"W x 30"H
M3 - 48"W x 30"H
M4 - 60"W x 30"H

SAMPLE TOILET ACCESSORY LABELING:

RH1A

RH — INDICATES TOILET ACCESSORY NAME (RH = TOILET ROLL HOLDER
1 — INDICATES TOILET ACCESSORY TYPE WHEN MORE THAN ONE TYPE IS SPECIFIED (IF NO NUMBER IS USED, ONLY ONE TYPE IS SPECIFIED)
A — INDICATES THE GRADE LEVEL, WHICH DETERMINES THE MOUNTING HEIGHT

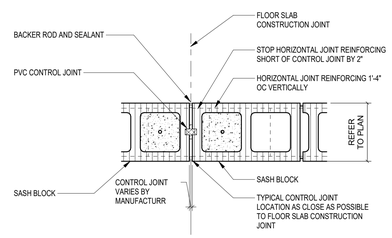
WCA — INDICATES PLUMBING FIXTURE AT MOUNTING HEIGHT "A". REFER TO PLUMBING DRAWINGS FOR PLUMBING FIXTURE SCHEDULE

GRADE LEVEL LEGEND:

A. ADULT ACCESSIBLE (ADA) HEIGHTS (GRADES 7 AND ABOVE)
B. GRADES 9 AND ABOVE (ADULTS)
C. GRADES 7-8
D. GRADES 4-6
E. GRADES 1-3
F. PRESCHOOL-KINDERGARTEN
G. CHILDREN'S ACCESSIBLE (ADA) HEIGHTS (K-6)
H. CHILDREN'S ACCESSIBLE (ADA) HEIGHTS (PRESCHOOL)

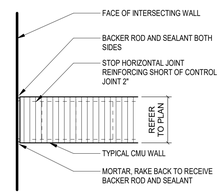
OWNER FURNISHED - CONTRACTOR INSTALLED TOILET ROOM ACCESSORIES:

- PAPER TOWEL DISPENSERS (TD)
- TOILET PAPER DISPENSERS (RH)
- SOAP DISPENSERS (SD)



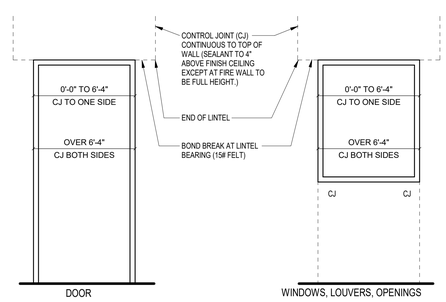
TYPICAL CONTROL JOINT

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



TYPICAL CONTROL JOINT

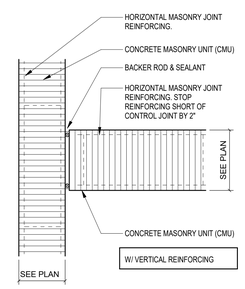
SCALE: 1 1/2" = 1'-0"



NOTE: INTERIOR CONCRETE MASONRY WALLS ONLY

TYPICAL PLACEMENT OF CONTROL JOINTS IN CMU WALLS AT OPENINGS

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



TYPICAL CONTROL JOINT

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

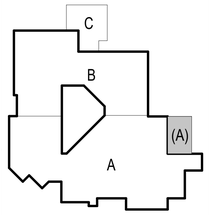
Elm Road Elementary School - Classroom Addition

59400 ELM ROAD,
MISHAWAKA, IN. 46544

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY
317-848-0966 WWW.FHAI.COM
350 EAST NEW YORK ST. SUITE 300 INDIANAPOLIS



KEY PLAN

PLAN NORTH

PAUL A. MILLER REGISTERED NO. A1300161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: MKS
DRAWN BY: Author
PROJECT NUMBER: 223211.00
PROJECT ISSUE DATE: 04-10-2025

REV. NO.	DESCRIPTION	DATE
2	Addendum #2	6/25/2025

ENLARGED PLANS AND TYPCAL DETAILS

A1.02

C:\Users\rgambill\Documents\2023_Arch_Elm Road_Addition 223211.00_rgambill.rvt
6/25/2025 12:03:11 PM

LIST OF FINISHES

REFER TO AF DWG. SHEETS

FLOOR MATERIALS

CARPET TILE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
CART-1	PATCHCRAFT / 10227 EASY ON THE EYES	00507 BIDDIDY-BOBBIDY-BOO

- ALL CARPET BACKING TO HAVE A MOISTURE RESISTANT BARRIER.
- INSTALLATION METHOD - MATCH EXISTING.
- SUBMIT INSTALLATION DRAWINGS INDICATING DIRECTION & LAYOUT OF CARPET TILE PRIOR TO INSTALLATION FOR APPROVAL.
- CARPET SELECTION IS TO MATCH EXISTING

DECORATIVE RESINOUS FLOORING

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
DRF-1	REFER TO SPECIFICATIONS	MATCH SHERWIN WILLIAMS "ORIENTAL SPICE"

ENTRY CARPET TILE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
ECT-1	INTERFACE FLOR / INDUSTRIOUS	MATCH EXISTING

RESILIENT TREADS AND RISERS

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
RSA-1	JOHNSONITE ANGLE-FIT RUBBER TREAD "VIRNRD" RAISED ROUND TREAD W/ VISUALLY IMPAIRED STRIP	SOLID COLOR 18 NAVY BLUE GREY GRIT TAPE

BASE MATERIALS

DECORATIVE RESINOUS BASE

INTEGRAL BASE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
DRF-1	REFER TO SPECIFICATIONS	MATCH SHERWIN WILLIAMS "ORIENTAL SPICE"

RESILIENT BASE

COVE BASE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
RB-1	JOHNSONITE/TARKETT	63 BURNT UMBER

WALL FINISHES

IMPACT-RESISTANT WALLCOVERING

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
IRWC-1	CS ACROVYN / WALL COVERING	CHARCOAL 162

PAINT

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
P-1 (FIELD)	SHERWIN WILLIAMS	SW7029 AGREEABLE GREY
P-2 (ACCENT)	PPG PAINTS	PPG1165-6 STAINED GLASS
P-3 (CEILINGS)	SHERWIN WILLIAMS	SW7757 HIGHLY REFLECTIVE WHITE
P-4 (DOOR FRAMES)	SHERWIN WILLIAMS	SW7674 PEPPERCORN
P-5 (ACCENT)	PPG PAINTS	PPG1129-6 LOTTERY WINNINGS

MISCELLANEOUS FINISHES

INTERIOR WOOD DOORS/ INTERIOR WOOD TRIM

- STAIN ALL WOOD DOORS, WOOD TRIM, ETC. COLOR TO MATCH EXISTING DOORS.
- WOOD SPECIES TO BE PLAIN SLICED RED OAK.
- PROVIDE WOOD STAIN SAMPLES FOR VERIFICATION.

RESILIENT MOLDING ACCESSORIES

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
RMA-1	JOHNSONITE/TARKETT	63 BURNT UMBER

SOLID SURFACE (WINDOW STOOLS)

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
SS-1	CORIAN	CONCRETE

CEILING FINISHES

ACOUSTICAL CEILING TILES

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
ACT-1 (OFFICE/CLASS)	REFER TO SPECIFICATIONS	WHITE / 2'X2'
ACT-2 (RESTROOMS)	REFER TO SPECIFICATIONS	WHITE / 2'X2'

INTERIOR FINISH SYSTEM

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
IFS-1	REFER TO SPECIFICATIONS	TO BE SELECTED (WHITE)

PAINT TYPE GENERAL NOTES

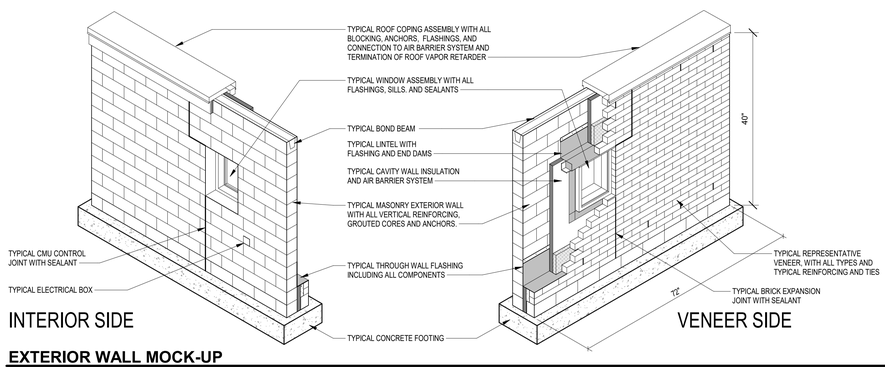
NOTE: THIS IS A COMPREHENSIVE LIST OF PAINT TYPES, NOT ALL ARE APPLICABLE TO THE PROJECT.

CEILING/STRUCTURE - INTERIOR PAINTING:

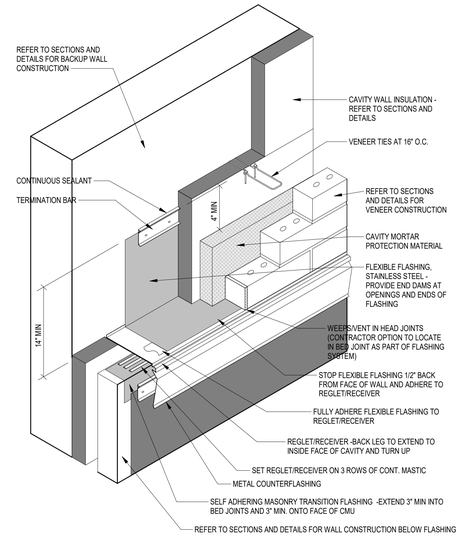
CP1. GYPSUM WALLBOARD (GWB): NEW OR EXISTING SOFFITS, CEILINGS, AND BULKHEADS SHALL BE PAINTED WITH PAINT CODE #9.21, FLAT.
CP2. PLASTER (PLAS): EXISTING CEILINGS SHALL BE PAINTED WITH PAINT CODE #9.31, EGGSHELL.
CP3. EXPOSED STEEL (FERROUS) STRUCTURE: EXPOSED STRUCTURE SHALL BE PAINTED WITH PAINT CODE #5.11, DRY FALL.
CP4. GALVANIZED METAL (EXCLUDING STRUCTURE): EXPOSED DECK SHALL BE PAINTED WITH PAINT CODE #5.31, DRY FALL.
CP5. GALVANIZED METAL STRUCTURE: EXPOSED METAL DECK SHALL BE PAINTED WITH PAINT CODE #5.31, DRY FALL.
CP6. ABUSE-RESISTANT ACOUSTICAL PANELS (AR-AWT): NEW OR EXISTING PANELS SHALL BE PAINTED WITH PAINT CODE #11.0, DRY FALL.

MISC. MATERIALS - INTERIOR PAINTING:

MP1. METAL, EXISTING: SURFACES THAT HAVE BEEN PREVIOUSLY PAINTED, SUCH AS HOLLOW METAL, EXPOSED STEEL, SHALL BE PAINTED WITH PAINT CODE #5.12, SEMI-GLOSS.
MP2. WOOD TRIM (WD) WITH EXISTING STAIN: SHALL BE PAINTED WITH PAINT CODE #6.31, SEMI-GLOSS, WHERE INDICATED ON PLANS.
MP3. PIPE AND DUCT COVERINGS: EXPOSED NEW AND EXISTING COVERINGS SHALL BE PAINTED WITH PAINT CODE #11.0, DRY FALL.
MP4. INDICATED BRICK WALLS SHALL BE PAINTED WITH HIGH PERFORMANCE PAINT TYPE #4.122, EPOXY.

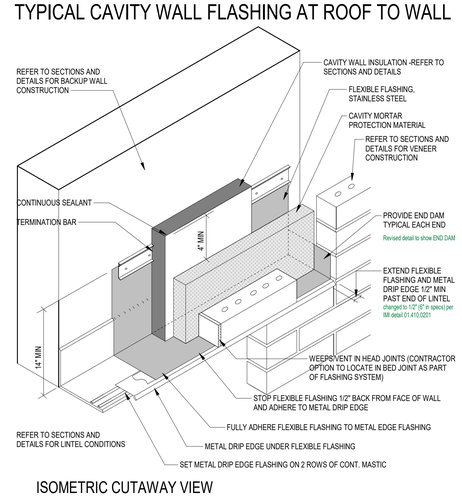


EXTERIOR WALL MOCK-UP
SCALE: 3/8" = 1'-0"



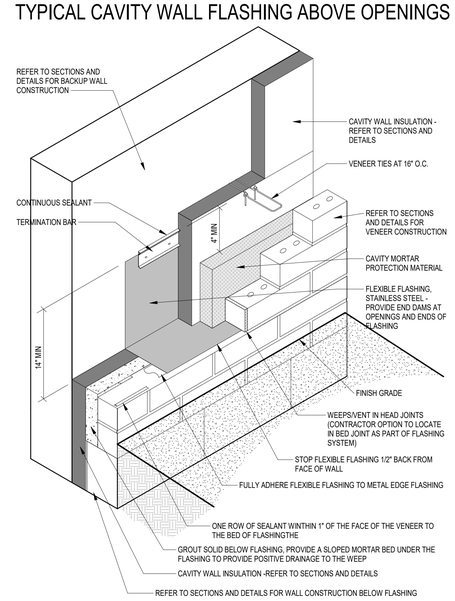
ISOMETRIC CUTAWAY VIEW

TYPICAL CAVITY WALL FLASHING AT ROOF TO WALL



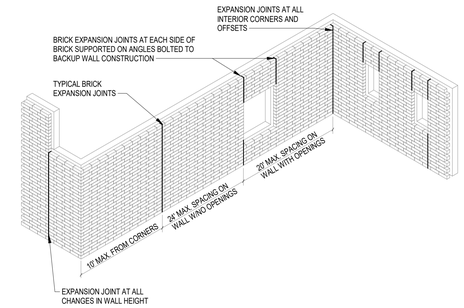
ISOMETRIC CUTAWAY VIEW

TYPICAL CAVITY WALL FLASHING ABOVE OPENINGS

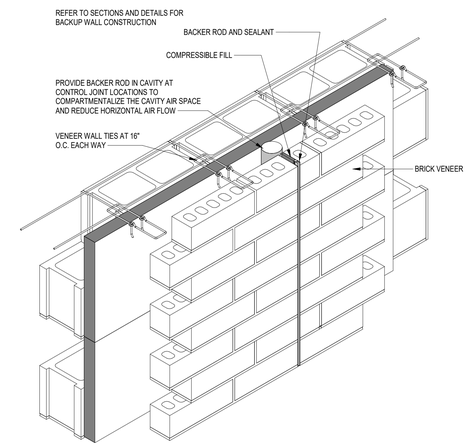


ISOMETRIC CUTAWAY VIEW

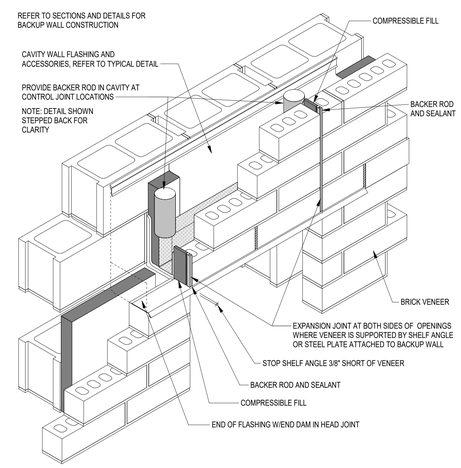
TYPICAL CAVITY WALL FLASHING AT BASE OF WALL



TYPICAL BRICK EXPANSION JOINT (EJ) LOCATIONS



TYPICAL BRICK EXPANSION JOINT DETAIL



TYPICAL BRICK EXPANSION JOINT AT OPENINGS

TYPICAL BRICK EXPANSION JOINTS
SCALE: 1 1/2" = 1'-0"

Elm Road Elementary School - Classroom Addition

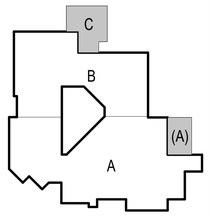
59400 ELM ROAD,
MISHAWAKA, IN. 46544

PENN HARRIS MADISON SCHOOL CORPORATION

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY
317-848-0966 WWW.FHAI.COM
350 EAST NEW YORK ST. SUITE 300 INDIANAPOLIS



KEY PLAN

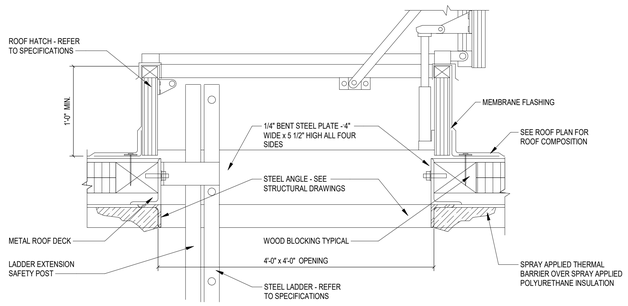
PROJECT MANAGER: MKS
DRAWN BY: Author
PROJECT NUMBER: 223211.00
PROJECT ISSUE DATE: 04-10-2025

REV. NO.	DESCRIPTION	DATE
2	Addendum #2	6/25/2025

EXTERIOR WALL ISOMETRICS, LIST OF FINISHES

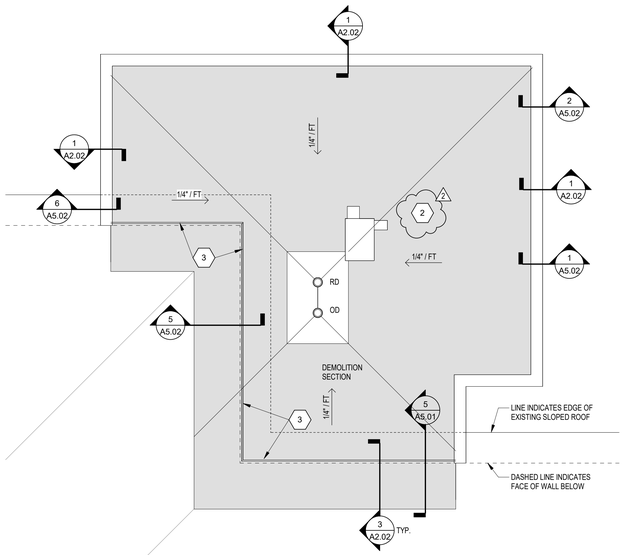
A1.03

C:\Users\gambill\Documents\2023_Arch_Elm Road_Addition 223211.00_rgambill.rvt
6/25/2025 12:01:16 PM



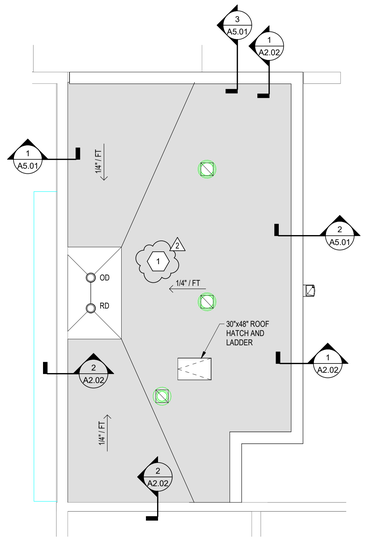
ROOF ACCESS HATCH

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



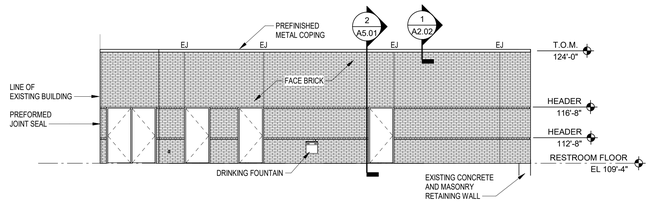
UNIT C ROOF PLAN

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



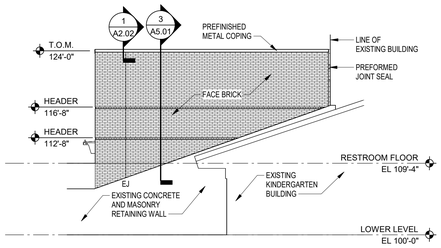
UNIT A ROOF PLAN

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



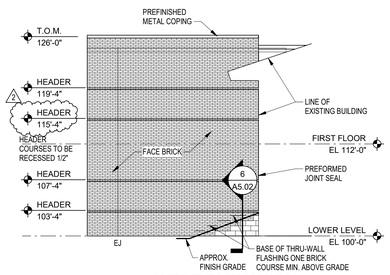
3 EAST ELEVATION - RESTROOM ADDITION

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



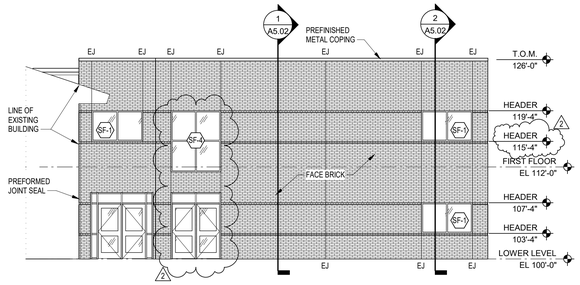
4 NORTH ELEVATION - RESTROOM ADDITION

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



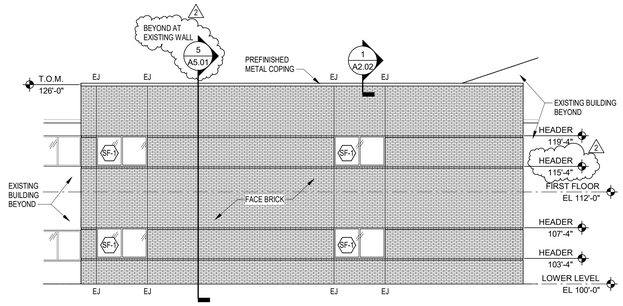
5 WEST ELEVATION - CLASSROOM ADDITION

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



1 EAST ELEVATION - CLASSROOM ELEVATION

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



2 NORTH ELEVATION - CLASSROOM ADDITION

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

ROOF PLAN GENERAL NOTES

A. ALL DETAILS SHOWN ARE FOR GENERAL INFORMATION. ALL FINAL FLASHING CONDITIONS SHALL BE THE RESPONSIBILITY OF THE ROOF INSTALLER, AND SHALL MEET APPROVAL OF ROOF MANUFACTURER.
B. ALL DETAIL MODIFICATIONS MUST HAVE SHOP DRAWINGS APPROVAL. CONTRACTOR SHALL INSPECT AND VERIFY ALL EXISTING FIELD CONDITIONS, CLEARANCES, AND DIMENSIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF EXISTING CONDITIONS. SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT ARCHITECT BEFORE PROCEEDING WITH ANY FURTHER WORK.
C. OPENINGS IN ROOF WILL BE CUT BY ROOF CONTRACTOR. MECHANICAL CONTRACTOR TO COORDINATE LOCATION OF OPENING IN ROOF WITH ROOF CONTRACTOR. CURB TO BE PROVIDED BY MECHANICAL CONTRACTOR AND INSTALLED BY ROOF CONTRACTOR.
D. PROVIDE FLASHING AND SADDLES FOR ALL EQUIPMENT PROVIDED UNDER MECHANICAL.
E. SADDLES AND TAPERED INSULATION SYMBOLS INDICATE DESIGN INTENT TO SLOPE TO DRAIN. CONTRACTOR SHALL PROVIDE SUBMITTAL DRAWINGS FOR TAPERED INSULATION AND SADDLES TO INSURE POSITIVE SLOPE.
F. THE ROOF CONTRACTOR SHALL PROTECT ALL ROOF DRAINS, SCUPPERS, AND DOWNSPOUTS FROM DEBRIS CREATED DURING DEMOLITION AND CONSTRUCTION. THE ROOF CONTRACTOR SHALL INSPECT AND CLEAR ALL DRAINS, SCUPPERS, AND DOWNSPOUTS PRIOR TO COMPLETION OF WORK AND TO ENSURE THAT THEY ARE FREE OF DEBRIS AND ARE FUNCTIONING PROPERLY.

ROOF PLAN NOTES

X

* MECHANICAL, ELECTRICAL AND PLUMBING INFORMATION SHOWN ON THIS PLAN IS GENERAL IN NATURE. REFER TO P, M AND E DRAWINGS FOR FURTHER INFORMATION AND COORDINATE ALL REQUIRED ROOF OPENINGS OR ROOF MOUNTED EQUIPMENT.

1. ROOF TYPE A: MEMBRANE ROOFING (ADHERED) ON 1/4" COVER BOARD ON ROOF INSULATION ON VAPOR RETARDER ON METAL DECK
2. ROOF TYPE B: MEMBRANE ROOFING (ADHERED) ON 1/4" COVER BOARD ON TAPERED ROOF INSULATION ON VAPOR RETARDER ON METAL DECK
3. ROOF EXPANSION JOINT - SEE 3 A2.02

ROOF PLAN SYMBOL LEGEND

NOTE: SEE SHEET A2.02 FOR TYPICAL ROOF DETAILS

RD	INDICATES ROOF DRAIN SUMP PAN. (FLASH IN ACCORDANCE WITH ROOF MEMBRANE MANUFACTURER'S RECOMMENDATION.)
OD	INDICATES ROOF OVERFLOW DRAIN. (FLASH IN ACCORDANCE WITH ROOF MEMBRANE MANUFACTURER'S RECOMMENDATION.)
VS	INDICATES VENT STACK
EF	INDICATES EXHAUST FAN
	INDICATES ROOF SADDLE - REFER TO PROJECT MANUAL.

ELEVATIONS GENERAL NOTES

A. HEADER COURSES TO ALIGN WITH EXISTING.
B. FOR TYPICAL MASONRY JOINTS FOR EXTERIOR WALLS AND OPENINGS SEE SHEET A1.03

Elm Road Elementary School - Classroom Addition

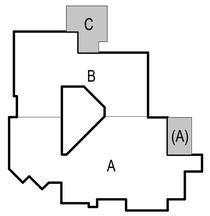
59400 ELM ROAD,
MISHAWAKA, IN. 46544

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 EAST NEW YORK ST. SUITE 300 INDIANAPOLIS



KEY PLAN

PLAN NORTH

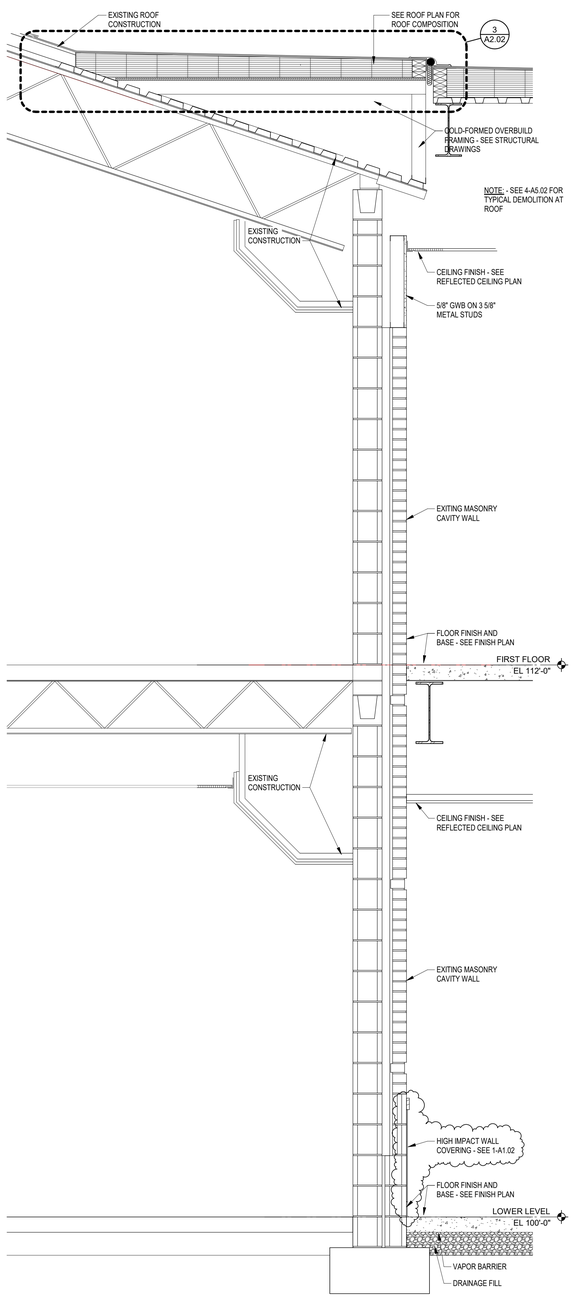
PROJECT MANAGER: MKS
DRAWN BY: RLG
PROJECT NUMBER: 223211.00
PROJECT ISSUE DATE: 04-10-2025

REV. NO.	DESCRIPTION	DATE
2	Addendum #2	6/25/2025

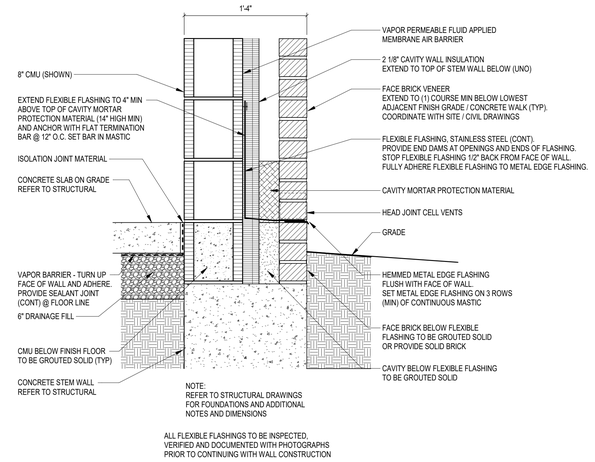
ROOF PLAN, ELEVATIONS AND DETAILS

A2.01

C:\Users\rgambill\Documents\2023_Arch_Elm Road_Addition 223211.00_rgambill.rvt
6/25/2025 12:31:31 PM

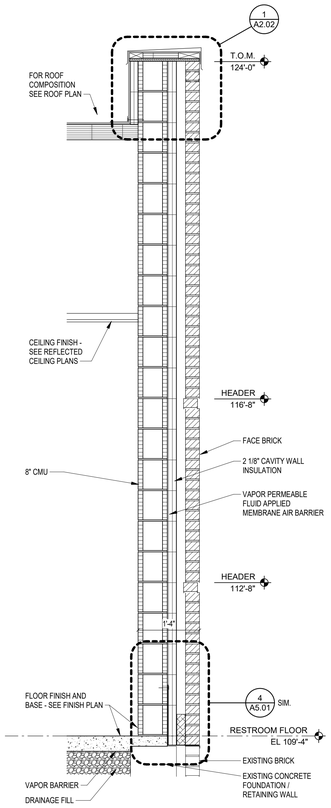


5 SECTION



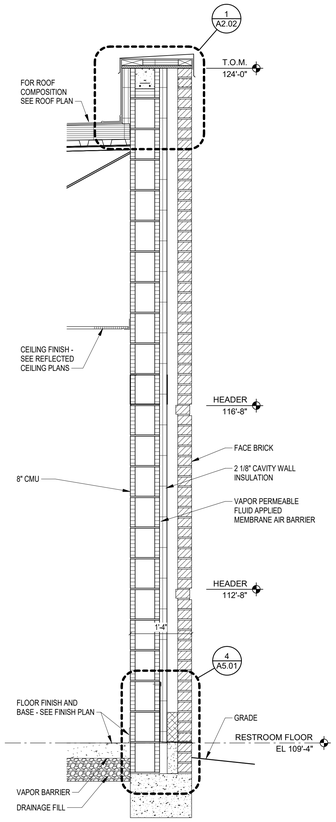
4 BASE FLASHING

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



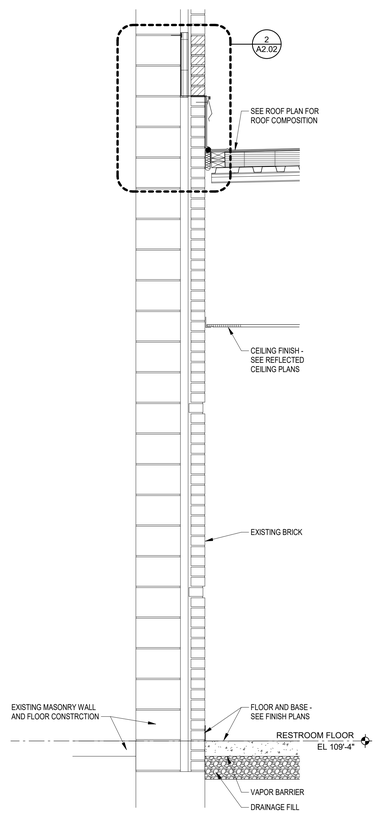
3 SECTION

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



2 Section 11

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



1 Section 10

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

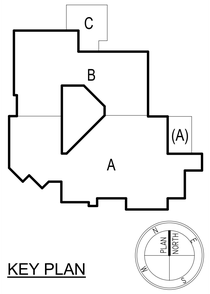
Elm Road Elementary School - Classroom Addition

59400 ELM ROAD,
MISHAWAKA, IN. 46544

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY
317-848-0966 WWW.FHAI.COM
350 EAST NEW YORK ST. SUITE 300 INDIANAPOLIS



KEY PLAN

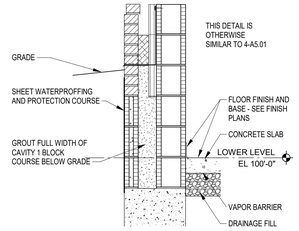
PROJECT MANAGER: MKS
DRAWN BY: RLG
PROJECT NUMBER: 223211.00
PROJECT ISSUE DATE: 04-10-2025

REV. NO.	DESCRIPTION	DATE
2	Addendum #2	6/25/2025

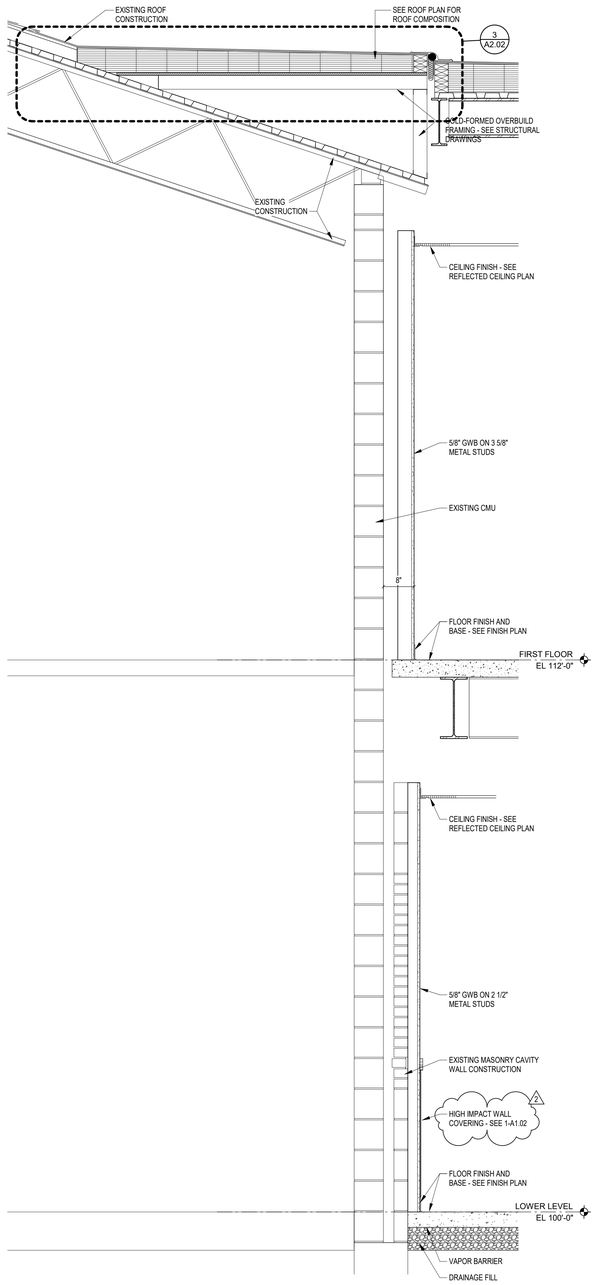
WALL SECTIONS

A5.01

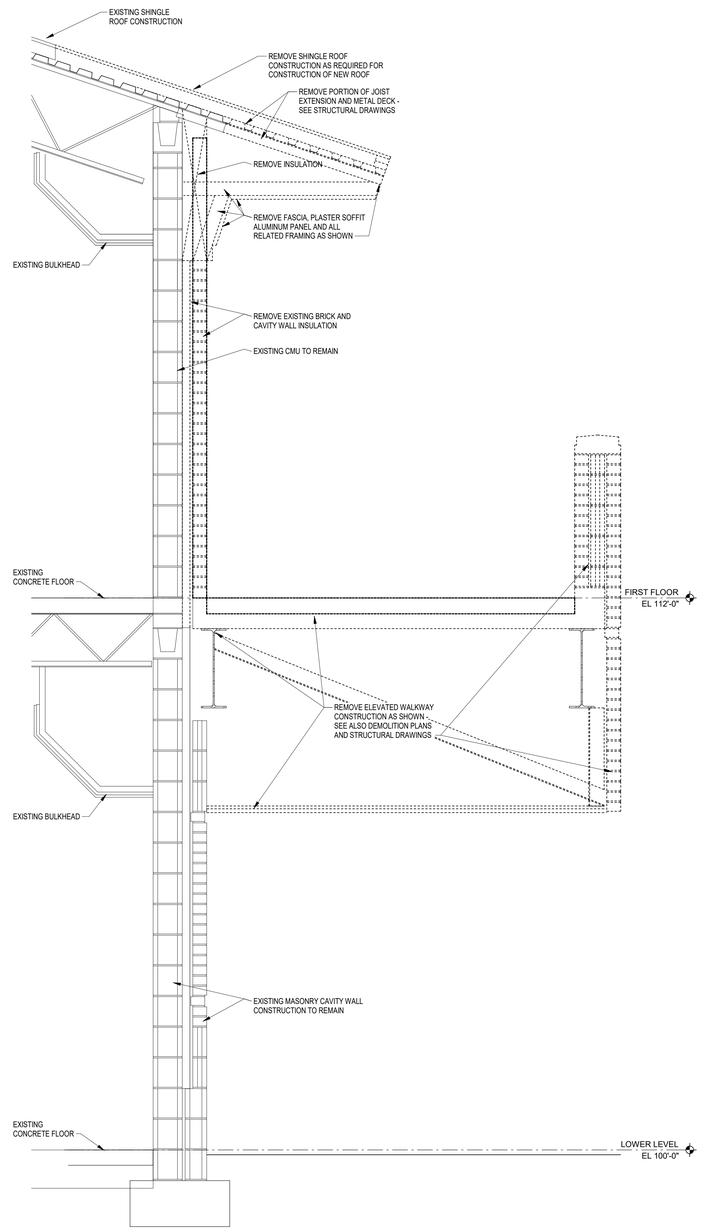
C:\Users\rgambill\Documents\2023_Arch_Elm Road_Addition 223211.00_rgambill.rvt
6/25/2025 12:01:37 PM



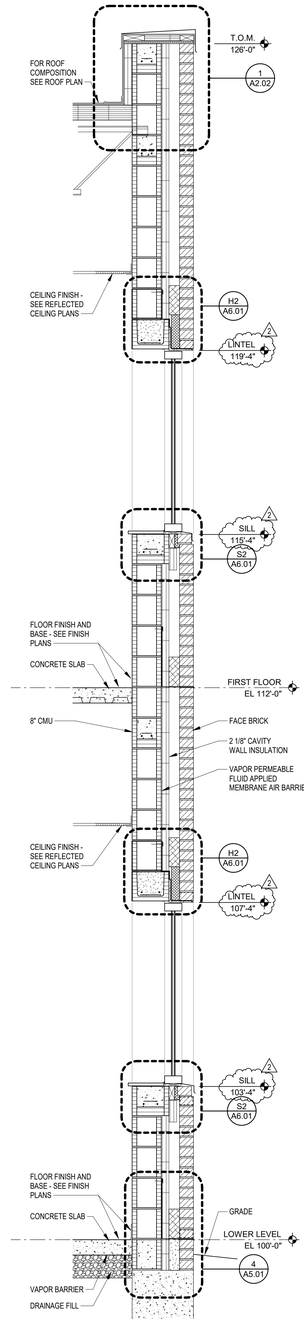
6 SECTION
SCALE: 3/4" = 1'-0"



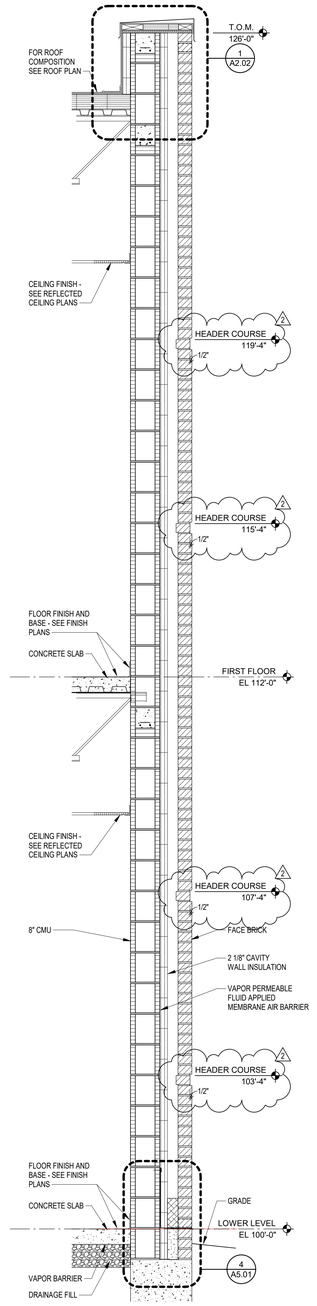
5 Section 9
SCALE: 3/4" = 1'-0"



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



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



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

Elm Road Elementary School - Classroom Addition

59400 ELM ROAD,
MISHAWAKA, IN. 46544

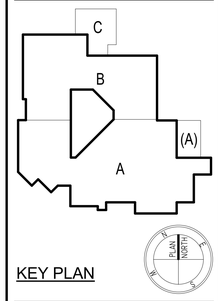
PENN HARRIS MADISON SCHOOL CORPORATION

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 EAST NEW YORK ST. SUITE 300 INDIANAPOLIS



KEY PLAN

PROJECT MANAGER: MKS
DRAWN BY: RLG
PROJECT NUMBER: 223211.00
PROJECT ISSUE DATE: 04-10-2025

REV. NO.	DESCRIPTION	DATE
2	Addendum #2	6/25/2025

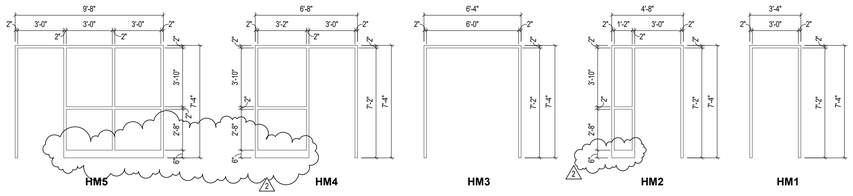
WALL SECTIONS

A5.02

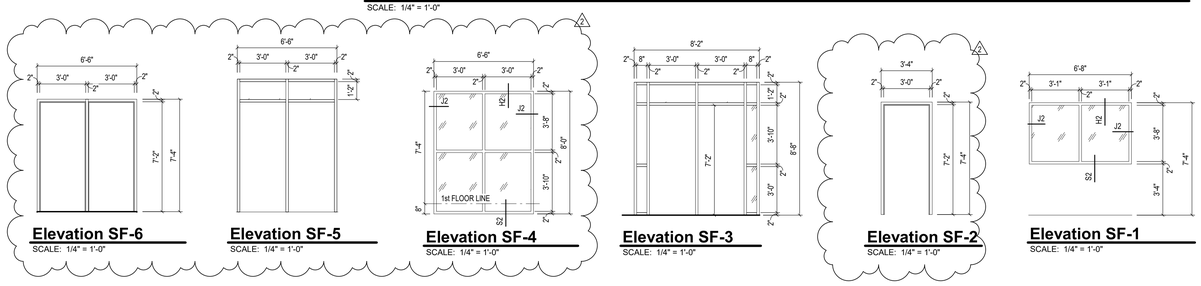
C:\Users\rgamboli\Documents\2023_Arch_Elm Road_Addition 223211.00_rgamboli.rvt
6/25/2025 12:01:42 PM

DOOR AND FRAME SCHEDULE

DOOR NUMBER	DOORS: DOOR SIZE (WxH)	DOORS: DOOR TYPE	FRAME: FRAME MATERIAL	FRAME: FRAME ELEVATION	FRAME: JAMB DEPTH	FRAME: DETAILS: HEAD	FRAME: DETAILS: JAMB	FRAME: DETAILS: SILL	FIRE RATING IN MINS.	HARDWARE: SET NO.	HARDWARE: KEYSIDE ROOM	STC RATING	REMARKS	DOOR NUMBER
A101	3'-0" x 7'-2"	F FRP	AL	SF-2	4 1/2"	H2	J2	S3		03	EXT			A101
A101A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	H4	J4	-	90	04	A006			A101A
A102	3'-0" x 7'-2"	F FRP	AL	SF-2	4 1/2"	H2	J2	S3		03	EXT			A102
A102A	3'-0" x 7'-2"	F WD	HM	HM1	5 3/4"	H4	J4	-	90	04	A006			A102A
A103	PR 3'-0" x 7'-2"	F WD	HM	HM3	8 3/4"	H1	J1	-		12	A005			A103
A104	3'-0" x 7'-2"	F FRP	AL	SF-2	4 1/2"	H2	J2	S3		07	EXT			A104
A105	3'-0" x 7'-2"	F FRP	AL	SF-6	4 1/2"	H2	J2	S3		15	EXT		ELECTRONIC ACCESS	A105
A105A	3'-0" x 7'-2"	F FRP	AL	SF-6	4 1/2"	H2	J2	S3		17	EXT			A105A
A105B	PR 3'-0" x 7'-2"	F WD	HM	HM3	5 3/4"	H4	J4	-	90	01	A006			A105B
C001	PR 3'-0" x 7'-2"	N1 WD	HM	HM3	5 3/4"	H3	J3	-	90	20	C001			C001
C002	3'-0" x 7'-2"	F WD	HM	HM4	8 3/4"	H1	J1	S1		05	C001			C002
C003	3'-0" x 7'-2"	F WD	HM	HM2	8 3/4"	H1	J1	S1		06	C001			C003
C004	3'-0" x 7'-2"	F WD	HM	HM1	8 3/4"	H1	J1	-		11	C003			C004
C005	3'-0" x 7'-2"	FGAL2	AL	SF-3	4 1/2"	H2	J2	S3,S4		14	EXT		ELECTRONIC ACCESS	C005
C005A	3'-0" x 7'-2"	FGAL2	AL	SF-3	4 1/2"	H2	J2	S3,S4		16	EXT			C005A
C101	PR 3'-0" x 7'-2"	N1 WD	HM	HM3	5 3/4"	H3	J3	-	90	20	C101			C101
C102	3'-0" x 7'-2"	F WD	HM	HM4	8 3/4"	H1	J1	S1		05	C101			C102
C103	3'-0" x 7'-2"	F WD	HM	HM2	8 3/4"	H1	J1	S1		05	C101			C103
C104	3'-0" x 7'-2"	F WD	HM	HM5	8 3/4"	H1	J1	S1		05	C101			C104
CS1-0	3'-0" x 7'-2"	FGAL2	AL	SF-5	4 1/2"	H2	J2	S3		15	EXT		ELECTRONIC ACCESS	CS1-0
CS1-0A	3'-0" x 7'-2"	FGAL2	AL	SF-5	4 1/2"	H2	J2	S3		17	EXT			CS1-0A



HM FRAME ELEVATIONS
SCALE: 1/4" = 1'-0"



Elevation SF-6
SCALE: 1/4" = 1'-0"

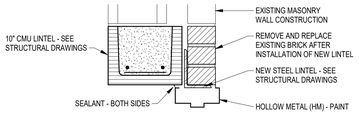
Elevation SF-5
SCALE: 1/4" = 1'-0"

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

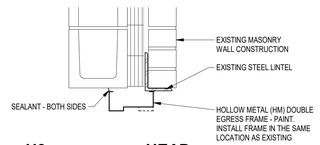
Elevation SF-3
SCALE: 1/4" = 1'-0"

Elevation SF-2
SCALE: 1/4" = 1'-0"

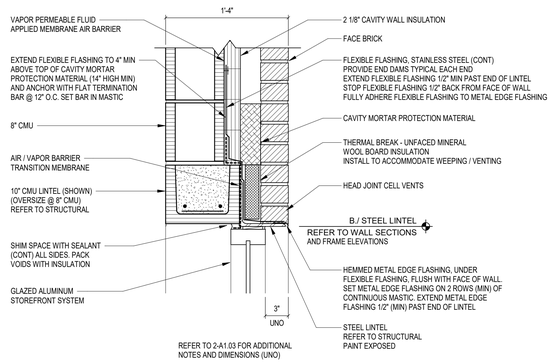
Elevation SF-1
SCALE: 1/4" = 1'-0"



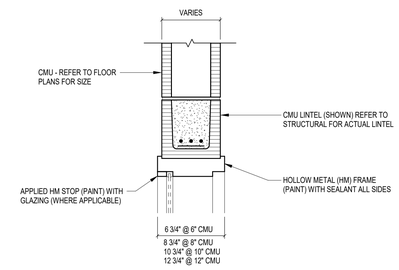
H4 HEAD
SCALE: 1 1/2" = 1'-0"



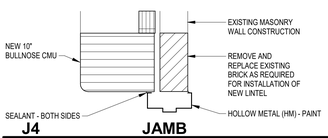
H3 HEAD
SCALE: 1 1/2" = 1'-0"



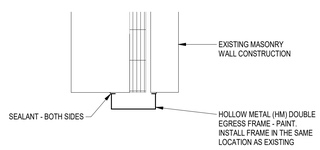
H2 HEAD
SCALE: 1 1/2" = 1'-0"



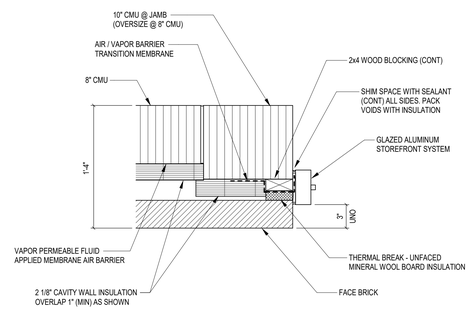
H1 HEAD
SCALE: 1 1/2" = 1'-0"



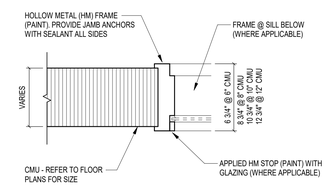
J4 JAMB
SCALE: 1 1/2" = 1'-0"



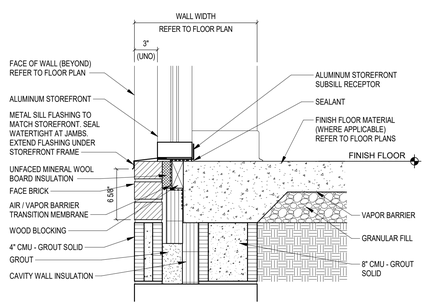
J3 JAMB
SCALE: 1 1/2" = 1'-0"



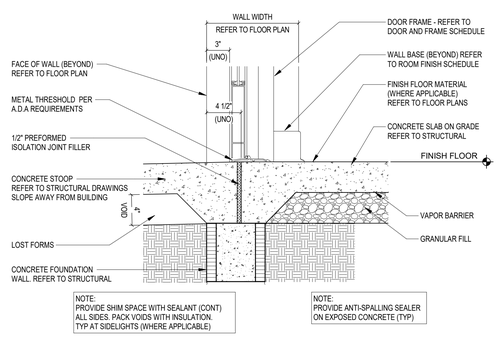
J2 JAMB
SCALE: 1 1/2" = 1'-0"



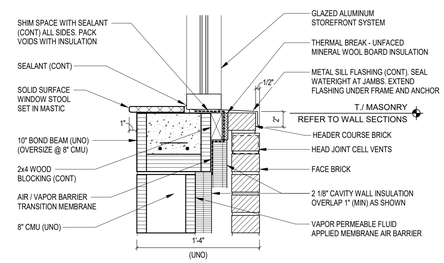
J1 JAMB
SCALE: 1 1/2" = 1'-0"



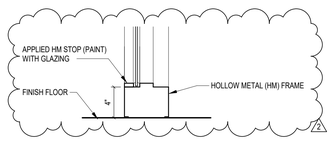
S4 SILL (AL SIDELIGHTS)
SCALE: 1 1/2" = 1'-0"



S3 CONCRETE STOOP
SCALE: 1 1/2" = 1'-0"



S2 SILL
SCALE: 1 1/2" = 1'-0"



S1 SILL
SCALE: 1 1/2" = 1'-0"

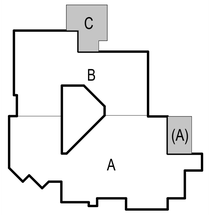
Elm Road Elementary School - Classroom Addition

59400 ELM ROAD,
MISHAWAKA, IN. 46544

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY
317-848-0966 WWW.FHAI.COM
350 EAST NEW YORK ST. SUITE 300 INDIANAPOLIS



KEY PLAN

PLAN NORTH

PAUL A. MILLER REGISTERED No. AR13800161 STATE OF INDIANA ARCHITECT

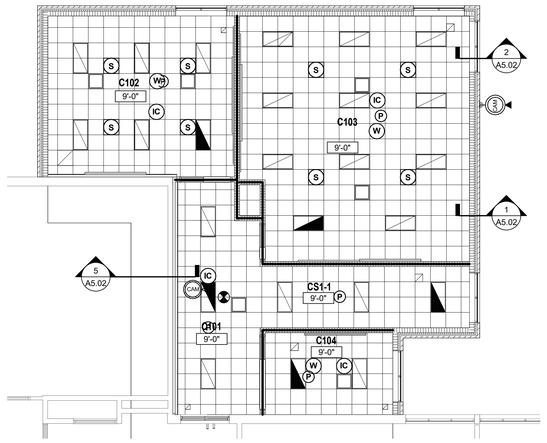
PROJECT MANAGER: MKS
DRAWN BY: RLG
PROJECT NUMBER: 223211.00
PROJECT ISSUE DATE: 04-10-2025

REV. NO.	DESCRIPTION	DATE
2	Addendum #2	6/25/2025

DOOR AND WINDOW DETAILS

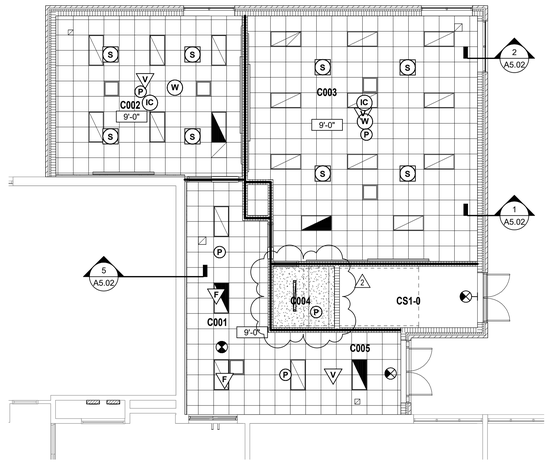
A6.01

C:\Users\rgarrisb\Documents\2023_Arch_Elm Road_Addition 223211.00_rgarrisb.rvt
6/25/2025 12:01:50 PM



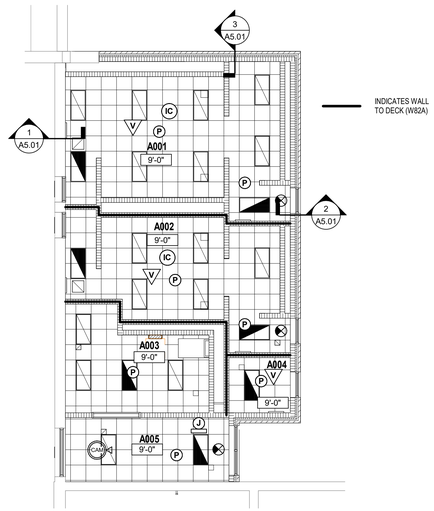
UNIT C - FIRST FLOOR - REFLECTED CEILING PLAN

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



UNIT C LOWER LEVEL - REFLECTED CEILING PLAN

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



UNIT A - REFLECTED CEILING PLAN

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

REFLECTED CEILING PLAN LEGEND

A. NEW CEILINGS ARE TO MATCH THE HEIGHT OF THE EXISTING CEILING IT IS REPLACING.
B. SLOPED CEILINGS ARE TO MATCH HEIGHT AND SLOPE OF EXISTING CEILINGS
C. ALL CEILING MOUNTED EQUIPMENT AND DEVICES ARE TO BE REMOVED AND REINSTALLED AFTER INSTALLATION OF NEW CEILING.
D. REMOVE, CLEAN AND REINSTALL MECHANICAL GRILLES, DIFFUSERS AND VENTS

REFLECTED CEILING PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

1. ACCENT PAINT SLOPED PORTION OF BULKHEAD AND VERTICAL SURFACE NEXT TO LAY-IN CEILING P-3. SEE 1-A9.01
2. ACCENT PAINT SLOPED PORTION OF BULKHEAD AND VERTICAL SURFACE NEXT TO LAY-IN CEILING P-4. SEE 1-A9.01
3. ACCENT PAINT SLOPED PORTION OF BULKHEAD AND VERTICAL SURFACE NEXT TO LAY-IN CEILING P-5. SEE 1-A9.01

REFLECTED CEILING PLAN LEGEND

9'-0" — INDICATES ACOUSTIC PANEL CEILING TYPE AND HEIGHT. REFER TO PROJECT MANUAL FOR "TYPE"

LIGHT - REFER TO ELECTRICAL DRAWINGS

LIGHT - REFER TO ELECTRICAL DRAWINGS

LIGHT - REFER TO ELECTRICAL DRAWINGS

EXSTING GWB CEILING OR BULKHEAD (SHOWN FOR REFERENCE) TO BE PAINTED P-2

ACOUSTICAL CEILING PANEL

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

Elm Road Elementary School - Classroom Addition

59400 ELM ROAD,
MISHAWAKA, IN. 46544

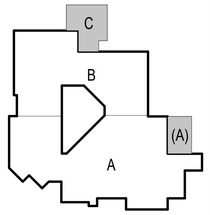
PENN HARRIS MADISON SCHOOL CORPORATION

PENN HARRIS MADISON SCHOOL CORPORATION

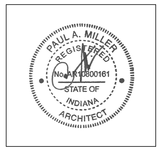
ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 EAST NEW YORK ST. SUITE 300 INDIANAPOLIS



KEY PLAN



PROJECT MANAGER: MKS

DRAWN BY: RLG

PROJECT NUMBER: 223211.00

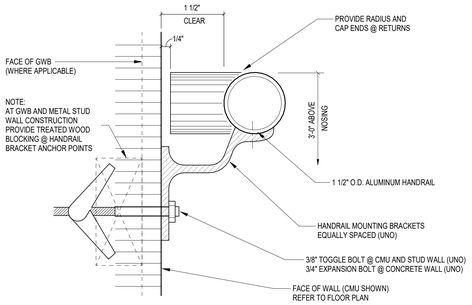
PROJECT ISSUE DATE: 04-10-2025

REV. NO.	DESCRIPTION	DATE
2	Addendum #2	6/25/2025

REFLECTED CEILING PLANS

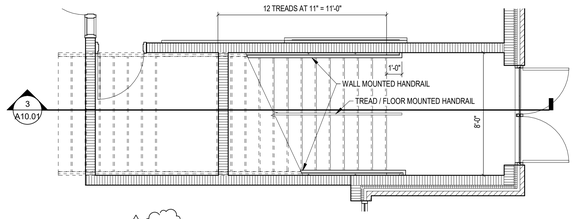
A9.01

C:\Users\rgamboli\Documents\2023_Arch_Elm Road_Addition 223211.00_rgamboli.rvt
6/25/2025 12:02:00 PM



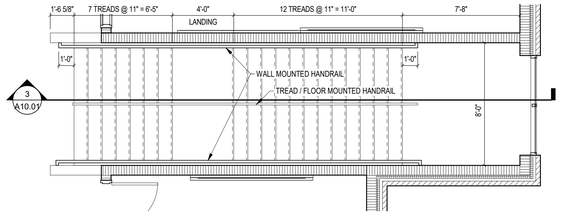
4 HANDRAIL - WALL MOUNT

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



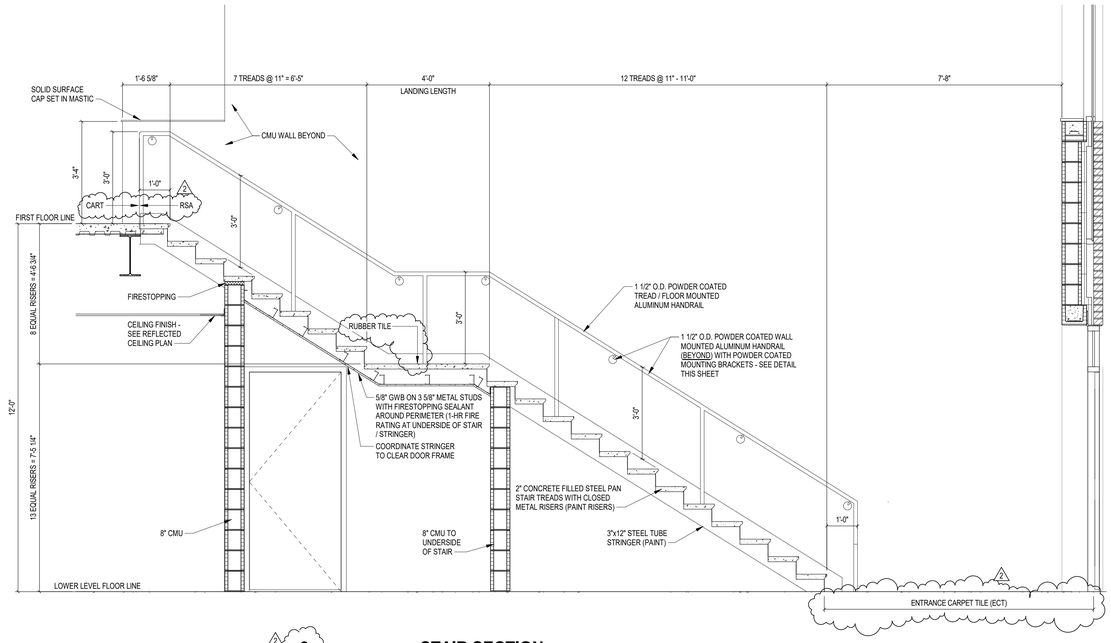
2 LOWER LEVEL - STAIR PLAN

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



1 FIRST FLOOR - STAIR PLAN

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



3 STAIR SECTION

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

Elm Road Elementary School - Classroom Addition

59400 ELM ROAD,
MISHAWAKA, IN. 46544

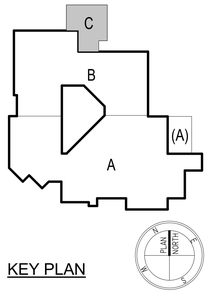
PENN HARRIS MADISON SCHOOL CORPORATION

PENN HARRIS MADISON SCHOOL CORPORATION

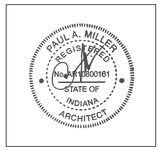
ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 EAST NEW YORK ST. SUITE 300 INDIANAPOLIS



KEY PLAN



PROJECT MANAGER: MKS

DRAWN BY: RLG

PROJECT NUMBER: 223211.00

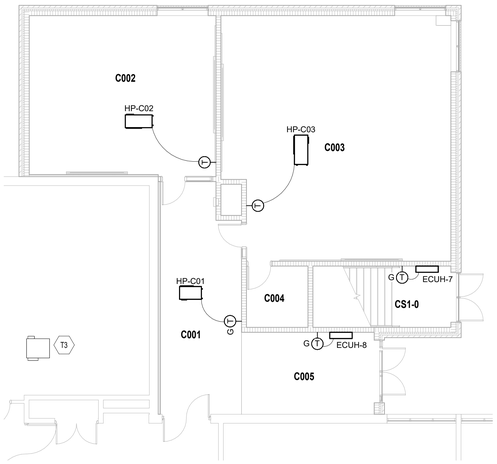
PROJECT ISSUE DATE: 04-10-2025

REV. NO.	DESCRIPTION	DATE
2	Addendum #2	6/25/2025

STAIR DETAILS

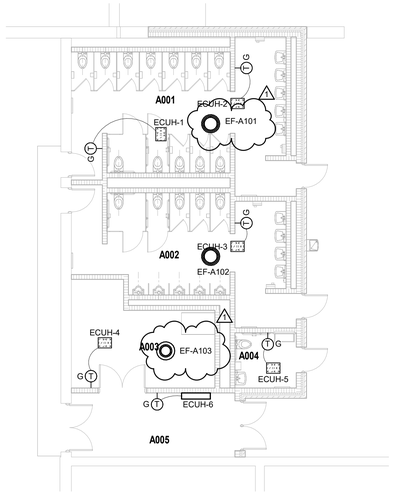
A10.01

C:\Users\rgambill\Documents\2023_Arch_Elm Road_Addition 223211.00_rgambill.rvt
6/25/2025 12:01:21 PM



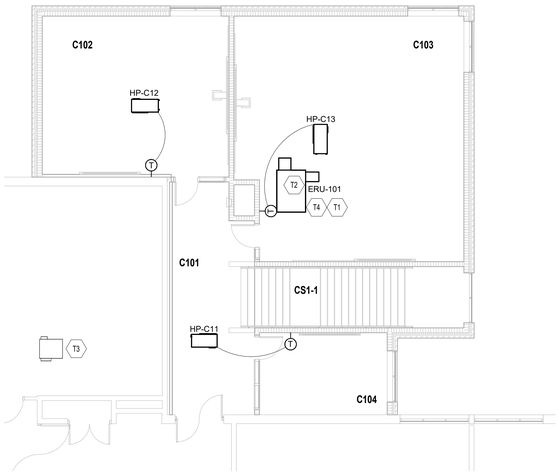
UNIT C - LOWER LEVEL TEMPERATURE CONTROL PLAN

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



UNIT A - RESTROOM FLOOR TEMPERTURE CONTROL PLAN

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



UNIT C - FIRST FLOOR TEMPERATURE CONTROL PLAN

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

ROOM LEGEND

ROOM NO.	ROOM NAME	AREA (SF)
C002	RESOURCE	507 SF
CS1-0	STAIR	144 SF
C005	ENTRY	185 SF
C102	RESOURCE	506 SF
CS1-1	STAIR	218 SF
C103	CLASSROOM	925 SF
C104	CONFERENCE	178 SF
C101	CORRIDOR	305 SF
C003	MUSIC	925 SF
C001	CORRIDOR	305 SF
C004	STORAGE	64 SF
A001	GIRLS	474 SF
A002	BOYS	374 SF
A003	STORAGE	217 SF
A004	TOILET	58 SF
A005	VESTIBULE	178 SF
A006	GYMNASIUM	123 SF

TEMPERATURE CONTROL PLAN GENERAL NOTES

A. ALL THERMOSTATS/SENSORS TO BE MOUNTED WITH BOTTOM AT 44" AFF UNLESS OTHERWISE NOTED. COORDINATE LOCATIONS WITH ALL TRADES.

B. THERMOSTATS FOR WATER SOURCE HEAT PUMP UNITS SHALL DISPLAY SPACE TEMPERATURE, SPACE CARBON DIOXIDE LEVEL AND SPACE RELATIVE HUMIDITY LEVEL IN A ROTATION FASHION ON A LED SCREEN.

C. WHEN (2) OR MORE SENSORS/SWITCHES/DEVICES ARE LOCATED IN THE SAME AREA, PROVIDE BETWEEN 2" AND 4" INCHES OF SPACE BETWEEN EACH DEVICE, NO LESS, NO MORE.

D. NEW EQUIPMENT TO TIE INTO EXISTING BUILDING AUTOMATION SYSTEM. TEMPERATURE CONTROL CONTRACTOR TO VERIFY LOCATION OF EXISTING CONTROLS FOR NEW EQUIPMENT CONNECTIONS.

TEMPERATURE CONTROL PLAN NOTES (X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
T1	OUTSIDE AIR CONTROL DAMPER SHALL BE FACTORY MOUNTED IN ENERGY RECOVERY UNIT. DAMPER OPERATORS PROVIDED BY TEMPERATURE CONTROL CONTRACTOR.
T2	ENERGY RECOVERY WHEEL SHALL BE FACTORY MOUNTED IN ENERGY RECOVERY UNIT. WIRING AND TERMINATIONS BY TEMPERATURE CONTROL CONTRACTOR.
T3	EXISTING ABOVE CEILING HEAT PUMP UNIT TO REMAIN.
T4	TEMPERATURE CONTROL CONTRACTOR SHALL PROVIDE INTERCONNECTING CONTROL WIRING TO ROOFTOP ENERGY RECOVERY UNIT ERU-101.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

Elm Road Elementary School - Classroom Addition

59400 ELM ROAD,
MISHAWAKA, IN. 46544

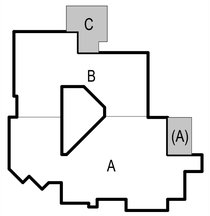
PENN HARRIS MADISON SCHOOL CORPORATION

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 EAST NEW YORK ST. SUITE 300 INDIANAPOLIS



KEY PLAN

PROJECT MANAGER: MKS

DRAWN BY: ECG

PROJECT NUMBER: 223211.00

PROJECT ISSUE DATE: 04/10/2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #2	06/25/25

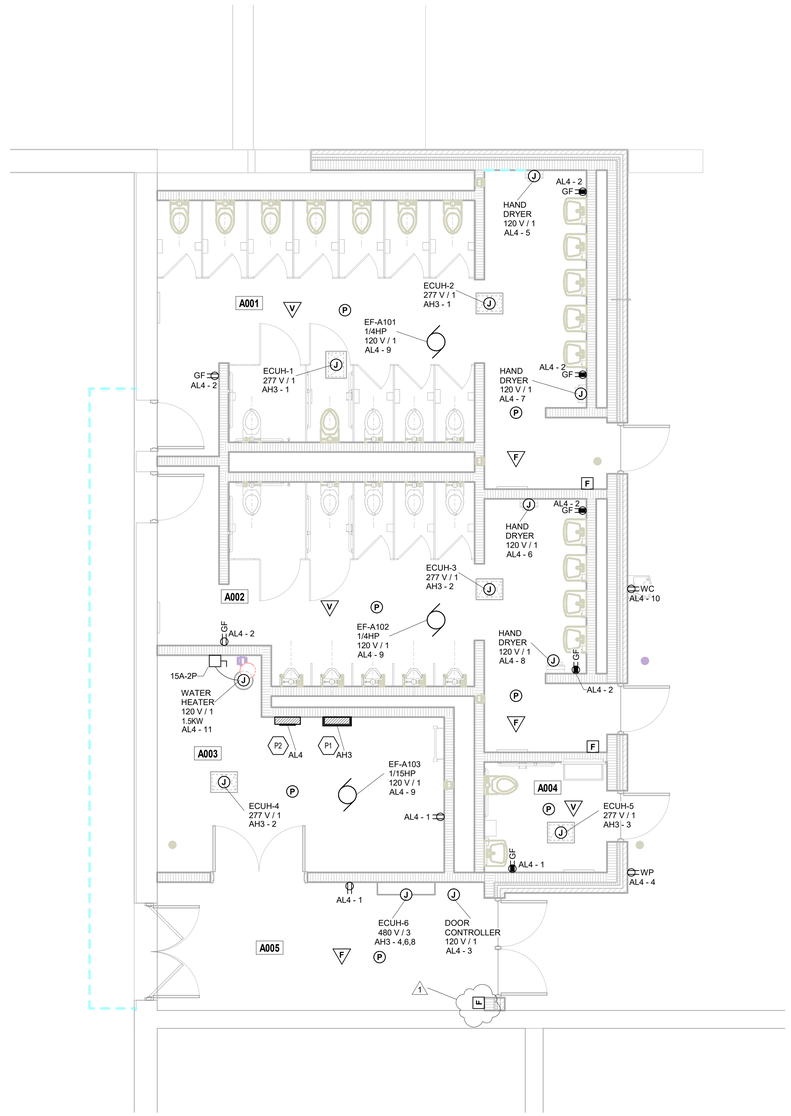
TEMPERATURE CONTROL PLANS

M6.01

\\data1\cdhprofiles$\mhopf\My Documents\2023_Mech_Elm Road_Addition 223211.00_mhopfAYMJQ.rvt
6/24/2025 8:31:14 AM

UNIT A - RESTROOM LIGHTING PLAN

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



UNIT A - ENLARGED RESTROOM POWER AND SYSTEMS PLAN

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

ROOM LEGEND

ROOM NO.	ROOM NAME	AREA (SF)
A001	GIRLS	474 SF
A002	BOYS	374 SF
A003	STORAGE	217 SF
A004	TOILET	58 SF
A005	VESTIBULE	178 SF
A006	GYMNASIUM	123 SF

LIGHTING PLAN GENERAL NOTES

1. GENERATOR TRANSFER DEVICE TO TAKE FIXTURE TO 100% IN EMERGENCY CONDITION.
2. FINALCONNECTION TO RECESSED LUMINAIRES SHALL BE WITH FLEXIBLE METALLIC CONDUIT, MC CABLE OR MANUFACTURED WIRING SYSTEM.
3. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATION OF LUMINAIRES. COORDINATE LOCATION OF LUMINAIRES, LOUDSPEAKERS, DIFFUSERS, GRILLES, AND OTHER CEILING INSTALLED ELEMENTS WITH THEIR RESPECTIVE INSTALLERS.
4. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN AND ROOM FINISH SCHEDULE TO DETERMINE PROPER TYPE OF LUMINAIRE TRIM REQUIRED FOR CEILING TYPE PRIOR TO ORDERING LUMINAIRES. PROVIDE LUMINAIRES COMPATIBLE WITH CEILING TYPE.
5. RECESSED LUMINAIRE IN GRID CEILING SYSTEMS SHALL BE PROVIDED WITH SEISMIC CLIPS OR PROVIDE ATTACHMENT TO CEILING GRID SYSTEM AND SUPPORTED PER PROJECT MANUAL AND DETAIL **"2/E1.02"**.
6. WHERE TWO SWITCHES ARE SHOWN ON PLAN CONNECTED TO THE SAME LIGHT FIXTURE, CONTRACTOR SHALL WIRE TO PROVIDE MULTI-LEVEL LIGHTING. ONE SWITCH SHALL ENERGIZE THE INBOARD LAMPS AND ONE SWITCH SHALL ENERGIZE THE OUTBOARD LAMPS. ALL ROOMS SHALL BE WIRED THE SAME.
7. LUMINAIRE TYPE IS SHOWN ONLY ONCE, AS "TYP." IN EVERY ROOM. PROVIDE SAME TYPE OF LUMINAIRE THROUGH-OUT SAME ROOM UNLESS OTHERWISE INDICATED.
8. PROVIDE NO. 10 AWG, MINIMUM, CONDUCTORS FOR EXIT SIGNS AND SECURITY LIGHT CIRCUITS.

POWER PLAN GENERAL NOTES

1. PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR EACH PANELBOARD ADDED OR MODIFIED DURING CONSTRUCTION. FIELD VERIFY EXISTING CIRCUIT INFORMATION WITH OWNER'S ASSISTANCE TO ENSURE FINAL DIRECTORY IS ACCURATE. UNUSED SPARE BREAKERS SHALL BE IN THE OFF POSITION.
2. VIDEO PROJECTOR RECEPTACLE TO BE MOUNTED ABOVE WALL MOUNTED PROJECTOR BRACKET, 96" A.F.F. U/NO.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS. SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.
4. LABEL EACH RECEPTACLE WITH THE PANEL NAME AND CIRCUIT NUMBER ON THE FACE OF EACH COVER PLATE WITH A TYPED LAMINATED LABEL.
5. PROVIDE "GFCI PROTECTED" LABEL ON COVER PLATE FOR ANY GFCI PROTECTED DEVICE.
6. CONTRACTOR SHALL INCREASE CIRCUIT CONDUCTOR SIZE TO COMPENSATE FOR VOLTAGE DROP DUE TO EXCESSIVE CIRCUIT LENGTHS. IN NO CASE SHALL VOLTAGE DROP EXCEED NFPA 70 (N.E.C.) REQUIREMENTS.
7. REFER TO MECHANICAL PLANS FOR LOCATION OF MECHANICAL EQUIPMENT. LOCATE DISCONNECT SWITCHES PER NEC.
8. REFER TO "CONTROL SCHEMATICS" MECHANICAL DRAWINGS FOR ADDITIONAL CONTROL WIRING AND CONTROL CONNECTIONS.
9. ALL DEVICES, EQUIPMENT, FIXTURES, AND THE LIKE, SHALL BE BONDED WITH A PROPERLY SIZED EQUIPMENT GROUNDING CONDUCTOR. MAINTAIN MECHANICAL/ELECTRICAL BONDS OF METALLIC RACEWAY SYSTEM.

FIRE ALARM PLAN GENERAL NOTES

1. PROVIDE FIRE ALARM DEVICES THAT ARE COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM IN THE BUILDING.
2. CONNECT ALL NEW FIRE ALARM DEVICES TO NEAREST EXISTING FIRE ALARM NOTIFICATION APPLIANCE CIRCUIT.

ELECTRICAL PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

SHEET KEYNOTES

L1	CONNECT NEW LIGHT FIXTURES IN THIS SPACE TO INDICATED CIRCUIT. PROVIDE NEW 20A/1P CIRCUIT BREAKER. UPDATE PANEL DIRECTORY.
L2	CONNECT NEW EMERGENCY LIGHT FIXTURE TO NEAREST EXISTING EMERGENCY LIGHTING CIRCUIT.
P1	CONNECT NEW 480/277V PANEL TO EXISTING SWITCHBOARD 'MSB'. SEE ONE-LINE DIAGRAM ON SHEET 7.01 FOR MORE INFORMATION.
P2	CONNECT NEW 208/120V PANEL TO EXISTING DISTRIBUTION PANEL 'DP-1'. SEE ONE-LINE DIAGRAM ON SHEET E7.01 FOR MORE INFORMATION.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

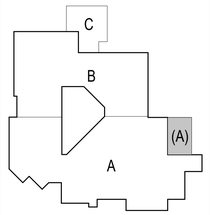
Elm Road Elementary School - Classroom Addition

59400 Elm Rd.
Mishawaka, IN 46544

Penn-Harris Madison School Corporation

ARCHITECT

FANNING HOWEY
317-848-0966 WWW.FHAI.COM
350 E NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

CONSTRUCTION DOCUMENTS

DRAWN BY: ISD
PROJECT NUMBER: 223211.00
PROJECT ISSUE DATE: 04.10.2025

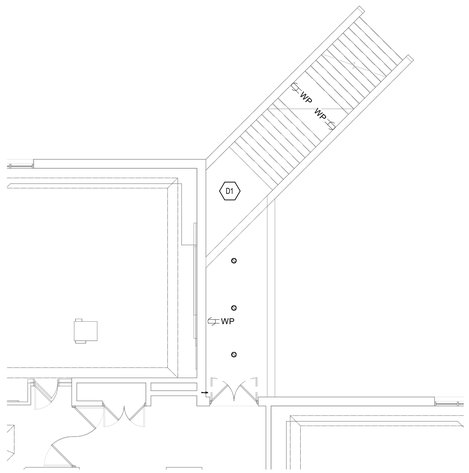
REV. NO.	DESCRIPTION	DATE
1	Addendum #2	06.25.25

ELECTRICAL PLANS - UNIT A

E5.03

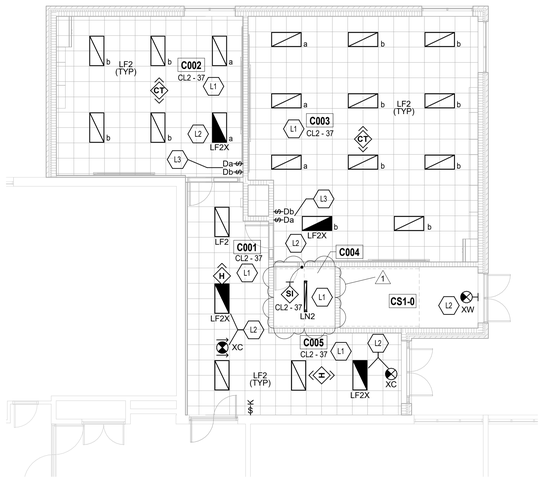
C:\Users\sdickson\Documents\2023_Elec_Elm Road_Addition 223211.00_sdickson\EWS27.rvt
6/25/2025 3:44:21 PM

ROOM LEGEND		
ROOM NO.	ROOM NAME	AREA (SF)
C001	CORRIDOR	305 SF
C002	RESOURCE	507 SF
C003	MUSIC	925 SF
C004	STORAGE	64 SF
C005	ENTRY	185 SF
C101	CORRIDOR	305 SF
C102	RESOURCE	506 SF
C103	CLASSROOM	925 SF
C104	CONFERENCE	178 SF
CS1-0	STAIR	144 SF
CS1-1	STAIR	218 SF



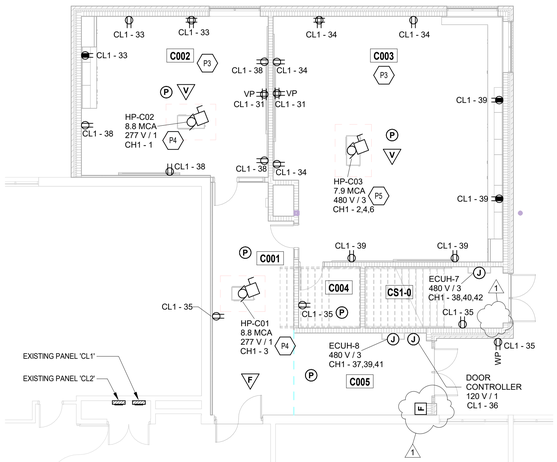
UNIT C - LOWER LEVEL DEMOLITION PLAN

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



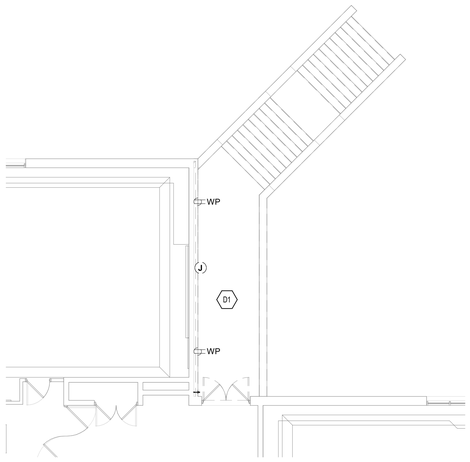
UNIT C - LOWER LEVEL LIGHTING PLAN

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



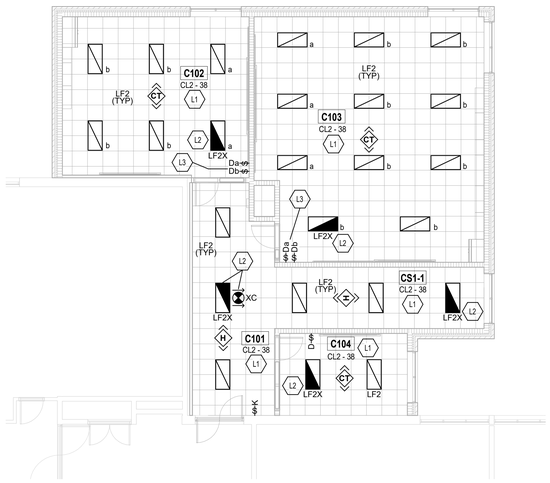
UNIT C - LOWER LEVEL POWER AND SYSTEMS PLAN

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



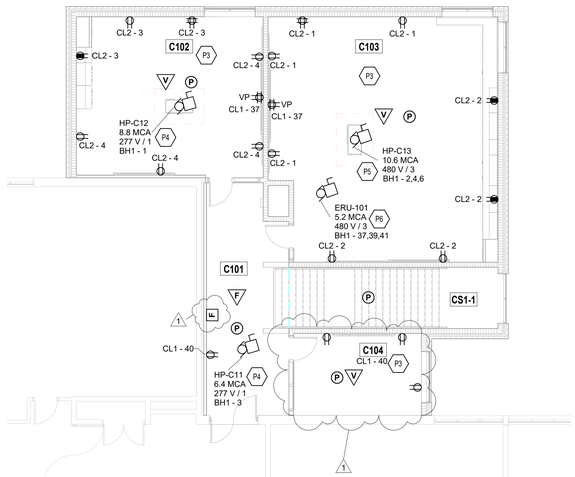
UNIT C - FIRST FLOOR DEMOLITION PLAN

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



UNIT C - FIRST FLOOR LIGHTING PLAN

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



UNIT C - FIRST FLOOR POWER AND SYSTEMS PLAN

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

LIGHTING PLAN GENERAL NOTES

1. GENERATOR TRANSFER DEVICE TO TAKE FIXTURE TO 100% IN EMERGENCY CONDITION.
2. FINAL CONNECTION TO RECESSED LUMINAIRES SHALL BE WITH FLEXIBLE METALLIC CONDUIT, MC CABLE OR MANUFACTURED WIRING SYSTEM.
3. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATION OF LUMINAIRES. COORDINATE LOCATION OF LUMINAIRES, LOUDSPEAKERS, DIFFUSERS, GRILLES, AND OTHER CEILING INSTALLED ELEMENTS WITH THEIR RESPECTIVE INSTALLERS.
4. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN AND ROOM FINISH SCHEDULE TO DETERMINE PROPER TYPE OF LUMINAIRE TRIM REQUIRED FOR CEILING TYPE PRIOR TO ORDERING LUMINAIRES. PROVIDE LUMINAIRES COMPATIBLE WITH CEILING TYPE.
5. RECESSED LUMINAIRE IN GRID CEILING SYSTEMS SHALL BE PROVIDED WITH SEISMIC CLIPS OR PROVIDE ATTACHMENT TO CEILING GRID SYSTEM AND SUPPORTED PER PROJECT MANUAL AND DETAIL **"2/E1.02"**.
6. WHERE TWO SWITCHES ARE SHOWN ON PLAN CONNECTED TO THE SAME LIGHT FIXTURE, CONTRACTOR SHALL WIRE TO PROVIDE MULTI-LEVEL LIGHTING. ONE SWITCH SHALL ENERGIZE THE INBOARD LAMPS AND ONE SWITCH SHALL ENERGIZE THE OUTBOARD LAMPS. ALL ROOMS SHALL BE WIRED THE SAME.
7. LUMINAIRE TYPE IS SHOWN ONLY ONCE, AS "TYP." IN EVERY ROOM. PROVIDE SAME TYPE OF LUMINAIRE THROUGH-OUT SAME ROOM UNLESS OTHERWISE INDICATED.
8. PROVIDE NO. 10 AWG, MINIMUM, CONDUCTORS FOR EXIT SIGNS AND SECURITY LIGHT CIRCUITS.

POWER PLAN GENERAL NOTES

1. PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR EACH PANELBOARD ADDED OR MODIFIED DURING CONSTRUCTION. FIELD VERIFY EXISTING CIRCUIT INFORMATION WITH OWNER'S ASSISTANCE TO ENSURE FINAL DIRECTORY IS ACCURATE. UNUSED SPARE BREAKERS SHALL BE IN THE OFF POSITION.
2. VIDEO PROJECTOR RECEPTACLE TO BE MOUNTED ABOVE WALL MOUNTED PROJECTOR BRACKET, 90" A.F.F. UNO.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS. SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.
4. LABEL EACH RECEPTACLE WITH THE PANEL NAME AND CIRCUIT NUMBER ON THE FACE OF EACH COVER PLATE WITH A TYPED LAMINATED LABEL.
5. PROVIDE "GFCI PROTECTED" LABEL ON COVER PLATE FOR ANY GFCI PROTECTED DEVICE.
6. CONTRACTOR SHALL INCREASE CIRCUIT CONDUCTOR SIZE TO COMPENSATE FOR VOLTAGE DROP DUE TO EXCESSIVE CIRCUIT LENGTHS. IN NO CASE SHALL VOLTAGE DROP EXCEED NFPA 70 (N.E.C.) REQUIREMENTS.
7. REFER TO MECHANICAL PLANS FOR LOCATION OF MECHANICAL EQUIPMENT. LOCATE DISCONNECT SWITCHES PER NEC.
8. REFER TO "CONTROL SCHEMATICS" MECHANICAL DRAWINGS FOR ADDITIONAL CONTROL WIRING AND CONTROL CONNECTIONS.
9. ALL DEVICES, EQUIPMENT, FIXTURES, AND THE LIKE, SHALL BE BONDED WITH A PROPERLY SIZED EQUIPMENT GROUNDING CONDUCTOR. MAINTAIN MECHANICAL/ELECTRICAL BONDS OF METALLIC RACEWAY SYSTEM.

FIRE ALARM PLAN GENERAL NOTES

1. PROVIDE FIRE ALARM DEVICES THAT ARE COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM IN THE BUILDING.
2. CONNECT ALL NEW FIRE ALARM DEVICES TO NEAREST EXISTING FIRE ALARM NOTIFICATION APPLIANCE CIRCUIT.

ELECTRICAL PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

SHEET KEYNOTES	
D1	REMOVE ALL EXISTING RECEPTACLES, LIGHTS, CONDUIT, WIRING, SNOW MAT AND RELATED ACCESSORIER, AND ANY OTHER ELECTRICAL EQUIPMENT FROM AREA OF ADDITION. REMOVE CONDUIT AND WIRING BACK TO EXISTING TO REMAIN.
L1	CONNECT NEW LIGHT FIXTURES IN THIS SPACE TO INDICATED CIRCUIT. PROVIDE NEW 20A/1P CIRCUIT BREAKER. UPDATE PANEL DIRECTORY.
L2	CONNECT NEW EMERGENCY LIGHT FIXTURE TO NEAREST EXISTING EMERGENCY LIGHTING CIRCUIT.
L3	CONNECT EACH DIMMER TO FIXTURES WITH CORRESPONDING LABEL (a/b).
P3	CONNECT RECEPTACLES IN THIS ROOM TO INDICATED CIRCUIT IN EXISTING PANEL. UPDATE PANEL DIRECTORY.
P4	CONNECT NEW HEAT PUMP TO NEW 15A/1P CIRCUIT BREAKER IN INDICATED PANEL WITH 2 # 12, # 12 G IN 3/4" CONDUIT. PROVIDE 15A/1P DISCONNECT SWITCH. NEMA 1 ENCLOSURE, MOUNTED TO MECHANICAL UNIT. PROVIDE FINAL CONNECTION TO HEAT PUMP THROUGH DISCONNECT SWITCH. UPDATE PANEL DIRECTORY.
P5	CONNECT NEW HEAT PUMP TO NEW 15A/3P CIRCUIT BREAKER IN INDICATED PANEL WITH 4 # 12, # 12 G IN 3/4" CONDUIT. PROVIDE 15A/3P DISCONNECT SWITCH. NEMA 1 ENCLOSURE, MOUNTED TO MECHANICAL UNIT. PROVIDE FINAL CONNECTION TO PUMP THROUGH DISCONNECT SWITCH. UPDATE PANEL DIRECTORY.
P6	CONNECT ROOFTOP ENERGY RECOVERY UNIT TO NEW 15A/3P CIRCUIT BREAKER IN INDICATED PANEL WITH 3 # 12, # 12 G IN 3/4" CONDUIT. PROVIDE 15A/3P DISCONNECT SWITCH, NEMA 3R ENCLOSURE, MOUNTED TO MECHANICAL UNIT. PROVIDE FINAL CONNECTION TO ENERGY RECOVERY UNIT THROUGH DISCONNECT SWITCH. UPDATE PANEL DIRECTORY.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

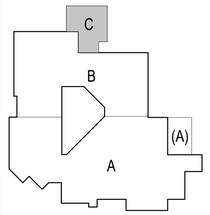
Elm Road Elementary School - Classroom Addition

59400 Elm Rd.
Mishawaka, IN 46544

Penn-Harris Madison School Corporation

ARCHITECT

FANNING HOWEY
317-848-0966 WWW.FHAI.COM
350 E NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



KEY PLAN

CONSTRUCTION DOCUMENTS

DRAWN BY: ISD

PROJECT NUMBER: 223211.00

PROJECT ISSUE DATE: 04.10.2025

REV. NO.	DESCRIPTION	DATE
1	Addendum #2	06.25.25

ELECTRICAL PLANS - UNIT C

E5.04

C:\Users\dickson\Documents\2023_Elec_Elm Road_Addition 223211.00_dicksonEWS2T.rvt
6/25/2025 3:33:45 PM

Branch Panel: AH3

Location: STORAGE A003
Supply From: MSB
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 25,000
Mains Type: MLO
Mains Rating: 100 A
MCB Rating: 100 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Ceiling Heaters Gang Restroom North	20 A	1	3989...	4487...					1	20 A	Ceiling Heaters Gang Restroom South, Storage	2
3	Ceiling Heater Single Restroom	20 A	1			2992...	3333...			3	20 A	Cabinet Heater Corridor	4
5	Restrooms, Storage, Corridor Lighting	20 A	1					425 VA	3333...	--	--	--	6
7	Spare	20 A	1	0 VA	3333...					--	--	--	8
9	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	10
11	Space	--	1					--	--	1	--	Space	12
13	Space	--	1	--	--					1	--	Space	14
15	Space	--	1			--	--			1	--	Space	16
17	Space	--	1					--	--	1	--	Space	18
		Total Load:		11810 VA		6325 VA		3758 VA					
		Total Amps:		44 A		24 A		14 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	21468 VA	100.00%	21468 VA		
Lighting	425 VA	125.00%	531 VA	**Total Conn. Load:**	21893 VA
				Total Est. Demand:	21999 VA
				Total Conn.:	26 A
				Total Est. Demand:	26 A

Notes:

Branch Panel: AL4

Location: STORAGE A003
Supply From: DP-1
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10,000
Mains Type: MCB
Mains Rating: 60 A
MCB Rating: 60 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Single Restroom, Storage, Corridor Recepts.	20 A	1	540 VA	1080...					1	20 A	Gang Restrooms Recepts.	2
3	Door Controller Corridor A004	20 A	1			360 VA	180 VA			1	20 A	Exterior Recept.	4
5	Hand Dryer Gang Restroom North	20 A	1					1464...	1464...	1	20 A	Hand Dryer Gang Restroom South	6
7	Hand Dryer Gang Restroom North	20 A	1	1464...	1464...					1	20 A	Hand Dryer Gang Restroom South	8
9	Restroom Addition Exhaust Fans	20 A	1			1564...	600 VA			1	20 A	Exterior Water Cooler Recept.	10
11	Storage Room Water Heater	20 A	1					1500...	0 VA	1	20 A	Spare	12
13	Spare	20 A	1	0 VA	0 VA					1	20 A	Spare	14
15	Space	--	1			--	--			1	--	Space	16
17	Space	--	1					--	--	1	--	Space	18
		Total Load:		4548 VA		2704 VA		4428 VA					
		Total Amps:		40 A		23 A		39 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	1564 VA	110.66%	1731 VA		
Other	7716 VA	100.00%	7716 VA	**Total Conn. Load:**	11680 VA
Receptacle	2400 VA	100.00%	2400 VA	**Total Est. Demand:**	11847 VA
				Total Conn.:	32 A
				Total Est. Demand:	33 A

Notes:

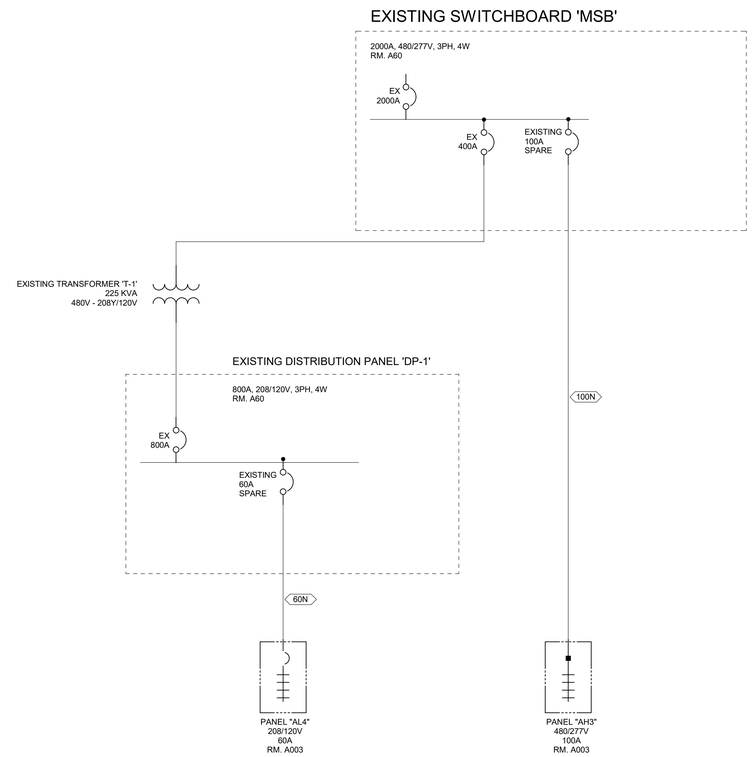
LUMINAIRE SCHEDULE

PLAN TYPE	MANUFACTURER/CATALOG	MOUNTING	LAMPS NO.	LAMPS WATTS	LAMPS TYPE	LAMPS LUMENS	DESCRIPTION	VA LOAD
LF2	LITHONIA CPX SERIES	RECESSED	1	25 W	LED	4000 lm	2 BY 4-FOOT LED FLAT PANEL FIXTURE WITH SATIN LENS, ALUMINUM FRAME, AJDUSTABLE LUMEN OUTPUT, 4000K, 80 CRI, 0-10VDC 10% DIMMING, MVOLT DRIVER.	25 VA
LF2X	LITHONIA CPX SERIES	RECESSED	1	25 W	LED	4000 lm	2 BY 4-FOOT LED FLAT PANEL FIXTURE WITH SATIN LENS, ALUMINUM FRAME, AJDUSTABLE LUMEN OUTPUT, 4000K, 80 CRI, 0-10VDC 10% DIMMING, MVOLT DRIVER, WITH EMERGENCY TRANSFER DEVICE.	25 VA
LN2	LITHONIA CLX SERIES	SURFACE CEILING	1	30 W	LED	3000 lm	4-FOOT LED STRIP LIGHT FIXTURE, FLAT DIFFUSE LENS, WIDE DISTRIBUTION, 4000K, WHITE FINISH, MVOLT DRIVER, WITH TONG HANGER ACCESSORY.	30 VA
XC	LITHONIA SIGNATURE SERIES	SURFACE CEILING	1	3 W	RED LED	0 lm	CAST ALUMINUM AC ONLY EXIT SIGN, SINGLE FACE, DIRECTIONAL ARROWS INDICATED, WHITE HOUSING. REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.	3 VA
XW	LITHONIA SIGNATURE SERIES	SURFACE WALL	1	3 W	RED LED	0 lm	CAST ALUMINUM AC ONLY EXIT SIGN, SINGLE FACE, DIRECTIONAL ARROWS INDICATED, WHITE HOUSING. REFER TO PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.	3 VA

COPPER FEEDER SCHEDULE

SOURCE 2014 NEC T310.15(B)(16), COPPER 75C, (THHW, THW, THWN, XHHW)

X FEEDER LEGEND	NO. OF SETS	CONDUCTOR SIZE PHASE QTY	NEUTRAL (1)	GROUND (1)	CONDUIT SIZE Inches
15	1	3 # 14		#14	3/4
15N	1	3 # 14	#14	#14	3/4
20	1	3 # 12		#12	3/4
20N	1	3 # 12	#12	#12	3/4
30	1	3 # 10		#10	3/4
30N	1	3 # 10	#10	#10	3/4
40	1	3 # 8		#10	3/4
40N	1	3 # 8	#8	#10	3/4
60	1	3 # 6		#10	1
60N	1	3 # 6	#6	#10	1
80	1	3 # 4		#6	1 1/4
80N	1	3 # 4	#4	#8	1 1/4
100	1	3 # 3		#8	1 1/2
100N	1	3 # 3	#3	#8	1 1/2
125	1	3 # 1		#6	2
125N	1	3 # 1	#1	#6	2
150	1	3 # 1/0		#6	2
150N	1	3 # 1/0	#1/0	#6	2
175	1	3 # 2/0		#6	2
175N	1	3 # 2/0	#2/0	#6	2
200	1	3 # 3/0		#6	2
200N	1	3 # 3/0	#3/0	#6	2
225	1	3 # 4/0		#4	2 1/2
225N	1	3 # 4/0	#4/0	#4	2 1/2
250	1	3 # 250		#4	2 1/2
250N	1	3 # 250	#250	#4	2 1/2
300	1	3 # 350		#3	3
300N	1	3 # 350	#350	#3	3
350	1	3 # 500		#3	4
350N	1	3 # 500	#500	#3	4
400	1	3 # 600		#3	4
400N	1	3 # 600	#600	#3	4
500	2	3 # 250		#2	2 1/2
500N	2	3 # 250	#250	#2	2 1/2
600	2	3 # 350		#1	3
600N	2	3 # 350	#350	#1	3
800	2	3 # 600		#1/0	4
800N	2	3 # 600	#600	#1/0	4
1000	3	3 # 400		#2/0	3
1000N	3	3 # 400	#400	#2/0	3
1200	3	3 # 600		#3/0	4
1200N	3	3 # 600	#600	#3/0	4
1600	4	3 # 600		#4/0	4
1600N	4	3 # 600	#600	#4/0	4
2000	5	3 # 600		#250	4
2000N	5	3 # 600	#600	#250	4
2500	6	3 # 600		#350	4
2500N	6	3 # 600	#600	#350	4
3000	7	3 # 600		#400	4
3000N	7	3 # 600	#600	#400	4
3300	8	3 # 600		#400	4
3300N	8	3 # 600	#600	#400	4
3700	9	3 # 600		#400	4
3700N	9	3 # 600	#600	#400	4



ONE-LINE DIAGRAM

NOT TO SCALE

ONE LINE DIAGRAM SYMBOLS

1AL1	MAIN LUG ONLY CIRCUIT BREAKER PANELBOARD, REFER TO E8 SERIES DRAWINGS FOR PANELBOARD SCHEDULES	DM	DIGITAL ELECTRONIC POWER METER		COMBINATION MAGNETIC MOTOR STARTER WITH FUSED SWITCH		FUSED SWITCH IN SWITCHBOARD, 3P UNO		FUSED POTENTIAL TRANSFORMER
		K	KIRK KEY INTERLOCK				DISCONNECT SWITCH IN SWITCHBOARD, 3P UNO		CURRENT TRANSFORMERS, 3 UNO
		M	UTILITY METER			SP G	FUSED BOLTED PRESSURE SWITCH WITH GROUND FAULT AND SINGLE PHASE PROTECTION, 3P UNO		CAPACITOR
2AL1	MAIN BREAKER IN CIRCUIT BREAKER PANELBOARD, REFER TO E8 SERIES DRAWINGS FOR PANELBOARD SCHEDULES	XXXA 5AL1	MAIN BREAKER IN CIRCUIT BREAKER PANELBOARD WITH SUB-FEED BREAKER, REFER TO E8 SERIES DRAWINGS FOR PANELBOARD SCHEDULES		COMBINATION MAGNETIC MOTOR STARTER WITH CIRCUIT BREAKER	E N	TRANSFER SWITCH		EARTH GROUND
							DISCONNECT, 3P UNO	LA	LIGHTNING ARRESTER
3AL1	THROUGH FEED LUGS CIRCUIT BREAKER PANELBOARD, REFER TO E8 SERIES DRAWINGS FOR PANELBOARD SCHEDULES	SPD 6AL1	MAIN BREAKER IN CIRCUIT BREAKER PANELBOARD WITH INTEGRAL BUS CONNECTED SPD, REFER TO E8 SERIES DRAWINGSFOR PANELBOARD SCHEDULES		COMBINATION MAGNETIC MOTOR STARTER WITH MOTOR CIRCUIT PROTECTOR		MOLDED CASE CIRCUIT BREAKER, 3P UNO		PLUG AND RECEPTACLE OR DRAWOUT DEVICE
				VSC	COMBINATION MAGNETIC MOTOR STARTER WITH VARIABLE SPEED CONTROLLER		CIRCUIT BREAKER IN SWITCHBOARD, 3P UNO		POWER TRANSFORMER
							INSULATED CASED POWER CIRCUIT BREAKER WITH L.I.S.G. PROTECTION FEATURES, 3P UNO		
4AL1	MAIN DOUBLE LUG CIRCUIT BREAKER PANELBOARD, REFER TO E8 SERIES DRAWINGS FOR PANELBOARD SCHEDULES	SPD 7AL1	MAIN BREAKER IN CIRCUIT BREAKER PANELBOARD WITH SPD MOUNTED ADJACENT WITH CLOSED NIPPLE, REFER TO E8 SERIES DRAWINGS FOR PANELBOARD SCHEDULES				DRAWOUT CIRCUIT BREAKER, 3P UNO	X	3 PHASE MOTOR. X INDICATES HORSEPOWER OR KILOWATTS
				EO	COMBINATION MAGNETIC MOTOR STARTER WITH ELECTRONIC OVERLOADS	S	SHUNT TRIP OPERATED CIRCUIT BREAKER	CP	CONTROL PANEL FURNISHED UNDER DIVISION 25
								G	GENERATOR

Elm Road Elementary School - Classroom Addition

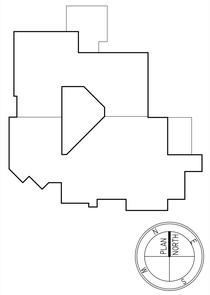
59400 Elm Rd.
Mishawaka, IN 46544

Penn-Harris Madison School Corporation

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E NEW YORK ST STE 300, INDIANAPOLIS, IN 46204



CONSTRUCTION DOCUMENTS

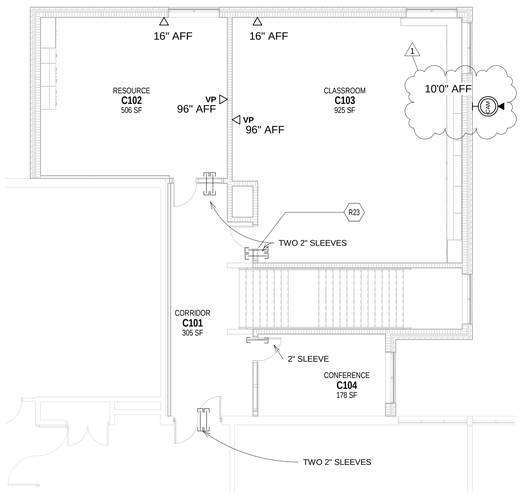
DRAWN BY: ISD
PROJECT NUMBER: 223211.00
PROJECT ISSUE DATE: 04.10.2025

REV. NO.	DESCRIPTION	DATE
1	Addendum #2	06.25.25

SCHEDULES AND ONE-LINE DIAGRAM

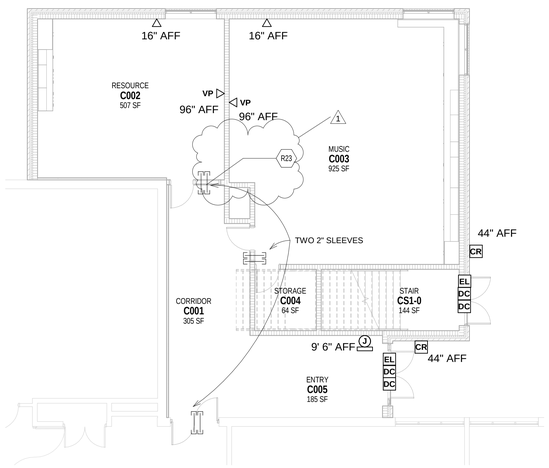
E7.01

C:\Users\dickson\Documents\2023_Elec_Elm Road_Addition 223211.00_dickson\EWSZF.rvt
6/25/2025 3:33:46 PM



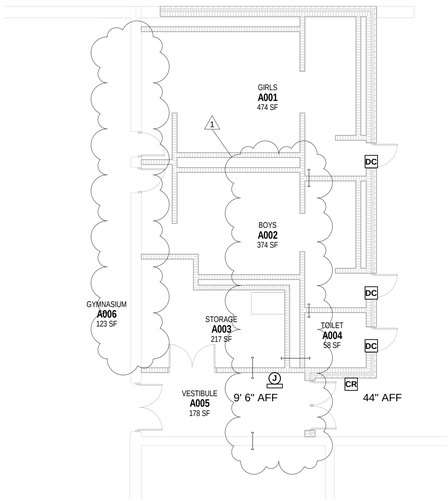
2 Tech Rough-In Plan - UNIT C - FIRST FLOOR

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



3 Tech Rough-In Plan - UNIT C - LOWER LEVEL

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



1 Tech Rough-In Plan - UNIT A - RESTROOM ADDITION

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

ROOM LEGEND

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
FIRST FLOOR			
C101		CORRIDOR	305 SF
C102		RESOURCE	506 SF
C103		CLASSROOM	925 SF
C104		CONFERENCE	178 SF
CS1-1		STAIR	218 SF
LOWER LEVEL			
C001		CORRIDOR	305 SF
C002		RESOURCE	507 SF
C003		MUSIC	925 SF
C004		STORAGE	64 SF
C005		ENTRY	185 SF
CS1-0		STAIR	144 SF
RESTROOM FLOOR			
A001		GIRLS	474 SF
A002		BOYS	374 SF
A003		STORAGE	217 SF
A004		TOILET	58 SF
A005		VESTIBULE	178 SF
A006		GYMNASIUM	123 SF

TECHNOLOGY ROUGH-IN GENERAL NOTES

A. DEVICES SHALL BE INSTALLED AT LOCATIONS SHOWN ON DRAWINGS. LOCATIONS OF DEVICES SHALL BE COORDINATED WITH OTHER ELECTRICAL DEVICES/ CASEWORK/ ARCHITECTURAL FEATURES AND OTHER TRADES PRIOR TO ROUGH-IN. IF RELOCATION OF DEVICES IS REQUIRED DUE TO LACK OF COORDINATION BETWEEN ELECTRICAL DRAWINGS AND OTHER TRADES, ANY ASSOCIATED COSTS SHALL BE RESPONSIBILITY OF ELECTRICAL CONTRACTOR.

ROUGH-IN PLAN NOTES

(X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

#	NOTE
R23	PROVIDE A MINIMUM OF TWO (2) TWO (2) INCH SLEEVES WITH PLASTIC BUSHINGS TO EACH ROOM (UNLESS OTHERWISE NOTED) ABOVE THE DOOR.

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

Elm Road Elementary School - Classroom Addition

59400 ELM ROAD,
MISHAWAKA, IN 46544

PENN HARRIS MADISON SCHOOL CORPORATION

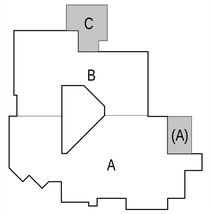
PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM

350 E New York St # 300, Indianapolis, IN 46204



KEY PLAN

CONSTRUCTION DOCUMENTS

PROJECT MANAGER: MS

DRAWN BY: CDT

PROJECT NUMBER: 223211.00

PROJECT ISSUE DATE: 04.10.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #2	6/25/2025

TECHNOLOGY ROUGH-IN PLAN

ET-11

\\data1\cinoprofiles$\cthomas\My Documents\2023_Tech_Elm Road_Addition 223211.00_cthomas\RVK1.rvt
6/23/2025 11:59:48 AM

COMMUNICATIONS ROUGH-IN SYMBOLS

SYMBOL	DESCRIPTION	MH UNO	ROUGH-IN DETAIL #
	COMMUNICATIONS OUTLET. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING. WITH 2 (TWO) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	16"	-
VP	WALL MOUNTED SHORT THROW PROJECTOR LOCATION. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING. WITH 2 (TWO) 1-1/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING. COORDINATE WITH TECHNOLOGY AND ARCHITECTURAL DRAWINGS.	96"	-
W	WALL MOUNTED WIRELESS ACCESS POINT. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	10'-0"	-
W	CEILING MOUNTED WIRELESS ACCESS POINT. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	C	-
	2" CONDUIT SLEEVES BETWEEN WALLS, UNLESS OTHERWISE NOTED	-	-

INTERCOMMUNICATIONS AND PROGRAM SYSTEMS ROUGH-IN SYMBOLS

SYMBOL	DESCRIPTION	MH UNO	ROUGH-IN DETAIL #
IC	CALL-IN SWITCH. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	44"	
VC	VOLUME CONTROL. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	44"	
IC	WALL MOUNTED HORN SPEAKER. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	96"	
IC	METAL SURFACE WALL MOUNTED SPEAKER. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	96"	-

INTRUSION DETECTION ROUGH-IN SYMBOLS

SYMBOL	DESCRIPTION	MH UNO	ROUGH-IN DETAIL #
IDCP	INTRUSION DETECTION PANEL. 2 GANG, 3.5" DEEP BOX WITH 2 (TWO) 1" CONDUIT STUBBED ABOVE. ACCESSIBLE LAY-IN CEILING	-	-
DC	DOOR CONTACT ROUGH-IN	-	-

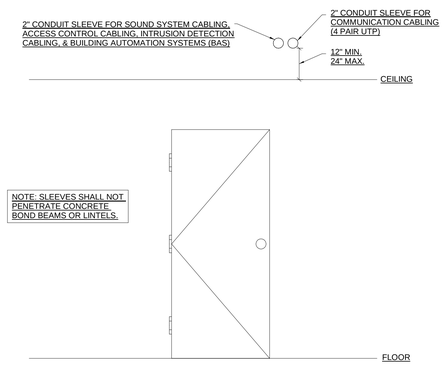
ACCESS CONTROL ROUGH-IN SYMBOLS

SYMBOL	DESCRIPTION	MH UNO	ROUGH-IN DETAIL #
ACP	ACCESS CONTROL PANEL. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING. 2 (TWO) 1" CONDUIT STUBBED ABOVE ACCESSIBLE LAY-IN CEILING WITH PULL STRING	-	-
CR	CARD READER. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING, 1 (ONE) 1" CONDUIT TO JUNCTION BOX ABOVE DOOR	44"	-
EL	ELECTRONIC LATCH. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING, 1 (ONE) 1" CONDUIT TO JUNCTION BOX ABOVE DOOR	-	-
J	24" W x 24" H x 6" D JUNCTION BOX ABOVE DOOR FOR ACCESS CONTROL DOOR CONTROLLER.	ABOVE CLG.	-

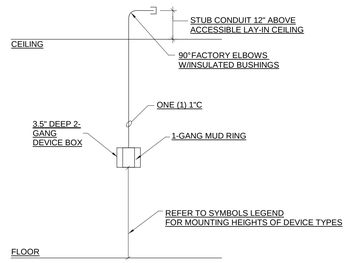
CAMERA SYSTEM ROUGH-IN SYMBOLS

SYMBOL	DESCRIPTION	MH UNO	ROUGH-IN DETAIL #
CAM	WALL MOUNTED CAMERA. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING. 1 (ONE) 1" CONDUIT TO JUNCTION BOX	10' 0"	6

1 N.T.S. **TECHNOLOGY ROUGHIN SYMBOL LEGEND**



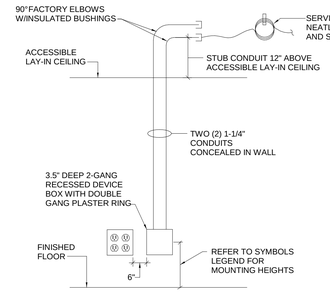
5 N.T.S. **TECHNOLOGY ROUGH-IN REQUIREMENTS FOR CONDUIT SLEEVES**



GENERAL NOTES:

1. PROVIDE BLANK COVERPLATES FOR ALL UNUSED BOXES.
2. PROVIDE PULL STRINGS IN CONDUIT RUNS GREATER THAN 10' IN LENGTH.

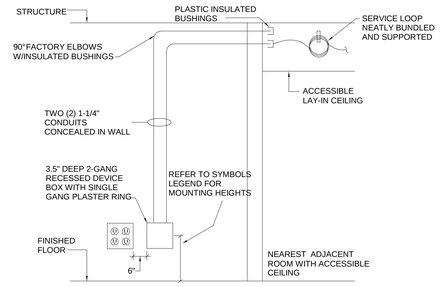
4 N.T.S. **TECHNOLOGY ROUGH-IN REQUIREMENTS 1-GANG WALL BOX - ACCESSIBLE LAY-IN CEILINGS**



ROUGH-IN NOTES:

1. RECEPTACLES ARE SHOWN FOR COORDINATION ONLY. REFER TO ELECTRICAL DRAWINGS FOR QUANTITY, CIRCUITING, MOUNTING, AND ADDITIONAL REQUIREMENTS.
2. PROVIDE PULL STRINGS IN ALL CONDUITS. PULL STRINGS SHALL BE INSTALLED IN EMPTY AND FULL CONDUITS.
3. MOUNTING HEIGHTS TO BE INSTALLED ABOVE COUNTERS OR IN CASEWORK SHALL BE COORDINATED WITH THE ARCHITECT AND GENERAL CONTRACTOR IN THE FIELD PRIOR TO ROUGH-IN.

2-GANG TELECOMMUNICATIONS OUTLET ROUGH-IN DETAIL WITH ACCESSIBLE LAY-IN CEILING

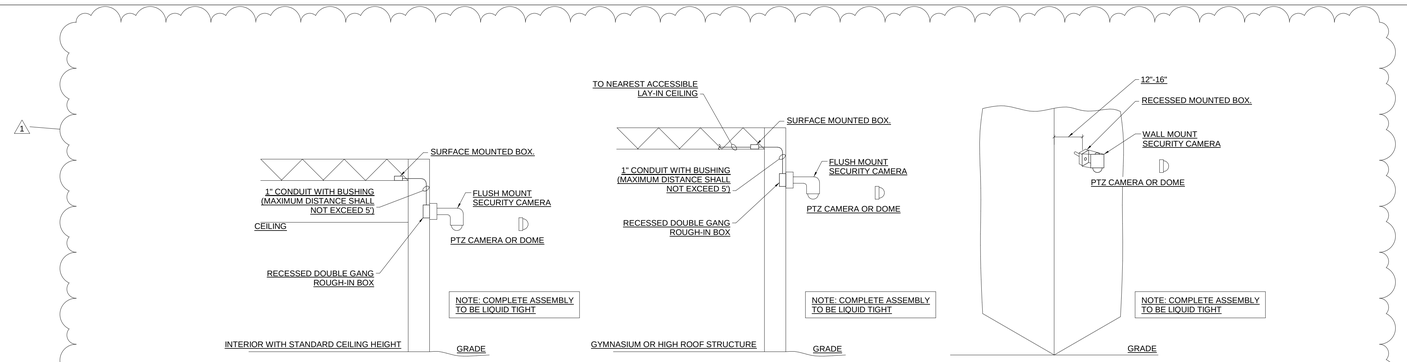


ROUGH-IN NOTES:

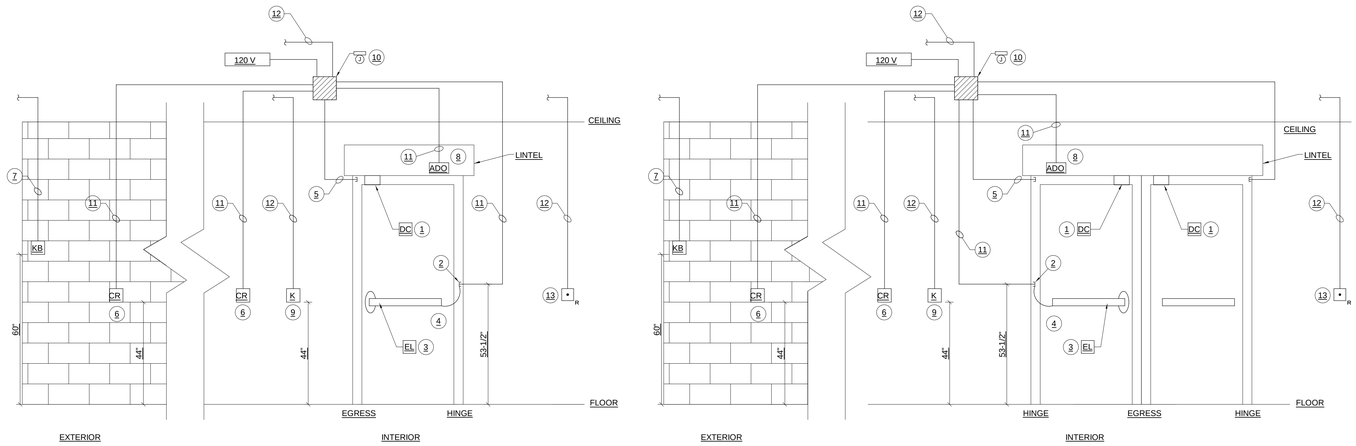
1. RECEPTACLES ARE SHOWN FOR COORDINATION ONLY. REFER TO ELECTRICAL DRAWINGS FOR QUANTITY, CIRCUITING, MOUNTING, AND ADDITIONAL REQUIREMENTS.
2. PROVIDE PULL STRINGS IN ALL CONDUITS. PULL STRINGS SHALL BE INSTALLED IN EMPTY AND FULL CONDUITS.
3. MOUNTING HEIGHTS TO BE INSTALLED ABOVE COUNTERS OR IN CASEWORK SHALL BE COORDINATED WITH THE ARCHITECT AND GENERAL CONTRACTOR IN THE FIELD PRIOR TO ROUGH-IN.

2-GANG TELECOMMUNICATIONS OUTLET ROUGH-IN DETAIL WITH FINISHED CEILING

2 N.T.S. **NEW WALL CONSTRUCTION 2-GANG ROUGH-IN DETAILS**



6 N.T.S. **VIDEO SURVEILLANCE CAMERA ROUGH-IN DETAIL**



SINGLE DOOR ENTRY

DOUBLE DOOR ENTRY

DOOR SECURITY ROUGH-IN LEGEND

1. ROUGH-IN FOR RECESSED MOUNTED DOOR CONTACT.
2. ROUGH-IN FOR THROUGH WIRE HINGE OR ELECTRONIC POWER TRANSFER. THROUGH WIRE HINGE OR ELECTRONIC POWER TRANSFER BY HARDWARE CONTRACTOR. (VERIFY EXACT ROUGH-IN LOCATION WITH DOOR HARDWARE CONTRACTOR.)
3. ELECTRIC LATCH OR RETRACTABLE PANIC EXIT DEVICE. BY HARDWARE CONTRACTOR.
4. ARMORED CABLE LOOP. EXISTING DOOR AND FRAME CONDITION ONLY.
5. 1/2" FLEX CONDUIT IN DOOR FRAME TO SECURITY JUNCTION BOX ABOVE CEILING.
6. 2 GANG JUNCTION BOX, 3 1/2" DEEP, FOR CARD READER.
7. 2 GANG BOX, 3 1/2" DEEP FOR KEY BOX WITH 1" CONDUIT TO NEAREST ACCESSIBLE LAY-IN CEILING.
8. ROUGH-IN FOR AUTOMATIC DOOR OPERATOR (ADO).
9. 2 GANG JUNCTION BOX, 3 1/2" DEEP FOR KEY PAD.
10. HINGED SECURITY JUNCTION BOX (24"X24"X6"). MOUNTED ABOVE CEILING TO HOUSE ACCESS CONTROL DOOR CONTROLLER.
11. 1" CONDUIT TO JUNCTION BOX ABOVE CEILING.
12. 1" CONDUIT TO CABLE TRAY.
13. 1 GANG JUNCTION BOX, 3 1/2" DEEP. FOR PUSH TO RELEASE BUTTON AT RECEPTION DESK.

3 N.T.S. **DOOR SECURITY HARDWARE ROUGH-IN DETAILS**

NOTE: TYPICAL DOOR ROUGH-IN DETAILS. REFER TO FLOOR PLANS FOR EXACT QUANTITIES AND CONFIGURATIONS

Elm Road Elementary School - Classroom Addition

59400 ELM ROAD,
MISHAWAKA, IN 46544

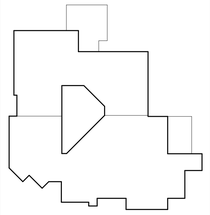
PENN HARRIS MADISON SCHOOL CORPORATION

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E New York St # 300, Indianapolis, IN 46204



PLAN NORTH

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE11000005 STATE OF INDIANA PROFESSIONAL ENGINEER

PROJECT MANAGER: MS
DRAWN BY: CDT
PROJECT NUMBER: 223211.00
PROJECT ISSUE DATE: 04.10.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #2	6/25/2025

TECHNOLOGY ROUGH-IN DETAILS

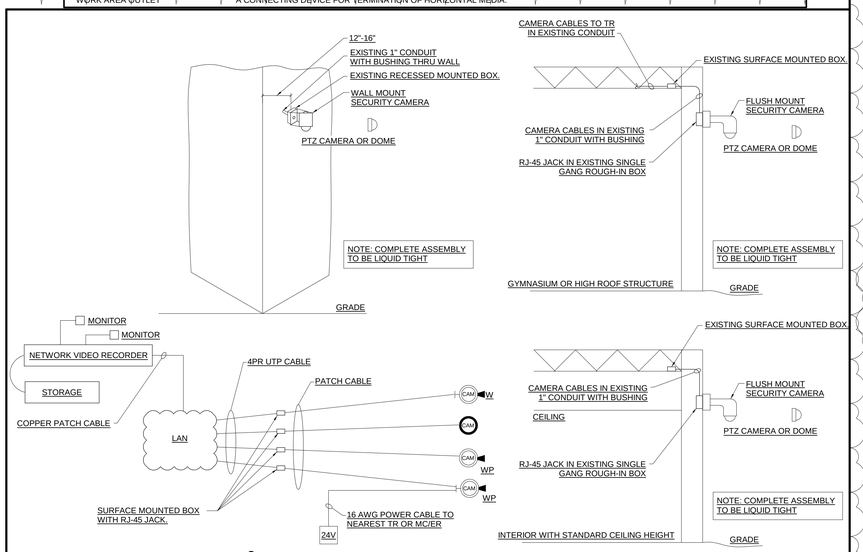
ET-51

DEFINITIONS

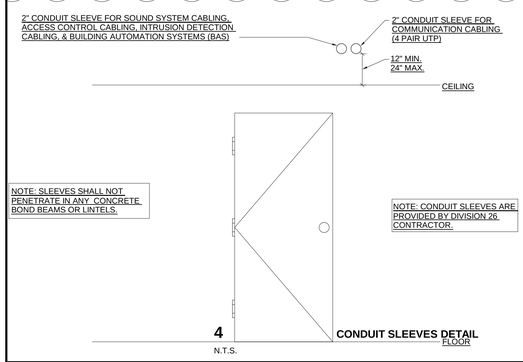
ACCEPTANCE TEST	A TEST OR SET OF TESTS PERFORMED TO DEMONSTRATE SATISFACTORY COMPLETION OF A PREDETERMINED TASK OR GROUP OF TASKS ON WHICH ACCEPTANCE IS DEPENDANT.
ACCESS POINT (AP)	ACCESS POINT (AP) - THE CENTRAL OR CONTROL POINT IN A WIRELESS CELL THAT ACTS AS A LINK FOR TRAFFIC TO AND FROM WIRELESS DEVICES IN THE CELL. THE AP ALSO CONNECTS WIRELESS DEVICES TO THE WIRED PORTION OF THE NETWORK.
ACTIVE CIRCUIT	ACTIVE CIRCUIT - A VOICE/DATA/VIDEO CHANNEL CONNECTED TO A CIRCUIT.
ACTIVE EQUIPMENT	ENERGIZED EQUIPMENT USED FOR RECEIVING OR TRANSMITTING ANALOG OR DIGITAL SIGNALS.
ADMINISTRATION	ADMINISTRATION - THE METHODOLOGY DEFINING THE DOCUMENTATION REQUIREMENTS OF A CABLING SYSTEM AND ITS CONTAINMENT, THE LABELING OF FUNCTIONAL ELEMENTS AND THE PROCESS BY WHICH MOVES, ADDS, AND CHANGES ARE RECORDED. (ISO)
ALIEN CROSSTALK	UNWANTED TRANSFER OF SIGNAL FROM ONE OR MORE CIRCUITS IN A GIVEN CABLE TO OTHER CIRCUITS IN ANOTHER CABLE.
ATTENUATION	THE DECREASE IN MAGNITUDE OF TRANSMISSION SIGNAL STRENGTH BETWEEN POINTS, EXPRESSED IN DB AS THE RATIO OF OUTPUT TO INPUT SIGNAL LEVEL.
ATTENUATION-TO-CROSSTALK RATION (ACR)	THE RATIO OBTAINED BY SUBTRACTING INSERTION LOSS (ATTENUATION [DB]) FROM NEAR-END CROSSTALK (DB). ACR IS NORMALLY STATED AT A GIVEN FREQUENCY. SEE SIGNAL-TO-NOISE RATIO.
BACKBONE	A FACILITY (E.G., PATHWAY, CABLE, OR CONDUCTORS) BETWEEN ANY OF THE FOLLOWING SPACES: TELECOMMUNICATIONS ENCLOSURES, TELECOMMUNICATIONS ROOMS, EQUIPMENT ROOMS, AND ENTRANCE FACILITIES.
BACKBONE BONDING CONDUCTOR	BACKBONE BONDING CONDUCTOR - A COPPER CONDUCTOR EXTENDING FROM THE TELECOMMUNICATIONS MAIN GROUNDING BUSBAR TO THE FARTHEST FLOOR TELECOMMUNICATIONS GROUNDING BUSBAR. (TIA)
BALANCED TWISTED-PAIR CABLE	A MULTI-CONDUCTOR CABLE COMPRISING TWO OR MORE COPPER CONDUCTORS TWISTED IN A MANNER DESIGNED TO CANCEL ELECTRICAL INTERFERENCE.
BANDWIDTH	A MEASURE OF THE RANGE OF FREQUENCIES ASSOCIATED WITH A GIVEN SIGNAL OR COMMUNICATIONS CHANNEL, TYPICALLY EXPRESSED IN HERTZ, IT IS USED TO DENOTE THE POTENTIAL TRANSMISSION CAPACITY OF THE MEDIUM, DEVICE, OR SYSTEM.
BEND RADIUS	1. MAXIMUM RADIUS THAT A CABLE CAN BE BENT TO AVOID PHYSICAL OR ELECTRICAL DAMAGE OR CAUSE ADVERSE TRANSMISSION PERFORMANCE. 2. RADIUS OF CURVATURE THAT A MEDIA CAN BEND WITHOUT SIGNAL DEGRADATION.
BICSI	AN INTERNATIONAL TELECOMMUNICATIONS ASSOCIATION.
BONDING	THE PERMANENT JOINING OF METALLIC PARTS TO FORM AN ELECTRICALLY CONDUCTIVE PATH THAT WILL ENSURE ELECTRICAL CONTINUITY AND THE CAPACITY TO CONDUCT SAFELY ANY CURRENT LIKELY TO BE IMPOSED. (TIA)
BONDING CONDUCTOR (BC)	A CONDUCTOR USED SPECIFICALLY FOR THE PURPOSE OF BONDING.
BONDING CONDUCTOR FOR TELECOMMUNICATIONS (BCT)	A CONDUCTOR THAT INTERCONNECTS THE BUILDINGS SERVICE EQUIPMENT (POWER) GROUND TO THE TELECOMMUNICATIONS GROUNDING SYSTEM.
BORING	A METHOD TO DISPLACE EARTH UNDER THE GROUND WITHOUT BREAKING THE GROUND SURFACE (TRENCHING) OR CUTTING GROUND SURFACES (E.G., SIDEWALKS, DRIVEWAYS, PARKING LOTS, AND ROAD SURFACES). NORMALLY, AS DIRT IS DISPLACED OR REMOVED, CONDUIT IS INSERTED.
CABLING SYSTEM	A SPECIFIC SYSTEM OF TELECOMMUNICATIONS CABLES, EQUIPMENT/PATCH CORDS, CONNECTING HARDWARE, AND OTHER COMPONENTS THAT IS SUPPLIED AS A SINGLE ENTITY.
CARD READER	A SECURITY SYSTEM DEVICE THAT READS CODED CARDS.
CATEGORY	A RATING THAT DEFINES THE PERFORMANCE OF CABLING COMPONENTS AND SYSTEMS.
CELL	THE FIXED AREA IN WHICH A WIRELESS DEVICES OPERATES.
COMMUNICATIONS	SEE TELECOMMUNICATIONS.
CROSS-CONNECT	A FACILITY ENABLING THE TERMINATION OF CABLE ELEMENTS AND THEIR INTERCONNECTION OR CROSS-CONNECTION. (TIA)
CROSSTALK	UNWANTED TRANSFER OF SIGNAL FROM ONE OR MORE CIRCUITS TO OTHER CIRCUITS.
CUTOVER	THE PROCESS OF SWITCHING FROM OLD NETWORK COMPONENTS TO NEW NETWORK COMPONENTS.
DAISY-CHAIN TOPOLOGY	DEVICES ARE CONNECTED IN SERIES, ONE AFTER THE OTHER, AND THE TRANSMITTED SIGNALS GO TO THE FIRST DEVICES, THEN THE SECOND, ETC.
DATA	ELECTRONICALLY ENCODED INFORMATION. (TIA)
DATA COMMUNICATION	THE TRANSMISSION AND RECEPTION OF ELECTRONICALLY CODED INFORMATION.
DATA NETWORK	AN INTERCONNECTED SYSTEM OF COMPUTERS, PERIPHERALS, AND SOFTWARE OVER WHICH COMMANDS, FILES, AND MESSAGES ARE SENT AND RECEIVED.
DECIBEL (DB)	A LOGARITHMIC UNIT FOR MEASURING THE RELATIVE POWER OR STRENGTH OF A SIGNAL.
DELAY SKEW	THE DIFFERENCE IN PROPAGATION DELAY BETWEEN ANY TWO PAIRS WITHIN THE SAME CABLE SHEATH. (TIA)
DEMARCATION POINT (DP)	1. A POINT WHERE THE OPERATIONAL CONTROL OR OWNERSHIP CHANGES. (TIA) 2. THE POINT OF INTERFACE BETWEEN SERVICE PROVIDERS AND CUSTOMER FACILITIES.
DIELECTRIC	1. THE NONCONDUCTIVE PROPERTIES OF AN INSULATING MATERIAL THAT RESISTS THE PASSAGE OF ELECTRIC CURRENT. THE INSULATION SURROUNDING A COPPER CONDUCTOR IS KNOWN AS A DIELECTRIC. 2. A MATERIAL THAT IS NONMETALLIC AND NONCONDUCTIVE. 3. A NONCONDUCTOR OF DIRECT ELECTRIC CURRENT.
DIRECT-BURIED CABLE	A TELECOMMUNICATIONS CABLE DESIGNED TO BE INSTALLED UNDER THE SURFACE OF THE EARTH, IN DIRECT CONTACT WITH THE SOIL. (TIA)
ELECTROMAGNETIC INTERFERENCE (EMI)	RADIATED OR CONDUCTED ELECTROMAGNETIC ENERGY THAT HAS AN UNDESIRABLE EFFECT ON ELECTRONIC EQUIPMENT OR SIGNAL TRANSMISSIONS. (TIA)
EQUAL LEVEL FAR-END CROSSTALK (ELFEXT)	CROSSTALK MEASURED AT THE OPPOSITE END FROM WHICH THE DISTURBING SIGNAL IS TRANSMITTED, NORMALIZED BY THE ATTENUATION CONTRIBUTION OF THE CABLE OR CABLING.
FAR-END CROSSTALK (FEXT) LOSS	A MEASURE OF THE UNWANTED SIGNAL COUPLING FROM A TRANSMITTER AT THE NEAR END INTO ANOTHER PAIR MEASURED AT THE FAR END, AND RELATIVE TO THE TRANSMITTED SIGNAL LEVEL. ALSO CALLED INPUT/OUTPUT FAR END CROSSTALK LOSS. (TIA)
FAULT TOLERANCE	THE ABILITY OF A SYSTEM TO CONTINUE OPERATIONS AFTER THE FAILURE OF ONE OR MORE COMPONENTS.
FIBER OPTICS	A COMMUNICATION SYSTEM THAT USES OPTICAL FIBER AS ITS MEDIUM.
GIGABIT PER SECOND (GB/S)	A TRANSMISSION RATE DENOTING ONE BILLION BITS PER SECOND.
GIGAHERTZ (GHZ)	A UNIT OF FREQUENCY DENOTING ONE BILLION CYCLES PER SECOND (HERTZ).
HERTZ (HZ)	1. A UNIT OF MEASURE USED TO EXPRESS THE RANGE OF FREQUENCIES ASSOCIATED WITH A GIVEN SIGNAL OR COMMUNICATIONS CHANNEL. THIS RANGE IS ALSO CALLED BANDWIDTH. 2. A UNIT OF FREQUENCY EQUAL TO ONE CYCLE PER SECOND.
HOME RUN	A PATHWAY OR CABLE BETWEEN TWO LOCATIONS WITHOUT A SPLICE OR INTERMEDIATE TERMINATIONS POINTS IN BETWEEN.
HORIZONTAL CABLE	1. A PERMANENT ELEMENT OF THE HORIZONTAL CABLING THAT CONNECTS THE TELECOMMUNICATIONS OUTLET/CONNECTOR AT THE WORK AREA AND THE FIRST PIECE OF CONNECTING HARDWARE IN THE HORIZONTAL OR MAIN CROSS-CONNECT. 2. FOUR PAIR 24 AWG UNSHIELDED TWISTED PAIR (UTP).
HORIZONTAL CROSS-CONNECT	A GROUP OF CONNECTORS THAT ALLOWS EQUIPMENT AND BACKBONE CABLING TO BE CROSS-CONNECTED.
INNERDUCT	A NONMETALLIC RACEWAY, USUALLY CIRCULAR, PLACED WITHIN A LARGER PATHWAY. (TIA)
INTERMEDIATE CROSS-CONNECT (IC)	THE CONNECTION POINT BETWEEN A BACKBONE CABLE THAT EXTENDS FROM THE MAIN CROSS-CONNECT AND THE BACKBONE CABLE FROM THE HORIZONTAL CROSS-CONNECT.
LATENCY	THE TIME IT TAKES FOR A SIGNAL TO PASS THROUGH A DEVICE OR NETWORK.
LOW-VOLTAGE CABLING/CABLING SYSTEM	TELECOMMUNICATIONS SIGNALING (INCLUDES BUILDING AUTOMATION SIGNALING) VOLTAGE LEVELS ARE TYPICALLY POWER-LIMITED WHEN COMPARED TO ELECTRICAL POWER CIRCUITS THAT CAN VARY FROM 100 VOLTS ALTERNATING CURRENT (AC) TO 240 VOLTS AC IN COMMERCIAL BUILDINGS. CIRCUITS TYPICALLY USE AN INHERENTLY LIMITED POWER SOURCE WITHOUT OVER-CURRENT PROTECTION OR A NONINHERENTLY LIMITED POWER SOURCE WHERE OVERCURRENT PROTECTION IS REQUIRED. SINCE TELECOMMUNICATIONS CABLING SYSTEMS ARE NOT USED TO DISTRIBUTE ELECTRICAL POWER, THE SIGNALING THAT OCCURS ON THESE COPPER-BASED SYSTEMS IS GENERALLY DESCRIBED AS LOW VOLTAGE.
MAIN CROSS-CONNECT (MC)	THE CROSS-CONNECT NORMALLY LOCATED IN THE (MAIN) TELECOMMUNICATIONS EQUIPMENT ROOM (ER) FOR CROSS-CONNECTION AND INTERCONNECTION OF ENTRANCE CABLES, FIRST-LEVEL BACKBONE CABLES, AND EQUIPMENT CABLES.
NEAR-END CROSSTALK (NEXT) LOSS	1. THE UNWANTED SIGNAL COUPLING BETWEEN PAIRS. IT IS MEASURED AT THE END OF A CABLE NEAREST THE POINT OF TRANSMISSION. CONTRAST WITH FAR-END CROSSTALK. 2. THE SIGNAL TRANSFER BETWEEN CIRCUITS AT THE SAME (NEAR) END OF THE CABLE.
NETWORK	A GROUP OF THREE OR MORE NODES THAT CAN COMMUNICATE WITH EACH OTHER, EITHER DIRECTLY THROUGH CABLING OR INDIRECTLY THROUGH REPEATERS TO SEPARATE CABLING.
OUTSIDE PLANT (OSP)	TELECOMMUNICATIONS INFRASTRUCTURE DESIGNED FOR INSTALLATION EXTERIOR TO BUILDINGS.
PAIR	TWO INSULATED WIRES TWISTED AROUND EACH OTHER.
PAIR TWIST	THE UNIFORM TWIST OF AN INSULATED COPPER PAIR THAT HELPS TO REDUCE THE NEGATIVE EFFECTS OF CAPACITANCE IMBALANCE AND ELECTROMAGNETIC INDUCTION.
PATCH CORD	A LENGTH OF CABLE WITH A PLUG ON ONE OR BOTH ENDS.
PATCH PANEL	A CONNECTING HARDWARE SYSTEM THAT FACILITATES CABLE TERMINATION AND CABLING ADMINISTRATION USING PATCH CORDS.
PATHWAY	1. A SEQUENCE OF CONNECTIONS THAT PROVIDES THE CONNECTIVITY BETWEEN DEVICES ON A NETWORK OR BETWEEN NETWORKS ON AN INTERNETWORK. 2. THE VERTICAL AND HORIZONTAL ROUTE OF THE TELECOMMUNICATIONS CABLE. 3. A FACILITY FOR THE PLACEMENT OF TELECOMMUNICATIONS CABLE. (TIA) 3. A FACILITY FOR THE PLACEMENT OF TELECOMMUNICATIONS CABLE. (TIA)
POWER SUM	USED TO SPECIFY A COMBINATION CROSSTALK FROM MULTIPLE SOURCES.
POWER SUM ATTENUATION-TO-CROSSTALK RATIO	A RATIO IN DB, DETERMINED BY SUBTRACTING THE INSERTION LOSS FROM TH EPOWER SUM NEAR-END CROSSTALK LOSS. (TIA)
POWER SUM EQUAL LEVEL FAR-END CROSSTALK (PSELFEXT)	A COMPUTATION OF THE UNWANTED SIGNAL COUPLING FROM MULTIPLE TRANSMITTERS AT THE NEAR-END INTO A PAIR MEASURED AT THE FAR-END, AND NORMALIZED TO THE RECEIVED SIGNAL LEVEL. (TIA)
POWER SUM NEAR-END CROSSTALK (PSNEXT) LOSS	A COMPUTATION OF THE UNWANTED SIGNAL COUPLING FROM MULTIPLE TRANSMITTERS AT THE NEAR-END INTO A PAIR MEASURED AT THE NEAR-END. (TIA)
PULL TENSION	THE PULLING FORCE THAT CAN BE APPLIED TO A CABLE. (TIA)
PUNCH DOWN	THE PROCESS OF TERMINATING COPPER CABLE CONDUCTORS ON INSULATION DISPLACEMENT CONNECTION TERMINALS BY USE OF A HANDHELD TOOL.
QUEUING	A TECHNIQUE THAT REDUCES TRANSMISSION DELAYS BY CLASSIFYING AND SORTING DATA PRIOR TO PROCESSING BY THE TRANSMITTING DEVICE.
RACEWAY	ANY ENCLOSED CHANNEL DESIGNED FOR HOLDING WIRES OR CABLES. (TIA)
RADIO FREQUENCY INTERFERENCE	ELECTROMAGNETIC INTERFERENCE WITHIN THE FREQUENCY BAND FOR RADIO TRANSMISSION.
RETURN LOSS	A RATIO, EXPRESSED IN DB, OF THE POWER OF THE OUTGOING SIGNAL TO THE POWER OF THE REFLECTED SIGNAL. (TIA)
REVERSED PAIR	A CONDITION IN WHICH THE CONDUCTORS IN A PAIR ARE TERMINATED IN THE WRONG SEQUENCE.
RIBBON CABLE	AN ASSEMBLY OF CONDUCTORS LAID SIDE BY SIDE IN A GEOMETRIC PLANE AND FASTENED TOGETHER.
SCALABILITY	THE ABILITY OF A NETWORK TO GROW WITHOUT DEGRADATION OF QUALITY.
SERVICE LOOP	A SURPLUS OF CABLE AT THE POINT OF TERMINATION TO FACILITATE POTENTIAL FUTURE CHANGES.
SHIELDED ENCLOSURE CABINET	A METAL ELECTRONICS CABINET CONSTRUCTED WITH WELDED SEAMS AND CONDUCTIVE GASKETS ON THE DOORS THAT SERVE AS AN EFFECTIVE SHIELD AGAINST ELECTROMAGNETIC RADIATION.
SPLIT PAIR	TRANSPOSITION OF TWO CONDUCTORS OF SEPARATE PAIRS.
STAR TOPOLOGY	A NETWORK TOPOLOGY IN WHICH SERVICES ARE DISTRIBUTED FROM A CENTRAL POINT.
STRUCTURED CABLING SYSTEM	THE COMPLETE COLLECTIVE CONFIGURATION OF TELECOMMUNICATIONS CABLING AND ASSOCIATED HARDWARE AT A GIVEN LOCATION.
SWEEP	BEND THAT HAS A GENTLE ARC RATHER THAN A SHARP BEND.

DEFINITIONS (CONTINUED)

TELECOMMUNICATIONS	ANY TRANSMISSION, EMISSION, AND RECEPTION OF SIGNS, SIGNALS, WRITINGS, IMAGES, AND SOUNDS, THAT IS, INFORMATION OF ANY NATURE BY CABLE, RADIO, OPTICAL, OR OTHER ELECTROMAGNETIC SYSTEMS. (TIA)
TELECOMMUNICATIONS BONDING BACKBONE	A CONDUCTOR THAT INTERCONNECTS THE TELECOMMUNICATIONS MAIN GROUNDING BUSBAR (TMGB) TO THE TELECOMMUNICATIONS GROUNDING BUSBAR (TGB). (TIA)
TELECOMMUNICATIONS EQUIPMENT BONDING CONDUCTOR	A CONDUCTOR INSTALLED FROM EACH PIECE OF EQUIPMENT TO THE TELECOMMUNICATIONS GROUNDING BUSBAR OR TELECOMMUNICATIONS MAIN GROUNDING BUSBAR.
TELECOMMUNICATIONS CABINET	AN ENCLOSURE USED FOR TERMINATING TELECOMMUNICATIONS CABLES, WIRING, AND CONNECTION DEVICES WITH A HINGED COVER, USUALLY FLUSH-MOUNTED IN THE WALL. (TIA)
TELECOMMUNICATIONS ENCLOSURE	A CASE OR HOUSING FOR TELECOMMUNICATIONS EQUIPMENT, CABLE TERMINATIONS, AND CROSS-CONNECT CABLING. (TIA)
TELECOMMUNICATIONS ENTRANCE FACILITY	1. AN ENTRANCE TO A BUILDING FOR BOTH PUBLIC AND PRIVATE NETWORK SERVICE CABLES (INCLUDING WIRELESS) INCLUDING THE ENTRANCE POINT AT THE BUILDING WALL AND CONTINUING TO THE ENTRANCE ROOM OR SPACE. (TIA) 2. A FACILITY THAT PROVIDES ALL NECESSARY MECHANICAL AND ELECTRICAL SERVICES, THAT COMPLIES WITH ALL RELEVANT REGULATIONS, FOR THE ENTRY OF TELECOMMUNICATIONS CABLES INTO A BUILDING. (ISO)
TELECOMMUNICATIONS EQUIPMENT ROOM	AN ENVIRONMENTALLY CONTROLLED CENTRALIZED SPACE FOR TELECOMMUNICATIONS EQUIPMENT THAT USUALLY HOUSES A MAIN OR INTERMEDIATE CROSS-CONNECT. (TIA)
TELECOMMUNICATIONS GROUNDING BUSBAR	A COMMON POINT OF CONNECTION FOR TELECOMMUNICATIONS SYSTEM AND EQUIPMENT BONDING TO GROUND, AND LOCATED IN THE TELECOMMUNICATIONS ROOM OR EQUIPMENT ROOM.
TELECOMMUNICATIONS INFRASTRUCTURE	A COLLECTION OF THOSE TELECOMMUNICATIONS COMPONENTS, EXCLUDING EQUIPMENT, THAT TOGETHER PROVIDE THE BASIC SUPPORT FOR THE DISTRIBUTION OF ALL INFORMATION WITHIN A BUILDING OR CAMPUS.
TELECOMMUNICATIONS MAINTENANCE HOLE	A VAULT LOCATED IN THE GROUND OR EARTH AS PART OF A UNDERGROUND DUCT SYSTEM AND USED TO FACILITY PLACING, CONNECTORIZATION, AND MAINTENANCE OF CABLES AS WELL AS THE PLACING OF ASSOCIATED EQUIPMENT, IN WHICH IT IS EXPECTED THAT A PERSON WILL ENTER TO PERFORM WORK. (TIA)
TELECOMMUNICATIONS MEDIA	WIRE, CABLE, OR CONDUCTORS USED FOR TELECOMMUNICATIONS. (TIA)
TELECOMMUNICATIONS OUTLET/CONNECTOR	A CONNECTING DEVICE IN THE WORK AREA ON WHICH HORIZONTAL CABLE OR OUTLET CABLE TERMINATES.
TELECOMMUNICATION ROOM	AN ENCLOSED ARCHITECTURAL SPACE FOR HOUSING TELECOMMUNICATIONS EQUIPMENT, CABLE TERMINATIONS, AND CROSS-CONNECT CABLING. (TIA)
TELECOMMUNICATIONS SPACE	AN AREA USED FOR HOUSING THE INSTALLATION AND TERMINATION OF TELECOMMUNICATIONS EQUIPMENT AND CABLE (E.G., COMMON EQUIPMENT ROOMS, EQUIPMENT ROOMS, COMMON TELECOMMUNICATIONS ROOMS, TELECOMMUNICATIONS ROOMS, WORK AREAS, MAINTENANCE HOLES/HANDHOLES). (TIA)
TRANSPOSED PAIRS	WHEN TWO PAIRS OF CONDUCTORS ARE TERMINATED IN EACH OTHER'S LOCATION.
UNDERGROUND	REFERS TO CONDUIT AND MAINTENANCE HOLES SYSTEMS INSTALLED BELOW THE SURFACE OF THE GROUND.
UNDERGROUND CABLE	A TELECOMMUNICATIONS CABLE DESIGNED TO BE INSTALLED UNDER THE SURFACE OF THE EARTH IN A TROUGH OR DUCT THAT ISOLATES THE CABLE FROM DIRECT CONTACT WITH THE SOIL. (TIA)
UTILITY COLUMN	AN ENCLOSED PATHWAY EXTENDING FROM THE CEILING TO FURNITURE OR TO THE FLOOR THAT FORMS A PATHWAY FOR ELECTRICAL WIRING, TELECOMMUNICATIONS CABLE, OR BOTH. (TIA)
WORK AREA (WORK STATION)	A BUILDING SPACE WHERE THE OCCUPANTS INTERACT WITH TELECOMMUNICATIONS TERMINAL EQUIPMENT. (TIA)
WORK AREA CABLE (CORD)	A CABLE CONNECTING THE TELECOMMUNICATIONS OUTLET/CONNECTOR TO THE TERMINAL EQUIPMENT.
WORK AREA OUTLET	A CONNECTING DEVICE FOR TERMINATION OF HORIZONTAL MEDIA.



6 N.T.S. **VIDEO SURVEILLANCE SYSTEM WIRING DETAIL**

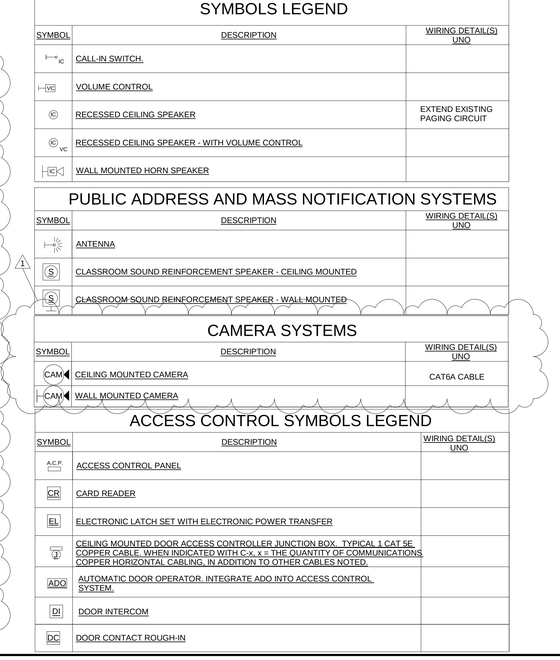


4 N.T.S. **CONDUIT SLEEVES DETAIL**

TELECOMMUNICATIONS CABLE COLOR LEGEND

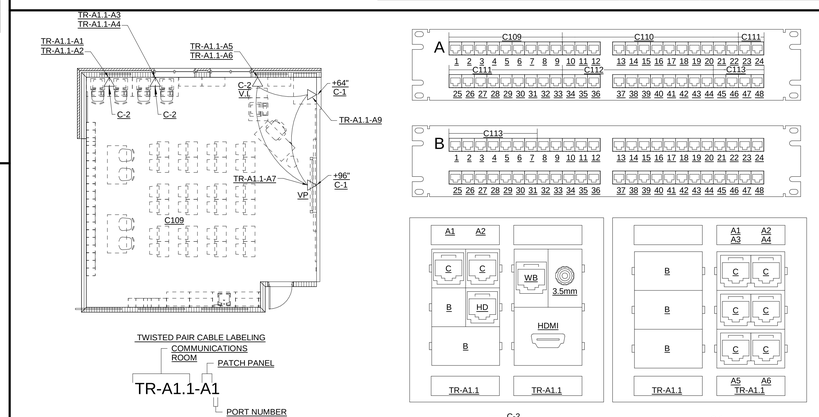
SYSTEM	TERMINATION (RJ45) PANDUIT	CABLE GENERAL	PATCH CABLE (PATCH PANEL)	PATCH CABLE (STATION)
DATA	WHITE	BLUE	BLUE	BLACK
WIRELESS	BLUE	BLUE	WHITE	WHITE
CAMERA	BLUE	BLUE	BLACK	BLACK
ACCESS	YELLOW	YELLOW	YELLOW	YELLOW
HVAC	RED	RED	RED	RED

3 N.T.S. **TECHNOLOGY CABLE COLOR LEGEND**



2 N.T.S. **CONTRACTOR - OWNER RESPONSIBILITY**

	CONTRACTOR FURNISH	CONTRACTOR INSTALL	OWNER FURNISH	OWNER INSTALL
ACCESS CARD READERS, DOOR CONTACTS	NO	NO	YES	YES
ACCESS, SECURITY CABLING & ROUGH INS	YES	YES	NO	NO
AV PROJECTOR AND MOUNTS	YES	YES	NO	NO
AV PROJECTOR MISC. CABLING (IN WALL)	YES	YES	NO	NO
AV MONITOR PATCH CABLES	YES	YES	NO	NO
WIRELESS CLOCKS	NO	NO	YES	YES
SOUND REINFORCEMENT	YES	YES	NO	NO
WIRELESS ACCESS POINTS	NO	YES	YES	NO
WIRELESS ACCESS POINTS CAT6A CABLING	YES	YES	NO	NO



5 N.T.S. **ROOM LABELING DETAIL**

DETAIL IS FOR REFERENCE ONLY. ACTUAL ROOM & FACEPLATE CONFIG WILL DIFFER.

TECHNOLOGY LEGEND & SYMBOLS TELECOMMUNICATIONS SYS.

COMMUNICATIONS SYMBOLS LEGEND

SYMBOL	DESCRIPTION	WIRING DETAIL(S) UNO
	COMMUNICATIONS OUTLET. TYPICAL 2 (TWO) CAT 6A COPPER CABLES. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	
VP	LOCATION OF WALL MOUNTED SHORT THROW PROJECTOR. TYPICAL 1 (ONE) WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED. MULTI CAPACITY FLOOR BOX. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	
W	CEILING MOUNTED WIRELESS ACCESS POINT LOCATION. PROVIDE CATEGORY 6A DATA DROPS FOR WIRELESS ACCESS POINTS. PROVIDE 20 FEET SLACK LOOP COILED NEATLY AND SUPPORTED ABOVE THE CEILING. TERMINATE CABLES WITH RJ45 MODULAR JACKS AND TEST PER SPECIFICATIONS. NOTE LOCATION ON RECORD DRAWINGS AND MARK LOCATION ON CEILING GRID WITH BLUE DOT. SLACK LOOP NOT NECESSARY FOR LOCATIONS WITH CONDUIT SUCH AS GYMNASIUMS WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING.	
W	WALL MOUNTED WIRELESS ACCESS POINT LOCATION. PROVIDE CATEGORY 6A DATA DROPS FOR WIRELESS ACCESS POINTS. PROVIDE 20 FEET SLACK LOOP COILED NEATLY AND SUPPORTED ABOVE THE CEILING. TERMINATE CABLES WITH RJ45 MODULAR JACKS AND TEST PER SPECIFICATIONS. NOTE LOCATION ON RECORD DRAWINGS AND MARK LOCATION ON CEILING GRID WITH BLUE DOT. SLACK LOOP NOT NECESSARY FOR LOCATIONS WITH CONDUIT SUCH AS GYMNASIUMS WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING.	
V.I.	VIDEO INPUT LOCATION WITH COMMUNICATIONS OUTLET. TYPICAL 2 (TWO) CAT 6A COPPER CABLES. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED .	
	CONDUIT SLEEVES BETWEEN WALLS	

INTERCOMMUNICATIONS AND PROGRAM SYSTEMS SYMBOLS LEGEND

SYMBOL	DESCRIPTION	WIRING DETAIL(S) UNO
IC	CALL-IN SWITCH.	
VC	VOLUME CONTROL	
SC	RECESSED CEILING SPEAKER	EXTEND EXISTING PAGING CIRCUIT
SC VC	RECESSED CEILING SPEAKER - WITH VOLUME CONTROL	
HS	WALL MOUNTED HORN SPEAKER	

PUBLIC ADDRESS AND MASS NOTIFICATION SYSTEMS

SYMBOL	DESCRIPTION	WIRING DETAIL(S) UNO
	ANTENNA	
S	CLASSROOM SOUND REINFORCEMENT SPEAKER - CEILING MOUNTED	
S	CLASSROOM SOUND REINFORCEMENT SPEAKER - WALL MOUNTED	

CAMERA SYSTEMS

SYMBOL	DESCRIPTION	WIRING DETAIL(S) UNO
CAM	CEILING MOUNTED CAMERA	CAT6A CABLE
CAM	WALL MOUNTED CAMERA	

ACCESS CONTROL SYMBOLS LEGEND

SYMBOL	DESCRIPTION	WIRING DETAIL(S) UNO
A.C.P.	ACCESS CONTROL PANEL	
CR	CARD READER	
EL	ELECTRONIC LATCH SET WITH ELECTRONIC POWER TRANSFER	
J	CEILING MOUNTED DOOR ACCESS CONTROLLER JUNCTION BOX. TYPICAL 1 CAT 5E COPPER CABLE. WHEN INDICATED WITH C-x, x = THE QUANTITY OF COMMUNICATIONS COPPER HORIZONTAL CABLING, IN ADDITION TO OTHER CABLES NOTED.	
ADO	AUTOMATIC DOOR OPERATOR. INTEGRATE ADO INTO ACCESS CONTROL SYSTEM.	
DI	DOOR INTERCOM	
DC	DOOR CONTACT ROUGH-IN	

Elm Road Elementary School - Classroom Addition

59400 ELM ROAD,
MISHAWAKA, IN 46544

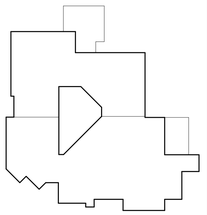
PENN HARRIS MADISON SCHOOL CORPORATION

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E New York St # 300, Indianapolis, IN 46204



CONSTRUCTION DOCUMENTS

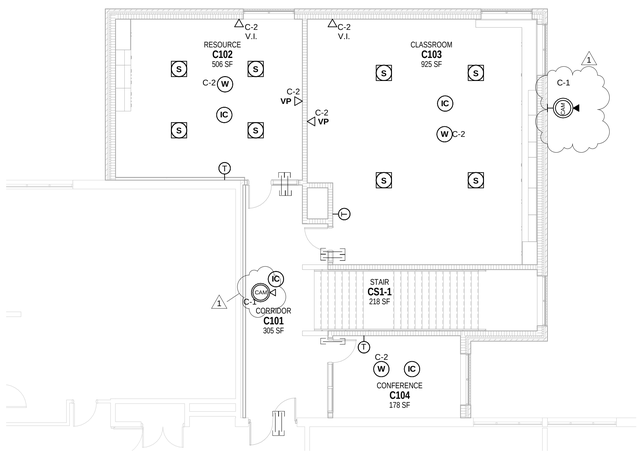
PROJECT MANAGER: MS
DRAWN BY: CDT
PROJECT NUMBER: 223211.00
PROJECT ISSUE DATE: 04.10.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #2	6/25/2025

TECHNOLOGY SYMBOLS & ABBREVIATIONS

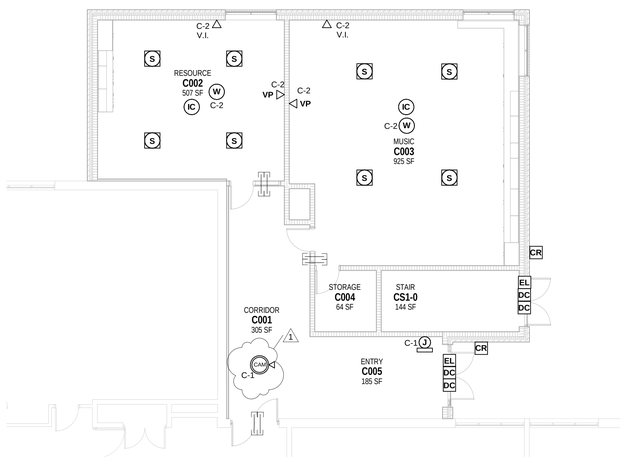
T1-01

\\atlas1\dropoffies$\schomas\My Documents\2023_Tech_Elm Road_Addition 223211.00_cthomas\KVK3.rvt
6/23/2025 11:59:51 AM



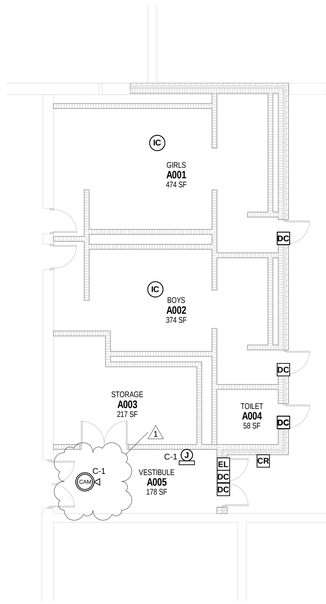
2 FIRST FLOOR TECHNOLOGY PLANS

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



1 LOWER LEVEL TECHNOLOGY PLAN

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



3 RESTROOM ADDITION TECHNOLOGY PLAN

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

ROOM LEGEND

ROOM NO.	OWNER ROOM NO.	ROOM NAME	AREA (SF)
FIRST FLOOR			
C101		CORRIDOR	305 SF
C102		RESOURCE	506 SF
C103		CLASSROOM	925 SF
C104		CONFERENCE	178 SF
CS1-1		STAIR	218 SF
LOWER LEVEL			
C001		CORRIDOR	305 SF
C002		RESOURCE	507 SF
C003		MUSIC	925 SF
C004		STORAGE	64 SF
C005		ENTRY	185 SF
CS1-0		STAIR	144 SF
RESTROOM FLOOR			
A001		GIRLS	474 SF
A002		BOYS	374 SF
A003		STORAGE	217 SF
A004		TOILET	58 SF
A005		VESTIBULE	178 SF
A006		GYMNASIUM	123 SF

TECHNOLOGY PLAN GENERAL NOTES

A. DEVICES SHALL BE INSTALLED AT LOCATIONS SHOWN ON DRAWINGS. LOCATIONS OF DEVICES SHALL BE COORDINATED WITH OTHER ELECTRICAL DEVICES/ CASEWORK/ ARCHITECTURAL FEATURES AND OTHER TRADES PRIOR TO ROUGH-IN. IF RELOCATION OF DEVICES IS REQUIRED DUE TO LACK OF COORDINATION BETWEEN ELECTRICAL DRAWINGS AND OTHER TRADES, ANY ASSOCIATED COSTS SHALL BE RESPONSIBILITY OF ELECTRICAL CONTRACTOR.

TECHNOLOGY PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

#	NOTE

VERIFICATION NOTE

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND ALL EXISTING FIELD CONDITIONS BEFORE STARTING CONSTRUCTION. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

SHOULD DIFFERENT CONDITIONS BE ENCOUNTERED, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.

Elm Road Elementary School - Classroom Addition

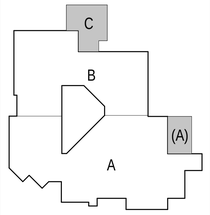
59400 ELM ROAD,
MISHAWAKA, IN 46544

PENN HARRIS MADISON SCHOOL CORPORATION

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM
350 E New York St # 300, Indianapolis, IN 46204



KEY PLAN

CONSTRUCTION DOCUMENTS

PROJECT MANAGER: MS

DRAWN BY: CDT

PROJECT NUMBER: 223211.00

PROJECT ISSUE DATE: 04.10.2025

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #2	6/25/2025

TECHNOLOGY PLAN

T1-11