ADDENDUM NO. 2

October 6, 2023

Carmel High School Polytechnic Addition & Renovation
520 East Main Street
Carmel, IN 46032

TO: ALL BIDDERS OF RECORD

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications and the Drawings dated August 31, 2023, by Fanning Howey Associates. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of Pages ADD 2-1 through ADD 2-4, Exterior Logistics Plan (Page 1) and attached Fanning Howey Associates Addendum No. 2, dated October 5, 2023, consisting of 11 items and 3 pages; Addendum No. 2, 11 items, 3 pages
New Project Manual Section: 09 21 16.23 – Gypsum Board Shaft Wall Assemblies, 23 11 13 – Facility Fuel-Oil Piping, 23 13 23 – Facility Above Ground Fuel-Oil Storage Tanks, 27 13 23 TM – Manufacturer's Material List, and 27 15 53 TM – Manufacturer's Material List, Revised Project Manual Sections: Sections 12 93 00 – Site Furnishings and Amenities, 23 80 61 – Fume Collection Systems, 27 11 00 TM – Manufacturer's Material List, 27 15 15 TM – Manufacturer's Material List, 27 15 17 – Communications Copper Horizontal Cabling (Augmented CAT 6A) and 33 41 00 – Storm Utility Drainage Piping, Revised Drawing Sheets: Index A, Index B, GD1.1, G1.1, G1.3, G2.1, G3.3, G4.1, G4.2, G5.1, G5.2, SU1.1, SU2.1, SU3.3, S1.01, S1.02, S1.03, S2.01, S2.02, S2.03, S3.01, S4.01, S5.02, S5.03, A0.01, AD1.01, AD3.01, A1.01, A1.02, A1.03, A1.05, A2.01, A2.02, A4.01, A5.01, A5.02, A5.04, A5.05, A7.01, A7S.01, A8.01, A8.03, A8.04, A8.08, A8S.01, A9.01, A9.03, A10.01, A10.02, P2.01, P3.01, P4.01, P4.02, M2.01, M2.02, M4.01, M5.01, M5.07, E3.01, E3.04, E5.01, E5.02, E6.01, TD.01, TD.02, T1.03, and T3.01.

A. SPECIFICATION SECTION 01 12 00 - MULTIPLE CONTRACT SUMMARY

Paragraph 3.03 BID CATEGORIES

A. BID CATEGORY NO. 1 – GENERAL TRADES

Add the following General Clarifications:

19. Bid Category No. 1 General Trades contractor is responsible for all slab cutting and pour backs identified on the architectural demo sheets.
20. Material within the concrete vault/tanks will be removed by the owner prior to demo operations.
21. Bid Category No. 5 contractor to be responsible for roofing demo shown on sheet AD2.01 in regard to roofing materials only. Bid Category No. 10 contractor responsible for demo and removal of mechanical equipment and roof drains on sheet AD2.01.
22. Acrylic panel with graphic shown on sheet A7.01 Plan Note 22 to be provided by Bid Category No. 1 General Trades within the base bid.
23. All equipment pads shown on sheet G1.1 are the responsibility of the Bid Category No. 1 General Trades contractor. Coordinate with the mechanical drawings and the Bid Category No. 10 – Mechanical and Plumbing contractor prior to placing.
24. In regard to the Vocational Shop Equipment Schedule Table shown in 11 57 00 the Hunter Alignment Lift and Installation is by the owner. The Hunter Alignment Cabinet is by the owner.
25. Relocating and reinstalling any wood top metal framed workbenches is by the Bid Category No. 1 General Trades contractor.

Add the following Specification Section:

Section 07 91 00 - Preformed Joint Seals

Delete the following Specification Sections:

Section 06 10 00 - Rough Carpentry
Section 06 61 16 - Solid Surface Fabrications

B. BID CATEGORY NO. 2 – MASONRY

Delete the following Specification Section:

Section 07 91 00 Preformed Joint Seals

Add the following General Clarification:

6. Installation of tube steel above and below windows to be supplied by the Bid Category No. 3 contractor but installed by the Bid Category No. 2 Masonry contractor.

C. BID CATEGORY NO. 3 STRUCTURAL STEEL

Add the following General Clarification:

4. Installation of tube steel above and below windows to be supplied by this contractor and to be installed by the Bid Category No. 2 Masonry contractor.

D. BID CATEGORY NO. 4 – METAL STUDS, DRYWALL, CEILINGS

Add the following General Clarification:

6. Bid Category No. 5 Roofing Contractor to be responsible for exterior wood blocking from the parapet down to the roof where wood blocking interfaces with the roofing system.
7. On the finish plans if within the finish box for a room when 1 material is listed that material extends to the full height of the walls and is on all walls of the room unless other materials are listed or otherwise indicated.

Add the following Specification Section:

Section 09 21 16.23 - Gypsum Board Shaft Wall Assemblies

E. BID CATEGORY NO. 5 – ROOFING

Replace the following General Clarifications:

2. Provide all wood blocking and plywood sheathing that interfaces with the roofing system. This includes any wood blocking associated with MEP curbs. In general, this means from the top of the parapet down to the roof.
3. Bid Category No. 5 contractor responsible for roofing demo shown on sheet AD2.01 in regard to roofing materials only. Bid Category No. 10 Contractor responsible for demo of mechanical equipment and roof drains on sheet AD2.01.

H. BID CATEGORY NO. 8 – CASEWORK

Add the following sections:

Section 06 61 16 Solid Surface Fabrications

J. BID CATEGORY NO. 10 – MECHANICAL AND PLUMBING

Add the following General Clarification:

4. Bid Category No. 1 General Trades Contractor is responsible for all existing slab cutting and pour backs identified on the architectural demo sheets.
5. All equipment pads shown on sheet G1.1 are the responsibility of the Bid Category No. 1 General Trades contractor. Coordinate with the mechanical drawings and the Bid Category No. 10 – Mechanical and Plumbing contractor prior to placing.

Add the following Specifications Sections:

Section 23 11 13 - Facility Fuel-Oil Piping
Section 23 13 23 - Facility Above Ground Fuel-Oil Storage Tanks

I. BID CATEGORY NO. 11 – ELECTRICAL AND TECHNOLOGY

Add the following Specification Section:

Section 27 13 23 - TM-Manufacturer's Material List

Add the following General Clarifications:

8. Existing Carmel High School intercom system is Carehawk.
9. Panel C2 on sheet E5.02 this is a 120v/208 v main lug only panelboard with 30 circuits. It is fed from Panel WDPL-1.
10. The 200-amp spare in the existing 480v switch gear that feeds SPH1 does not appear to be a spare.

B. SPECIFICATION SECTION 01 21 00 - ALLOWANCES

Paragraph 3.01 Product Allowance

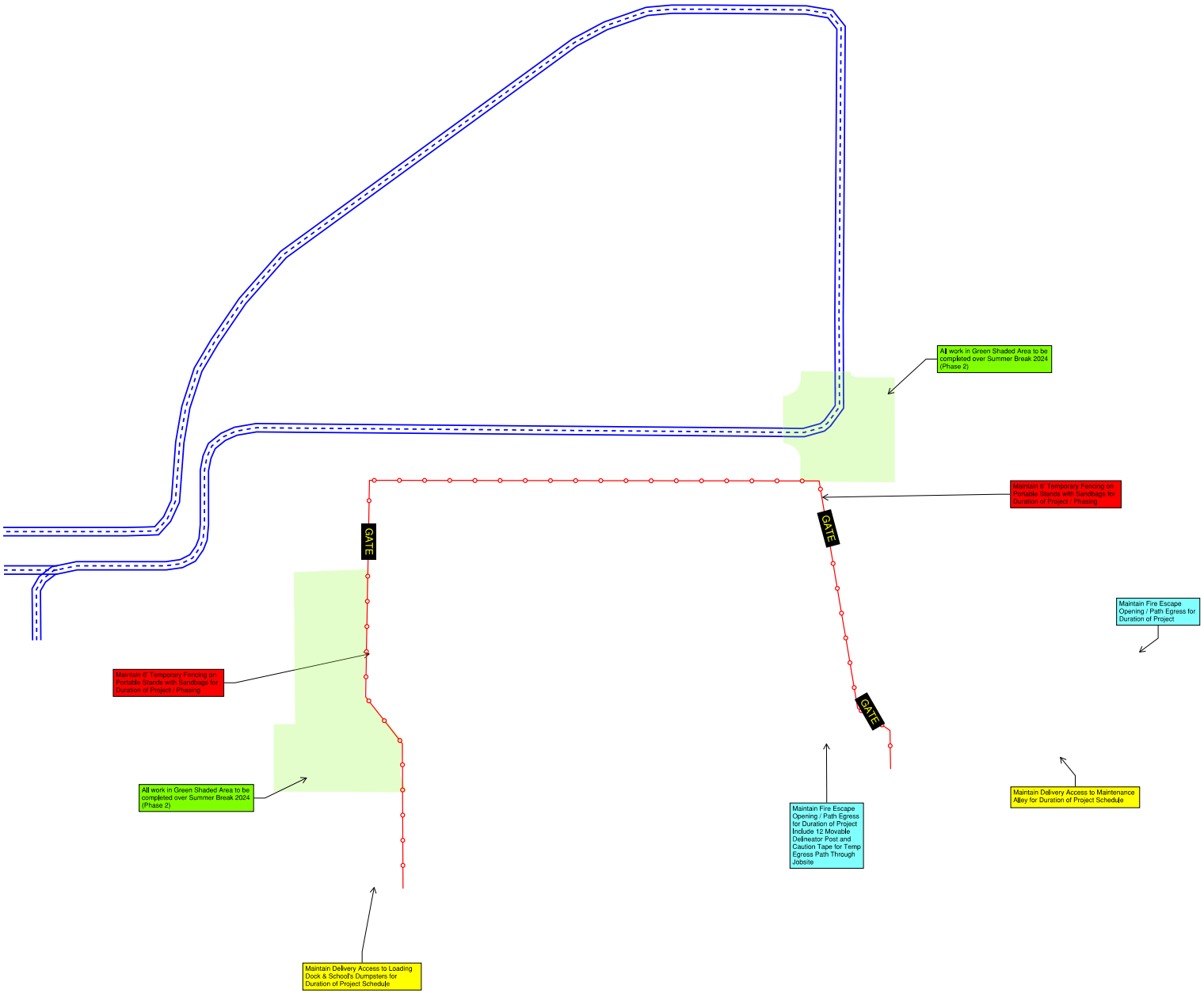
Add:

B. Bid Category No. 11 Electrical – 200 amp Fused Switch in Existing 480v Gear $3500

C. SPECIFICATION SECTION 01 32 00 – SCHEDULES

Delete the following:

Delete the attached incorrect sheet of the Exterior Logistics Plan (Page 1).


All work in Green Shaded Area to be completed over Summer Break 2024 (Phase 2)
Maintain 6' Temporary Fencing on Portable Stands with Sandbags for Duration of Project / Phasing
GATE
GATE
GATE
Maintain Fire Escape Opening / Path Egress for Duration of Project
Maintain 6' Temporary Fencing on Portable Stands with Sandbags for Duration of Project / Phasing
All work in Green Shaded Area to be completed over Summer Break 2024 (Phase 2)
Maintain Fire Escape Opening / Path Egress for Duration of Project Include 12 Movable Delineator Post and Caution Tape for Temp Egress Path Through Jobsite
Maintain Delivery Access to Maintenance Alley for Duration of Project Schedule
Maintain Delivery Access to Loading Dock & School's Dumpsters for Duration of Project Schedule

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

Carmel High School Polytechnic Addition and Renovation

Project No. 221165.01

Carmel Clay Schools
Carmel, Indiana

Index of Contents

Addendum No. 2, 11 items, 3 pages
New Project Manual Section: 09 21 16.23 – Gypsum Board Shaft Wall Assemblies, 23 11 13 – Facility Fuel-Oil Piping, 23 13 23 – Facility Above Ground Fuel-Oil Storage Tanks, 27 13 23 TM – Manufacturer's Material List, and 27 15 53 TM – Manufacturer's Material List
Revised Project Manual Sections: Sections 12 93 00 – Site Furnishings and Amenities, 23 80 61 – Fume Collection Systems, 27 11 00 TM – Manufacturer's Material List, 27 15 15 TM – Manufacturer's Material List, 27 15 17 – Communications Copper Horizontal Cabling (Augmented CAT 6A) and 33 41 00 – Storm Utility Drainage Piping
Revised Drawing Sheets: Index A, Index B, GD1.1, G1.1, G1.3, G2.1, G3.3, G4.1, G4.2, G5.1, G5.2, SU1.1, SU2.1, SU3.3, S1.01, S1.02, S1.03, S2.01, S2.02, S2.03, S3.01, S4.01, S5.02, S5.03, A0.01, AD1.01, AD3.01, A1.01, A1.02, A1.03, A1.05, A2.01, A2.02, A4.01, A5.01, A5.02, A5.04, A5.05, A7.01, A7S.01, A8.01, A8.03, A8.04, A8.08, A8S.01, A9.01, A9.03, A10.01, A10.02, P2.01, P3.01, P4.01, P4.02, M2.01, M2.02, M4.01, M5.01, M5.07, E3.01, E3.04, E5.01, E5.02, E6.01, TD.01, TD.02, T1.03, and T3.01

Date: October 5, 2023

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

Paul A. Miller, License No. AR10800161
Expiration Date: 12/31/2023

TO: ALL BIDDERS OF RECORD

ADDENDUM NO. 2 to Drawings and Project Manual, dated August 31, 2023 for Carmel High School Polytechnic Addition and Renovations for Carmel Clay Schools, 5201 East Main Street, Carmel, Indiana 46033; 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. PROJECT MANUAL, TABLE OF CONTENTS

A. Book 2, Page 00 00 20-3, DIVISION 09: Add Section 09 21 16.23 – Gypsum Board Shaft Wall Assemblies.

B. Book 2, Page 00 00 20-5, DIVISION 23: Add Sections 23 11 13 – Facility Fuel-Oil Piping and 23 13 23 – Facility Above Ground Fuel-Oil Storage Tanks.

C. Book 3, Page 00 00 20-6, Division 27: Add Sections 27 13 23 TM – Manufacturer's Material List, and 27 15 53 TM – Manufacturer's Material List.

ITEM NO. 2. NEW PROJECT MANUAL SECTION(S)

A. New Project Manual Section 09 21 16.23 – Gypsum Board Shaft Wall Assemblies, 23 11 13 – Facility Fuel-Oil Piping, 23 13 23 – Facility Above Ground Fuel-Oil Storage Tanks, 27 13 23 TM – Manufacturer's Material List, and 27 15 53 TM – Manufacturer's Material List are included with and hereby made a part of this Addendum.

ITEM NO. 3. REVISED PROJECT MANUAL SECTIONS

A. Sections 12 93 00 – Site Furnishings and Amenities, 23 80 61 – Fume Collection Systems, 27 11 00 TM – Manufacturer's Material List, 27 15 15 TM – Manufacturer's Material List, 27 15 17 – Communications Copper Horizontal Cabling (Augmented CAT 6A) and 33 41 00 – Storm Utility Drainage Piping have been revised, dated 10/5/23, and are included with and hereby made a part of this Addendum.

ITEM NO. 4. PROJECT MANUAL, SECTION 04 20 00 – UNIT MASONRY

A. Replace 2.4, C., 2., as follows:

"2. Owner to provide Ground Face Masonry Units from Owner's attic stock."

B. Delete 2.4, C., 3., 4., and 6., in their entirety.

Note: Paragraph No. 5 remains, adding the Acrylic Coating to Owner supplied Ground Frace Masonry Units is required as part of this Work.

ITEM NO. 5. PROJECT MANUAL, SECTION 07 01 50.91 – ROOFING RESTORATION

A. Add 1.10, B., 3., as follows:

"3. New material installed at intersection of roof coating and new membrane roofing to integrate new roof coating with new construction shall be covered under Manufacturer Warranty described herein."

B. Add 3.2, C., as follows:

"C. All new membrane materials must be sanded to develop suitable profile and cleaned per manufacturer's written instructions.
1. Cleaning shall utilize manufacturer's recommended cleaning solution and thoroughly rinse with fresh water.
2. Apply manufacturer's recommended primer to new membrane before proceeding with roof coating materials.

ITEM NO. 6. PROJECT MANUAL, SECTION 07 54 00 – THERMOPLASTIC MEMBRANE ROOFING

A. Replace 2.3, A., 1., a., 1), as follows:

"1) Roof NAV #269163-0-0"

B. Replace 2.5, B., as follows:

"B. Vapor Retarder/Barrier Laminate Sheet: Roof Membrane Manufacturer's standard product of same or similar material and performance specified that is part of the tested assembly."

ITEM NO. 7. PROJECT MANUAL, SECTION 11 57 00.01 – VOCATIONAL SHOP EQUIPMENT SCHEDULE

A. Item No. SAA-100: In the "Item Name/Description" column delete the Model Number "SLW210UOTO". Model number in the Model Number column and specification is correct.

ITEM NO. 8. PROJECT MANUAL, SECTION 26 24 16 - PANELBOARDS

A. Add 2.1, A., 4., as follows:

"4. Existing Equipment: GE equipment to match existing may be utilized for new parts within that existing equipment only."

ITEM NO. 9. 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 08 91 19 – Fixed Louvers
- Pottorff, Fort Worth, Texas

Section 10 51 13 – Metal Lockers
- Lockers MFG, Como Mississippi

Section 23 34 23 – HVAC Power Ventilators
- Canarm Ltd. (Article 2.1 A.)
- Canarm Ltd. (Article 2.2 A.)

Section 23 36 00 – Variable Air Volume Terminals
- Krueger (Article 2.1 A.)
- Metalaire (Article 2.1 A.)

Section 23 37 23 – HVAC Gravity Ventilators
- Acme (Article 2.3 A.)

Section 23 41 00 – Particulate Air Filtration
- IAP Air Products (Article 2.1 A.)

Section 23 73 13 – Modular Indoor Central Station Air-Handling Units
- VTS America (Article 2.1 A.)

Section 23 80 54 – Dust Collection System
- AQC Dust (Article 2.1 A.)
- Imperial Systems (Article 2.1 A.)
- Nederman (Article 2.1 A.)
- Boss Products LLC (Article 2.1 B.)
- Nederman (Article 2.1 B.)
- US Duct (Article 2.2 A 1.)

Section 23 80 54 – Vehicle Exhaust Systems
- Nederman (Article 2.05 A.)

ITEM NO. 10. REVISED DRAWING SHEETS

A. Drawing Sheets: Index A, Index B, GD1.1, G1.1, G1.3, G2.1, G3.3, G4.1, G4.2, G5.1, G5.2, SU1.1, SU2.1, SU3.3, S1.01, S1.02, S1.03, S2.01, S2.02, S2.03, S3.01, S4.01, S5.02, S5.03, A0.01, AD1.01, AD3.01, A1.01, A1.02, A1.03, A1.05, A2.01, A2.02, A4.01, A5.01, A5.02, A5.04, A5.05, A7.01, A7S.01, A8.01, A8.03, A8.04, A8.08, A8S.01, A9.01, A9.03, A10.01, A10.02, P2.01, P3.01, P4.01, P4.02, M2.01, M2.02, M4.01, M5.01, M5.07, E3.01, E3.04, E5.01, E5.02, E6.01, TD.01, TD.02, T1.03, and T3.01 have been revised, dated 10/5/22 and are included with and hereby made a part of this Addendum. These Drawings supersede the original documents.

ITEM NO. 11. DRAWING SHEET A8.03

A. Room No. C124, add the following note adjacent to the “PSP-1” designation:

“PSP-1 shall extend from floor base to bottom of ceiling.”

END OF ADDENDUM

SECTION 09 21 16.23 - GYPSUM BOARD SHAFT WALL ASSEMBLIES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes gypsum board shaft-wall assemblies for the following:
   1. Shaft-wall enclosures.
   2. Horizontal enclosures.

B. Related Sections include the following:
   1. Division 07 Section "Penetration Firestopping" for head-of-wall assemblies that incorporate gypsum board shaft-wall assemblies.
   2. Division 09 Section “Gypsum Board Assemblies” for finish requirements.

1.2 ACTION SUBMITTALS

A. Product Data: For each gypsum board shaft-wall assembly indicated.

1.3 QUALITY ASSURANCE

A. Fire-Resistance Ratings: Provide materials and construction identical to those of assemblies with fire-resistance ratings determined according to ASTM E 119 by a testing and inspecting agency.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original packages, containers, and bundles bearing brand name and identification of manufacturer or supplier.

B. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes.

C. Stack panels flat on leveled supports off floor or slab to prevent sagging.

1.5 FIELD CONDITIONS

A. Environmental Limitations: Comply with ASTM C 840 requirements or with gypsum board manufacturer's written recommendations, whichever are more stringent.

B. Do not install interior products until installation areas are enclosed and conditioned.

C. Do not install panels that are wet, moisture damaged, or mold damaged.
   1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, and irregular shape.
   2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated in Gypsum Board Shaft-Wall Assembly Schedule at the end of Part 3 or a comparable product by one of the following:
   1. American Gypsum Company.
   2. CertainTeed Gypsum, Inc.

3. G-P Gypsum.
4. Continental Building Products, LLC (fka Lafarge).
5. National Gypsum Company.
6. PABCO Gypsum.
7. Temple-Inland Forest Products Corporation.
8. USG Corporation.

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 GYPSUM BOARD SHAFT-WALL ASSEMBLIES, GENERAL

A. Provide materials and components complying with requirements of fire-resistance-rated assemblies indicated.
1. Provide panels in maximum lengths available to eliminate or minimize end-to-end butt joints.
2. Provide auxiliary materials complying with gypsum board shaft-wall assembly manufacturer's written recommendations.

2.3 PANEL PRODUCTS

A. Gypsum Shaft Liner Panels: Comply with ASTM C 1396.
1. Moisture- and Mold-Resistant Type X: ASTM C 1396, manufacturer's proprietary liner panels with moisture- and mold-resistant core and surfaces; comply with ASTM D 3273, score of 10 as rated according to ASTM D 3274.
a. Core: 1 inch thick.
b. Long Edges: Double bevel.
c. Mold Resistance: ASTM D 3273, score 10 as rated according to ASTM D 3274.

B. Gypsum Board: As specified in Division 09 Section "Gypsum Board Assemblies".

2.4 NON-LOAD-BEARING STEEL FRAMING

A. Framing Members: Comply with ASTM C 645 for conditions indicated.

B. Steel Sheet Components: Comply with ASTM C 645 requirements for metal, unless otherwise indicated.
1. Protective Coating: Coating with equivalent corrosion resistance of ASTM A 653, G40, hot-dip galvanized, unless otherwise indicated.

C. Firestop Tracks: Top runner manufactured to allow partition heads to expand and contract with movement of the structure while maintaining continuity of fire-resistance-rated assembly indicated; in thickness not less than indicated for studs and in width to accommodate depth of studs.
1. Products: Subject to compliance with requirements, provide one of the following:
a. Fire Trak Corp.; Fire Trak System.
b. Grace Construction Products; FlameSafe FlowTrak System.
c. Metal-Lite, Inc.; The System.
d. Steel Network Inc. (The); VertiClip SLD or VertiTrack VTD.

2.5 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced product standards and manufacturer's written recommendations.

B. Trim Accessories: Cornerbead, edge trim, and control joints of material and shapes specified in Division 09 Section "Gypsum Board Assemblies" that comply with gypsum board shaft-wall assembly manufacturer's written recommendations for application indicated.

C. Gypsum Board Joint-Treatment Materials: As specified in Division 09 Section "Gypsum Board Assemblies."

D. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.

E. Track Fasteners: Power-driven fasteners of size and material required to withstand loading conditions imposed on shaft-wall assemblies without exceeding allowable design stress of track, fasteners, or structural substrates in which anchors are embedded.
   1. Expansion Anchors: Fabricated from corrosion-resistant materials, with capability to sustain, without failure, a load equal to 5 times design load, as determined by testing per ASTM E 488 conducted by a qualified testing agency.

F. Sound Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing), produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.
   1. Fire-Resistance-Rated Assemblies: Comply with mineral-fiber requirements of assembly.
   2. Sustainability Requirements: Glass fiber blanket insulation used on this project shall be tested according to ASTM D5116 and shown to emit less than 13.5-ppb formaldehyde.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates to which gypsum board shaft-wall assemblies attach or abut, with Installer present, including hollow-metal frames, elevator hoistway door frames, cast-in anchors, and structural framing. Examine for compliance with requirements for installation tolerances and other conditions affecting performance.

B. Examine panels before installation. Reject panels that are wet, moisture damaged, or mold damaged.

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

3.2 INSTALLATION

A. General: Install gypsum board shaft-wall assemblies to comply with requirements of fire-resistance-rated assemblies indicated, manufacturer's written installation instructions, and the following:
   1. ASTM C 754 for installing steel framing except comply with framing spacing indicated.
   2. Division 09 Section "Gypsum Board Assemblies" for applying and finishing panels.

B. Do not bridge architectural or building expansion joints with shaft-wall assemblies; frame both sides of expansion joints with furring and other support.

C. Install supplementary framing in gypsum board shaft-wall assemblies around openings and as required for blocking, bracing, and support of gravity and pullout loads of fixtures, equipment, services, heavy trim, furnishings, and similar items that cannot be supported directly by shaft-wall assembly framing.

D. At penetrations in shaft wall, maintain fire-resistance rating of shaft-wall assembly by installing supplementary steel framing around perimeter of penetration and fire protection behind boxes containing wiring devices, elevator call buttons, elevator floor indicators, and similar items.

E. Isolate perimeter of gypsum panels from building structure to prevent cracking of panels, while maintaining continuity of fire-rated construction.

F. Firestop Tracks: Install to maintain continuity of fire-resistance-rated assembly indicated.

G. Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by A/E, while maintaining fire-resistance rating of gypsum board shaft-wall assemblies.

H. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch from the plane formed by faces of adjacent framing.

3.3 PROTECTION

A. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

B. Remove and replace panels that are wet, moisture damaged, or mold damaged.
1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, and irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

3.4 GYPSUM BOARD SHAFT-WALL ASSEMBLY SCHEDULE

A. Gypsum Board Shaft-Wall Assembly SWGB-1: Where this designation is indicated, provide assembly complying with the following:
1. Horizontal and vertical orientation.
2. Fire Resistance Rated Assembly (1 hour):
   a. Products:
      1) One hour assembly (WP-755): National Gypsum Co.
      2) Cavity shaft-wall gypsum drywall (UL Des U469): United States Gypsum Co.
      3) One hour rated finished one side (WP 7000): Georgia Pacific.
   b. Option: UL I504 (HM 101): National Gypsum.
3. Stud Depth: As indicated or as required to comply with tested assembly.
4. Stud and Track Base Metal Thickness
   a. Minimum Base-Metal Thickness: 0.0329 inch.
5. Room Side Finish: Per Division 09 Section “Gypsum Board Assemblies”.
6. Shaft Side Finish: As indicated by fire resistance rated assembly design designation above.

END OF SECTION 09 21 16.23

SECTION 12 93 00 – SITE FURNISHINGS AND AMENITIES

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes the following:
   1. Screen Wall and Gates
   2. Trash Dumpster Gates
   3. Pipe Bollards and Covers

B. Related sections include the following:
   1. Division 03 Section "Cast-in-Place Concrete" for installation of pipe sleeves cast or anchor bolts cast in concrete footings.
   2. Division 31 Section "Earth Moving" for excavation for installation of concrete footings.

1.3 SUBMITTALS

A. Samples for Initial Selection: For units with factory-applied color finishes.

B. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below.
   1. Size: Not less than 6-inch-long linear components and 4-inch-square sheet components.

C. Quality Assurance/Control Submittals
   1. Product Data: For each type of product indicated.

D. Closeout Submittals
   1. Maintenance Data: For site furnishings to include in maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated; free of surface blemishes and complying with the following:
   1. Rolled or Cold-Finished Bars, Rods, and Wire: ASTM B 211.
   2. Extruded Bars, Rods, Wire, Profiles, and Tubes: ASTM B 221.
   3. Structural Pipe and Tube: ASTM B 429.
   4. Sheet and Plate: ASTM B 209.
   5. Castings: ASTM B 26.

B. Steel and Iron: Free of surface blemishes and complying with the following:
   1. Plates, Shapes, and Bars: ASTM A 36.
   2. Steel Pipe: Standard-weight steel pipe complying with ASTM A 53, or electric-resistance-welded pipe complying with ASTM A 135.
   3. Tubing: Cold-formed steel tubing complying with ASTM A 500.
   4. Mechanical Tubing: Cold-rolled, electric-resistance-welded carbon or alloy steel tubing complying with ASTM A 513, or steel tubing fabricated from steel complying with ASTM A 1011 and complying with dimensional tolerances in ASTM A 500; zinc coated internally and externally.
   5. Sheet: Commercial steel sheet complying with ASTM A 1011.
   6. Perforated Metal: From steel sheet not less than 0.0897-inch nominal thickness; manufacturer's standard perforation pattern.
   7. Expanded Metal: Carbon-steel sheets, deburred after expansion, and complying with ASTM F 1267.

8. Malleable-Iron Castings: ASTM A 47, grade as recommended by fabricator for type of use intended.
9. Gray-Iron Castings: ASTM A 48, Class 200.
10. Welded metal grid

C. Stainless Steel: Free of surface blemishes and complying with the following:
1. Sheet, Strip, Plate, and Flat Bars: ASTM A 666.
2. Pipe: Schedule 40 steel pipe complying with ASTM A 312.
3. Tubing: ASTM A 554.

D. Anchors, Fasteners, Fittings, and Hardware: Manufacturer's standard, corrosion-resistant-coated or non-corrodible materials; commercial quality, tamperproof, vandal and theft resistant, or concealed, recessed, and capped or plugged. Provide one of the following:
1. Angle Anchors: For inconspicuously bolting legs of site furnishings to on-grade substrate; one per leg, unless otherwise noted.
2. Antitheft Hold-Down Brackets: For securing site furnishings to substrate; minimum two per unit or as required by manufacturer.

E. Erosion-Resistant Anchoring Cement: Factory-packaged, non-shrink, non-staining, hydraulic-controlled expansion cement formulation for mixing with potable water at Project site to create pourable anchoring, patching, and grouting compound; resistant to erosion from water exposure without needing protection by a sealer or waterproof coating; recommended in writing by manufacturer, for exterior applications.

F. Galvanizing: Where indicated for steel and iron components, provide the following protective zinc coating applied to components after fabrication:
1. Zinc-Coated Tubing: External, zinc with organic overcoat, consisting of a minimum of 0.9 oz./sq. ft. of zinc after welding, a chromate conversion coating, and a clear, polymer film. Internal, same as external or consisting of 81 percent zinc pigmented coating, not less than 0.3 mil thick.
2. Hot-Dip Galvanizing: According to ASTM A 123, ASTM A 153, or ASTM A 924.

2.2 SCREEN WALL AND GATES

A. Screen Wall / Fencing
1. CityScapes Architectural innovations, Covrit System (Cellular PVC Vertical Plank with standard stiffener infill – Madison Style with woodgrain surface on two-sides)
2. Color selection by Owner.
3. Height shall be 8’-0”. Width of planks, per manufacturer to withstand local wind load codes.
4. Posts: Shall be part of the Plank system and surface mounted on new concrete or a new concrete pier foundation.
a. Posts shall be mounted with Hilti epoxy anchors.
b. Post cap shall be a metal powder-coated shallow hip style.

B. Swing Gates at Screen Wall System
1. CityScapes Architectural innovations, ToughGate PVC Vertical Plank Infill Series – Madison Style)
2. Height shall be 7’-9”, leaving a 3” gap at the bottom.
3. Width: Opening is per Plan and allow for two 5” diameter gate posts, as required.
4. Gate Posts: Steel powder coated in ground posts (5” diameter) Color selection by Owner.
5. Latch: Powder-coated steel. (lock by Owner). Color selection by Owner.
6. Drop Pin: Powder-coated steel or Stainless Steel (1/2” diameter) with adjustable mounting hardware.
7. Handle: Powder-coated aluminum “Bridge” style handle on both gates. Color selection by Owner.
8. Man-gate shall be a 5’ wide single swing gate.
a. Provide door hardware with lock on the on the “Un-secure”, west side.
b. Provide weather-proof panic hardware (Detex or similar) with local alarm on the “secure” east side, with contact switch at post.

C. Rolling or Sliding Gates
1. CityScapes Architectural innovations, ToughGate PVC Vertical Plank Infill Series – Madison Style)
2. Height shall be 7’-8”, leaving a 4” gap at the bottom.
3. Width: Opening is 12’-0” between masonry.
4. Gate Frame: Steel, powder coated to be designed by the wall system manufacturer to support vertical planks.
5. Gate support system shall be steel, powder coated to be designed by the wall system manufacturer.
6. Rollers (3 minimum shall have steel powder coated axles and springs as required, with flexible wheels.
7. Latch: Powder-coated steel. (Lock by Owner). Color selection by Owner.
8. Handle: Powder-coated aluminum “Bridge” style handle on both gates. Color selection by Owner.

D. Trash Dumpster Gates.
1. CityScapes Architectural innovations, ToughGate PVC Vertical Plank Infill Series – Madison Style) Wood grain on two sides.
2. Height shall be 7’-9”, leaving a 3” gap at the bottom.
3. Width: Opening is 12’-0” between masonry, and allow for two 5” diameter gate posts.
4. Double Swing Gates
5. Gate Posts: Steel powder coated in ground posts (5: diameter) Color selection by Owner.
6. Hinges: Powder-coated steel. Color selection by Owner.
7. Latch: Powder-coated steel. (Lock by Owner). Color selection by Owner.
8. Drop Pin: Powder-coated steel or stainless steel (1/2” diameter) with adjustable mounting hardware.
9. Handle: Powder-coated aluminum “Bridge” style handle on both gates. Color selection by Owner.

2.3 BOLLARDS

A. Steel Bollards
1. Pipe materials
a. Size shall be 4” or 6” diameter and 48” tall, per plan and details.
b. Schedule 40 galvanized steel pipe.
c. Concrete filled.
d. Powder coated finish, unless receiving a bollard cover.

2. Foundations and mounting
a. Direct buried with 3,500 psi Concrete Foundations, 36” minimum depth
b. Surface mounted with 1/2” (min) base plates and four ½” diameter x 6” long galvanized anchor bolts.

B. Bollard Covers
1. HDPE, Wall thickness ¼”.
2. Color shall be as indicated on the Plans.
3. Sealant caulking (1/8” min) to be applied between bollard cover and foundation.
4. Manufacturers:
a. Ideal Sheild
b. ULine

2.4 FABRICATION

A. Metal Components: Form to required shapes and sizes with true, consistent curves, lines, and angles. Separate metals from dissimilar materials to prevent electrolytic action.

B. Welded Connections: Weld connections continuously. Weld solid members with full-length, full-penetration welds and hollow members with full-circumference welds. At exposed

connections, finish surfaces smooth and blended so no roughness or unevenness shows after finishing and welded surface matches contours of adjoining surfaces.

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

D. Exposed Surfaces: Polished, sanded, or otherwise finished; all surfaces smooth, free of burrs, barbs, splinters, and sharpness; all edges and ends rolled, rounded, or capped.

E. Factory Assembly: Assemble components in the factory to greatest extent possible to minimize field assembly. Clearly mark units for assembly in the field.

2.5 FINISHES, GENERAL

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

B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

C. All exposed metal surfaces on tables, seating, and trash receptacles shall be coated with a Panguard II powder-coat finish.

2.6 STEEL AND GALVANIZED STEEL FINISHES

A. Powder-Coat Finish: Manufacturer's standard, baked, polyester, powder-coat finish complying with finish manufacturer's written instructions for surface preparation, including pretreatment, application, baking, and minimum dry film thickness.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for correct and level finished grade, mounting surfaces, installation tolerances, and other conditions affecting performance.
   1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. Comply with manufacturer's written installation instructions unless more stringent requirements are indicated. Complete field assembly of site furnishings where required.

B. Install all site furnishings with embedment type mounting prior to paving and landscaping. All other surface style mounted site furnishings to be installed after landscaping and paving have been completed.

C. Install site furnishings level, plumb, true, and securely anchored at locations indicated on Drawings.

D. Post Setting: Set cast-in or embedment type support posts in concrete footing with smooth top, shaped to shed water to depths as required by manufacturer. Protect portion of posts above footing from concrete splatter. Verify that posts are set plumb or at correct angle and are

aligned and at correct height and spacing. Hold posts in position during placement and finishing operations until concrete is sufficiently cured.

E. Store and Install Apex Inverted Bike Parking Racks per manufacture's written instructions.

3.3 CLEANING

A. After completing site furnishing installation, inspect components. Remove spots, dirt, and debris. Repair damaged finishes to match original finish or replace component.

END OF SECTION 116833

SECTION 231113 - FACILITY FUEL-OIL PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Double-containment pipe and fittings.
2. Piping specialties.
3. Joining materials.
4. Specialty valves.
5. Mechanical leak-detection valves.
6. Leak-detection and monitoring system.
7. Labels and identification.

1.2 ACTION SUBMITTALS

A. Product Data:

1. Double-containment pipe and fittings.
2. Piping specialties.
3. Joining materials.
4. Specialty valves.
5. Mechanical leak-detection valves.
6. Leak-detection and monitoring system.
7. Labels and identification.

B. Product Data Submittals:

1. Include construction details, material descriptions, and dimensions of individual components and profiles.
2. Include rated capacities, pressure ratings, operating characteristics, electrical characteristics, settings, and furnished specialties and accessories.

C. Shop Drawings: For fuel-oil piping.

1. Include plans, elevations sections, hangers, and supports for multiple pipes.
2. Include details of location of anchors, alignment guides, and expansion joints and loops.
3. Scale: 1/4 inch per foot.

1.3 INFORMATIONAL SUBMITTALS

A. Coordination Drawings:

1. Plans and details, drawn to scale, on which fuel-oil piping and tanks are shown and coordinated with other installations, using input from installers of the items involved.

B. Field quality-control reports.

C. Sample Warranty: For special warranty.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For fuel-oil equipment and accessories.

1. Indicate actual installed items by marking submittals with an arrow or box.

1.5 MAINTENANCE MATERIAL SUBMITTALS

1.6 QUALITY ASSURANCE

A. Delegated Design Engineer Qualifications: A professional engineer who is legally qualified to practice in Indiana where Carmel High School is located and who is experienced in providing engineering services of the type indicated.

B. Steel Support Welding Qualifications: Qualify procedures and personnel in accordance with AWS D1.1/D1.1M, "Structural Welding Code - Steel."

C. Pipe Welding Qualifications: Qualify procedures and personnel in accordance with ASME Boiler and Pressure Vessel Code.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Lift and support fuel-oil storage tanks only at designated lifting or supporting points, as indicated on Shop Drawings. Do not move or lift tanks unless empty.

B. Deliver pipes and tubes with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe end damage and to prevent entrance of dirt, debris, and moisture.

C. Store PE and PE-coated pipes, tubes, and valves in manner to avoid damaging the coating and to protect from direct sunlight.

1.8 FIELD CONDITIONS

A. Interruption of Existing Fuel-Oil Service: Do not interrupt fuel-oil service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary fuel-oil supply in accordance with requirements indicated:

1. Notify Construction Manager/Owner no fewer than **two** days in advance of proposed interruption of fuel-oil service.

2. Do not proceed with interruption of fuel-oil service without Construction Manager's/ Owner's written permission.

1.9 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of flexible, double-containment piping and related equipment that fail in materials or workmanship within specified warranty period.

1. Failures include those due to defective materials or workmanship for materials including piping, dispenser sumps, watertight sump entry boots, terminations, and other end fittings.
2. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by an NRTL, and marked for intended location and use.

B. Comply with ASME B31.9, "Building Services Piping," for fuel-oil piping materials, installation, testing, and inspecting.

C. Fuel-Oil Valves: Comply with UL 842 and have service mark initials "WOG" permanently marked on valve body.

D. Comply with requirements of the EPA and of state and local authorities having jurisdiction.

E. Maximum Operating-Pressure Ratings: 3 psig fuel-oil supply pressure at oil-fired appliances.

2.2 DOUBLE-CONTAINMENT PIPE AND FITTINGS

A. Double-Containment Piping - Flexible, Nonmetallic:
1. Source Limitations: Obtain double-containment piping - flexible, nonmetallic, from single manufacturer.
2. Standard: Comply with UL 971.
3. Pipe Materials: PVDF complying with ASTM D3222 for carrier pipe with mechanical couplings to seal carrier, and PE pipe complying with ASTM D4976 for containment piping.
4. Sumps: PE.
5. Watertight sump entry boots, pipe adapters with test ports and tubes, coaxial fittings, and couplings.
6. Minimum Operating Pressure Rating: 10 psig
7. Plastic to Steel Pipe Transition Fittings: Factory-fabricated fittings with plastic end matching or compatible with carrier piping, and steel pipe end complying with ASTM A53/A53M, black steel, Schedule 40, Type E or S, Grade B.

8. Include design and fabrication of double-containment pipe and fitting assemblies with provision for field installation of cable leak-detection system in annular space between carrier and containment piping.
9. Leak-Detection System: Include design and fabrication of double-containment pipe and fitting assemblies with provision for field installation of cable leak-detection system in annular space between carrier and containment piping.

B. Double-Containment Piping - Flexible, Metallic:
1. Source Limitations: Obtain double-containment piping - flexible, metallic, from single manufacturer.
2. Standard: Comply with UL 971A.
3. Pipe Materials:

    a. Metallic Lining: ASTM A240/A240M, Type 304, corrugated stainless steel tubing.
    b. Carrier Pipe: Fluoropolymer tube.
    c. Jacket: UV stabilized.

4. Watertight sump entry boots, pipe adapters with test ports and tubes, coaxial fittings, and couplings.
5. Minimum Operating Pressure Rating: 10 psig
6. Plastic to Steel Pipe Transition Fittings: Factory-fabricated fittings with plastic end matching or compatible with carrier piping, and steel pipe end complying with ASTM A53/A53M, black steel, Schedule 40, Type E or S, Grade B.
7. Include design and fabrication of double-containment pipe and fitting assemblies with provision for field installation of cable leak-detection system in annular space between carrier and containment piping.
8. Leak-Detection System: Include design and fabrication of double-containment pipe and fitting assemblies with provision for field installation of cable leak-detection system in annular space between carrier and containment piping.

C. Double-Containment Piping - Rigid:
1. Source Limitations: Obtain double-containment piping - rigid, from single manufacturer.
2. Standard: Comply with UL 971.
3. RTRP: ASTM D2996 or ASTM D2997 carrier and containment piping and mechanical couplings to seal carrier and containment piping or individually bonded joints.

    a. Minimum Operating-Pressure Rating for RTRP NPS 2 and NPS 3 (DN 50 and DN 80): 150 psig
    b. Minimum Operating-Pressure Rating for RTRP NPS 4 and NPS 6 (DN 100 and DN 150): 125 psig. Compliance with UL 971 is not required for NPS 6 (DN 150) and larger piping.
    c. Fittings: RTRF complying with ASTM D2996 or ASTM D2997 and made by RTRP manufacturer; watertight sump entry boots, termination, or other end fittings.

4. Leak-Detection System: Include design and fabrication of double-containment pipe and fitting assemblies with provision for field installation of cable leak-detection system in annular space between carrier and containment piping.

2.3 PIPING SPECIALTIES

A. Flexible Connectors - Metallic:
   1. Source Limitations: Obtain flexible connectors - metallic, from single manufacturer.
   2. Listed and labeled for aboveground and underground applications by an NRTL acceptable to authorities having jurisdiction.
   3. Stainless steel bellows with woven, flexible, bronze or stainless steel, wire-reinforcing protective jacket.
   4. Minimum Operating Pressure: 150 psig
   5. End Connections: Socket, flanged, or threaded end to match connected piping.
   6. Maximum Length: 30 inches
   7. Swivel end, 50 psig maximum operating pressure.
   8. Factory-furnished anode for connection to cathodic protection.

B. Flexible Connectors - Nonmetallic:
   1. Source Limitations: Obtain flexible connectors - nonmetallic, from single manufacturer.
   2. Listed and labeled for underground applications by an NRTL acceptable to authorities having jurisdiction.
   3. PFTE bellows with woven, flexible, bronze or stainless steel, wire-reinforcing protective jacket.
   4. Minimum Operating Pressure: 150 psig
   5. End Connections: Socket, flanged, or threaded end to match connected piping.
   6. Maximum Length: 30 inches
   7. Swivel end, 50 psig maximum operating pressure.
   8. Factory-furnished anode.

C. Strainers - Y-Pattern:

   1. Body: ASTM A126, Class B, cast iron with bolted cover and bottom drain connection.
   2. End Connections: Threaded ends for NPS 2 and smaller; flanged ends for NPS 2-1/2 and larger.
   3. Strainer Screen: 80-mesh startup strainer and perforated stainless steel basket with 50 percent free area.
   4. CWP Rating: 125 psig.

D. Strainers - Basket:

   1. Body: ASTM A126, Class B, high-tensile cast iron with bolted cover and bottom drain connection.
   2. End Connections: Threaded ends for NPS 2 and smaller; flanged ends for NPS 2-1/2 and larger.
   3. Strainer Screen: 80-mesh startup strainer and perforated stainless steel basket with 50 percent free area.
   4. CWP Rating: 125 psig.

E. Strainers - T-Pattern:

   1. Body: Ductile or malleable iron with removable access coupling and end cap for strainer maintenance.
   2. End Connections: Grooved ends.

3. Strainer Screen: 80-mesh startup strainer and perforated stainless steel basket with 57 percent free area.
4. CWP Rating: 750 psig

F. Air Vents - Manual:

1. Body: Bronze.
2. Internal Parts: Nonferrous.
3. Operator: Screwdriver or thumbscrew.
4. Inlet Connection: NPS 1/2
5. Discharge Connection: NPS 1/8
6. CWP Rating: 150 psig
7. Maximum Operating Temperature: 225 deg F

2.4 JOINING MATERIALS

A. Joint Compound and Tape for Threaded Joints: Suitable for fuel oil.

B. Welding Filler Metals: Comply with AWS D10.12/D10.12M for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded.

C. Brazing Filler Metals: Alloy with melting point greater than 1000 deg F complying with AWS A5.8/A5.8M. Brazing alloys containing more than 0.05 percent phosphorus are prohibited.

D. Bonding Adhesive for RTRP and RTRF: As recommended by piping and fitting manufacturer.

2.5 SPECIALTY VALVES

A. Pressure Relief Valves:
1. Source Limitations: Obtain pressure relief valves from single manufacturer.
2. Listed and labeled for fuel-oil service by an NRTL acceptable to authorities having jurisdiction.
3. Body: Brass, bronze, or cast steel.
4. Springs: Stainless steel, interchangeable.
5. Seat and Seal: NBR.
6. Orifice: Stainless steel, interchangeable.
7. Factory-Applied Finish: Baked enamel.
8. Maximum Inlet Pressure: **150 psig**
9. Relief Pressure Setting: **60 psig**

B. Oil Safety Valves:
1. Source Limitations: Obtains oil safety valves from single manufacturer.
2. Listed and labeled for fuel-oil service by an NRTL acceptable to authorities having jurisdiction.
3. Body: Brass, bronze, or cast steel.
4. Springs: Stainless steel.
5. Seat and Diaphragm: NBR.
6. Orifice: Stainless steel, interchangeable.

7. Factory-Applied Finish: Baked enamel.
8. Manual override port.
9. Maximum Inlet Pressure: 60 psig.
10. Maximum Outlet Pressure: 3 psig

C. Emergency Shutoff Valves:
1. Source Limitations: Obtain emergency shutoff valves from single manufacturer.
2. Listed and labeled for fuel-oil service by an NRTL acceptable to authorities having jurisdiction.
3. [**Single**] [**Double**] poppet valve.
4. Body: ASTM A126, cast iron.
5. Disk: FPM.
6. Poppet Spring: Stainless steel.
7. Stem: Plated brass.
8. O-Ring: FPM.
9. Packing Nut: PTFE-coated brass.
10. Fusible link to close valve at 165 deg F
11. Thermal relief to vent line pressure buildup due to fire.
12. Air test port.
13. Maximum Operating Pressure: 0.5 psig

2.6 MECHANICAL LEAK-DETECTION VALVES

A. Source Limitations: Obtain mechanical leak-detection valves from single manufacturer.

B. Listed and labeled for fuel-oil service by an NRTL acceptable to authorities having jurisdiction.

C. Body: ASTM A126, cast iron.

D. O-Rings: Elastomeric compatible with fuel oil.

E. Piston and Stem Seals: PTFE.

F. Stem and Spring: Stainless steel.

G. Piston Cylinder: Burnished brass.

H. Indicated Leak Rate: Maximum 3 gph at 10 psig

I. Leak Indication: Reduced flow.

2.7 LEAK-DETECTION AND MONITORING SYSTEM

A. Cable and Sensor Leak-Detection Monitoring System:
1. Source Limitations: Obtain cable and sensor leak-detection monitoring system from single manufacturer.
2. Standard: Comply with UL 1238.
3. Calibrated leak-detection and monitoring system with probes and other sensors and remote alarm panel for fuel-oil piping.

4. Include fittings and devices required for testing.

2.8 LABELS AND IDENTIFICATION

A. Detectable Warning Tape: Acid- and alkali-resistant PE-film warning tape manufactured for marking and identifying underground utilities, minimum of 6 inches wide and 4 mils thick, continuously inscribed with description of utility, with metallic core encased in a protective jacket for corrosion protection, and detectable by metal detector when tape is buried up to 30 inches deep; colored yellow.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas for compliance with requirements for installation tolerances and other conditions affecting performance of fuel-oil piping.

B. Examine installation of fuel-burning equipment and fuel-handling and storage equipment to verify actual locations of piping connections before installing fuel-oil piping.

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

3.2 EARTHWORK

A. Comply with requirements in Section 312000 "Earth Moving" for excavating, trenching, and backfilling.

3.3 PREPARATION

A. Close equipment shutoff valves before turning off fuel oil to premises or piping section.

B. Comply with NFPA 30 and NFPA 31 requirements for prevention of accidental ignition.

3.4 INSTALLATION OF OUTDOOR PIPING

A. Underground Fuel-Oil Piping Burial Depth:

1. Under Compacted Backfill: 18 inches below finished grade.
2. Under Asphalt 2 Inches (51 mm) Thick: 8 inches below bottom of asphalt.
3. Under 4 Inches (102 mm) of Reinforced Concrete in Areas Subject to Vehicle Traffic: 4 inches below bottom of concrete.
4. Comply with requirements in Section 312000 "Earth Moving" for excavating, trenching, and backfilling.

B. Steel Piping with Protective Coating:

1. Apply joint cover kits to pipe after joining, to cover, seal, and protect joints.
2. Repair damage to PE coating on pipe, complying with protective coating manufacturer's written instructions. Review protective coating damage with Architect prior to repair.
3. Replace pipe having damaged PE coating with new pipe.

C. Install double-containment, fuel-oil pipe at a minimum slope of 1 percent downward toward fuel-oil storage tank sump.

D. Install vent pipe at a minimum slope of 2 percent downward toward fuel-oil storage tank sump.

E. Assemble and install entry boots for pipe penetrations through sump sidewalls for liquidtight joints.

F. Install metal pipes and tubes, fittings, valves, and flexible connectors at piping connections to aboveground storage tanks and underground storage tanks.

G. Install fittings for changes in direction in rigid pipe.

H. Install system components with pressure rating equal to or greater than system operating pressure.

3.5 INSTALLATION OF VALVES

A. Install valves in accessible locations.

B. Install pressure relief valves in distribution piping between the supply and return lines.

C. Install one-piece, bronze ball valve with hose end connection at low points in fuel-oil piping. Comply with requirements in Section 230523.12 "Ball Valves for HVAC Piping."

D. Install manual air vents at high points in fuel-oil piping.

3.6 PIPING JOINT CONSTRUCTION

A. Ream ends of pipes and tubes and remove burrs.

B. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.

C. Threaded Joints: Thread pipe with tapered pipe threads in accordance with ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:

1. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.

D. Welded Joints: Construct joints in accordance with AWS D10.12/D10.12M, using qualified processes and welding operators in accordance with "Quality Assurance" Article.

1. Bevel plain ends of steel pipe.
2. Patch factory-applied protective coating as recommended in writing by manufacturer at field welds and where damage to coating occurs during construction.

E. Brazed Joints: Construct joints in accordance with AWS's "Brazing Handbook," Ch. 35, "Pipe and Tubing."

F. Flanged Joints: Install gasket material, size, type, and thickness for service application. Install gasket concentrically positioned.

G. Flared Joints: Comply with SAE J513. Tighten finger tight, and then use wrench in accordance with fitting manufacturer's written instructions. Do not overtighten.

H. Fiberglass-Bonded Joints: Prepare pipe ends and fittings, apply adhesive, and join in accordance with pipe manufacturer's written instructions.

3.7 INSTALLATION OF LEAK-DETECTION AND MONITORING SYSTEM

A. Install leak-detection and monitoring system. Install alarm panel inside building where indicated.

B. Double-Containment, Fuel-Oil Piping: Install leak-detection sensor cable probes in interstitial space of double-containment piping.

3.8 PIPING CONNECTIONS

A. Where installing piping adjacent to equipment, allow space for service and maintenance.

B. Install unions, in piping NPS 2 and smaller, adjacent to each valve and at final connection to each piece of equipment having threaded pipe connection.

C. Install flanges, in piping NPS 2-1/2 and larger, adjacent to flanged valves and at final connection to each piece of equipment having flanged pipe connection.

D. Connect piping to equipment with shutoff valve and union. Install union between valve and equipment.

E. Install flexible piping connectors at final connection to burners, oil-fired appliances, and day tanks.

3.9 LABELING AND IDENTIFYING

A. Nameplates, pipe identification, valve tags, and signs are specified in Section 230553 "Identification for HVAC Piping and Equipment."

B. Install detectable warning tape directly above buried fuel-oil piping, 6 inches below subgrade under pavements and slabs. Terminate tracer wire in an accessible area, and identify as "tracer wire" for future use with plastic-laminate sign.

1. Piping: Over underground fuel-oil distribution piping.

3.10 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.

B. Manufacturer Field Services: Engage a factory-authorized service representative to support/ supervise field tests and inspections.

C. Tests and Inspections:

1. Piping Pressure Test: Minimum hydrostatic or pneumatic test-pressures measured at highest point in system.

a. Fuel-Oil Distribution Piping:

1) Hydrostatic: Minimum 150 percent of maximum anticipated pressure or 5 psig
2) Pneumatic: Minimum 110 percent of maximum anticipated pressure.
3) Pressure to be maintained while complete visual inspection of all joints and connections is conducted.
4) In no case is test pressure to be less than a gauge pressure of 5 psi measured at the highest point of the system.
5) In no case is test pressure to be maintained for less than 10 minutes.

b. Fuel-Oil, Double-Containment Piping:

1) Carrier Pipe: Same as "Fuel-Oil Distribution Piping" Subparagraph above.
2) Containment Conduit: Minimum 5 psig for minimum 60 minutes.

c. Suction Piping: Minimum 20 in. Hg for minimum 30minutes.
d. Isolate storage tanks if test pressure in piping will cause pressure in storage tanks to exceed 10 psig.

D. Inspect and test fuel-oil piping in accordance with NFPA 31, "Tests of Piping" Paragraph; and in accordance with requirements of authorities having jurisdiction.

E. Test leak-detection and monitoring system for accuracy by manually operating sensors and checking against alarm panel indication.

F. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

G. Bleed air from fuel-oil piping using manual air vents.

H. Fuel-oil piping and equipment will be considered defective if they do not pass tests and inspections.

I. Prepare test and inspection reports.

3.11 OUTDOOR PIPING SCHEDULE

A. All underground fuel-oil piping is to be installed in containment piping.

B. Underground Fuel-Oil Piping: Flexible/Rigid, double-containment piping. Size indicated is carrier-pipe size.

C. Underground fuel-oil-tank fill and vent piping to be the following:

1. NPS 2 (DN 50) Pipe Size and Smaller: Steel pipe, steel or malleable-iron threaded fittings, and threaded joints. Coat pipe and fittings with protective coating for steel piping.
2. NPS 2-1/2 (DN 65) Pipe Size and Larger: Steel pipe, steel welding fittings, and welded joints. Coat pipe and fittings with protective coating for steel piping.

D. Containment Conduit: Steel pipe with wrought-steel fittings and welded joints. Coat pipe and fittings with protective coating for steel piping.

E. Aboveground fuel-oil piping to be the following:

1. NPS 2 (DN 50) Pipe Size and Smaller: Steel pipe, steel or malleable-iron threaded fittings, and threaded joints.
2. NPS 2-1/2 (DN 65) Pipe Size and Larger: Steel pipe, steel welding fittings, and welded joints.
3. Stainless steel pipe with grooved joints.

3.12 SHUTOFF VALVE SCHEDULE

A. Valves for aboveground distribution piping NPS 2 (DN 50) and smaller to be the following:

1. One-piece, bronze ball valve with bronze trim.
2. Two-piece, full-port, bronze ball valves with bronze trim.

B. Distribution piping valves for pipe NPS 2-1/2 (DN 65) and larger to be the following:

1. Two-piece, full-port, bronze ball valves with bronze trim.
2. Bronze, lubricated plug valve.

C. Valves in branch piping for single appliance to be the following:

1. One-piece, bronze ball valve with bronze trim.
2. Two-piece, full-port, bronze ball valves with bronze trim.

END OF SECTION 231113

SECTION 231323 - FACILITY ABOVEGROUND FUEL-OIL STORAGE TANKS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Aboveground fuel-oil storage tanks, horizontal, steel.
2. Aboveground fuel-oil storage tank accessories.
3. Fuel-oil-level gauge system.
4. Fuel-oil leak-detection and monitoring systems.
5. Fuel oil.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, and dimensions of individual components and profiles.
2. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.
3. Fuel-oil storage tank accessories.
4. Fuel-oil leak-detection and monitoring system.

B. Shop Drawings: For aboveground fuel-oil storage tanks.

1. Include plans, elevations, sections, concrete bases, anchors, and lifting or supporting points.
2. Indicate details of equipment assemblies. Indicate dimensions, components, and location and size of each field connection.
3. Shop Drawing Scale: 1/4 inch per foot

1.3 INFORMATIONAL SUBMITTALS

A. Site Survey: Plans, drawn to scale, on which fuel-oil storage tanks are indicated and coordinated with other services and utilities.

B. Seismic Qualification Data: Certificates for aboveground fuel oil storage tanks, accessories, and components, from manufacturer.

1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
3. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.

C. Welding certificates.

D. Field quality-control reports.

E. Sample Warranty: For special warranty.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For fuel-oil equipment and accessories to include in emergency, operation, and maintenance manuals.

1.5 QUALITY ASSURANCE

A. Steel Support Welding Qualifications: Qualify procedures and personnel in accordance with AWS D1.1/D1.1M, "Structural Welding Code - Steel."

1.6 DELIVERY, STORAGE, AND HANDLING

A. Lift and support fuel-oil storage tanks only at designated lifting or supporting points, as shown on Shop Drawings. Do not move or lift tanks unless empty.

1.7 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of fuel-oil storage tanks that fail in materials or workmanship within specified warranty period.

1. Storage Tanks:

a. Failures include, but are not limited to, the following when used for storage of fuel oil at temperatures not exceeding 150 deg F.

1) Structural failures including cracking, breakup, and collapse.
2) Corrosion failure including external and internal corrosion of steel tanks.

PART 2 - PRODUCTS

2.1 ABOVEGROUND FUEL-OIL STORAGE TANKS, HORIZONTAL, STEEL

A. Source Limitations: Obtain horizontal, steel, aboveground fuel-oil storage tanks from single manufacturer.

B. Description:
1. UL 142, double-wall, horizontal steel tank; with primary- and secondary-containment walls and interstitial space.

C. Construction: Fabricated with welded carbon steel; suitable for operation at atmospheric pressure and for storing fuel oil with specific gravity up to 1.1 and with maintained temperature up to 150 deg F.

D. Supports:

1. Manufacturer's standard structural steel welded to tank.
2. Number of Supports: 2.

E. Capacities and Characteristics:

1. Capacity: 750 gal.
2. Diameter: <**Insert feet (m)**>.
3. Length: <**Insert feet (m)**>.
4. Connection Sizes:

    a. Fill Line: 2” NPS
    b. Vent Line: 2” NPS
    c. Outlet: 2” NPS
    d. Return: 2” NPS
    e. Gauge: NPS

5. Manholes:

    a. Number Required: <**Insert number**>.
    b. Diameter: <**Insert inches (mm)**>.

6. Fuel: Fuel Oil.

2.2 ABOVEGROUND FUEL-OIL STORAGE TANK ACCESSORIES

A. Threaded pipe connection fittings on top of tank, for fill, supply, return, vent, sounding, and gauging. Include cast-iron plugs for shipping.

B. Threaded pipe connection fittings on top or sides of tank as indicated, for fill, supply, return, vent, sounding, and gauging. Include cast-iron plugs for shipping.

C. Striker Plates: Inside tank, on bottom below fill, vent, sounding, gauge, and other tube openings.

D. Lifting Lugs: For handling and installation.

E. Supply Tube: Extension of supply piping fitting into tank, terminating 6 inches above tank bottom and cut at a 45-degree angle.

F. Sounding and Gauge Tubes: Extension of fitting into tank, terminating 6 inches above tank bottom and cut at a 45-degree angle.

2.3 FUEL-OIL-LEVEL GAUGE SYSTEM

A. Source Limitations: Obtain fuel-oil-level gauge system from single manufacturer.

B. Description: Calibrated fuel-oil-level gauge system complying with UL 180 with floats & UL 1238 with probes or other sensors and remote annunciator panel.

C. Annunciator Panel: With visual and audible, high-tank-level and low-tank-level alarms; fuel indicator with registration in gallons; and overfill alarm. Include gauge volume range that covers fuel-oil storage capacity.

D. Controls: Electrical, operating on 120V ac.

2.4 FUEL-OIL LEAK-DETECTION AND MONITORING SYSTEMS

A. Fuel-Oil Leak Detection and Monitoring, Cable and Sensor System: Comply with UL 1238.
   1. Source Limitations: Obtain cable-and-sensor fuel-oil leak-detection and monitoring system from single manufacturer.
   2. Calibrated fuel-oil leak-detection and monitoring system with probes and other sensors and remote alarm panel for fuel-oil storage tanks and fuel-oil piping.
   3. Include fittings and devices required for testing.
   4. Controls: Electrical, operating on 120V ac.

2.5 FUEL OIL

A. Fuel Oil: ASTM D396, Grade No. 2.

2.6 SOURCE QUALITY CONTROL

A. Pressure test and inspect fuel-oil storage tank, after fabrication and before shipment, in accordance with ASME and the following:
   1. Horizontal, Double-Wall Steel Aboveground Fuel-Oil Storage Tanks: UL 142, STI F921, and STI R931.

B. Affix standards organization's code stamp.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine roughing-in for aboveground fuel-oil storage tanks to verify actual locations.

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

3.2 EARTHWORK

A. Comply with requirements in Section 312000 "Earth Moving" for excavating, trenching, and backfilling.

3.3 INSTALLATION OF ABOVEGROUND FUEL-OIL STORAGE TANKS

A. Install tank in accordance with NFPA 30 and 31 by a tank-manufacturer-trained and -certified contractor.

B. Install tank supports.

C. Concrete Bases: Anchor aboveground fuel oil storage tank to concrete base in accordance with equipment manufacturer's written instructions and in accordance with seismic codes at Project.

1. Construct concrete bases of dimensions indicated, but not less than 4 inches larger in both directions than supported unit.
2. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on **18-inch** centers around the full perimeter of the base.
3. Install epoxy-coated anchor bolts for supported equipment that extend through concrete base, and anchor into structural concrete floor.
4. Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
5. Install anchor bolts to elevations required for proper attachment to supported equipment.
6. Use 3000-psig, 28-day, compressive-strength concrete and reinforcement as specified in Section 033000 "Cast-in-Place Concrete."

D. Connect piping and vent fittings.

E. Install ground connections.

F. Install tank leak-detection and monitoring devices.

G. Install steel aboveground fuel-oil storage tanks in accordance with STI R912.

H. Fill storage tanks with fuel oil.

3.4 INSTALLATION OF FUEL-OIL-LEVEL GAUGE SYSTEM

A. Install liquid-level gauge system. Install panel where indicated on Drawings.

3.5 INSTALLATION OF LEAK-DETECTION AND MONITORING SYSTEM

A. Install leak-detection and monitoring system. Install alarm panel where indicated on Drawings.

1. Double-Wall, Fuel-Oil Storage Tanks: Install probes in interstitial space.
2. Double-Containment Fuel-Oil Piping: Install leak-detection sensor probes in fuel-oil storage tank containment sumps and at low points in piping; cable probes in interstitial space of double-containment piping.
3. Install liquid-level gauge.

3.6 LABELING AND IDENTIFYING

A. Nameplates, pipe identification, and signs are specified in Section 230553 "Identification for HVAC Piping and Equipment."

3.7 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.

B. Perform the following tests and inspections with the assistance of a factory-authorized service representative:

1. Tanks: Minimum hydrostatic or compressed-air test pressures for fuel-oil storage tanks that have not been factory tested and do not bear the ASME code stamp or a listing mark acceptable to authorities having jurisdiction:
   a. Double-Wall Tanks:
      1) Inner Tanks: Minimum 3 psig and maximum 5 psig
      2) Interstitial Space: Minimum 3 psig and maximum 5 psig, or 5.3-in. Hg vacuum.
   b. Where vertical height of fill and vent pipes is such that the static head imposed on the bottom of the tank is greater than 10 psig, hydrostatically test the tank and fill and vent pipes to a pressure equal to the static head thus imposed.
   c. Maintain the test pressure for one hour.

C. Aboveground fuel-oil storage tanks will be considered defective if they do not pass tests and inspections.

D. Prepare test and inspection reports.

END OF SECTION 231323

SECTION 23 80 61 - FUME COLLECTION SYSTEMS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. The Contractor shall provide the labor, materials, equipment, appliances, services and transportation, and perform operations in connection with the construction and installation of the Work. Work to be as herein specified and as denoted on the accompanying Drawings.

B. This Section of the Work includes the providing the filtration unit and exhaust fan, including air cleaners, plenums, ductwork, flexible hose, source capture devices, and other related items necessary to bring the fumes generated by the welding process within the OSHA Air Quality Standards at the welder's breathing zone.

C. Related Work by Others
1. Motor starter, safety disconnect switch, and starting controls shall be by the unit manufacturer.

D. Refer to the Details and Schedules on the Drawings for additional requirements.

1.3 ACTION SUBMITTALS

A. The Contractor shall submit to the Design Engineer a copy of submittal data from the manufacturer which specifies unit parameters as follows:
1. CFM
2. Horsepower
3. Blower type
4. Static pressure
5. Electrical requirements
6. Outlet velocity

B. Refer to Division 01 Section “Submittal Procedures” for submittal requirements.

1.4 QUALITY ASSURANCE

A. Air cleaning equipment shall be manufactured by a bona fide manufacturer of the type of equipment specified. The manufacturer must be able to establish his credentials and the credentials of equipment to be sold by providing proof that said equipment is presently in use and performing successfully in similar applications.

B. The manufacturer shall have a field service network to perform service and maintenance on the equipment. A factory representative shall perform field start-up of equipment.

1.5 WARRANTY

A. Warranty: The unit shall carry a 1 year parts and labor warranty following the date of Substantial Completion.

PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
   1. Basis-of-Design Manufacturers: Subject to compliance with requirements, provide either the product named or a comparable product by one of the other manufacturers specified.
   2. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the manufacturers specified.
   3. Manufacturers: Subject to compliance with requirements, provide products by 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 A/E'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 Construction Manager. Construction Manager will then forward to A/E for approval.

2.2 DOWN FLOW CARTRIDGE COLLECTORS

A. Basis-of-Design – Collector: Donaldson-Torit. Subject to compliance with requirements, provide either the product named or a comparable product by one of the other manufacturers specified.
   1. American Air Filter Company, Inc.
   2. United Air Specialists
   3. **Nederman**
   4. **AQC Dust**
   5. **Camfil APC**

B. The collector shall be a down flow cartridge filter collector designed for welding exhaust systems.

C. Cabinet shall be constructed of heavy gauge steel with welded seams and shall be rated to -25" w.g.

D. The cabinet shall be finished in a durable, multi-coat liquid or powder finish that meets ASTM B117 salt spray test of 2,000 hours. The exterior shall be finished in a custom color as selected by A/E. The interior of the unit shall be primed with a durable liquid or powder primer.

E. The unit shall be provided with an air management module with multiple connections to an extended dirty air plenum. Airflow shall be directed into a dropout zone for reduced filter loading. Each dedicated duct connection shall be provided with an electronic or pneumatic actuated blast gate that shall be opened and closed based on the usage of the system as determined by the unit control panel. The blast gates shall be constructed of heavy duty aluminum or galvanized steel construction, and shall be rated for the design system pressure.

F. The unit shall be equipped with a heavy gauge welded ledgeless hopper with single outlet. The unit shall be provided with a drum cover pack with slide gate and locking latches, including hose, clamps and 55 gallon drum cover to provide air-tight seal a the hopper discharge. The slide gate shall allow drum change without shutting down the system.

G. The unit shall be supported by structural steel legs designed to meet IBC requirements for wind and snow loads. The unit shall be installed with 48" clearance below hopper outlet.

H. The collector shall be provided with filters equal to Donaldson Torit Ultra-Web Flame Retardant cartridge filters complete with galvanized steel end caps and expanded metal inner and outer liners. Filters shall be replaceable without the use of tools. The filters shall be provided with compressed air pulse cleaning. The filter media shall be designed for pulse cleaning and shall have a minimum of MERV 15 with 0.3 micron, 0.2% - 0.5% moisture absorption, a maximum operating temperature of 180 degrees F., and be flame retardant as specified in TAPPI T461.

I. The clean air plenum shall be lined with minimum 3/4" silencing foam liner.

2.3 BACKWARD-INCLINED CENTRIFUGAL FAN

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Greenheck
2. Loren Cook Company.
3. Penn Ventilation
4. Twin City Fan
5. **Nederman**
6. **AQC Dust**

B. Description: Factory-fabricated, -assembled, -tested, and -finished, belt- or direct-driven centrifugal fans consisting of housing, wheel, fan shaft, bearings, motor, drive assembly, and support structure.

C. Housings: Fan housings shall be heavy gauge, continuously welded construction.
1. Panel Bracing: Steel angle- or channel-iron member supports for mounting and supporting fan scroll, wheel, motor, and accessories.
2. Discharge flanges for rigidity and duct connection.
3. Aerodynamically designed inlet or shrouds for stable flow and rigidity.

D. Backward-Inclined Wheels: Single-width-single-inlet construction with curved inlet flange, back plate, backward-inclined blades fully welded to rim and backplate. Wheels shall be statically and dynamically balanced. The complete fan assembly shall be balanced at the design operating speed.

E. Shafts: Statically and dynamically balanced and selected for continuous operation at maximum rated fan speed and motor horsepower, with final alignment and belt adjustment made after installation.
1. Turned, ground, and polished hot-rolled steel with keyway. Ship with a protective coating of lubricating oil.
2. Designed to operate at no more than 70 percent of first critical speed at top of fan's speed range.

F. Grease-Lubricated Shaft Bearings: Heavy-Duty, anti-friction, self-aligning, pillow-block-type, ball bearings with adapter mount and two-piece, cast-iron housing.
1. Ball-Bearing Rating Life: AFBMA L50 at 200,000 hours.

G. Belt Drives: Factory mounted, with final alignment and belt adjustment made after installation.
1. Service Factor Based on Fan Motor Size: 1.5.
2. Fan Pulleys: Cast iron; dynamically balanced at factory.
3. Motor Pulleys: Cast iron, fixed pitch.
4. Provide pulleys changes as required to obtain design airflow and static pressure.
5. Belts: Oil resistant, nonsparking, and nonstatic; matched sets for multiple belt drives.
6. Belt Guards: Fabricate to comply with OSHA and SMACNA requirements for outdoor installation, prime coated, and finish painted. Secure to fan or fan supports without short circuiting vibration isolation. Include provisions for adjustment of belt tension, lubrication, and use of tachometer with guard in place.
7. Motor Mount: Adjustable for belt tensioning.

H. Accessories:
1. Access Door: Bolted, gasketed door allowing access to fan scroll, of same material as housing.
2. Scroll Drain Connection: NPS 1 steel pipe coupling welded to low point of fan scroll complete with plug.
3. Companion Flanges: Rolled flanges for duct connections of same material as housing.
4. Shaft Seals: Airtight seals installed around shaft on drive side of single-width fans.
5. Weather Cover: Enameled-steel sheet with ventilation slots, bolted to housing.
6. Vibration Isolation: Minimum 1” deflection.

I. Motors: Comply with requirements in Division 23 Section "Common Motor Requirements for HVAC Equipment."
1. Enclosure Type: Totally enclosed, fan cooled.

2.4 ADJUSTABLE FUME COLLECTION ARM – Type WA

A. Basis-of-Design – Extraction Arm: Plymovent T-Flex/CW. Subject to compliance with requirements, provide either the product named or a comparable product by one of the other manufacturers specified.
1. Lincoln Electric LTA 2.0-CW
2. **Nederman**
3. **AQC Dust**

B. Extraction arm designed to collect fumes at source with adjusted joints to be easily positioned at any point within the working area.

C. Counter-weighted, telescopic extraction arm. Extends from 5 feet to 8.2 feet, 360 degree swivel elbow, support flange, internal support, pre-set joints with wear discs, wire reinforced PVC hose, 8 inch diameter, rotating hood with inlet screen, handle for positioning hood, internal baffle for regulating airflow damper.

D. Maximum operating temperature 176 degrees F.

E. Hanging weight 60 pounds.

2.5 SLOTTED PLENUM HOOD – Type WH

A. Basis-of-Design – Slotted Plenum Hood: KEES Incorporated. Subject to compliance with requirements, provide either the product named or a comparable product by one of the other manufacturers specified.
1. Monoxivent

B. Slotted plenum hood designed to collect fumes at source with hood that sits on the table top and exhausts air through slots prior to reaching the breathing zone.

C. Constructed of all welded 18 gauge galvanized steel. Size and dimensions as indicated on the drawings.

2.6 SPARK ARRESTORS

A. Basis-of-Design – Spark Arrestor: Quality Air Management - Quencher. Subject to compliance with requirements, additional manufacturers may be considered for acceptance if a Substitution Request Form is submitted as noted below.

B. The spark arrestors shall be static devices with no moving parts or electrical controls. The fixed overlapping curved blade assembly shall be designed to produce turbulent airflow and strip the oxygen away from and cool embers in the air stream.

C. The spark arrestors shall be constructed of hot rolled steel and shall comply with SMACNA industrial duct construction standards.

D. The spark arrestors shall not rely on the injection of water or chemicals.

2.7 SILENCERS

A. Basis-of-Design – Silencer: VAW VRDS. Subject to compliance with requirements, provide either the product named or a comparable product by one of the other manufacturers specified.
1. Industrial Noise Control, Inc.
2. McGill AirFlow LLC.
3. Ruskin Company.
4. Vibro-Acoustics.
5. Price
6. **Nederman**

B. General Requirements:
1. Factory fabricated industrial duty silencer.
2. Fire-Performance Characteristics: Adhesives, sealants, packing materials, and accessory materials shall have flame-spread index not exceeding 25 and smoke-developed index not exceeding 50 when tested according to ASTM E 84.

C. Shape:
1. Rectangular fan discharge.

D. Rectangular Silencer Outer Casing: Mild steel, primed and finished in manufacturers standard finish system for exterior application.

E. Inner Casing and Baffles: ASTM A 653/A 653M, G90 galvanized sheet metal.

F. Special Construction:
1. Suitable for outdoor use.
2. Maximum pressure drop: 0.5” w.c.
3. Criteria Level: 75 dbA
4. Criteria Position: Position 3

G. Connection Sizes: Match fan discharge and connecting ductwork unless otherwise indicated.

H. Principal Sound-Absorbing Mechanism:
1. Controlled impedance membranes and broadly tuned resonators without absorptive media.
2. Dissipative or film-lined type with fill material.

I. Fill Material: Inert and vermin-proof fibrous material, packed under not less than 5 percent compression.
1. Erosion Barrier: Polymer bag enclosing fill, and heat sealed before assembly.
2. Lining: Fiberglass cloth.

J. Fabricate silencers to form rigid units that will not pulsate, vibrate, rattle, or otherwise react to system pressure variations. Do not use mechanical fasteners for unit assemblies.
1. Flange connections.
2. Reinforcement: Cross or trapeze angles for rigid suspension.

K. Accessories:
1. Factory-installed end caps to prevent contamination during shipping.

2.8 CONTROL PANEL

A. Provide NEMA 12 control panel to house all operating controls for the fume collection system.

1. Main Disconnect
2. 460/3/60 incoming power
3. Variable Frequency Controller (VFC) for fan motor
4. Control voltage transformer
5. Microprocessor based controller
6. Circuit breakers/fuses
7. Individual zone start/stop
8. Individual zone status
9. Relays, solenoids, etc.
10. Velocity control
11. Filter differential pressure
12. Pulse cleaning
13. **Zone 1 and Zone 2 control damper status and control open/close with system Zone 1 and Zone 2 operation.**

B. The control panel shall provide for the system to operate with any of the following zones signally or in combination:
1. Zone 1 (welding booths in Auto Lab Area)
   a. Zone 1 control damper open/close.
2. Zone 2 (welding booths in Advanced MFG Innovation Lab)
   a. Zone 2 control damper open/close.
3. Zone 3 (welding booths in Auto Lab Area and Advanced MFG Innovation Lab)
   a. Zone 1 control damper open/close.
   b. Zone 2 control damper open/close.

C. The following controls shall be door mounted:
1. Zone 1 start/stop
2. Zone 2 start/stop
3. Zone 3 start/stop
4. Fan run indicator

D. Push-Button Stations, Pilot Lights, and Selector Switches: NEMA ICS 2, heavy-duty type.

2.9 ROUND SPIRAL DUCTWORK FOR MEDIUM AND HIGH VELOCITY FUME COLLECTION SYSTEMS SHALL BE AS FOLLOWS:

A. Round duct shall be manufactured of galvanized steel and complying with SMACNA requirements for the pressure class required by the system or by the following methods and gauges listed as a minimum.

DIAMETER	MINIMUM GAUGE	METHOD OF MANUFACTURE
3 through 14 inches	26 ga.	Spiral Lockseam
15 through 26 inches	24 ga.	Spiral Lockseam
27 through 36 inches	22 ga.	Spiral Lockseam

B. The spiral duct shall have locked seams so made to eliminate any leakage under the pressure for which the system has been designed.

C. Spiral duct shall be provided in 10 foot lengths for accurate fitting.

2.10 DUCT FITTINGS FOR ABOVE MENTIONED FUME COLLECTION SYSTEMS SHALL BE AS FOLLOWS:

A. Fittings and couplings shall be made of minimum 20 gauge galvanized steel, or as required by SMACNA for the pressure class required by the system.

B. Fittings are to have continuous welds along all seams. All divided flow fittings (laterals) are to be manufactured as separate fittings, not as tap collars welded into spiral duct sections. Galvanized areas that have been damaged by welding shall be coated with corrosion resistant aluminum paint.

C. 90 degree tees and 45 degree laterals (wyes) up to and including 12 inch diameter tap size shall have a radiused entrance into the tap, produced by machine or press forming. The entrance shall be free of weld build-up burrs or irregularities.

D. Elbows in diameters 3 inches through 8 inches shall be two section stamped elbows. Other elbows shall be gored construction with seams continuous/welded. Elbows shall be fabricated to a centerline radius of 1.5 times the cross-section diameter. Elbows, not die-stamped, shall be fabricated according to the following schedule:

ELBOW ANGLE	NUMBER OF GORES
Less than 35 degrees	2
36 degrees through 71 degrees	3
Over 71 degrees	5

E. Couplings for round high pressure duct pipe-to-pipe joints in diameters to 60 inches shall be by the use of sleeve couplings, reinforced by rolled beads.

F. Pipe-to-fitting joints in diameters to 60 inches shall be slip-fit of projecting collar of the fitting into the pipe.

G. Insertion length of sleeve coupling and fitting collar shall be 2 inches.

PART 3 EXECUTION

3.1 INSTALLATION

A. Refer to Drawings for general location of the dust collector and extraction equipment. Proper clearances must be maintained for component access, electrical access, bottom working clearance, and air discharge against walls or other obstructions must be considered.

B. The dust collector shall be installed on concrete pad of size and strength required by unit manufacturer. Refer to manufacturer's installation instructions.

C. Fume extraction arms or slotted plenum hoods to be located as denoted on drawing plans. Secure mounting bracket for each unit to wall for extraction arms and from welding booth walls for slotted plenum hoods. Follow manufacturer's recommendations for installation.

3.2 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain centrifugal fans. Refer to Division 01 Section "Demonstration and Training."

END OF SECTION 23 80 61

FANNING HOWEY

PROJECT NAME	Carmel High School Performing Arts Additions and Renovations											
PROJECT NO.	221165.01				DATE	3/8/2021						
271100 Communications Equipment Room Fittings (Items in bold are standard of quality and performance)												
Racks/Cabinets												
	Panduit	Middle Atlantic	**CPI**	**Hoffman**	**Hubbell**	**Leviton**	**Belden**	**B-Line**	**Lowell**	**Emerson (Liebert)**	**Siemon**
24"W x 36"D x 7' H Cabinet	**S6519B**	WMRK 4536	GF-2A120-CB	PS1C2179B			XH2M451140000	V452436ACVXTNNSB	LGR-4436		V61B-0AB121-45
24"W x 42"D x 7' H Cabinet	**S6519B**	WMRK 4542	GF-2A320-CB	PS1S21611B	H3N4242		XH3M451140000	V452442ACVXTNNSB		F8611	V61B-0AB121-45
24"W x 48"D x 7' H Cabinet	**S6529B**	WMRK 4548	GF-2A520-CB	PS1S21612B	H3N4248		XH4M451140000	V452448ACVXTNNSB		F8612	V62B-0AB121-45
30"W x 36"D x 7'H Cabinets	**S8512B SERIES**	DRK19-44-36	GF-2C120-CB	PS1C2189B			XH6M451220100	V452936BCNSSNN1B & VVCMC45FB			V81A-2AB111-45
30"W x 42"D x 7'H Cabinets	**S8512B SERIES**	DRK19-44-42	GF-2B320-CB	PS1C21810B			XH7M451220100	V452942BCNSSNN1B & VVCMC45FB		F8811	V81A-2AB111-45
7' Cabinet Fans/Guards		FAN-10/GUARD-10		A6AXFNPG/AFLTR6LD	H3FT110		Included in above XHM	VTP1BB			VP-FAN
Free-Standing 4' Equipment Cabinet											
22"W x 25"D x 51" H Cabinet		ERK-2725					XMF282413022				
22"W x 25"D x 41" H Cabinet		ERK-2125		PS1C1278B			XMF212413012				
22"W x 25"D x 36" H Cabinet		ERK-1825					XMF192413012				
Cabinet Fans/Guards		FAN/GUARD					Included in above XMF cabinets				
Wall-Mount Hinged Sectional											
35U spaces, 24"W 26"D x 68"H	**S7229B**	DWR-35-26PD	13495-772				N/A		LWR-2423		
24U spaces, 24"W 26"D x 49"H		DWR-24-26PD	11900-748	EWMWG482425	HSQ4826		XWM-4824-GD-3	VLWM4825PB			WC3-(X)101-24
18U spaces, 24"W 26"D x 39"H	**PZWMC18P**	DWR-18-26PD	11900-736	EWMWG362425	HSQ3626		XWM-3624-GD-3	VLWM3625PB			WC3-(X)101-18
12U spaces, 24"W 26"D x 28"H	**PZWMC12P**	DWR-12-26PD	11900-724	EWMWG242425	HSQ2426		XWM-2424-GD-3	VLWM2425PB		202637G2	WC3-(X)101-12
Wall Mt Fan/Guards	**PZCFK**	DWR-FK26	12804-701 & 12805-701	EWMF2	HWKF120		XWM-9312-1600	VLWMFKB			VP-FAN
21U spaces, 24"W x 22"D x 44"H		DWR-21-22	11900-748	EWMW482425			XWM-4824-SD-3	VLWM4820PB			WC2-(X)101-24
16U spaces, 24"W x 22"D x 35"H	**PZC12S**	DWR-16-22	11900-736	EWMW362425			XWM-3624-SD-3	VLWM3620PB			WC2-(X)101-18
10U spaces, 24"W x 22"D x 25"H	**PZC12W**	DWR-10-22	11900-724	EWMW242425			XWM-2424-SD-3	VLWM2420PB			WC2-(X)101-12
Wall Mt Fan/Guards	**PZCFK**	DWR-FK22	12804-701 & 12805-701	EWMF2			XWM-9312-1600	VLWMFKB			VP-FAN
Hinged Floor Cabinet											
40U, Space, 24"W x 32"D x 90 3/4"H		SR-40-32	13496-772				N/A		LWBR-4032		
Hinged Floor Cabinet		SR-24-32	13496-772				N/A		LWBR-4032		
Hinged Cabinet Fans/Guards	**PZCFK**	QFAN/GUARD	12804-701		HWKF230		N/A				
Wall Mt Fan/Guards	**PZCFK**	DWR-FK32	12804-701				N/A				
Technology Equipment Rack											
2-post Equipment Racks	**R2P**	RLA19-1245B	55053-703	EDR19FM45U	HPW84RR19	NB191-BLU SERIES	BHRR194	SB556084XUFB	LRR-4515		RS1-07-S
4-post Adjustable Comm Racks 12/24, 19"Wx42"Dx84"H	**ER4P29**	R4XX-XXXXB	15218-703	E4DR19FM45U	SF841942T		XDR8419-3102836	SB838084DFB			RSQ1-07-S
4-post Adjustable Server Racks Square Punched, 19"Wx42"Dx84"H	**R4PCN**	WMRK-4236SVR	15214-703	E4DRS19FM45U	SF841942		XH2M421121220 w/ (1) HVMP014201 and (1)	SB838086BFB			RSQ1-07C-S
Wall Mounted Swing Rack		SFR-20-24	11791-718				XWR-4819-18				SBH-6 (4ea = 42" height)
Hardware Kit	**CNWS1224-C**	HP	12639-001				(2) 8915-0100				
Low Profile Wall Cabinet		WRP-6	13050-712	DBS242412G	RE4X		N/A				
Adjustable Vented Shelf	**SRM19FM1**	VDS	15255-702	ESHVA19			N/A				V-SHV1-01-1U
Heavy Duty Adjustable Vented Shelf	**SRM19X18A1**	VSA-2744	16350-719	P19VSH810B	CKTSD		N/A		VDS-2		V-SHV2-01-1U
Sliding Shelf		SS	12338-719	P19SHP68B/ P19SHP810B			9013-1924	SB742M19FB	RSD-116	535809G1	
Vertical Wire Mangement	**WMPVHC45E**	CK-45	13911-703	EC6D7	VS76H	4980L-VFR	BHVH006	SB86166DFB		10200078	VCM-6D
Horizontal Wire Mangement	**NMF2**	HCM-2	13930-702	DCHD2	HM277C	492RU-HFO	9511-1902	SB87019D2FB			HCM-4-2U-D
Vertical Power Strips	**CMRPSV20**	PDT-20xxC-NS	12848-705	DP1N622420	PR20620	P1043-10S	9BG1-201004			35351051	8BV01-AA20Z-K1A
Horizontal Power Strips		PD-915R	13239-757	DP1N191020	PR10120	P1021-125	9BF1-101002				8BH01-AA08Z-K1A
Light Duty Rack Shelf	**SRM19FM2**	U2	40074-700	ESHA19	MCCCS19		9012-1918	SB747S1915SFB	US-114		SH-S19-01
Vented Light Duty Rack Shelf	**SRM19CMV3**	RC-3	11231-719		CKSSD		9011-1918	E2SHH4P1930FB	RMK3-14 SERIES		SH-S19V-01
Ground Strip	**RGS134-1Y**	BB-44-1	40172-001	DG72	HBBBVR76KT		N/A	SBVB72			VP-GRD
Ladder Tray											
12" Cable Tray	**WG12BL10**	CLxx series	10250-712	LSS12BLK	HLS0612B		BLRS250-12B	SB17U12BFB			
Waterfall Accessory	**WGBTMWFBL**	CLH-EDxx	12100-712	LRD12BLK	HLCD12		BLRRD100-12B	SB212912FB			
Rack Mounting Kit	**WGSTRKTBL**	MK-LA	10595-712	LRRMPBLK12	HLMPK19		BLRTR595-9B	SB213312FB			
UPS										**Emerson (Liebert)**	
		Middle Atlantic	**Minuteman**	**TrippLite**	**APC**	**Cyber Power**	**Xtreme**			GXT3-1500RT-120	
1500VA		UPS-OL1500R	ED1500RM2U	SU1500RTXL2U	SRT1500RMXLA	OL1500RTXL2U	P90-1500			GXT3-2000RT-120	
2000VA		UPS-OL2200R	ED2000RM2U	SU2200RTXL2UA	SRT2200RMXLA	OL2200RTXL2UA	P90-2000			GXT3-3000RT-120	
3000VA		UPS-OL3000R	ED3000RM2U	SU3000TRXL2U	**SRT3000RMXLA**	OL3000RTXL2U	P90-3000				
External Battery										GXT3-48VBATT	
2000 VA		UPS-EBPR	EDBP48XL	BP48V24-2U	SURTA48RMXLBP	BP72V60ART2U				GXT3-72VBATT	
3000VA		103002836-6591	EDBP72XL	BP72V28RT-3U	**SURT192RMXLBP3U**	BP72V60ART2U					

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PLEASE NOTE: Not all products are used, see plans and specifications for more information.

FANNING HOWEY

PROJECT NAME	Carmel City Schools Polytechnic											
PROJECT NO.	221165.01					DATE	8/29/2023					
271323 Communications Fiber Optical Backbone Cabling (Items in bold are standard of quality and performance)												
Fiber Optic Cable	**Panduit**	**Corning**	**Belden**	**Mohawk**	**BerkTek**	**Hitachi**	**General**	**Superior**	**Hubbell**	**Siemon**		
Indoor Plenum Rated												
6 strand Multimode (50um)	**FODPZ06Y**	006T88-31190-29	FI4D006P9	FI4D006P9	PDP006FB3010/F5	61868-6	BL0061PNU	44006PG01	HFCD1006P4	9BB5P006D-T512A		
12 strand Multimode (50um)	**FODPZ12Y**	012T88-33190-29	FI4D012P9	FI4D012P9	PDP012FB3010/F5	61868-12	BL0121PNU	44012PG01	HFCD1012P4	9BB5P012G-T512A		
6 strand Singlemode	**FSDP906Y**	006E88-31131-29	FISD006P9	FISD006P9	PDP006AB0707	60029-6	AP0061PNU	4406K101	HFCD1006PS	9BB8P006D-E205A		
12 strand Singlemode	**FSDP912Y**	012E88-33131-29	FISD012P9	FISD012P9	PDP012AB0707	60029-12	AP0121PNU	44024KK01	HFCD1012PS	9BB8P012G-E205A		
Indoor Plenum Rated Armored												
6 strand Multimode (50um)	**FOPPZ06Y**	006T88-31190-A3	FI4D006A9	FI4D006A9	PDPK006FB3010/F5	61897-6	BL0061PNU-ILPA	L4006P401	HFCD15006P4	9BC5P006D-T512A		
12 strand Multimode (50um)	**FOPPZ12Y**	012T88-33190-A3	FI4D012A9	FI4D012A9	PDPK012FB3010/F5	61897-12	BL0121PNU-ILPA	L4012P401	HFCD15012P4	9BC5P012G-T512A		
6 strand Singlemode	**FSPP906Y**	006E88-31131-A3	FISD006A9	FISD006A9	PDPK006AB0707	61955-6	AP0061PNU-ILPA	L4006K401	HFCD15006PS	9BC8P006D-E205A		
12 strand Singlemode	**FSPP912Y**	012E88-33131-A3	FISD012A9	FISD012A9	PDPK012AB0707	61955-12	AP0121PNU-ILPA	L4012KK1Q	HFCD15012PS	9BC8P012G-E205A		
Non-Plenum Outdoor												
6 strand Multimode (50um)	**FOTNZ06**	006TU4-T4790D20	FS4L006NF	FS4L006NF	OPR006FB30100/F5	61900-6	BL0064M1A-DT	11006PG01		9PE5C006D-T501A		
12 strand Multimode (50um)	**FOTNZ12**	012TU4-T4790D20	FS4L012NF	FS4L012NF	OPR012FB3010/F5	61900-12	BL0124M1A-DT	11012PG01		9PE5C012G-T501A		
6 strand Singlemode	**FSTN906**	006EU4-T4701D20	FSSL006NF	FSSL006NF	OPR006AB0403	60720-6	HB0064M1A-DT	110063101		9PE8C006D-E205A		
12 strand Singlemode	**FSTN912**	**012ZU4-T4F22D20**	FSSL012NG	FSSL012NG	OPR012AB0403	60721-12	HB0124M1A-DT	110123101		9PE8P012G-E205A		
Plenum Rated Indoor/Outdoor												
6 strand Multimode (50um)	**FOCPZ06Y**	006TSP-T4190D20	FD4D006P9	FD4D006P9	LTP006FB3010/F5	62068-6	BL0061ANU.BK	W4006PG01	HFCD14006P4	9GD5P006D-T501A		
12 strand Multimode (50um)	**FOCPZ12Y**	012TSP-T4190D20	FD4D012P9	FD4D012P9	LTP012FB3010/F5	62068-12	BL0121ANU.BK	W4012PG01	HFCD14012P4	9GD5P012G-T501A		
6 strand Singlemode	**FSCP906Y**	006ESP-T4101D20	FDSD006P9	FDSD006P9	LTP006AB0403	61579-6	AP0061ANU.BK	W4006K101	HFCD14012PS	9GD8P006D-E201A		
12 strand Singlemode	**FSCP912Y**	012ESP-T4101D20	FDSD012P9	FDSD012P9	LTP012AB0403	61579-12	AP0124ANU.BK	W4012K101	HFCD14012PS	9GD8P012G-E201A		
Wiring Room	**Panduit**	**Corning**	**Belden**	**Siemon**		**Leviton**	**Hubbell**	**HellermannTyton**				**Ortronics**
Fiber Optic Wall Mouned Enclosure	**FWME4**	WCH-04P		SWIC3G-CC-01		5WMED-04C	FCW4SP					OR-615SMFC-24P
12 Port Fiber Optic Patch Panel	**FCE1U**	CCH-01U	ECX-01U	FCP3-DWR		5R1UM-F03	FPR3SP					OR-615SMFC-LX-12P
24 Port Fiber Optic Patch Panel	**FCE1U**	CCH-01U	ECX-01U	FCP3-DWR		5R1UM-F03	FCR2U6SP					FC01U-C
36 Port Fiber Optic Patch Panel	**FCE2U**	CCH-02U	ECX-02U	RIC3-24-01 or RIC3-36-01		5R2UM-S06	FCR2U6SP					FC02U-C
72 Port Fiber Optic Patch Panel	**FCE4U**	CCH-04U	ECX-04U	RIC3-72-(XX)		5R3UM-F12	FRC3U12SP					FC04U-C
6 Duplex LC Coupling Pnl (MM)	**FAP6WAQDLCZ**	CCH-CP12-E4	FF3X06LD	RIC-F-LCQ12-01C		5F100-2QL	FSPLCDM6AQ					OR-OFP-LCD12LC
6 Duplex LC Coupling Pnl (SM)	**FAP6WBUDLCZ**	CCH-CP12-A9	FFSX06LD	RIC-F-LCU12-01C		5F100-2LL	FSPLCDS6xx					OR-OFP-LCD12AC
Multimode LC Connectors	**FLCSMCXAQY**	95-050-99-X	FT3LC900FS01 OR AX105202-S1	FC1-LB-LC5-9AQ		49991-LLC	FCLC900K50GM12					OR-205KAS9GA-50T
Singlemode LC Connectors	**FLCSSCBUY**	95-200-99	FTSLC900FS01 OR AX105252-S1	FC1-LB-LCU-9BL		49991-SLC	FCLC900KSM12					OR-205KAS9GA-09
3M Duplex LC-LC Ptch Cbl (SM)	F92ERLNLNSNM003	040402G5120003M	FPSLDLD003M	FJ2-LCULCUL-03		UPDLC-S03	DFPCLCLCS3SM					
3M Duplex LC-LC Ptch Cbl (MM)	FZ2ERLNLNSNM003	050502Q5120003M	FP4LDLD003MR2XA	FJ2-LCLC5V-03AQ		5LDLC-M03	DFPCLCLCE3MM					
Multimode LC Pigtails	**FZ1BN1NNNSNM001**	000301Q4190003F	FT4LC900PS011MA	FP1B-LC5V-01AQ		5LPLC-M03	FPLCE3MM					
Singlemode LC Pigtails		**000201G4131003F**	FTSLC900PS013MW	FP1B-LCUL-01		UPPLC-S03	FPLCS3SM					
Innerduct	**EASTERN**	**IPEX**	**Carlon**	**Endot**								
1" Indoor Plenum Coorigated	PDPU1000F1000R	KPPW100TR	**A5D2S1JNNB1000**	PR100XX177								
1" Outdoor Ribbed	PDVN1000		**A5B4N1JNNBX**	IDU 131								

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FANNING HOWEY

PROJECT NAME	Carmel City Schools Polytechnic									
PROJECT NO.	221165.01				DATE	8/29/2023				
271515 Communications Copper Horizontal Cabling, Category 6 (Items in bold are standard of quality and performance)										
Cable	**Panduit**	**BerkTek**	**Mohawk**	**General**	**Superior**	**Belden**	**Hitachi**	**Hubbell**	**Siemon**	
Cat. 6- 4 pair Plenum	**PUP6004xx-UY**	10032094	M57193	7131900	66-246-xB	3613	30025-8	C6RPB	9C6P4-E3-06-RXA	
Cat 6 - 4 Pair OSP	**PUO6C04xx-U**	10139885	M57562	7136100	04-001-58	OSP6U	30180-8		9C6O4-E1	
Connectors	**Panduit**		**Siemon**	**Hubbell**	**Leviton**	**Belden**				
RJ45 Jacks	**NK688Mxx**		MX6-F(XX)	HXJ6(XX)	61110-RW5	RV6MJKUEW-S1 OR AX101320				
Bezel	**NKHF2Mxx-X**			IM2K1XX	41291-2Q*	AX102737				
Single Gang Faceplates	**CBExxY**		MX-FP-S-(XX)-(YY)	IMF1xx	41290-SMW	AX101747				
Double Gang Faceplates	**CBExx-2GY**		MX-FP-D-(XX)-(YY)	IMF2xx	41290-DMW	AX101871				
Stainless Steel Faceplate	**NKF4S**		MX-FP-S-04-SS-L	IMSS1 & IMSS2	43080-2S*	AX104234				
Weather proof cover plate				TWPF1GY		AX104687				
Surface Box	**NK2BXxx-A**		MX-SM2-(XX)	ISB2-xx	41089-1xP	AX102652				
Telephone Faceplate	**KWPY**		MX-WP-(XX)-SS	SP6R	40223-S	AX104126				
Duplex Outlet Froame (106)	**NK4106MFxx**		MX-E4F-(XX)	Q106*	41087-Q*P	AX104124				
Blank Insert	**NKBMxx-X**		MX-BL-(XX)	SFBx10	41084-Bx	AX101759				
Wiring Rooms						AX102261				
Terminations	**Panduit**		**Siemon**	**Hubbell**	**Leviton**	**Belden**				
12 Port Mod. Patch Panels	**NKFP12W**		MX-89D-12	UDX1289	49255-Q89 + 40089-00D	N/A				
24 Port Mod. Patch Panels	**NKPP24FMY**		MX-PNL-24	UDX24E	49255-H24	AX103114				
48 Port Mod. Patch Panels	**NKPP48FMY**		MX-PNL-48	UDX48E	49255-H48	AX103115				
12 Port Punchdown Patch Panels	**NK6PPG12WY**		HD6-89D-12	HP612U	69586-U12					
24 Port Punchdown Patch Panels	**NK6PP24P**		HD6-24	HP6E24	69586-U24	AX103253				
48 Port Punchdown Patch Panels	**NK6PP48P**		HD6-48	HP6E48	69586-U48	AX103255				
Patch Cords	**Panduit**		**Siemon**	**Hubbell**	**Leviton**	**Belden**				
3' RJ-45 Patch Cables	**NK6PC3Y**		MC6-03-(XX)	HC6xx03	62460-03*	C601106003				
5' RJ-45 Patch Cables	**NK6PC5Y**		MC6-05-(XX)	HC6xx05	62460-05*	C601106005				
7' RJ-45 Patch Cables	**NK6PC7Y**		MC6-07-(XX)	HC6xx07	62460-07*	C601106007				
9' RJ-45 Patch Cables	**NK6PC9Y**		MC6-09-(XX)	HC6xx10	62460-10*	C601106009				
15' RJ-45 Patch Cables	**NK6PC15Y**		MC6-15-(XX)	HC6xx15	62460-15*	C601106015				
	Circa		**Marconni**	**Cylix**	**Emerson**					
Cat 6 Protector	4B1FS		R4C1S	CAT 6-PPC	R4C1S					

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SECTION 27 15 17 - COMMUNICATIONS COPPER HORIZONTAL CABLING (Augmented Category 6 Cable)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes, but is not limited to the following:
1. Local area network
2. Horizontal cabling
3. Patch panels compatible with the structured cabling system
4. Patch cords compatible with the structured cabling system
5. Modular jacks
6. Termination of all horizontal cabling
7. Testing of all horizontal cabling

B. Related section includes the following:
1. Division 01 – All Sections
2. Division 26 - Electrical
3. Division 27 – Communications Sections

1.3 DESCRIPTION OF WORK

A. Provide labor, material, equipment, terminations, and accessories necessary for a complete and operational communications copper horizontal cabling system as indicated on the Drawings and specified herein. The contractor shall furnish the equipment, accessories and necessary material as described herein.

B. All Wireless Access Point locations will receive two (2) white plenum Cat6A cables per device. All other data, camera, access and any other locations will receive Cat6 with the quantity marked on the print with colors indicated below.

TELECOMMUNICATIONS COLOR LEGEND				
SYSTEM	TERMINATION (RJ45)	CABLE	PATCH CABLE (PATCH PANEL)	PATCH CABLE (STATION)
DATA	BLUE	BLUE	BLUE	BLACK
WIRELESS	WHITE	WHITE	WHITE	WHITE
CAMERA	PURPLE	PURPLE	PURPLE	PURPLE
ACCESS	YELLOW	YELLOW	YELLOW	YELLOW
HVAC	RED	RED	RED	RED

C. Provide communications copper horizontal cabling from each communication jack to each TR/MC/ER as described here and as shown on the drawings.

D. The maximum allowable horizontal cable length is 295 feet. This maximum allowable length does not include an allowance for the length of 16 feet to the workstation equipment or in the horizontal cross-connect.

E. The modular computer/data eight-position jack shall match the color scheme of EIA-568 B as follows:

1. Pair 1: Pin 4 - Blue; Pin 5 - White-Blue
2. Pair 2: Pin 1 - White-Orange; Pin 2 – Orange
3. Pair 3: Pin 3 - White-Green; Pin 6 – Green
4. Pair 4: Pin 7 - White-Brown; Pin 8 – Brown

F. Contractor shall coordinate the extension of the electrical service from the electrical junction box located in the room to each communications cabinets/rack with the Site Electrical Contractor.

1.4 QUALITY ASSURANCE

A. Communications cabling system components and equipment shall be listed by Underwriters Laboratories, Inc. for Computer use, and the components shall bear the UL label.

B. The system shall be installed in accordance with requirements set by ANSI/NFPA-70 National Electric Code.

C. All equipment shall comply with the latest ANSI-J-STD-607 grounding and bonding standards.

D. All equipment and installation practices shall comply with latest BICSI (TDMM) standards.

E. All equipment shall comply with the latest ANSI/TIA/EIA-568, 569, 60, 607, and 862 standards, as applicable.

F. Cables shall be installed in accordance with ANSI/EIA/TIA and BISCI standards.

G. Provide labeling per ANSI/EIA/TIA-606 requirement and in accordance with the Owner and the Technology Consultant.

H. All cabling shall be tested in accordance with the ANSI/TIA/EIA-568-B2 standards with the required testing equipment.

I. See section – "Common Work Results for Communications".

1.5 CERTIFICATION

A. Cabling Contractor shall provide the services of a component manufacturer and provide equipment listed by Underwriters Laboratories, Inc. The Contractor shall issue a equipment certification stating that the equipment and connected wiring and devices which form the specified system, together with installation have a 20-year Application Assurance and 20-year Extended Product Warranty on Registered Installation, and are in compliance with the requirements established by TIA/EIA 568, 569, and BICSI Standards. Also this Contractor shall submit with his/her bid a letter from the manufacturer indicating that his/her installation will be certified for a 20-year Application Assurance and 20-year Extended Product Warranty on Registered System Installation.
   1. See Manufacturer Material List for approved manufacturers with part numbers.

1.6 SUBMITTALS / RECORD DRAWINGS / MAINTENANCE MANUALS

A. Shop Drawings
   1. Provide complete and comprehensive shop drawings with labeling to the Architect/Engineer for approval.
   2. Drawings shall be provided in AutoCAD Release 2002 format or higher.

B. See front end submittals section for more information.

C. See Common Work Results For Communications section 270500 for more submittal requirements.

D. Provide record drawings and maintenance manual, per section – "Operation and Maintenance of Communications Systems".

E. Contractor shall include the following with their submittal:
   1. Manufacturer's Certificate stating each testing device used on the project and shall contain the most current revision of software.
   2. Manufacturer's Certificate stating that each testing device used on the project has been calibrated within the last 12 months.

1.7 WARRANTY

A. Components, parts, and assemblies supplied by the Communications Contractor/manufacturer shall be guaranteed against defects in materials and workmanship for a period as specified in section – Demonstration, Training, and Warranty of Communications Systems, commencing upon system start-up. Warranty services shall be provided by an installer certified by the equipment manufacturer during normal working hours. The manufacturer's statement of warranty shall be included in the submittals.

1.8 CHANNEL WARRANTY FOR HORIZONTAL CABLING SYSTEM

A. The channel ACR performance warranty: 19 dB at 100 MHz.

B. The link ACR performance warranty: 22 dB at 100 MHz.

C. Application systems supports: 10 Gig at 500 MHz.

1.9 TRAINING

A. Provide training as specified in the section titled "Demonstration, Training, and Warranty of Communications Systems.

PART 2 - PRODUCTS

2.1 VOICE AND DATA CABLE AND COMPONENT PRODUCTS

A. Contractors must provide a system where the component and cable manufacture have formed a partnership to create a complete channel solution. This solution shall be warranted by the component manufacturer.

B. See Manufacturers List Section 27 15 17TM for approved manufacturers and part numbers.

2.2 VOICE AND DATA JACKS

A. Provide a flush mounted modular data jack RJ-45 to fit in a one or two gang 3-1/2 inch deep box and/or to fit in the surface mounted raceway or floor boxes as shown on the Drawings and as specified herein.

B. Data jacks shall be 8-position configurations and shall meet all the transmission performance of the specified cable.

C. The data jacks shall be UL listed and must meet TIA/EIA 568B.2-AD10 requirements.

D. The data jacks to be wired to TIA/EIA 568B .2-AD10 color scheme.

E. Modular data jacks shall be mounted in modular wall plates for one, two, three, four, five, and/or six modular opening.

F. See Manufacturers List Section 27 15 17TM for approved manufacturers and part numbers.

2.3 MODULAR COVER PLATES (TWO GANG)

A. Provide decorative modular cover plates with number of modular data jack as shown on the drawing and (minimum one each) as specified in this section.

B. Provide modular mounting frames for all jacks in the exposed surface raceway only (Panduit CFG4 Series).

C. Provide floor cover plate to match receptacle cover plates (verify with site electrical contractor).

D. Wall jacks shall be mounted on a stainless steel plate (Panduit KWP6P or equal).

E. Cover plate shall be adjustable either in field or by factory (1/4 inch minimum).

F. Provide blanks for wall and floor boxes.

G. Cover plate:
1. See Manufacturers List Section 27 15 17TM for approved manufacturers and part numbers.

H. Wall adapter:
1. See Manufacturers List Section 27 15 17TM for approved manufacturers and part numbers.

I. Surface boxes:
1. See Manufacturers List Section 27 15 17TM for approved manufacturers and part numbers.

2.4 STAINLESS STEEL COVER PLATES

A. Provide stainless steel cover plates to fit the modular jacks as shown on the Drawings.

B. Stainless steel cover plate shall be double gang.

C. Provide stainless steel cover plates in all areas.

D. See Manufacturers List Section 27 15 17TM for approved manufacturers and part numbers.

2.5 COPPER PATCH PANELS

A. Provide 24 port RJ45 patch panels for termination of all UTP cable with 24-RJ45 jacks.

B. Provide 48 port RJ45 patch panels for termination of all UTP cables with front and back cable management with 48-RJ45 jacks.

C. Patch panels shall meet or exceed all transmission performance for augmented category 6 as outlined in TIA/EIA-568B.2-10. .

D. Each RJ45 jacks shall be terminated with 4 pair of UTP wire and shall be wired to meet TIA/EIA 568B color scheme.

E. Provide three (3) extra wire management for data switches in each rack/cabinet.

F. See Manufacturers List Section 27 15 17TM for approved manufacturers and part numbers.

2.6 PATCH CORDS

A. Provide patch cords with modular RJ45 at each end. UL listed, 3 foot (1m), 5 foot (1.5m), 7 foot (2.1m), 10 foot (3m), and 15 foot (4.6m) long.

B. Patch cord manufacturer must match connector/patch panel manufacturer.

C. See Manufacturers List Section 27 15 17TM for approved manufacturers and part numbers.

D. Patch cable quantity
1. Furnish one blue patch cord for each data jack (within patch panel) with 20% spare; provide 50% three (3) foot patch cables, 50% five (5) foot patch cables.
2. Furnish one green patch cord for each wireless access point jack (within patch panel) with 20% spare cables; provide 50% three (3) foot patch cables, 50% five (5) foot patch cables.
3. Provide one fifteen (15) foot green station patch cable at the Wireless Access point location plus 20% spare.

2.7 COMPUTER/DATA CABLE (AUGMENTED CATEGORY 6)

A. The computer/data cable shall be four unshielded twisted pair (UTP), 23 AWG, solid bare copper.

B. The insulated conductors shall be twisted in pairs and shall be insulated with FEP material, and all 4 insulated pairs shall be laid into an insulated plastic jacket.

C. UL listed CMP with transmission characteristics that meet or exceed those of FCC-68/ TIA /EIT, 568A-5 and TIA /EIT TSB-95 performance and NEMA low loss, extended frequency, jacket shall be sequentially marked at 2 foot intervals and must be plenum rated. UL listed 1459 and 1863.

D. Pair twisting shall be maintained to meet the cable performance, but maximum cable, untwisting allows is one half (1/2) inch.

E. Cable shall meet ANSI/TIA/EIA-658-B2-AD10 transmission performance specifications for 4 pair UTP augmented category 6 cabling.

F. Design bandwidth - 500 MHZ, cable bandwidth - 500+ MHZ, standard data rate 10 Gig.

G. Color Code = Pair #1 - White/Blue and Blue
Pair #2 - White/Orange and Orange
Pair #3 - White/Green and Green
Pair #4 - White/Brown and Brown

H. Cable Electrical Specifications
1. Maximum operating voltage: 300V RMS
2. Nominal capacitance at 1 Khz: 15 PF/FT
3. Nominal velocity of propagation: 72 percent plenum
4. Nominal capacitance unbalance: PF/100M – 25.00 PF/M
5. Maximum capacitance unbalance: PF/100M – 66.00 PF/M

I. See Manufacturers List Section 27 15 17TM for approved manufacturers and part numbers.

2.8 WIRELESS ACCESS POINTS LOCATIONS

A. Cable Connection
1. Provide two ports UL listed surface mount box to terminate the RJ45 jack and cable.
a. See Manufacturers List Section 27 15 17TM for approved manufacturers and part numbers.
2. Provide 5 foot patch cord and/or as required.
3. Patch the wireless access point to the data jack in the box above the ceiling.
4. Provide one 4 inch square box with cover plate as shown for CEILING mounted devices.
5. Mount the biscuit in a 4 square junction box with cover plate and mounting hardware to attach to the ceiling grid, box to be mounted with face up.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Provide communications copper horizontal cabling, connectors, jacks, cover plate, blank inserts, patch panels, cords, etc., as specified here and as shown on the drawings.

B. Cabling at patch panels shall be terminated in numerical order, so as to provide a logical pattern that will provide the end user the greatest ease in the system administration.

C. See labeling details for more information.

3.2 UNSHIELDED TWISTED PAIR CABLE (UTP)

A. Provide the following additional UTP runs:
   1. Provide one (1) 4-pair UTP to the telephone headend equipment and also to the telephone back-up power supply in same room.
   2. Provide two (2) 4-pair UTP to each file server from MC/ER.
   3. Provide 20 additional 4-pair UTP cables, jacks, labeling, testing, etc (180 feet each) to the nearest telecommunications rooms. (Install as directed by the Architect/Engineer.)

B. Maximum pulling force shall be as recommended by the manufacturers and the maximum bending radius shall be (10) times the cable diameter.

C. Outdoor computer/data cable shall be used in all floor box locations where concrete is slab on grade.

D. Terminate the data jacks per the manufacturer's recommendations and ensure the termination bar is positioned as close as possible to the cable jacket edge.

3.3 CABLE PULLING

A. Cable rollers shall be used when pulling cable. Cable pulleys must be used when pulling cable around bends and corners of wireways. Pulleys shall have a minimum diameter of 6 inches.

B. Contractor shall use basket grips wherever possible and exercise care while pulling cable as not to exceed the maximum allowable pulling tension of the cable.

C. Cable rollers used for pulling cable in cable tray shall be mounted close to wireway supports and shall be placed at the beginning of the run and spaced every 25 feet along the run.

D. Provide 3 foot service loop at each jack.

E. Provide 25 foot service loop in each TR and MC/ER.

F. Support service loop above ceiling properly.

3.4 LABELING AND MARKING

A. See Drawings for Technology Schedules for more information.

B. Contractor shall install labels as follows:
   1. One label at each end of each cable at the end of the cable sheath, after stripping.
   2. One label on the outside of each face plate in the space provided.
   3. Label as shown on drawings.
   4. All markings shall be carefully done so as to present a neat, professional appearance.
   5. Cross connect color coded shall be as follows:
      a. Green - circuits from the central office/RBOC/Telco
      b. Purple - circuits from the switch ports

c. Yellow - circuits from the auxiliary cabinet
d. Blue - wiring from the work station information outlets
e. White - house pairs from riser cable between the equipment room and satellite closets.
f. Orange - wiring originating from electronic equipment
g. Grey - Tie cables between satellite closets.

3.5 CABLE SEPARATION FROM POWER WIRING

A. Between the cabling system and any fluorescent, neon, incandescent, or high intensity discharge lamp fixtures, the minimum distance shall be 5 inches.

B. Cable may be installed closer to lighting and convenience outlet power cable (single phase, 120V, 20A maximum), in metal cable channels for limited distances if the following guidelines are observed:
1. Coincident (parallel) runs of no more than 15 feet are permissible if a 1 inch separation between the power cable and the cabling system cable is maintained by separators or suitable retention hardware. If necessary, the separation may be less than 1 inch for a run of up to 6 inches if no contact between the cabling system cable and the power cable occur.
2. Coincident runs of no more than 30 feet are permissible if a 2 inch separation is maintained. The separation may be less than 2 inches for a run of up to 12 inches, if no contact occurs between the cabling system cable and the power cable.

3.6 WIRING COLOR SCHEME

Wire Pair	Color	8-Position T568A	8-Position T568B
1 Tip	White - Blue	5	5
1 Ring	Blue	4	4
2 Tip	White - Orange	3	1
2 Ring	Orange	6	2
3 Tip	White - Green	1	3
3 Ring	Green	2	6
4 Tip	White - Brown	7	7
4 Ring	Brown	8	8

3.7 TESTING

A. The Cabling Contractor shall be responsible for testing each horizontal cable run, patch panel, and patch cables to verify the performance of the channel warranty for the horizontal cabling system as defined in TIA/EIA TSB-67.

B. The contractor shall configure the tester for the cable and connectors used in the installation.

C. The contractor shall calibrate the tested to the newest software.

D. The contractor shall use the same tester(s) from the same manufacturer for the entire project(s).

E. All test reports shall look the same and all test reports shall be done with the same manufacture tester to assure all test results have the same appearance.

F. The contractor shall turn in all tests, partial or quick tests shall NOT be accepted, all test results shall be in an electronic format and shall be accessible with a cable test management software available free from the tester manufacture when submitted with the close out documents.

G. System and Wiring Testing, Checking, and Reports:
   1. Cabling Contractor shall provide necessary technical personnel and testing instruments as required to perform complete testing of all systems installed by Contractor and coordinate this testing activity with the Architect/Engineer and Owner's representative.
   2. All wiring, terminations, equipment, etc. shall be checked and tested by qualified field representative or equipment vendor. A report shall be submitted to Architect/Engineer and Commissioning Agent by vendor representative and/or Contractor indicating results of such final check-out and testing processes. Final payment will not be approved until such report is submitted and any "failure" results are corrected.
   3. Cabling Contractor shall conduct such other tests and make necessary adjustments of equipment and installation infrastructure required by Architect/Engineer and/or Commissioning Agent, as requested or necessary to verify performance requirements. Submit all data gathering information taken during such tests to Architect/Engineer and Commissioning Agent.
   4. Cabling Contractor must input the specified cable parameters, manufacturers' name and number in the tester. (Test results will not be accepted with generic cable type.)
   5. Reporting to be done in compliance with standards and schedules published by authority and agencies defined in the Specifications.

H. Cable test results shall be stored and presented to the architect/engineers in an electronic format for approval, and cable tester records designations shall match the associated cable labels and associated patch panel label designations.

I. Submit one complete cable test results in electronic format and 1 complete set of paper format in a 3-ring binder.

3.8 MAIN CROSS CONNECT/EQUIPMENT ROOM

A. See section – "Communications Equipment Room Fittings" for more information.

B. The cables shall be terminated on RJ45 copper patch panels with modular inserts for jacks.

END OF SECTION 27 15 17

FANNING HOWEY

PROJECT NAME	**0**								
PROJECT NO.	**0.00**			**DATE**	**June 2019**				
271553 Miscellanous Communicaitons Audio/Video Cabling (Items in bold are standard of quality and performance)									
Cable	**Belden**	**BerkTek**	**Mohawk**	**General**	**West Penn**	**West Penn**			
RG-6	**633938**		M71002	C3524	25841	25841			
RS-232/RS-485 Cable	**82504**								
Power Cables									
3/C #16 Unshielded plenum	**6201UE**			E3043S	AQ246	AQ246			
3/C #16 Unshielded Outdoor	**5201UE**			E1043S	AQ3245	AQ3245			
Connectors	**Panduit**	**Ortronics**	**Siemon**	**Hubbell**	**Leviton**	**Belden**	**Belden**	**HellermannTyton**	
Yellow RCA Inserts	**NKRPMYxx**	OR-KSRCAY	MX-F-RC-(xx)	SFRCY110	40830-B(x)Y		AX105339-EW		
Red RCA Inserts	**NKRPMRxx**	OR-KSRCAR	MX-F-RC-(xx)	SFRCR110	40830-B(x)R	AX100999 (1RED,1BLK)	AX105337-EW		
White RCA Inserts	**NKRPMWxx**	OR-KSRCAW	MX-F-RC-(xx)	SFRCW110	40830-B(x)E		AX105338-EW		
F-Connector Inserts	**NKFxx**	OR-KSFCN	MX-F-FA-(xx)	SFF(xx)	41084-F(x)F	AX100995	AX102904		
Blank Insert	**NKBMxx-X**	OR-KSB10-XX	MX-BL-(xx)	SFB(x)10	41084-Bx		AX102262		
3.5mm Insert	**NK35MSSxx**	OR-KS35STST		SF35SJ(xx)	40839-SWS		AX105335-EW		
VGA Inserts	**CMD15HDCxxY**		MX-D4F-15-(xx)	IM15DIN1OW	41295-HDW (MOS)	AC300285	AX101887		
HDMI Inserts	**NKHDMIxx**	OR-KSHDMI	MX-HD-(xx)	SFHC14(xx)	40834-W		AX105345-EW		
Angled Bezel Insert	**NKHS2xx-X**			IM2KA15(xx)	41294-2Q(x) (MOS)				
USB Insert	**NKUSBAAxx**	OR-KSUSB		**SFUSBAA(xx)**	40835-W		AX105342-EW		
Shielded Cabling and Connectors	**Panduit**	**Mohawk**	**Belden**	**General**	**Hubbell**	**Leviton**	**Siemon**		
Category 5E Shielded Cable	PFP5504RD-UY	M57364	1213F	2131774E			9A5P4-E1-03-R1A		
Category 6 Shielded Cable	PFP6X04RD-UG	M58181	2413F	6131790	C6FTSPB		9A6P4-A5-03-R1A		
Category 5E RJ45 Shielded Jack	CJS5E88TGY		AX104595		SJ5E2A	5ESJK-xx5	Z5-S04		
Category 6 RJ45 Shielded Jack	CJS688TGY		AX104596		SJ6	61SJK-xx6	Z6A-S04		
VGA Cables		**TecNec**	**Covid**	**Liberty**					
Plenum VGA Cable Assem.		P/D15HDM-F-x	**CVD-3917-xx-IST**	G-VGAM-F-xx					
HDMI Cables		**FSR**	**Covid**	**Liberty**	**Legrand**	**Kramer**			
Fiber Optic Cable Assembly		**DR-PCB-HxxM**	P-HDFH	PF-HDM-M-0xxM	2101-4137x	CP-AOCH/XL-XX			

The bidder is responsible to verify that all part numbers meet the specifications. The bidder shall notify the Architect of any specification or part number discrepancies prior to bid date.

PLEASE NOTE: Not all products are used, see plans and specifications for more information.
*** Per the manufacturers recommendations.**
**** Coordinate color with owner.**

SECTION 33 41 00 - STORM UTILITY DRAINAGE PIPING

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. Section Includes:

1. Pipe and fittings.
2. Cleanouts.
3. Manholes.
4. Catch basins.
5. Storm water inlets.
6. Pipe outlets.
7. Water quality structures.
8. Trench Drains

1.2 RELATED DOCUMENTS

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

B. Related Specification Sections

1. Earth Moving - Specification Section 33 20 00.
2. Subdrainage - Specification Section 33 46 00.

1.3 SUBMITTALS

A. Submittal procedures and requirements shall comply with Division 01 Specification Sections.

B. Product Data: For each type of product indicated.

C. Shop Drawings:

1. Manholes: Include plans, elevations, sections, details, frames, and covers.
2. Catch Basins and Inlets: Include plans, elevations, sections, details, frames, covers and grates.
3. Water quality structures: Include plans, elevations, sections, details, frames, and covers.

1.4 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Show pipe sizes, locations, and elevations. Show other piping in same trench and clearances from storm drainage system piping. Indicate interface and spatial relationship between manholes, piping, and proximate structures.

B. Field quality-control reports.

1.5 PROJECT CONDITIONS

A. Interruption of Existing Storm Drainage Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated:

1. Notify Owner no fewer than two days in advance of proposed interruption of service.

2. Do not proceed with interruption of service without Owner's written permission.

PART 2 - PRODUCTS

2.1 CONCRETE PIPE AND FITTINGS

A. Reinforced-Concrete Sewer Pipe and Fittings: ASTM C 76.

1. Bell-and-spigot ends and gasketed joints with ASTM C 443, rubber gaskets

2. Class III, Wall type B.

2.2 HDPE PIPE AND FITTINGS

A. Corrugated Polyethylene (PE) Pipe and Fittings NPS12 to NPS60: AASHTO M294M, Type S, with smooth waterway for coupling joints.

1. Silt-tight Couplings: PE sleeve with ASTM D 1056, Type 2, Class A, Grade 2 gasket material that mates with pipe and fittings.

2. Soil-tight Couplings: AASHTO M294M, corrugated, matching pipe and fittings.

2.3 PVC PIPE AND FITTINGS

A. PVC Type PSM Sewer Piping:

1. Pipe: ASTM D 3034, SDR 26, PVC Type PSM sewer pipe with bell-and-spigot ends for gasketed joints.
2. Fittings: ASTM D 3034, PVC with bell ends.
3. Gaskets: ASTM F 477, elastomeric seals.

2.4 NONPRESSURE TRANSITION COUPLINGS

A. Comply with ASTM C 1173, elastomeric, sleeve-type, reducing or transition coupling, for joining underground non-pressure piping. Include ends of same sizes as piping to be joined, and corrosion-resistant-metal tension band and tightening mechanism on each end.

B. Sleeve Materials:

1. For Plastic Pipes: ASTM F 477, elastomeric seal or ASTM D 5926, PVC.

2. For Dissimilar Pipes: ASTM D 5926, PVC or other material compatible with pipe materials being joined.

C. Unshielded, Flexible Couplings:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Fernco Inc.

b. NDS Inc.

c. Plastic Oddities; a division of Diverse Corporate Technologies, Inc.

2. Description: Elastomeric sleeve with stainless-steel shear ring and corrosion-resistant-metal tension band and tightening mechanism on each end.

2.5 CLEANOUTS

A. Cast-Iron Cleanouts:

1. Description: ASME A112.36.2M, round, gray-iron housing with clamping device and round, secured, scoriated, gray-iron cover. Include gray-iron ferrule with inside calk or spigot connection and countersunk, tapered-thread, brass closure plug.

2. Top-Loading Classification(s): Medium Duty (non-paved areas) or Heavy Duty (paved areas).

3. Sewer Pipe Fitting and Riser to Cleanout: ASTM A 74, Service class, cast-iron soil pipe and fittings.

B. Plastic Cleanouts:

1. Description: PVC body with PVC threaded plug. Include PVC sewer pipe fitting and riser to cleanout of same material as sewer piping.

2. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. IPS Corporation.

b. NDS Inc.

c. Plastic Oddities; a division of Diverse Corporate Technologies, Inc.

d. Sioux Chief Manufacturing Company, Inc.

e. Zurn Light Commercial Products Operation; Zurn Plumbing Products Group.

2.6 MANHOLES

A. Standard Precast Concrete Manholes:

1. Description: ASTM C 478, precast, reinforced concrete, of depth indicated, with provision for sealant joints.

2. Diameter: 48 inches minimum unless otherwise indicated.

3. Ballast: Increase thickness of precast concrete sections or add concrete to base section as required to prevent flotation.

4. Base Section: 6-inch minimum thickness for floor slab and 5-inch minimum thickness for walls and base riser section, and separate base slab or base section with integral floor.

5. Riser Sections: 5-inch minimum thickness, and lengths to provide depth indicated.

6. Top Section: Eccentric-cone type unless concentric-cone or flat-slab-top type is indicated, and top of cone of size that matches grade rings.

7. Joint Sealant: ASTM C 990, bitumen or butyl rubber.

8. Resilient Pipe Connectors: ASTM C 923, cast or fitted into manhole walls, for each pipe connection.

9. Steps: Individual FRP steps wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12- to 16-inch intervals. Omit steps if total depth from floor of manhole to finished grade is less than 48”.

10. Adjusting Rings: Interlocking HDPE rings with level or sloped edge in thickness and diameter matching manhole frame and cover, and of height required to adjust manhole frame and cover to indicated elevation and slope. Include sealant recommended by ring manufacturer.

11. Grade Rings: Reinforced-concrete rings, 3-inch to a 12-inch total thickness, to match diameter of manhole frame and cover, and height as required to adjust manhole frame and cover to indicated elevation and slope.

B. Manhole Frames and Covers:

1. Description: Ferrous; 24-inch ID by 7- to 9-inch riser with 4-inch- minimum width flange and 26-inch- diameter cover, unless otherwise specified. Include indented top design with lettering cast into cover, using wording equivalent to "STORM SEWER."

2. Material: ASTM A 536, Grade 60-40-18 ductile iron unless otherwise indicated.

2.7 CATCH BASINS AND INLETS

A. Standard Precast Concrete Catch Basins:

1. Description: ASTM C 478, precast, reinforced concrete, of depth indicated, with provision for sealant joints.

2. Base Section: 6-inch minimum thickness for floor slab and 6-inch minimum thickness for walls and base riser section, and separate base slab or base section with integral floor.

3. Riser Sections: 6-inch minimum thickness, riser dimensions to match structure dimensions, and lengths to provide depth indicated.

4. Joint Sealant: ASTM C 990, bitumen or butyl rubber.

5. Adjusting Rings: Interlocking rings with level or sloped edge in thickness and shape matching catch basin frame and grate. Include sealant recommended by ring manufacturer.

6. Grade Rings: Include two or three reinforced-concrete rings, of 3- to 9-inch total thickness, that match structure, frame and grate.

7. Pipe Connectors: ASTM C 923, resilient, of size required, for each pipe connecting to base section.

B. Frames and Grates: ASTM A 536, Grade 60-40-18, ductile iron designed for A-16, structural loading. Include flat grate with small square or short-slotted drainage openings.

1. Size: 24 by 24 inches minimum, unless otherwise indicated.

2. Grate Free Area: Approximately 50 percent, unless otherwise indicated.

2.8 CONCRETE

A. General: Cast-in-place concrete according to ACI 318, and the following:

1. Cement: ASTM C 150, Type II.

2. Fine Aggregate: ASTM C 33, sand.

3. Coarse Aggregate: ASTM C 33, crushed gravel.

4. Water: Potable.

B. Manhole Channels and Benches: Factory or field formed from concrete. Portland cement design mix, 4000 psi minimum, with 0.45 maximum water/cementitious materials ratio. Include channels and benches in manholes.

1. Channels: Concrete invert, formed to same width as connected piping, with height of vertical sides to 80% of pipe diameter. Form curved channels with smooth, uniform radius and slope.

a. Invert Slope: 1.0 percent through manhole.

2. Benches: Concrete, sloped to drain into channel.

a. Slope: 4.0 percent.

2.9 WATER QUALITY STRUCTURES

A. General: Contech Engineered Solutions Cascade CS-5 BMP Unit. The BMP unit should be staged so as to minimize UV exposure until burial.

2.10 POLYMER-CONCRETE TRENCH DRAIN-CHANNEL SYSTEMS

A. General Requirements for Polymer-Concrete, Channel Drainage Systems: Modular system of precast, polymer-concrete channel sections, grates, and appurtenances; designed so grates fit into channel recesses without rocking or rattling. Include quantity of units required to form total lengths indicated.

B. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. ACO Drain
2. PolyDrain
3. J.R. Smith

C. Sloped-Invert, Polymer-Concrete Systems:

1. Channel Sections:

a. Interlocking-joint, precast, modular units with end caps.
b. 4-inch inside width and deep, rounded bottom, with built-in invert slope of a minimum 0.50 percent and with outlets in quantities, sizes, and locations indicated.
c. Extension sections necessary for required depth.
d. Frame: Include gray-iron or steel frame for grate.

2. Grates:

a. Manufacturer's designation "Heavy Duty," with slots or perforations that fit recesses in channels.
b. Material: Galvanized steel or Gray iron as indicated on plans.

3. Covers: Solid gray iron if indicated.
4. Locking Mechanism: Manufacturer's standard device for securing grates to channel sections.

D. Drainage Specialties: Precast, polymer-concrete units.

1. Catch Basins:

a. Size: 24-by-12-inch polymer-concrete body, with outlets in quantities and sizes indicated.
b. Gray-iron slotted grate.
c. Frame: Include gray-iron or steel frame for grate.

E. Supports, Anchors, and Setting Devices: Manufacturer's standard unless otherwise indicated.

F. Channel-Section Joining and Fastening Materials: As recommended by system manufacturer.

PART 3 - EXECUTION

3.1 EARTHWORK

A. Excavation, trenching, and backfilling are specified in Section 31 20 00 "Earth Moving."

3.2 PIPING INSTALLATION

A. General Locations and Arrangements: Drawing plans and details indicate general location and arrangement of underground storm drainage piping. Location and arrangement of piping layout take into account design considerations. Install piping as indicated, to extent practical. Where specific installation is not indicated, follow piping manufacturer's written instructions.

B. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements.

C. Install manholes for changes in direction unless fittings are indicated. Use fittings for branch connections unless direct tap into existing sewer is indicated.

D. Install proper size increasers, reducers, and couplings where different sizes or materials of pipes and fittings are connected. Reducing size of piping in direction of flow is prohibited.

E. When installing pipe under streets or other obstructions that cannot be disturbed, use pipe-jacking process of microtunneling.

F. Install gravity-flow, nonpressure drainage piping according to the following:

1. Install piping pitched down in direction of flow.

2. Install piping with 24” minimum cover.

3. Install PVC sewer piping according to ASTM D 2321 and ASTM F 1668.

4. Install reinforced-concrete sewer piping according to ASTM C 1479 and ACPA's "Concrete Pipe Installation Manual."

3.3 PIPE JOINT CONSTRUCTION

A. Join gravity-flow, nonpressure drainage piping according to the following:

1. Join PVC sewer piping according to ASTM D 2321 and ASTM D 3034 for elastomeric-seal joints or ASTM D 3034 for elastomeric-gasketed joints.

2. Join reinforced-concrete sewer piping according to ACPA's "Concrete Pipe Installation Manual" for rubber-gasketed joints.

3. Join dissimilar pipe materials with nonpressure-type flexible couplings.

3.4 CLEANOUT INSTALLATION

A. Install cleanouts and riser extensions from sewer pipes to cleanouts at grade. Use cast-iron soil pipe fittings in sewer pipes at branches for cleanouts and cast-iron soil pipe for riser extensions to cleanouts. Install piping so cleanouts open in direction of flow in sewer pipe.

1. Use Medium-Duty, top-loading classification cleanouts in non-paved areas.

2. Use Heavy-Duty, top-loading classification cleanouts in vehicle-traffic service areas.

B. Set cleanout frames and covers in earth in cast-in-place concrete block, 18 by 18 by 12 inches deep. Set with tops 1 inch above surrounding earth grade.

C. Set cleanout frames and covers in concrete pavement and roads with tops flush with pavement surface.

3.5 MANHOLE INSTALLATION

A. General: Install manholes, complete with appurtenances and accessories indicated.

B. Install precast concrete manhole sections with sealants according to ASTM C 891.

C. Where specific manhole construction is not indicated, follow manhole manufacturer's written instructions.

D. Set tops of frames and covers flush with finished surface of manholes, unless otherwise indicated.

3.6 CATCH BASIN AND INLET INSTALLATION

A. Construct catch basins to sizes and shapes indicated.

B. Set frames and grates to elevations indicated.

3.7 WATER QUALITY STRUCTURE INSTALLATION

A. Stub outs and internal components shall be supplied by manufacturer and MIG welded using welding practices and thickness as approved by the Town.

B. Manufacturer shall supply direct access to BMP Unit via 30-inch ID riser(s). If necessary to accommodate field adjustments, Contractor may cut riser to match finish grade. The exposed metal of the cut riser must be recoated to 12 mil thickness using the touch up kit supplied with each BMP unit. If necessary to extend riser, Contractor can use adjusting rings to bring top of structure to grade.

C. Contractor shall supply pipe couplings to and from BMP Unit, which shall be Mar-Mac, Fernco, or Mission style flexible boot with stainless steel tension bands and shear guard. Manufacturer shall supply minimum 12" long inlet/outlet stub-outs (≤Ø10" shall be smooth rolled and ≥Ø12" shall be corrugated (with re-rolled ends)).

D. Contractor shall prepare excavation and off-load BMP Unit. Contractor is responsible for bedding and backfill around the BMP Unit and Diversion structure as detailed on site utility plan and details. Contractor should inspect BMP for any exposed material (scratches or other

damage to the polymer coating). This must be recoated to 12 mil thickness using the touch up kit supplied with each unit prior to installation or placement of backfill.

E. Manufacturer shall supply standard manhole frame(s) and cover(s) (Traffic rated HS-25).

F. Where traffic loading (HS-25) is required or anticipated, a 4-foot diameter, 14-inch thick reinforced concrete pad must be placed over the BMP Unit to support and level the manhole frame. The top of riser pipe must be wrapped with compressible expansion joint material to a minimum 1/2-inch thickness to allow transfer of wheel loads from manhole cover to concrete slab. Manhole cover shall bear on concrete slab and not on riser pipe. The concrete slab shall have a minimum strength of 3,000 psi and be reinforced with #4 reinforcing steel (per drawing). Minimum cover over reinforcing steel shall be 1-inch. Top of manhole cover and concrete slab shall be level with finish grade.

G. Where high groundwater elevations are present or anticipated, Contractor shall supply concrete anti-floatation pad poured integral with the Contech Unit to prevent buoyancy and base plate deflection (details, if necessary, available upon request).

H. Excavation and Bedding - The trench and trench bottom shall be constructed in accordance with ASTM A 798 Sections 5, 6, and 7. The PCS Aqua-Swirl shall be installed on a stable base consisting of at least 6-inches of Class 1 stone materials (Class I #8 crushed stone, angular, large void content; contains little or no fines) as defined by ASTM D 2321, Section 5, Materials, and compacted to 95% proctor density. Bedding shall not contain stones retained on a 3-inch ring, frozen lumps, highly plastic clay, organic material, corrosive material, or other deleterious foreign materials. All required safety precautions for Aqua-Swirl installation are the responsibility of the Contractor and shall be per OSHA approved methods.

I. Backfill Requirements - Backfill materials shall be Class 1 stone materials (Class I #8 crushed stone, angular, large void content; contains little or no fines) as defined by ASTM D 2321, Section 5, Materials, and compacted to 90% proctor density. Backfilling shall conform to ASTM A 798, Section 10. Backfill shall be placed in 6 to 12 inch layers or “lifts” and compacted before adding the next lift. Backfill shall extend at least 18 inches outward from Aqua-Swirl and for the full height of the Aqua-Swirl (including riser(s)) extending laterally to undisturbed soils.

3.8 CONNECTIONS

A. Connect non-pressure, gravity-flow drainage piping in building's storm building drains specified in Section 22 14 13 "Facility Storm Drainage Piping."

B. Make connections to existing piping and underground manholes.

1. Use commercially manufactured wye fittings for piping branch connections. Remove section of existing pipe; install wye fitting into existing piping; and encase entire wye fitting, plus 6-inch overlap, with not less than 6 inches of concrete with 28-day compressive strength of 3000 psi.

2. Make branch connections from side into existing piping, NPS 4 to NPS 20. Remove section of existing pipe, install wye fitting into existing piping, and encase entire wye with not less than 6 inches of concrete with 28-day compressive strength of 3000 psi.

3. Make branch connections from side into existing piping, NPS 21 or larger, or to underground manholes and structures by cutting into existing unit and creating an opening large enough to allow 3 inches of concrete to be packed around entering connection. Cut end of connection pipe passing through pipe or structure wall to conform to shape of and be flush with inside wall unless otherwise indicated. On outside of pipe,

manhole, or structure wall, encase entering connection in 6 inches of concrete for minimum length of 12 inches to provide additional support of collar from connection to undisturbed ground.

a. Use concrete that will attain a minimum 28-day compressive strength of 3000 psi unless otherwise indicated.

b. Use epoxy-bonding compound as interface between new and existing concrete and piping materials.

4. Protect existing piping, manholes, and structures to prevent concrete or debris from entering while making tap connections. Remove debris or other extraneous material that may accumulate.

C. Pipe couplings, expansion joints, and deflection fittings with pressure ratings at least equal to piping rating may be used in applications below unless otherwise indicated.

1. Use nonpressure-type flexible couplings where required to join gravity-flow, nonpressure sewer piping unless otherwise indicated.

a. Unshielded flexible couplings for same or minor difference OD pipes.

b. Unshielded, increaser/reducer-pattern, flexible couplings for pipes with different OD.

c. Ring-type flexible couplings for piping of different sizes where annular space between smaller piping's OD and larger piping's ID permits installation.

2. Use pressure-type pipe couplings for force-main joints.

3.9 CLOSING ABANDONED STORM DRAINAGE SYSTEMS

A. Abandoned Piping: Close open ends of abandoned underground piping indicated to remain in place. Include closures strong enough to withstand hydrostatic and earth pressures that may result after ends of abandoned piping have been closed. Use either procedure below:

1. Close open ends of piping with at least 8-inch- thick, brick masonry bulkheads.

2. Close open ends of piping with threaded metal caps, plastic plugs, or other acceptable methods suitable for size and type of material being closed. Do not use wood plugs.

B. Abandoned Manholes and Structures: Excavate around manholes and structures as required and use one procedure below:

1. Remove manhole or structure and close open ends of remaining piping.

2. Remove top of manhole or structure down to at least 36 inches below final grade. Fill to within 12 inches of top with stone, rubble, gravel, or compacted dirt. Fill to top with concrete.

C. Backfill to grade according to Section 31 20 00 "Earth Moving."

3.10 FIELD QUALITY CONTROL

A. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after approximately 24 inches of backfill is in place, and again at completion of Project.

1. Submit separate reports for each system inspection.

2. Defects requiring correction include the following:

a. Alignment: Less than full diameter of inside of pipe is visible between structures.

b. Deflection: Flexible piping with deflection that prevents passage of ball or cylinder of size not less than 92.5 percent of piping diameter.

c. Damage: Crushed, broken, cracked, or otherwise damaged piping.

d. Infiltration: Water leakage into piping.

e. Exfiltration: Water leakage from or around piping.

3. Replace defective piping using new materials, and repeat inspections until defects are within allowances specified.

4. Reinspect and repeat procedure until results are satisfactory.

B. Test new piping systems, and parts of existing systems that have been altered, extended, or repaired, for leaks and defects.

1. Do not enclose, cover, or put into service before inspection and approval.

2. Test completed piping systems according to requirements of authorities having jurisdiction.

3. Schedule tests and inspections by authorities having jurisdiction with at least 24 hours' advance notice.

4. Submit separate report for each test.

5. Gravity-Flow Storm Drainage Piping: Test according to requirements of authorities having jurisdiction, UNI-B-6, and the following:

a. Exception: Piping with soiltight joints unless required by authorities having jurisdiction.

b. Option: Test plastic piping according to ASTM F 1417.

c. Option: Test concrete piping according to ASTM C 924.

C. Leaks and loss in test pressure constitute defects that must be repaired.

D. Replace leaking piping using new materials, and repeat testing until leakage is within allowances specified.

3.11 CLEANING

A. Clean interior of piping of dirt and superfluous materials. Flush with water.

END OF SECTION 33 41 00

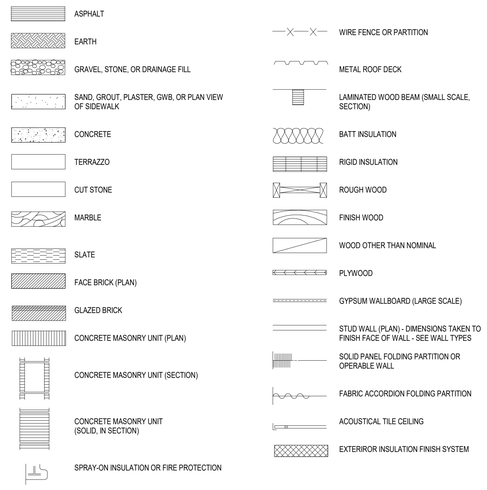
ARCHITECTURAL/SITE ABBREVIATIONS

ABBREVIATIONS USED ON THE CONTRACT DOCUMENTS. INCLUDE BUT ARE NOT LIMITED TO THOSE LISTED BELOW

@	AT
AC	AIR CONDITIONING
ACT	ACOUSTICAL CEILING TILE
AD	AREA DRAIN
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFP	ACCORDION FOLDING PARTITION
AGG	AGGREGATE
ALT	ALTERNATIVE
AL	ALUMINUM
AP	ACCESS PANEL
APROX	APPROXIMATE
AR	ACID RESISTANT
ARCH	ARCHITECT(URAL)
ASPH	ASPHALT
AV	AUDIO-VISUAL
AWG	AMERICAN WIRE GUAGE
AWT	ACCOUSTICAL WALL TREATMENT
L	ANGLE
&	AND
BIT	BITUMINOUS
BLDG	BUILDING
BLKG	BLOCKING
BM	BENCH MARK / BEAM
B.O.	BOTTOM OF
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BRG	BEARING
BRK	BRICK
BUR	BUILT-UP ROOF
CAB	CABINET
CAR	CARPET
CAT	CATALOG
CB	CHALKBOARD / CATCH BASIN
CFM	CUBIC FEET PER MINUTE
CH	CABINET HEATER
CI	CAST IRON
CJ	CONTROL JOINT
CL	CENTERLINE
CLR	CLEAR
CLG	CEILING
CMP	CORRUGATED METAL PIPE
CMT	CERAMIC MOSAIC TILE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COL	COLUMN
COMP	COMPACTED
CONC	CONCRETE
CONSTR	CONSTRUCTION
CONT	CONTINUOUS/CONTINUE
CONTR	CONTRACTOR
CORR	CORRUGATED
CT	CERAMIC TILE
C TO C	CENTER TO CENTER
CSK	COUNTER SINK
CU FT/CF	CUBIC FEET
CU IN/CI	CUBIC INCH
CU YD/CY	CUBIC YARD
CUSP	CUSPIDOR
CW	COLD WATER
CWF	CEMENTITIOUS WOOD FIBER
d	PENNY (NAILS, ETC.)
D	DEPTH/DEEP
°	DEGREE
DC	DISPLAY CASE
DEPT	DEPT
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA/ Ø	DIAMETER
DIM	DIMENSION
DIV	DIVISION
DL	DEAD LOAD
DWG	DRAWING
DS	DOWNSPOUT
DWC	DRINKING WATER COOLER
E	EAST
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC(AL)
ELEV	ELEVATOR
ENGR	ENGINEER
EP	ELECTRICAL PANELBOARD
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EFS (or DEFS)	DIRECT APPLIED EXTERIOR FINISH SYSTEM
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
EXTN	EXTENSION
FD	FLOOR DRAIN
FHC	FIRE HOSE CABINET
FIN	FINISH
FIN FL	FINISH FLOOR
FLR	FLOOR
FDN	FOUNDATION
FSR	FLEXIBLE SHEET ROOFING
FSSK	FLOOR SERVICE SINK
FT	FEET
FTG	FOOTING
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
GA	GAUGE
GALV	GALVANIZED(D)
GB	GRAB BAR
GFCMU	GROUND FACE CONCRETE MASONRY UNIT
GFRGU	GLASS FIBER REINFORCED GYPSUM UNIT
GL	GLASS
GWB	GYPSUM WALLBOARD
H	HEIGHT/HIGH
HB	HOSE BIB
HDWE	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HPT	HIGH POINT
HS	HIGH STRENGTH
HTG	HEATING
HVAC	HEATING/VENTILATING/AIR CONDITIONING
HW	HOT WATER
HWY	HIGHWAY
ID	INSIDE DIAMETER
IN	INCH
INCL	INCLUDE(D), (ING)
INFO	INFORMATION
INSUL	INSULATION
INTR	INTERIOR
INV	INVERT
JS	JOIST SUBSTITUTE
JST	JOIST
JT	JOINT
KIT	KITCHEN
L	LENGTH
LAM	LAMINATE(D)
LAV	LAVATORY
LB/#	POUND
LKR	LOCKER
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LVR	LOUVER
LW	LONG WAY
M	METER
MAS	MASONRY
MAT	MATERIAL
MAX	MAXIMUM
MB	MARKER BOARD
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MH	MOP HOLDER
MIN	MINIMUM
MISC	MISCELLANEOUS
MM	MILLIMETER
MO	MASONRY OPENING
MTL	METAL
N	NORTH
NIC	NOT IN CONTRACT
NO#	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPNG	OPENING
OPP	OPPOSITE
O.H.	OPPOSITE HAND
O TO O	OUT TO OUT
OW	OPERABLE WALL
OZ	OUNCE
P	PAINT
PA	PUBLIC ADDRESS
PERF	PERFORATED
PLAS	PLASTIC
PL	PLASTIC LAMINATE
PLBG	PLUMBING
PLYWD	PLYWOOD
PREFAB	PREFABRICATED
PS	PROJECTION SCREEN
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSS	PENCIL SHARPENER SUPPORT
PT	PORCELAIN TILA
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
QT	QUARRY TILE
R	RISER
RA	RETURN AIR
RAD/R	RADIUS
RB	RESILIENT BASE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REF	REFERENCE
REFR	REFRIGERATOR
REINF	REINFORCING
REQ'D	REQUIRED
REV	REVISION(S)
RM	ROOM
R.O.	ROUGH OPENING
ROW	RIGHT-OF-WAY
S	SOUTH
SA	SUPPLY AIR
SAN	SANITARY
SCHED	SCHEDULE
SD	STORM DRAIN / SMOKE DETECTOR
SECT	SECTION
SEW	SEWER
SOFT	STRUCTURAL GLAZED FACING TILE
SHT	SHEET
SIM	SIMILAR
SP	SPACE
SPEC(S)	SPECIFICATION(S)
SPKR	SPEAKER
SQ	SQUARE
SQ FT/SF	SQUARE FEET
SQ IN/SI	SQUARE INCHES
SQ YD/SY	SQUARE YARDS
SS	STAINLESS STEEL
ST	STORM/STREET
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SW	SHORT WAY / SIDEWALK
SYMM	SYMMETRY(ICAL)
SYNTH	SYNTHETIC
T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TA	TOILET ACCESSORY(IES)
TB	TACKBOARD
TC	TOP OF CURB
TEL	TELEPHONE
TERR	TERRAZZO
T.O.	TOP OF
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOM	TOP OF MASONRY
TOS	TOP OF STEEL
TV	TELEVISION
TYP	TYPICAL
TWS	TACKABLE WALL SURFACE
UNO	UNLESS NOTED OTHERWISE
UV	UNIT VENTILATOR
UR	URINAL
VCT	VINYL COMPOSITE TILE
VCGWB	VINYL COVERED GYPSUM WALLBOARD
VERT	VERTICAL
VFWC	VINYL FABRIC WALLCOVERING
VIF	VERIFY IN FIELD
VIT	VITREOUS
VOL	VOLUME
VR	VAPOR RETARDER
VRB	VENTED RESILIENT BASE
VS	VENT STACK
VT	VINYL STACK
W	WEST / WIDE / WIDTH
W/	WITH
W/O	WITHOUT
WA	WARDROBE ACCESSORIES
WB	WOOD BASE
WC	WATER CLOSET / WIND COLUMN
WD	WOOD
WH	WATER HEATER
WP	WORKING POINT
WSSK	WALL SERVICE SINK
WWF	WELDED WIRE FABRIC
YD	YARD / YARD DRAIN

MATERIAL SYMBOLS LEGEND

MATERIAL SYMBOLS USED ON THE CONTRACT DOCUMENTS. INCLUDE BUT ARE NOT LIMITED TO THOSE LISTED BELOW



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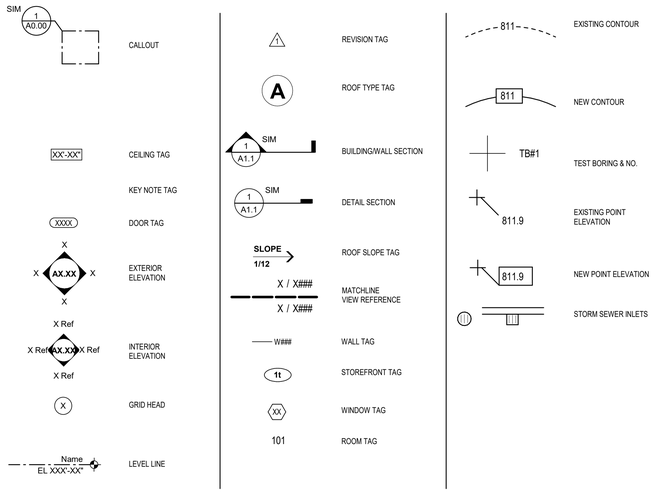

SHEET INDEX

VOLUME A

VOLUME B

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

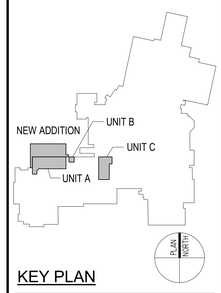
520 EAST MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

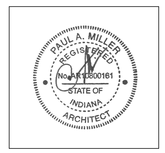
FANNING HOWEY

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



KEY PLAN

100% CONSTRUCTION DOCUMENTS



DRAWN BY: CLP
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

ABBREVIATIONS AND INDEX

_INDEX A

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ARCHITECTURAL/SITE ABBREVIATIONS

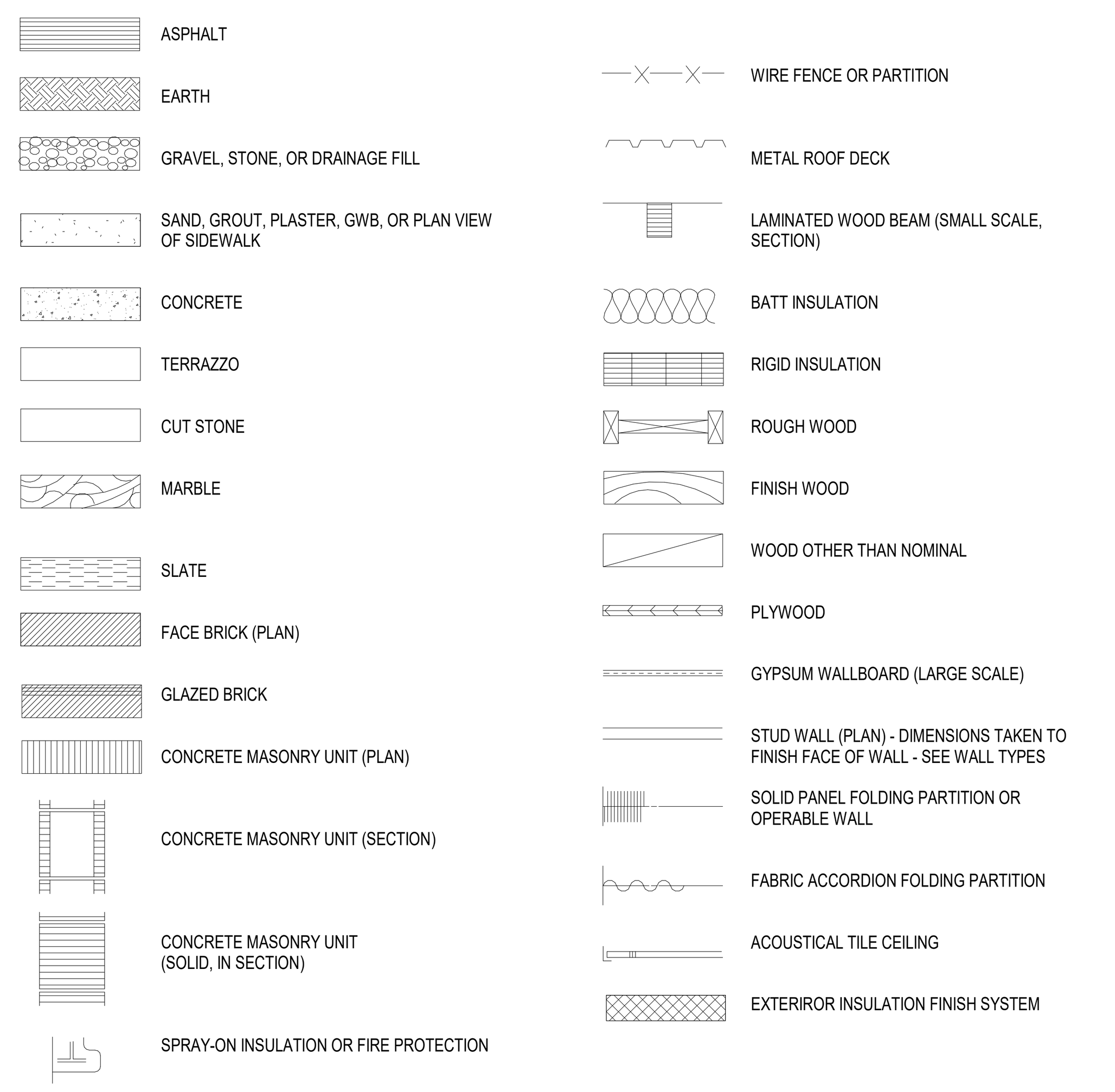
ABBREVIATIONS USED ON THE CONTRACT DOCUMENTS, INCLUDE BUT ARE NOT LIMITED TO THOSE LISTED BELOW

@	AT
AC	AIR CONDITIONING
ACT	ACOUSTICAL CEILING TILE
AD	AREA DRAIN
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFP	ACCORDION FOLDING PARTITION
AGG	AGGREGATE
ALT	ALTERNATIVE
AL	ALUMINUM
AP	ACCESS PANEL
APROX	APPROXIMATE
AR	ACID RESISTANT
ARCH	ARCHITECT(URAL)
ASPH	ASPHALT
AV	AUDIO-VISUAL
AWG	AMERICAN WIRE GUAGE
AWT	ACCOUSTICAL WALL TREATMENT
L	ANGLE
&	AND
BIT	BITUMINOUS
BLDG	BUILDING
BLKG	BLOCKING
BM	BENCH MARK / BEAM
B.O.	BOTTOM OF
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BRG	BEARING
BRK	BRICK
BUR	BUILT-UP ROOF
CAB	CABINET
CAR	CARPET
CAT	CATALOG
CB	CHALKBOARD / CATCH BASIN
CFM	CUBIC FEET PER MINUTE
CH	CABINET HEATER
CI	CAST IRON
CJ	CONTROL JOINT
CL	CENTERLINE
CLR	CLEAR
CLG	CEILING
CMP	CORRUGATED METAL PIPE
CMT	CERAMIC MOSAIC TILE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COL	COLUMN
COMP	COMPACTED
CONC	CONCRETE
CONSTR	CONSTRUCTION
CONT	CONTINUOUS/CONTINUE
CONTR	CONTRACTOR
CORR	CORRUGATED
CT	CERAMIC TILE
C TO C	CENTER TO CENTER
CSK	COUNTER SINK
CU FT/CF	CUBIC FEET
CU IN/CI	CUBIC INCH
CU YD/CY	CUBIC YARD
CUSP	CUSPIDOR
CW	COLD WATER
CWF	CEMENTITIOUS WOOD FIBER
d	PENNY (NAILS, ETC.)
D	DEPTH/DEEP
°	DEGREE
DC	DISPLAY CASE
DEPT	DEPT
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA/ Ø	DIAMETER
DIM	DIMENSION
DIV	DIVISION
DL	DEAD LOAD
DWG	DRAWING
DS	DOWNSPOUT
DWC	DRINKING WATER COOLER
E	EAST
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC(AL)
ELEV	ELEVATOR
ENGR	ENGINEER
EP	ELECTRICAL PANELBOARD
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EFS (or DEFS)	DIRECT APPLIED EXTERIOR FINISH SYSTEM
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
EXTN	EXTENSION
FD	FLOOR DRAIN
FHC	FIRE HOSE CABINET
FIN	FINISH
FIN FL	FINISH FLOOR
FLR	FLOOR
FDN	FOUNDATION
FSR	FLEXIBLE SHEET ROOFING
FSSK	FLOOR SERVICE SINK
FT	FEET
FTG	FOOTING
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
GA	GAUGE
GALV	GALVANIZED(D)
GB	GRAB BAR
GFCMU	GROUND FACE CONCRETE MASONRY UNIT
GFRGU	GLASS FIBER REINFORCED GYPSUM UNIT
GL	GLASS
GWB	GYPSUM WALLBOARD
H	HEIGHT/HIGH
HB	HOSE BIB
HDWE	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HPT	HIGH POINT
HS	HIGH STRENGTH
HTG	HEATING
HVAC	HEATING/VENTILATING/AIR CONDITIONING
HW	HOT WATER
HWY	HIGHWAY
ID	INSIDE DIAMETER
IN	INCH
INCL	INCLUDE(D), (ING)
INFO	INFORMATION
INSUL	INSULATION
INTR	INTERIOR
INV	INVERT
JS	JOIST SUBSTITUTE
JST	JOIST
JT	JOINT
KIT	KITCHEN
L	LENGTH
LAM	LAMINATE(D)
LAV	LAVATORY
LB/#	POUND
LKR	LOCKER
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LVR	LOUVER
LW	LONG WAY

M	METER
MAS	MASONRY
MAT	MATERIAL
MAX	MAXIMUM
MB	MARKER BOARD
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MH	MOP HOLDER
MIN	MINIMUM
MISC	MISCELLANEOUS
MM	MILLIMETER
MO	MASONRY OPENING
MTL	METAL
N	NORTH
NIC	NOT IN CONTRACT
NO/#	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPNG	OPENING
OPP	OPPOSITE
O.H.	OPPOSITE HAND
O TO O	OUT TO OUT
OW	OPERABLE WALL
OZ	OUNCE
P	PAINT
PA	PUBLIC ADDRESS
PERF	PERFORATED
PLAS	PLASTIC
PL	PLASTIC LAMINATE
PLBG	PLUMBING
PLYWD	PLYWOOD
PREFAB	PREFABRICATED
PS	PROJECTION SCREEN
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSS	PENCIL SHARPENER SUPPORT
PT	PORCELAIN TILA
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
QT	QUARRY TILE
R	RISER
RA	RETURN AIR
RAD/R	RADIUS
RB	RESILIENT BASE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REF	REFERENCE
REFR	REFRIGERATOR
REINF	REINFORCING
REQ'D	REQUIRED
REV	REVISION(S)
RM	ROOM
R.O.	ROUGH OPENING
ROW	RIGHT-OF-WAY
S	SOUTH
SA	SUPPLY AIR
SAN	SANITARY
SCHED	SCHEDULE
SD	STORM DRAIN / SMOKE DETECTOR
SECT	SECTION
SEW	SEWER
SGFT	STRUCTURAL GLAZED FACING TILE
SHT	SHEET
SIM	SIMILAR
SP	SPACE
SPEC(S)	SPECIFICATION(S)
SPKR	SPEAKER
SQ	SQUARE
SQ FT/SF	SQUARE FEET
SQ IN/SI	SQUARE INCHES
SQ YD/SY	SQUARE YARDS
SS	STAINLESS STEEL
ST	STORM/STREET
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SW	SHORT WAY / SIDEWALK
SYMM	SYMMETRY(ICAL)
SYNTH	SYNTHETIC
T	TREAD
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TA	TOILET ACCESSORY(IES)
TB	TACKBOARD
TC	TOP OF CURB
TEL	TELEPHONE
TERR	TERRAZZO
T.O.	TOP OF
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOM	TOP OF MASONRY
TOS	TOP OF STEEL
TV	TELEVISION
TYP	TYPICAL
TWS	TACKABLE WALL SURFACE
UNO	UNLESS NOTED OTHERWISE
UV	UNIT VENTILATOR
UR	URINAL
VCT	VINYL COMPOSITE TILE
VCGWB	VINYL COVERED GYPSUM WALLBOARD
VERT	VERTICAL
VFWC	VINYL FABRIC WALLCOVERING
VIF	VERIFY IN FIELD
VIT	VITREOUS
VOL	VOLUME
VR	VAPOR RETARDER
VRB	VENTED RESILIENT BASE
VS	VENT STACK
VT	VINYL STACK
W	WEST / WIDE / WIDTH
W/	WITH
W/O	WITHOUT
WA	WARDROBE ACCESSORIES
WB	WOOD BASE
WC	WATER CLOSET / WIND COLUMN
WD	WOOD
WH	WATER HEATER
WP	WORKING POINT
WSSK	WALL SERVICE SINK
WWF	WELDED WIRE FABRIC
YD	YARD / YARD DRAIN

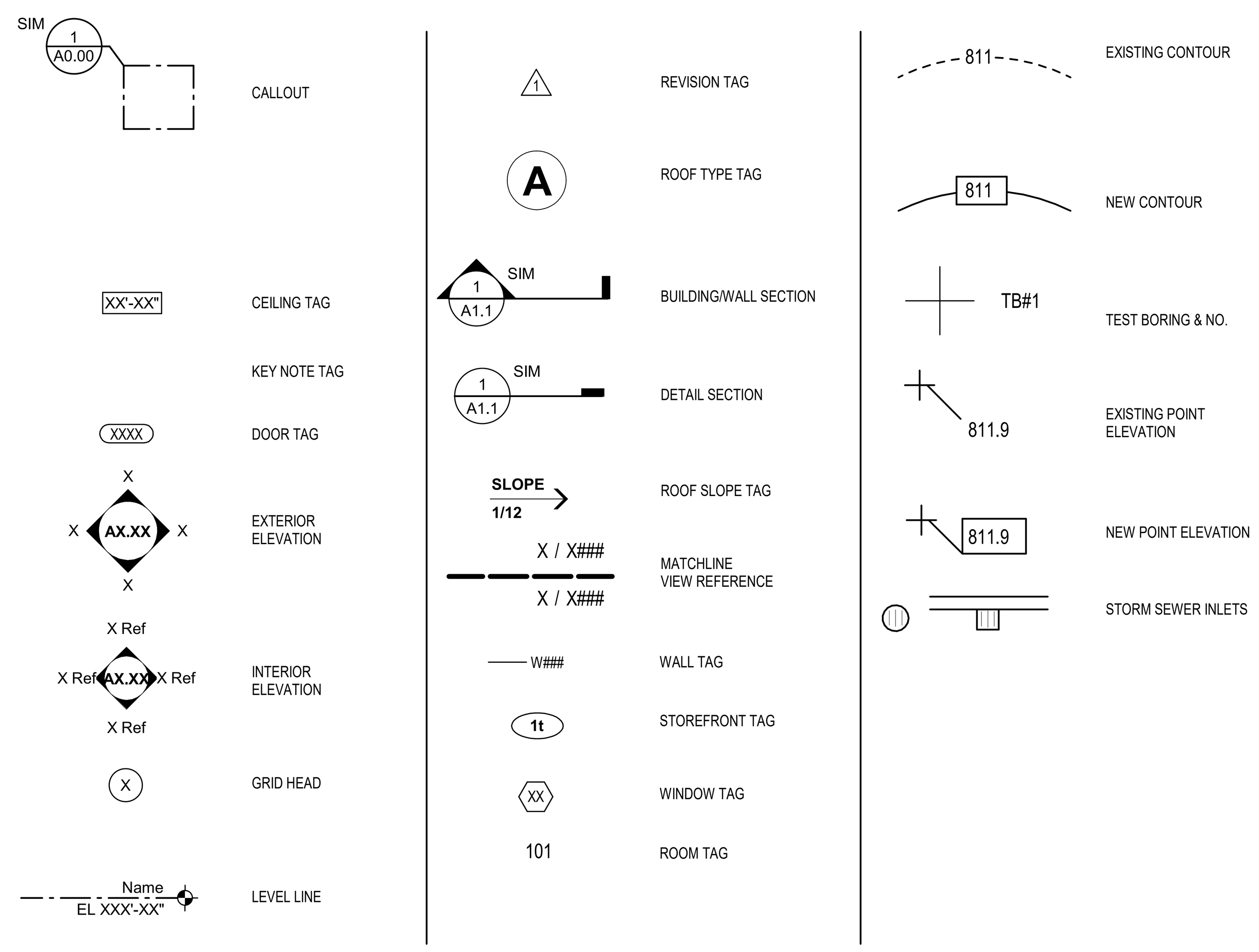
MATERIAL SYMBOLS LEGEND

MATERIAL SYMBOLS USED ON THE CONTRACT DOCUMENTS, INCLUDE BUT ARE NOT LIMITED TO THOSE LISTED BELOW



DRAWING SYMBOLS LEGEND

DRAWING SYMBOLS USED ON THE CONTRACT DOCUMENTS, INCLUDE BUT ARE NOT LIMITED TO THOSE LISTED BELOW



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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

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CARMEL CLAY SCHOOLS

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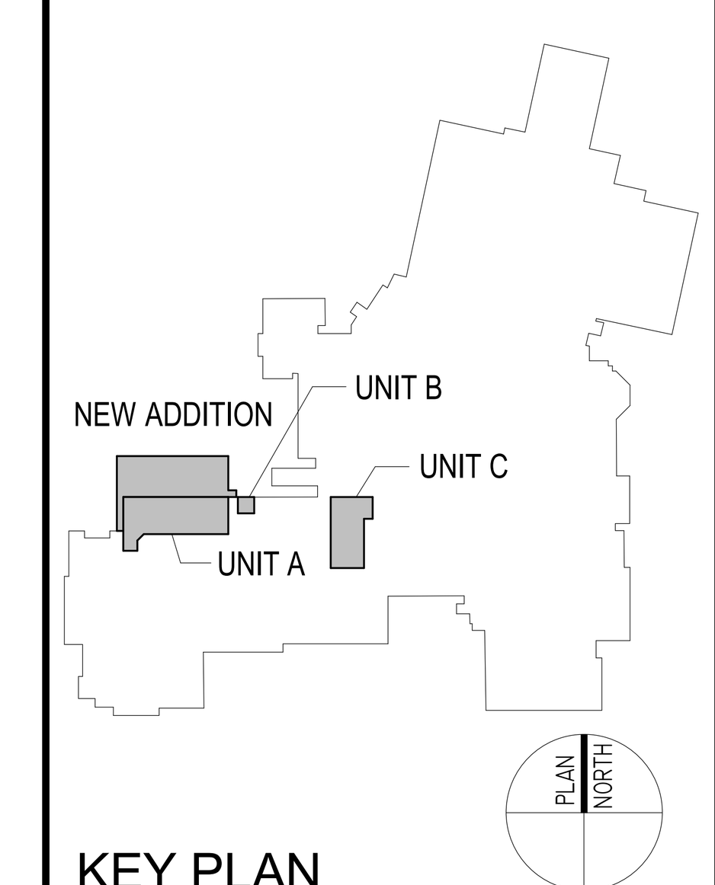

KEY PLAN

100% CONSTRUCTION DOCUMENTS

PAUL A. MILLER REGISTERED No. AR10800161 STATE OF INDIANA ARCHITECT

DRAWN BY: CLP
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

ABBREVIATIONS AND INDEX

_INDEX B

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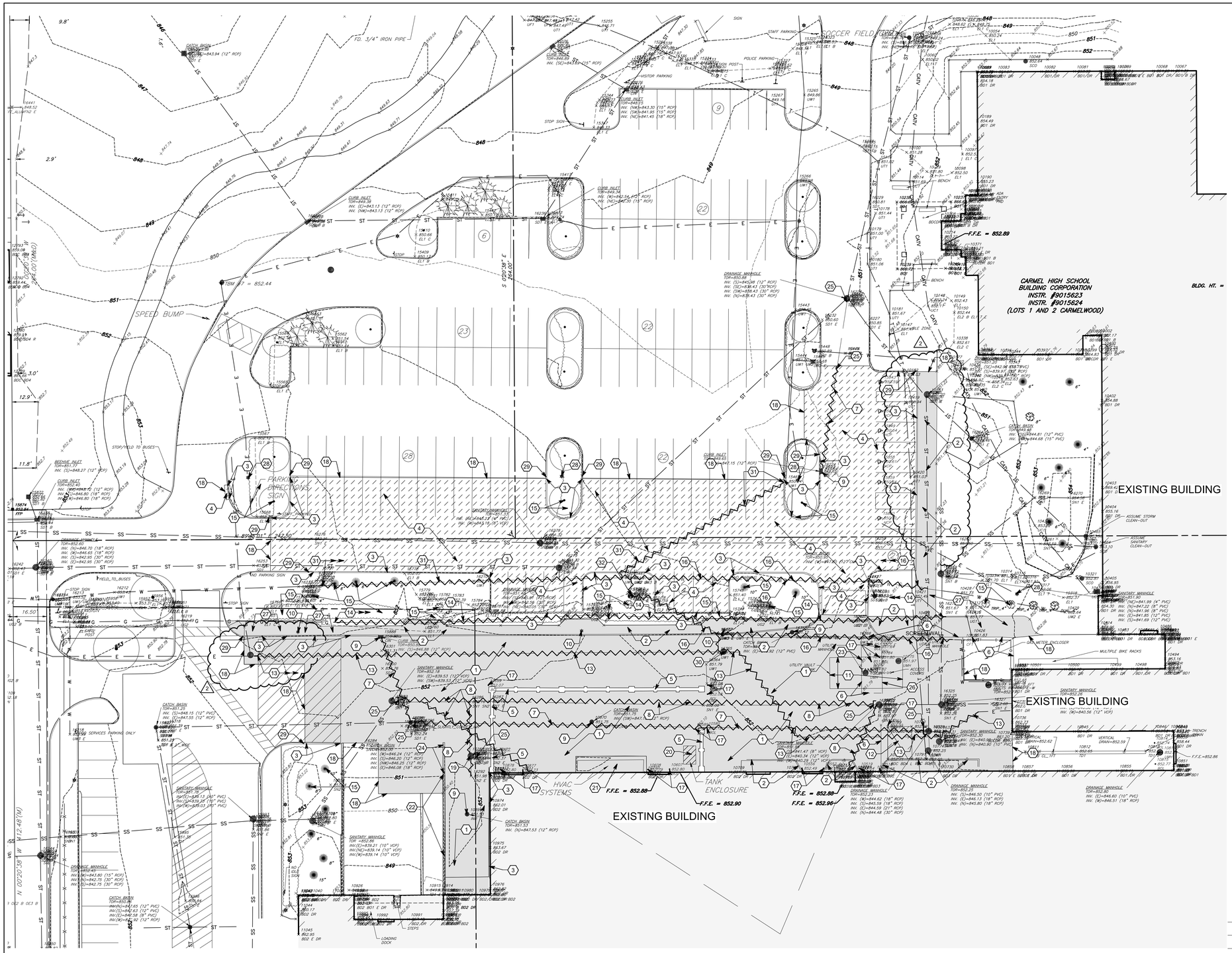

NORTH

20 0 20 40 60

GENERAL NOTES

1. SEE DRAWING GD0.1 FOR GENERAL NOTES AND ADDITIONAL LEGEND.
2. TOPOGRAPHIC CONDITIONS AND EXISTING UTILITIES SHOWN WERE PROVIDED BY CEC - CIVIL & ENVIRONMENTAL CONSULTANTS, INC DATED MAY 19, 2023. 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.

DEMOLITION KEYNOTES

1. REMOVE CONCRETE PAVEMENT
2. REMOVE CONCRETE SIDEWALK & CURB
3. REMOVE CONCRETE CURB
4. REMOVE ASPHALT PAVEMENT
5. REMOVE MASONRY SCREEN WALL AND FOUNDATIONS
6. REMOVE METAL PANEL SCREEN WALL AND FOUNDATIONS.
7. REMOVE 18" RCP STORM SEWER
8. REMOVE 10" VCP SANITARY SEWER
9. REMOVE STORM STRUCTURE
10. REMOVE LIGHTPOLES (3 TOTAL)
11. EXISTING CONCRETE VAULT (INCLUDING CAP WALLS AND SLAB) & 20,000 FUEL TANK TO BE REMOVED, AND SOIL TO BE REMEDIATED AS REQUIRED BY OWNER/OTHERS. COORDINATE REMOVAL AND CAPPING OF EXISTING FUEL LINES WITH MEP PLANS.
12. REMOVE EXISTING BUILDING STRUCTURE. SEE ARCHITECTURAL PLANS
13. REMOVE ELECTRICAL LINES. COORDINATE WITH ELECTRICAL SITE PLANS.
14. REMOVE/RELOCATE EXISTING GAS LINE. COORDINATE REMOVALS WITH CENTERPOINTE ENERGY.
15. REMOVE TREES AND SHRUBS
16. REMOVE 8" DIP WATER LINE
17. REMOVE PIPE BOLLARDS AND FOUNDATIONS
18. PAVEMENT SAWCUT LINE
19. REMOVE EXISTING ABANDONED GREASE TRAP
20. REMOVE WASTE OIL/FREEZE TANK, CONCRETE SLAB AND FOUNDATION WALLS FULL DEPTH. REMOVE CANOPY STRUCTURE, SALVAGE AND RETURN TO OWNER. CAP EXISTING LINES AT 6" FROM FACE OF BUILDING. COORDINATE PIPING REMOVAL WITH MEP.
21. REMOVE CONCRETE EQUIPMENT PAD. SEE MEP PLANS FOR REMOVAL OF EQUIPMENT PAD.
22. REMOVE HANDRAIL. PROTECT EXISTING RETAINING WALL DURING CONSTRUCTION. COORDINATE WITH ARCHITECTURAL AND STRUCTURAL PLANS.
23. REMOVE SWING GATE
24. REMOVE SECTION OF EXISTING RETAINING WALL AND FOUNDATION. COORDINATE LIMITS OF REMOVAL WITH ARCHITECTURAL AND STRUCTURAL PLANS.
25. CAP EXISTING PIPE WITH MECHANICAL PLUG - SEE DETAIL ON SU2.1
26. REMOVE SLIDING CHAINLINK FENCE, GATE, AND FOUNDATIONS.
27. REMOVE CONCRETE SIDEWALK
28. PROTECT LIGHT POLE TO REMAIN
29. PROTECT CURB TO REMAIN
30. REMOVE ELECTRICAL MANHOLE. COORDINATE REMOVALS WITH ELECTRICAL SITE PLAN.
31. REMOVE 10" DIP WATER LINE.
32. REMOVE POST INDICATOR VALVE.

DEMOLITION LEGEND

- EXISTING BUILDING
- APPROXIMATE LIMITS OF CONCRETE REMOVAL
- APPROXIMATE LIMITS OF ASPHALT PAVEMENT REMOVAL
- EXISTING STORM LINE
- EXISTING SANITARY LINE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING LIGHT POLE
- EXISTING STORM STRUCTURE
- EXISTING SANITARY STRUCTURE
- EXISTING FIRE HYDRANT
- APPROXIMATE LIMITS OF UTILITY LINE REMOVAL

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CAUTION !!

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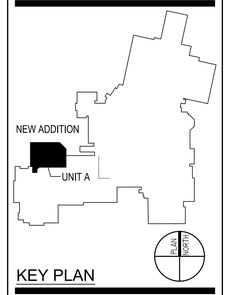


KEY PLAN

100% CONSTRUCTION DOCUMENTS

POLITE, MITCHELL, CMIR, REGISTERED No. 19700317 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: ARS

PROJECT NUMBER: 221165.01

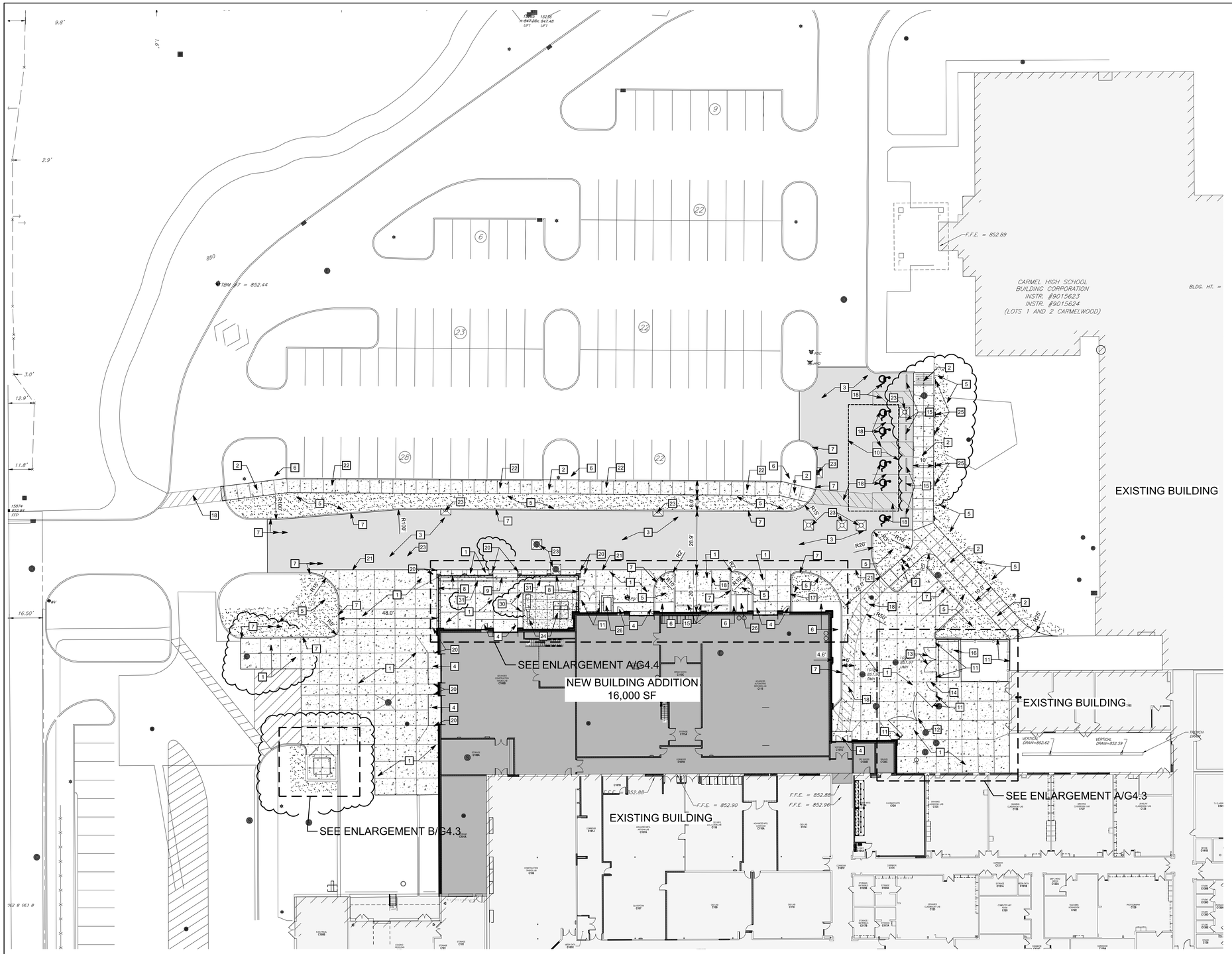
PROJECT ISSUE DATE: 08/31/2023

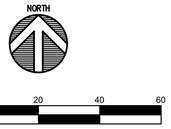
REV. NO△	DESCRIPTION	DATE
1	TAC REVIEW	9-19-2023
2	ADDENDUM 2	10-04-2023

DEMOLITION PLAN

GD1.1

Drawing Path: P:\2023\100\119\CAD\Civil\Active\04_2023-119_GD1.1_Site Demolition Plan.dwg
Plotted By: ostheier Time of Plot: 10/3/23 - 4:12pm Last Edited: 10/3/23 - 2:38pm





GENERAL NOTES

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4. SEE SHEET G1.2 FOR STRIPING AND SIGNAGE PLAN.
5. SEE SHEET G1.3 FOR CONCRETE JOINTING PLAN.

SITE KEYNOTES

1	CONCRETE PAVEMENT - SEE DETAIL D/G4.1
2	CONCRETE SIDEWALK - SEE DETAIL A/G4.1
3	ASPHALT PAVEMENT - SEE DETAIL O/G4.1
4	CONCRETE STOOP - SEE STRUCTURAL DRAWING
5	LAWN AREA - SEE LANDSCAPE PLAN L1.0
6	SHREDDED HARDWOOD MULCH PLANTING BED - SEE LANDSCAPE PLAN L1.0
7	CONCRETE CURB - SEE DETAIL H/G4.1
8	EXTERIOR STORAGE MASONRY SCREEN WALL - SEE ARCHITECTURAL PLANS
9	ROLLING GATE WITH CITY SCAPES - TOUGHGATE (PVC VERTICAL PLANK INFILL SERIES - MADISON STYLE) FOR A 12'-0" WIDE OPENING AND 8'-0" HEIGHT
10	UNDERGROUND STORMWATER DETENTION AREA - SEE DRAWING SU1.1 & SU2.1
11	8' HT. CITY SCAPES COVRIT SCREENWALL ENCLOSURE WITH VERTICAL PLANKS AND STANDARD STIFFENER, FENCE PANELS AND POSTS, DOUBLE SWING GATE
12	DOUBLE SWING GATE (TWO 10'-0" GATES) WITH CITY SCAPES - TOUGHGATE (PVC VERTICAL PLANK INFILL SERIES - MADISON STYLE) 8'-0" HEIGHT
13	DOUBLE SWING GATE (2 - 6'-0" GATES) WITH CITY SCAPES - TOUGHGATE (PVC VERTICAL PLANK INFILL SERIES - MADISON STYLE) 8'-0" HEIGHT
14	5' WIDE SWING GATE WITH CITY SCAPES - TOUGHGATE (PVC VERTICAL PLANK INFILL SERIES - MADISON STYLE) 8'-0" HEIGHT WITH WEATHERPROOF PANIC HARDWARE MOUNTED TO DOOR
15	PRECAST PARKING BUMPER - SEE DETAIL D/G4.2
16	CONCRETE EQUIPMENT PAD (12' X 20') WITH ABOVE GROUND TANK - SEE DETAIL M/G4.1 (REFER TO MEP PLANS FOR SIZE AND LOCATION)
17	ALUMINUM HANDRAIL - SEE DETAIL E/G4.2
18	PAVEMENT MARKING - SEE STRIPING AND SIGNAGE PLAN G1.2
19	TRASH DUMPSTER ENCLOSURE - SEE ARCHITECTURAL PLANS & DWG 10/S3.01. PROVIDE TWO SWING GATES, CITY SCAPES - TOUGHGATE (PVC VERTICAL PLANK INFILL SERIES - MADISON STYLE)
20	STEEL BOLLARD - PER DETAIL Q/G4.1
21	CONCRETE/ASPHALT INTERFACE - DETAIL G/G4.1
22	MONOLITHIC CURB & WALK - SEE DETAIL B/G4.1
23	CONCRETE COLLAR - SEE DETAIL N/G4.1
24	CONCRETE EQUIPMENT PAD (+25'-0" X +20'-0") FOR DUST COLLECTOR AND WELDING EXHAUST - SEE DETAIL M/G4.1 (COORDINATE WITH MEP PLANS FOR SIZE AND LOCATION)
25	ADA PARKING SIGN - SEE STRIPING AND SIGNAGE PLAN G1.2
26	OIL CONTAINMENT TANK, CONCRETE PIT AND CANOPY, SEE SHEET G4.2 FOR ADDITIONAL LAYOUT INFORMATION AND STRUCTURAL DETAIL XX/S5.X
27	TAPER CURB FROM 6" TO 1"
30	6" PIPE BOLLARD - SEE DETAIL 1/G4.1
31	NEW TRENCH DRAIN - SEE DETAIL ON SHEET SU2.1

PROPOSED SITE LEGEND

- EXISTING BUILDING
- PROPOSED BUILDING ADDITION
- PROPOSED CONCRETE PAVEMENT/SIDEWALK
- PROPOSED ASPHALT PAVEMENT
- PROPOSED LAWN AREA
- EXISTING LIGHT POLE
- EXISTING STORM STRUCTURE
- EXISTING SANITARY STRUCTURE
- EXISTING FIRE HYDRANT
- PROPOSED STORM STRUCTURE
- PROPOSED SANITARY STRUCTURE

PARKING SUMMARY	
PARKING SPACES REMOVED	34
NEW PARKING SPACES	6
NET LOSS	28

HARD SURFACE	
HARD SURFACE ADDED	2,355 SF

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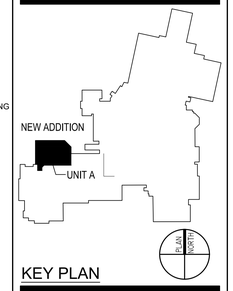

KEY PLAN

100% CONSTRUCTION DOCUMENTS

DRAWN BY: ARS
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	TAC REVIEW	9-19-2023
2	ADDENDUM 2	10-04-2023

SITE PLAN

G1.1

Drawing Path: P:\2023\100\118\CAD\Civil\Active\05_2023-119_G1.1_Site Plan.dwg
Plotted By: gosmerson Time of Plot: 10/5/23 - 1:27pm Last Edited: 10/5/23 - 12:38pm

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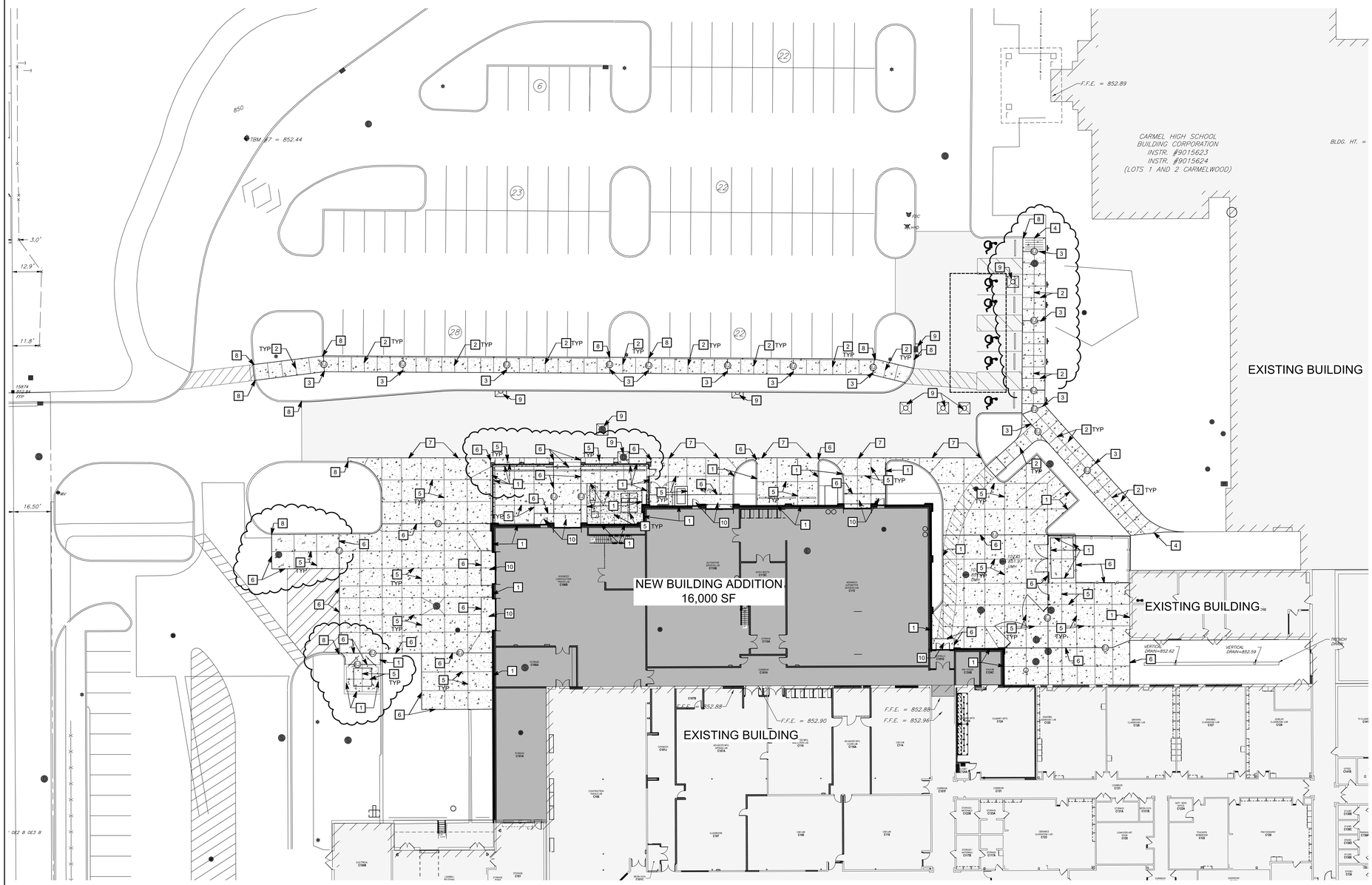

GENERAL NOTES

1. SEE DRAWING GD0.1 FOR GENERAL NOTES AND ADDITIONAL LEGEND.
2. TOPOGRAPHIC CONDITIONS AND EXISTING UTILITIES SHOWN WERE PROVIDED BY CEC - CIVIL & ENVIRONMENTAL CONSULTANTS, INC DATED MAY 19, 2023. 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. ISOLATION JOINT - SEE DETAIL L/G4.1
2. SIDEWALK CONTROL JOINT - SEE DETAIL C/G4.1
3. SIDEWALK EXPANSION JOINT - SEE DETAIL C/G4.1
4. NEW SIDEWALK TO EXISTING SIDEWALK CONNECTION - SEE DETAIL F/G4.1
5. CONCRETE PAVEMENT CONTROL JOINT - SEE DETAIL E/G4.1
6. CONCRETE PAVEMENT EXPANSION JOINT - SEE DETAIL E/G4.1
7. ASPHALT PAVEMENT/CONCRETE PAVEMENT INTERFACE - PER DETAIL G/4.1
8. CONCRETE CURB CONNECTION TO EXISTING CURB - SEE DETAIL K/G4.1
9. CONCRETE COLLAR - SEE DETAIL N/G4.1
10. CONCRETE STOOP/APRON - SEE STRUCTURAL DRAWING

PROPOSED SITE LEGEND

- EXISTING BUILDING
- PROPOSED BUILDING ADDITION
- PROPOSED CONCRETE PAVEMENT/SIDEWALK
- PROPOSED ASPHALT PAVEMENT
- EXISTING LIGHT POLE
- EXISTING STORM STRUCTURE
- EXISTING SANITARY STRUCTURE
- EXISTING FIRE HYDRANT
- PROPOSED STORM STRUCTURE
- PROPOSED SANITARY STRUCTURE
- EXPANSION JOINT

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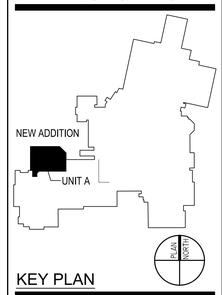
CAUTION !!

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.



KEY PLAN

100% CONSTRUCTION DOCUMENTS

PETER MITCHMER RANKIN
REGISTERED
No. 19700317
STATE OF INDIANA
PROFESSIONAL ENGINEER

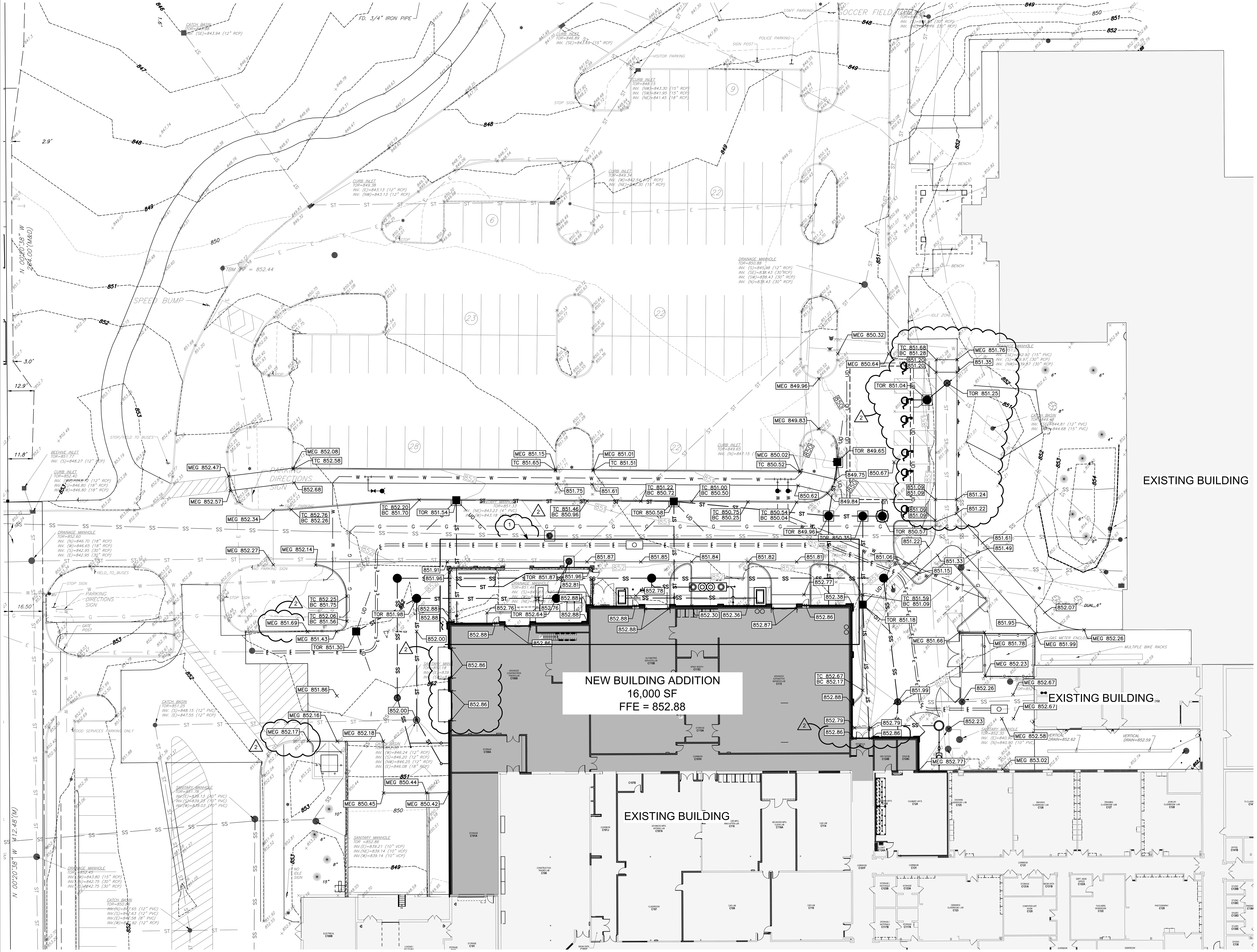
DRAWN BY: ARS
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.△	DESCRIPTION	DATE
1	TAC REVIEW	9-19-2023
2	ADDENDUM 2	10-04-2023

CONCRETE JOINTING PLAN

G1.3

Drawing Path: P:_2023\100\119\CAD\Civil\Action\07_2023-119_G1.3_Concrete Jointing Plan.dwg
Plotted By: ashelker Time of Plot: 10/4/23 - 10:48am Last Edited: 10/3/23 - 4:16pm



NORTH

20 0 20 40 60

GENERAL NOTES

1. SEE DRAWING GD0.1 FOR GENERAL NOTES AND ADDITIONAL LEGEND.
2. TOPOGRAPHIC CONDITIONS AND EXISTING UTILITIES SHOWN WERE PROVIDED BY THE SURVEYOR. 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.

KEYNOTES

1. SEE SHEET G5.2 FOR ADDITIONAL GRADING INFORMATION..

GRADING PLAN LEGEND

Symbol	Description
+728.30	EXISTING SPOT ELEVATION
MEG	MATCH EXISTING GRADE
TC	TOP OF CURB
BC	BOTTOM OF CURB
TOR	TOP OF RIM
FFE	FINISH FLOOR ELEVATION
730	EXISTING CONTOUR W/ ELEVATION
735	PROPOSED CONTOUR W/ ELEVATION
750.65	PROPOSED SPOT ELEVATION
TC / BC	PROPOSED CURB ELEVATION
	EXISTING STORM LINE
	EXISTING SANITARY LINE
	EXISTING GAS LINE
	EXISTING WATER LINE
	EXISTING LIGHT POLE
	EXISTING STORM STRUCTURE
	EXISTING SANITARY STRUCTURE
	EXISTING FIRE HYDRANT
ST	PROPOSED STORM LINE
SS	PROPOSED SANITARY LINE
	PROPOSED MANHOLE (STORM / SANITARY)
	PROPOSED STORM INLET
G	PROPOSED / RELOCATED GAS LINE

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Drawing Path: P:\2023\100\119\CAD\Civil\Active\08_2023-119_G2.1_Grading Plan.dwg
Plotted By: gcameron Time of Plot: 10/4/23 - 12:09pm Last Edited: 10/4/23 - 9:42am

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

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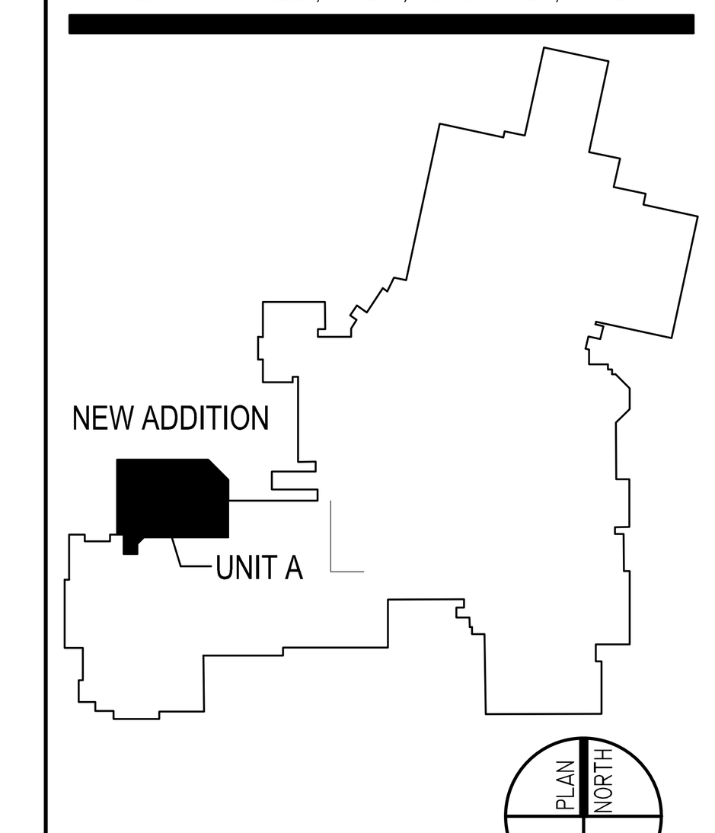

KEY PLAN

100% CONSTRUCTION DOCUMENTS

PETE MILOMIR RANKOVICH REGISTERED No. 19700317 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: ARS
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	TAC REVIEW	9-19-2023
2	ADDENDUM 2	10-04-2023

GRADING PLAN

G2.1

A1 PLAN INDEX

ASSESSMENT OF CONSTRUCTION PLAN ELEMENTS

A1	PLAN INDEX - SWPP PLAN SHEET
A2	VICINITY MAP - SWPP PLAN SHEET
A3	PROJECT NARRATIVE - SWPP PLAN SHEET
A4	LATITUDES AND LONGITUDE - SWPP PLAN SHEET
A5	LEGAL DESCRIPTION - SEE SURVEY SHEETS
A6	11"X17" PLAN - SEPARATE DOCUMENT
A7	BOUNDARIES 100 YEAR FLOODPLAINS, FLOODWAY FRINGES AND FLOODWAYS - SURVEY SHEETS
A8	ADJACENT LAND USE - SWPP PLAN SHEET
A9	IDENTIFICATION OF U.S. EPA APPROVED OR ESTABLISHED TMDL
A10	RECEIVING WATERS
A11	IDENTIFICATION OF DISCHARGES TO WATER ON 303(d) LIST
A12	SOIL MAP AND SOIL DESCRIPTION - SWPP PLAN SHEET
A13	WETLANDS, LAKES AND WATER COURSES - EROSION CONTROL PLANS
A14	STATE AND FEDERAL WQ PERMITS - NONE REQUIRED AT THIS TIME
A15	EXISTING VEGETATIVE COVER - SITE SURVEY SHEETS
A16	EXISTING SITE TOPOGRAPHY - SITE SURVEY SHEETS
A17	STORMWATER DISCHARGE ENTERING SITE - GRADING PLANS
A18	STORMWATER DISCHARGE LEAVING SITE - GRADING PLANS
A19	LOCATION OF EXISTING STRUCTURES - SITE SURVEY PLANS
A20	EXISTING PERMANENT RETENTION / DETENTION FACILITIES WETLANDS SITE SURVEY SHEETS
A21	STORMWATER DISCHARGE TO GROUNDWATER - GRADING PLANS
A22	PROJECT AREA - SWPP PLAND AND SITE PLANS
A23	DISTURBED AREA - EROSION CONTROL PLANS
A24	PROPOSED FINAL TOPOGRAPHY -GRADING PLANS
A25	LOCATION OF BOUNDARIES OF DISTURBED AREAS - EROSION CONTROL PLANS
A26	LOCATION OF STORMWATER DRAINAGE SYSTEM - SITE UTILITY PLANS
A27	LOCATION OF STORMWATER AND NON-STORMWATER DISCHARGE LOCATIONS - GRADING PLANS
A28	LOCATION OF SITE IMPROVEMENTS - SITE PLANS
A29	SOIL STOCKPILES - EROSION CONTROL PLANS
A30	CONSTRUCTION SUPPORT ACTIVITIES - SWPP PLAN
A31	LOCATION OF IN-STREAM ACTIVITIES - NONE
A32	HYDROLOGIC UNIT CODE - SWPP PLAN
A33	PRE CONSTRUCTION AND POST CONSTRUCTION DISCHARGE - SWPP PLAN

STORM WATER POLLUTION PREVENTION - DURING CONSTRUCTION

B1	POTENTIAL POLLUTION SOURCES - SWPP SHEET
B2	CONSTRUCTION ENTRANCE - EROSION CONTROL PLANS
B3	TEMPORARY SURFACE STABILIZATION - EROSION CONTROL PLANS
B4	SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW - EROSION CONTROL PLANS
B5	SEDIMENT CONTROL MEASURES FOR SHEET FLOW - EROSION CONTROL PLANS
B6	RUNOFF CONTROL MEASURES - EROSION CONTROL PLANS
B7	STORM WATER OUTLET PROTECTION - EROSION CONTROL PLANS
B8	GRADE STABILIZATION STRUCTURES - NONE
B9	DEWATERING MANAGEMENT - EROSION CONTROL DETAIL SHEET
B10	MEASURES IN WATERBODIES - NONE
B11	STORMWATER QUALITY MEASURES MAINTENANCE GUIDELINES SWPP SHEET
B12	EROSION AND SEDIMENT CONTROL MEASURES BUILDING LOTS - NONE
B13	SEQUENCE OF STORM WATER QUALITY MEASURES - SWPP SHEET
B14	MATERIAL HANDLING AND SPILL PREVENTION - SWPP SHEET
B15	MATERIAL HANDLING AND STORAGE PROCEDURES - SWPP SHEET

STORM WATER POLLUTION PREVENTION - POST CONSTRUCTION

C1	POTENTIAL POLLUTANTS ASSOCIATED WITH PROPOSE LAND USE SWPP SHEET
C2	PROPOSED POST CONSTRUCTION STORM WATER QUALITY MEASURES SWPP SHEET
C3	PLAN DETAIL FOR STORMWATER MEASURES - EROSION CONTROL PLANS
C4	LOCATION, DIMENSION, SPECIFICATIONS AND DETAILS OF EACH STORMWATER QUALITY MEASURE - EROSION CONTROL PLANS
C5	MAINTENANCE GUIDELINES OF POST CONSTRUCTION STORMWATER QUALITY MEASURES - SWPP SHEET
C6	RESPONSIBLE PERSON POST CONSTRUCTION - SWPP SHEET

GENERAL EROSION CONTROL REQUIREMENT NOTES

1. PERSONNEL ASSOCIATED WITH THE PROJECT MUST BE INFORMED OF THE TERMS AND CONDITIONS OF A CONSTRUCTION STORMWATER GENERAL PERMIT (CGSP), THE REQUIREMENTS WITHIN THE STORMWATER POLLUTION PREVENTION PLAN (SWP3) AND THE REQUIREMENTS OF THE EROSION CONTROL PLAN . THE PERMITTEE IS REQUIRED TO DOCUMENT THIS PROCESS. PERSONNEL INCLUDE BUT ARE NOT LIMITED TO: GENERAL CONTRACTORS, CONSTRUCTION MANAGEMENT FIRMS, GRADING/EXCAVATING CONTRACTORS, CONCRETE SUPPLIERS, SWP3 RESPONSIBLE PERSONS AND THOSE RESPONSIBLE FOR ADMINISTERING THE SELF-MONITORING PROGRAM (SMP).
2. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES AS DEEMED NECESSARY MAY BE REQUIRED BY IDEM OR THE CITY INSPECTOR.

CONSTRUCTION SOLID WASTE MANAGEMENT

1. PROVIDE CONTINUOUS SITE MONITORING AND CLEANUP. COLLECT TRASH ON A DAILY BASIS. PROVIDE AS MANY WASTE BINS AS NEEDED TO KEEP SITE CLEAN OF LITTER AND WASTE. DURING EXTENDED PERIODS OF RAINFALL, WASTE BINS MUST BE COVERED.
2. LOOSE MATERIALS RESULTING FROM THE CONSTRUCTION AND DEMOLITION SHALL BE PROMPTLY REMOVED FROM THE SITE BY THE CONTRACTOR. WHEN NECESSARY TO STORE CONSTRUCTION AND DEMOLITION DEBRIS ONSITE, THE MATERIALS SHALL BE CONCEALED IN COVERED DUMPSTERS OR STOCKPILED AND COVERED. LOCATE STOCK PILES SUFFICIENTLY FAR AWAY FROM DRAINAGE INLETS (50 FT MINIMUM SEPARATION).
3. SEGREGATE AND RECYCLE WASTE MATERIALS WHEN APPROPRIATE.
4. ARRANGE FOR REGULAR WASTE COLLECTION BY LICENSED TRASH HAULER.
5. PROVIDE SECONDARY CONTAINMENT FOR HAZARDOUS MATERIAL CONTAINERS.
6. COMPLY WITH ALL STATE AND LOCAL SOLID WASTE DISPOSAL AND NUISANCE REQUIREMENTS.
7. TRAIN EMPLOYEES AND SUBCONTRACTORS TO USE PROPER SOLID WASTE MANAGEMENT PRACTICES.

SANITARY WASTE MANAGEMENT

1. DO NOT PLACE TEMPORARY FACILITIES (PORT-O-LETS) ON PAVED AREAS. LOCATE TEMPORARY FACILITIES AT LEAST 50 FEET FROM STORM DRAINAGE INLETS.
2. UNTREATED RAW WASTEWATER MAY NOT BE DISCHARGED TO LAND, THE STORM DRAIN SYSTEM OR TO SURFACE WATER BODIES.
3. SANITARY/SEPTIC FACILITIES SHOULD BE MAINTAINED IN GOOD WORKING ORDER BY A LICENSED SERVICE PROVIDER.
4. ARRANGE REGULAR WASTE COLLECTION BY A LICENSED HAULER.

Indiana 811

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ASSESSMENT OF CONSTRUCTION PLAN ELEMENTS SECTION A

A2	VICINITY MAP THE VICINITY MAP IS LOCATED ON THIS SHEET. THE PROJECT LIES EAST OF RICHLAND AVE AND SOUTH OF AUDUBON DR. IN THE CITY OF CARMEL - PROPERTY ADDRESS IS 502 E. MAIN ST.
A3	PROJECT NARRATIVE THIS PROJECT INVOLVES THE CONSTRUCTION OF A NEW ADDITION, RENOVATIONS TO THE EXISTING BUILDING, REVISIONS TO AN EXISTING ASPHALT PARKING LOT AND ASSOCIATED INFRASTRUCTURE REVISIONS.
A4	LATITUDE AND LONGITUDE LATITUDE N 39° 58' 47.69"; LONGITUDE W 86° 07' 10.00"
A5	LEGAL DESCRIPTION THE PROJECT PROPERTY IS LOCATED IN HAMILTON COUNTY INDIANA ON THE CARMEL HIGH SCHOOL CAMPUS. (LEGAL DESCRIPTION UNDER SEPERATE COVER)
A6	11 x 17 INCH PLAT REFER TO SITE PLAN
A7	BOUNDARIES OF 100 YEAR FLOODPLAINS, FLOODWAY FRINGES AND FLOODWAYS NO FLOODPLAINS, FLOODWAY FRINGES OR FLOODWAYS ARE LOCATED ON THIS SITE
A8	ADJACENT LAND USE ADJACENT LAND USE IS RESIDENTIAL ON ALL SIDES.
A9	IDENTIFICATION OF U.S. EPA APPROVED OR ESTABLISHED TMDL COOL CREEK DOES NOT HAVE AN ESTABLISHED TMDL
A10	RECEIVING WATERS THE RECEIVING WATER IS COOL CREEK LOCATED ON THE SOUTH SIDE OF SMOKEY ROW ROAD.
A11	IDENTIFICATION OF DISCHARGES TO WATER ON 303(d) LIST VIA THE IDEM ATTAINS RECORD COOL CREEK IF THREATEND BY ELEVATED PATHOGEN LEVELS.
A12	SOILS MAP AND SOIL DESCRIPTION THE SOILS MAP AND SOIL DESCRIPTIONS CAN BE FOUND ON THIS SHEET.
A13	WETLANDS, LAKES AND WATER COURSES THERE ARE NO WETLANDS, LAKES OR WATER COURSES LOCATED WITHIN THE PROJECT SITE.
A14	STATE AND/OR FEDERAL WATER QUALITY PERMITS A CONSTRUCTION GENERAL STORMWATER PERMIT WILL BE NEEDED FROM THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
A15	EXISTING VEGETATIVE COVER THE EXISTING SITE VEGETATION MAINLY CONSISTS OF LANDSCAPE PLANTING AND MAINTAINED LAWN AREAS.
A16	EXISTING SITE TOPOGRAPHY THE EXISTING SITE TOPOGRAPHY CAN BE FOUND ON THE SITE SURVEY. THE SITE GENERALLY SLOPES FROM SOUTH TO NORTH.
A17	STORMWATER DISCHARGE ENTERING SITE STORMWATER DISCHARGE DOES NOT ENTER THE PROJECT SITE.
A18	STORMWATER DISCHARGE LEAVING SITE STORMWATER DISCHARGE WILL LEAVE THE SITE VIA A STORM SYSTEM COMPRISED OF EXISTING AND PROPOSED STORM PIPES AND STRUCTURES.
A19	LOCATION OF EXISTING STRUCTURES LOCATION OF ALL EXISTING STRUCTURES CAN BE FOUND ON THE SURVEY SHEETS.
A20	EXISTING PERMANENT RETENTION / DETENTION FACILITIES / WETLANDS THERE ARE NO EXISTING RETENTION OR DETENTION FACILITIES LOCATED ON OR DOWNSTREAM OF THE PROJECT SITE.
A21	STORMWATER DIRECT DISCHARGE TO GROUNDWATER THERE ARE NO INFILTRATION WELLS, SINKHOLES OR DRYWELLS CURRENTLY LOCATED OR PROPOSED FOR THE PROJECT SITE.
A22	PROJECT AREA THE TOTAL PROJECT SITE AREA IS 1.88± ACRES. THE PROJECT AREA IS DEPICTED ON THE EROSION CONTROL PLANS
A23	DISTURBED AREA THE TOTAL OF DISTURBED AREA IS TO BE 1.24± ACRES.
A24	PROPOSED FINAL TOPOGRAPHY FINAL TOPOGRAPHY IS DEPICTED ON THE GRADING PLANS.
A25	LOCATION OF BOUNDARIES OF DISTURBED AREAS DISTURBED AREAS ARE NOTED ON THE EROSION CONTROL PLAN.
A26	LOCATION OF STORMWATER DRAINAGE SYSTEM STORMWATER SYSTEMS ARE LOCATED ON THE WEST AND NORTH SIDES OF THE PROJECT. SEE SITE UTILITY PLANS.
A27	LOCATION OF STORMWATER AND NON-STORMWATER DISCHARGE LOCATIONS STORMWATER COLLECTED BY STORM STRUCTURES AND UNDERGROUND PIPES LEAVE THE SITE AND DRAIN NORTH TO COOL CREEK. SEE SITE UTILITY PLANS.
A28	LOCATION OF SITE IMPROVEMENTS SITE IMPROVEMENTS CAN BE FOUND ON THE SITE PLANS. SITE UTILITIES CAN BE FOUND ON THE SITE UTILITY PLANS. NO OFFSITE IMPROVEMENTS ARE PART OF THIS PROJECT.
A29	SOIL STOCKPILES NO SOIL STOCKPILES WILL BE CREATED AS PART OF THIS PROJECT. DEMOLITION MATERIALS WILL REMOVED FROM SITE AND DISPOSED OF AT AN APPROVED SITE.
A30	CONSTRUCTION SUPPORT ACTIVITIES STAGING AREA FOR CONSTRUCTION LAYDOWN IS PLANNED FOR THE NORTH SIDE OF THE PROJECT AREA.
A31	LOCATION OF IN-STREAM ACTIVITIES NO IN-STREAM ACTIVITY WILL BE USED ON THIS PROJECT
A32	HYDROLOGIC UNIT CODE THE HYDROLOGIC UNIT CODE FOR THIS PROJECT IS: 05120201090030
A33	PRE-CONSTRUCTION AND POST CONSTRUCTION PEAK DISCHARGE Q PRE (10YR.) = 7.20 cfs Q POST (10 YR.) = 4.13 cfs

2

SHEET REFERENCE

TOPO (1 OF1)	TOPOGRAPHIC SURVEY
G1.1	SITE PLAN
G2.1	GRADING PLAN
G3.2	EROSION CONTROL PLAN
G3.3	SWPP PLAN
G3.4	EROSION CONTROL DETAILS
SU1.1	UTILITY PLAN
SU2.1	UTILITY DETAILS

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
YclA	Crosby silt loam, fine-loamy subsoil-Urban land complex, 0 to 2 percent slopes	2.8	47.8%
YmsB2	Miami silt loam-Urban land complex, 2 to 6 percent slopes, eroded	3.0	52.2%
Totals for Area of Interest		5.8	100.0%

SOIL TYPES

STORMWATER POLLUTION PREVENTION - DURING CONSTRUCTION - SECTION B

B1	POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTVITIES THERE IS A POTENTIAL FOR POLLUTANTS ASSOCIATED WITH CONSTRUCTION MACHINERY INCLUDING DIESEL FUEL, HYDRAULIC FLUID, ENGINE OILS AND LUBRICANTS, ANTIFREEZE AND OTHER PETROLEUM PRODUCTS. SOIL AND SEDIMENT DISTURBED DURING EARTHWORK ACTIVITIES COULD BE BECOME POLLUTANTS IF THE TRANSPORT OF THESE MATERIALS BY WIND AND/OR WATER IS NOT MEDIATED BY EROSION CONTROL MEASURES. CONSTRUCTION VEHICLES NEED TO BE INSPECTED DAILY. CONTRACTOR SHALL HAVE SPILL CONTAINMENT TRAYS ALONG WITH A UNIVERSAL SPILL KIT ONSITE. ANY SPILL SHALL BE ADDRESSED IMMEDIATELY. CONTAMINATED SOIL / STONE SHALL BE REMOVED.
B2	CONSTRUCTION ENTRANCE THE CONSTRUCTION ENTRANCE SHALL BE LOCATED AT THE ENTRANCE TO THE PROJECT. THE PLANNED LOCATION CAN BE FOUND ON THE EROSION CONTROL PLAN.
B3	TEMPORARY SURFACE STABILIZATION TEMPORARY SURFACE STABILIZATION IS REQUIRED WHEN DISTURBED AREAS ARE EXPECTED TO REMAIN INACTIVE FOR A PERIOD EXCEEDING 7 DAYS. THESE AREAS ARE PLANNED FOR TEMPORARY SEEDING ACCORDING TO THE SEEDING TABLE PROVIDED ON THE EROSION CONTROL DETAIL SHEET.MULCH AND STONE MAY BE USED AS WELL TO STABILIZE BARE SOIL. STABILIZATION MUST BE COMPLETED 14 DAYS AFTER INITIATION.
B4	SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW EROSION CONTROL BLANKET SERVES AS CONCENTRATED FLOW SEDIMENT CONTROL MEASURES.THESE MEASURES ARE SHOWN ON THE EROSION CONTROL PLANS. DETAILS CAN BE FOUND ON THE EROSION CONTROL PLAN.
B5	SEDIMENT CONTROL MEASURES FOR SHEET FLOW SILT FENCE SEDIMENT CONTROL MEASURES ARE SHOWN ON THE EROSION CONTROL PLANS. DETAILS CAN BE FOUND ON THE EROSION CONTROL PLAN.
B6	RUNOFF CONTROL MEASURES RUNOFF CONTROL MEASURES INCLUDE SILT FENCE WHICH IS SHOWN ON THE EROSION CONTROL PLANS. DETAILS CAN BE FOUND ON THE EROSION CONTROL PLAN.
B7	STORMWATER OUTLET PROTECTION STORM WATER OUTLETS ALL DISCHARGE DIRECTLY TO NEW STORM SEWER STRUCTURES. OUTLETS ARE SHOWN ON THE EROSION CONTROL PLANS.
B8	GRADE STABILIZATION STRUCTURES RIP RAP APRONS AT OUTLETS WILL BE UTILIZED TO PREVENT GRADE DESTABILIZATION. SEE EROSION CONTROL PLANS FOR LOCATIONS. DETAILS CAN BE FOUND ON THE EROSION CONTROL PLANS.
B9	DEWATERING MANAGEMENT SHOULD DEWATERING BE NECESSARY, WATER SHALL BE DIRECTED TO A SEDIMENT BASIN OR SEDIMENT TRAP PRIOR TO DISCHARGE. DEWATERING BAGS MAY ALSO BE INTRODUCED TO CONTROL SEDIMENT.
B10	MEASURES IN WATERBODIES NO IN-STREAM WORK WILL BE REQUIRED ON THIS PROJECT.
B11	STORMWATER QUALITY MEASURES MAINTENANCE GUIDELINES STORMWATER INLET CONTROL MEASURES CONSISTING OF TEMPORARY SEDIMENT BAGS ARE SHOWN ON THE EROSION CONTROL PLANS. DETAILS CAN BE FOUND ON THE EROSION CONTROL DETAIL SHEET. ANY DISCHARGE OF WATER FROM DEWATERING OR GROUND WATER FROM EXCAVATIONS, TRENCHES, FOUNDATIONS, ETC. MUST BE DIRECTED TO AN APPROPRIATE SEDIMENT CONTROL MEASURE OR SERIES OF EROSION CONTROL MEASURES THAT MINIMIZE THE DISCHARGE OF SEDIMENT. CONTRACTOR SHALL MONITOR ALL EROSION CONTROL MEASURES AND PERFORM MAINTENANCE AS OUTLINED IN THE MANUFACTURERS SPECIFICATIONS OR AS REQUIRED TO ENSURE PROPER WORKING ORDER OF EACH DEVICE. MONITORING AND MAINTENANCE GUIDELINES FOR EACH EROSION CONTROL BEST MANAGEMENT PRACTICE IS INCLUDED WITH THE DETAIL FOR THAT PRACTICE. EROSION CONTROL PRACTICE DETAILS ARE FOUND ON THE EROSION CONTROL PLAN. THE CONTRACTOR IS RESPONSIBLE FOR COMPLETING WEEKLY INSPECTION REPORTS FOR THE PURPOSE OF EVALUATING THE EFFECTIVENESS AND CONDITIONS OF THE INSTALLED PRACTICES. DAILY INSPECTIONS ARE REQUIRED DURING PERIODS OF RAINFALL EQUAL TO OR EXCEEDING 1/2". MEASURES FOUND TO BE DEFICIENT SHALL BE REPAIRED OR REPLACED.
B12	EROSION AND SEDIMENT CONTROL MEASURES BUILDING LOTS THERE ARE NO INDIVIDUAL BUILDING LOTS CREATED AS PART OF THIS PROJECT.
B13	SEQUENCE OF STORMWATER QUALITY MEASURE IMPLEMENTATION PRIOR TO MOBILIZING HEAVY EQUIPMENT, THE TEMPORARY STONE CONSTRUCTION ENTRANCE SHALL BE INSTALLED. IMMEDIATELY UPON MOBILIZING, THE CONTRACTOR SHALL POST THE NECESSARY PERMITS AND CONSTRUCTION GENERAL STORMWATER PERMIT DOCUMENTATION AT THE ENTRANCE TO THE SITE. PRIOR TO STARTING EARTHWORK OPERATIONS OR ANY OTHER SOIL DISTURBING ACTIVITY, ALL THE SILT FENCE SHALL BE INSTALLED . ALONG WITH THE SILT FENCE INSTALLATION, ALL EXISTING INLETS SHALL BE PROTECTED AS INDICATED ON THE PLAN.TEMPORARY SEEDING, EROSION CONTROL BLANKET AND RIPRAP SHALL BE INSTALLED AS EARTHWORK IS IMPLEMENTED. FINAL STABILIZATION SHALL INCLUDE REMOVAL OF ALL TEMPORARY CONTROL MEASURES, INSTALLATION OF TOPSOIL AND SEEDING IN AREAS TO RECEIVE PERMANENT SEEDING HAS BEEN ACHIEVED WITH 70% COVERAGE REALIZED, FINAL GRADES AND COMPACTION ARE COMPLETE, STORM STRUCTURES AND ROAD SURFACES HAVING BEEN CLEANED.
B14	MATERIAL HANDLING AND SPILL PREVENTION SPILL PREVENTION SHALL BE ACCOMPLISHED BY UTILIZING SPILLGUARDS FOR EQUIPMENT FUELING. EQUIPMENT IN NEED OF REPAIR SHALL BE REMOVED FROM SITE FOR THE NECESSARY MAINTENANCE. NO EQUIPMENT SPILLGUARDS SHALL BE 3'X3'X6" AND SHALL BE CONSTRUCTED OF A MATERIAL RESISTANT TO PETROLEUM PRODUCTS. ON-SITE FUEL STORAGE TANKS SHALL HAVE EMERGENCY STORAGE CAPACITY DIRECTLY BELOW THE TANK IN CASE OF RUPTURE. ANY HAZARDOUS MATERIAL SPILLAGE SHALL BE COLLECTED AND/OR CLEANED IMMEDIATELY BY A TRAINED INDIVIDUAL AND DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
B15	MATERIAL HANDLING AND STORAGE PROCEDURES WASTE CONTAINERS (TRASH RECEPTACLES MUST BE MANAGED TO REDUCE THE DISCHARGE OF POLLUTANTS AND BLOWING OF DEBRIS. WASTE CONTAINERS MUST HAVE A COVER TO MINIMIZE EXPOSURE OF WASTE TO PRECIPITATION OR WASTE MUST BE REMOVED FROM THE SITE DAILY AND DISPOSED OF PROPERLY. CONCRETE WASHOUT OUT AREAS ARE OUTLINED ON THE PLANS. PROPER INSTALLATION, MAINTENANCE AND UTILIZATION SHALL BE OBSERVED TO CONTROL CONCRETE AND CEMENTITIOUS WATER. CONCRETE WASHOUT AREAS SHALL BE LEAK PROOF AND LOCATED AWAY FROM STORMWATER INLETS AND DISCHARGE POINTS. PROPER STORAGE AND HANDLING OF MATERIALS, SUCH AS FUELS OR HAZARDOUS WASTES MUST BE IMPLEMENTED TO MINIMIZE THE POTENTIAL FOR POLLUTANTS TO CONTAMINATE SURFACE OR GROUND WATER OR DEGRADE SOIL QUALITY.

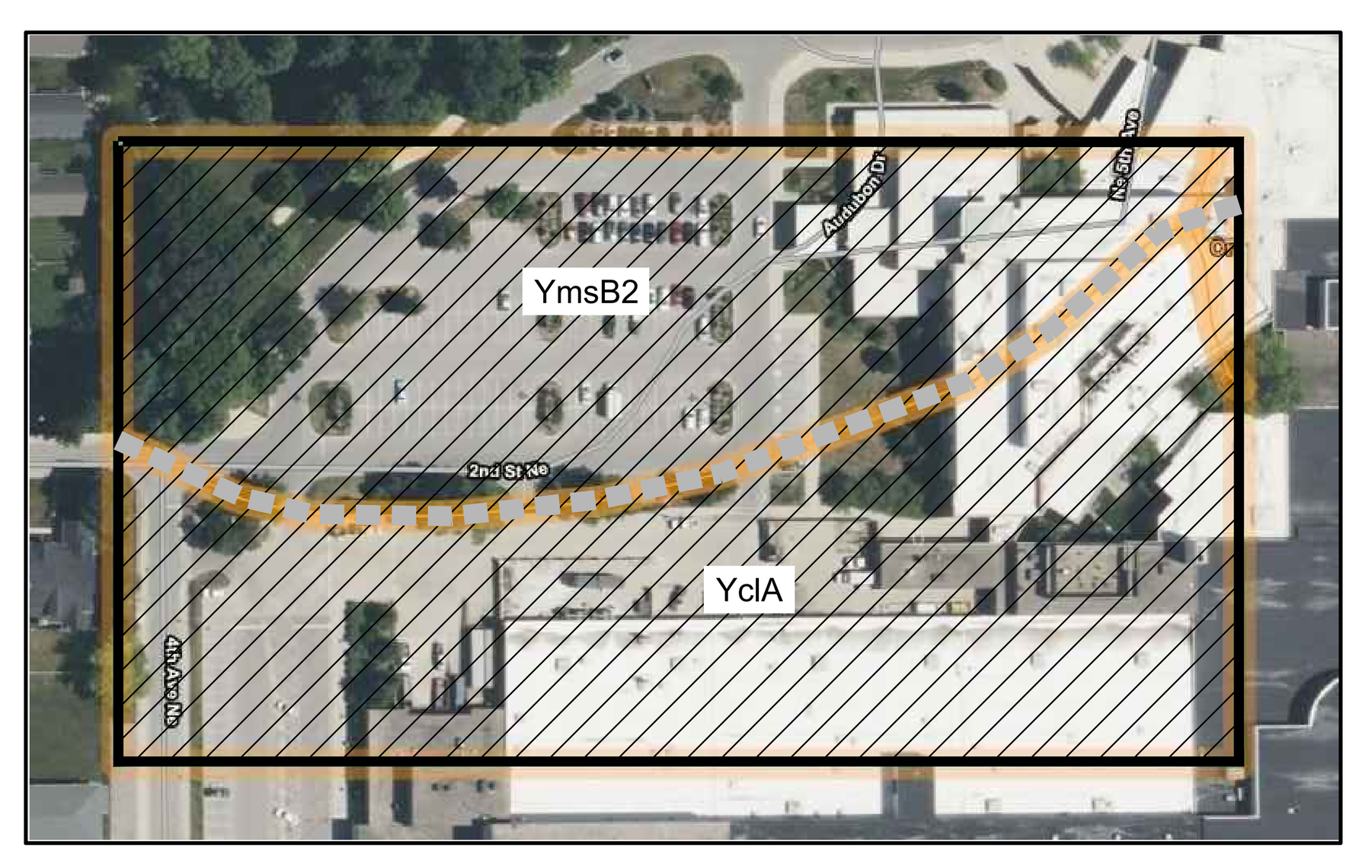
IDEM EMERGENCY SPILL PHONE INFORMATION

PH: 1-888-233-7745
1-317-233-7745

IDEM ATTAINS

WMP	COOL CREEK WMP
WATERSHED SPECIALIST	KRISTI TODD
PHONE	317-308-3376
EMAIL	kmtodd@idem.in.gov
AUID	INW01A1_05
AU NAME	COOL CREEK
CATEGORY	2
ASSESSED	YES
IMPAIRED	NO
THREATENED	NO
ON 303(d) LIST	NO
HAS TDML	NO
HAS 4B PLAN	NO
ALUS	FULLY SUPPORTING
FISH	NOT ASSESSED
RECR	FULLY SUPPORTING

EROSION CONTROL: RESPONSIBLE PARTY CONTACT INFORMATION	ONSITE CONTACT INFORMATION:
CONTACT: xxxx xxxx xxxx xxxx xxxx	CONTACT: xxxx xxxx xxxx xxxx xxxx
EMAIL: xxxxxxx Ph. No: xxx-xxx-xxxx	EMAIL: xxxxxx Ph. No: xxx-xxx-xxxx



SOILS MAP

STORMWATER POLLUTION PREVENTION - POST CONSTRUCTION SECTON C

C1	POTENTIAL POLLUTANTS ASSOCIATED WITH PROPOSED LAND USE THE FUTURE USE OF THE IMPROVED AREAS INVOLVES THE DRIVING AND PARKING OF PRIVATE VEHICLES ON ASPHALT / STONE PAVED SURFACES. CONTAMINANTS TYPICALLY FOUND IN PARKING AREAS AND ON ROADS INCLUDE THE FOLLOWING; 1. OIL & GREASE 2. ANTIFREEZE 3. BRAKE FLUID & BRAKE DUST 4. RUBBER FRAGMENTS 5. GASOLINE, DIESEL FUEL AND OTHER HYDROCARBONS 6. METALS FROM VEHICLES 7. GRIT AND SEDIMENT FROM WEARING OF THE ROAD SURFACE 8. MATERIAL FALLING OR WASHING OFF OF VEHICLES 9. TRASH AND OTHER BIOLOGICAL AGENTS CONTAINED IN THE TRASH
C2	PROPOSED POST CONSTRUCTION STORMWATER QUALITY MEASURES DRY DETENTION SYSTEM THE EXISTING DRY DETENTION SYSTEM WILL TEMPORARILY HOLD, AND GRADUALLY RELEASE EXCESS STORMWATER FROM STORM EVENTS WHILE PERFORMING A SEDIMENT REMOVAL FUNCTION. DETENTION IS ACHIEVED THROUGH THE USE OF AN OUTLET STRUCTURE THAT REGULATES THE RATE OF STORMWATER OUTFLOW. THE EXISTING DRY DETENTION POND WILL REMAIN IN PLACE AS A PERMANENT FEATURE POST CONSTRUCTION. MECHANICAL BMP'S THE MECHANICAL BMP'S ARE LOCATED UPSTREAM OF THE EXISTING DRY DETENTION POND AND WILL REMAIN IN PLACE AS A PERMANENT FEATURE AFTER CONSTRUCTION IS COMPLETED. THE PURPOSE OF THIS MEASURE IS TO PROVIDE A SEDIMENT REMOVAL FUNCTION. SEDIMENT SUMP A SEDIMENT SUMP IS DESIGNED TO RETAIN GRIT AND DEBRIS BELOW THE POINT OF OVERFLOW. GOOD HOUSE KEEPING MEASURES GOOD HOUSEKEEPING MEASURES SUCH AS REGULAR STREET VACUUMING, INSTALLATION OF TRASH RECEPTACLES, AND REDUCTION IN FERTILIZER OVERSPRAY CAN BE INCORPORATED BY THE OWNER AND/OR OCCUPANT. VACUUM CLEAN ALL PAVED AREAS PRIOR TO REMOVING INLET PROTECTION. NATIVE VEGETATION NATIVE VEGETATION HELPS FILTER OUT POLLUTANTS AND INCREASE STORMWATER UPTAKE THROUGH THE PLANT ROOTS.
C3	PLAN DETAIL FOR STORMWATER MEASURES DETAILS FOR STORMWATER MEASURES ARE SHOWN ON THE EROSION CONTROL DETAIL SHEET
C4	SEQUENCE OF STORMWATER MEASURE IMPLEMENTATION AN EXISTING STORMWATER DRY DETENTION BASIN IS LOCATED AT THE SOUTHEAST CORNER OF THE SITE. THIS DRY BASIN WILL BE UTILIZED FROM THE OUTSET OF CONSTRUCTION. OBSERVATION OF THIS WILL BE CONDUCTED THROUGHOUT CONSTRUCTION AND A FINAL INSPECTION WILL BE CONDUCTED AT THE END OF CONSTRUCTION TO ADDRESS ANY SEDIMENT REMOVAL REQUIREMENTS.
C5	MAINTENANCE GUIDELINES OF POST CONSTRUCTION STORMWATER QUALITY MEASURES MAINTENANCE REQUIREMENTS FOR THE STORMWATER QUALITY MEASURES WHICH WILL REMAIN IN PLACE AFTER CONSTRUCTION IS COMPLETE, ARE DESCRIBED BELOW. REFER TO THE BMP OPERATIONS AND MAINTENANCE MANUAL FOR MORE DETAILED MAINTENANCE REQUIREMENTS. EXISTING DRY DETENTION POND INSPECT PERIODICALLY AS NEEDED AFTER EACH MAJOR RAINFALL EVENT OR AT LEAST EVERY SIX MONTHS. ANY TRASH OR DEBRIS ACCUMULATED WITHIN THE SYSTEM SHOULD BE REMOVED IMMEDIATELY. SEDIMENT AND TRASH DEBRIS SHALL BE DISPOSED OF OFF SITE IN ACCORDANCE WITH ALL APPLICABLE LAWS. MECHANICAL BMP'S FREQUENT INSPECTION AND CLEANING IS CRITICAL FOR PROPER OPERATION. RECOMMENDED INSPECTION AND MAINTANCE SCHEDULES VARY WITH MANUFACTURER. SEDIMENT SUMP FREQUENT INSPECTION AND CLEANING IS CRITICAL FOR PREVENTING/REDUCING SEDIMENT FROM ENTERING THE UNDERGROUND DETENTION SYSTEM. RECOMMEND INSPECTING AFTER EACH MAJOR RAINFALL EVENT.
C6	RESPONSIBLE ENTITY FOR POST CONSTRUCTION MEASURES THE SKILLMAN GROUP JACOB BOWER 3834 SOUTH EMERSON AVENUE INDIANAPOLIS, IN. 46203 PHONE: 317-788-5142 EMAIL: jbower@skillman.com

EROSION CONTROL REQUIREMENT NOTE:

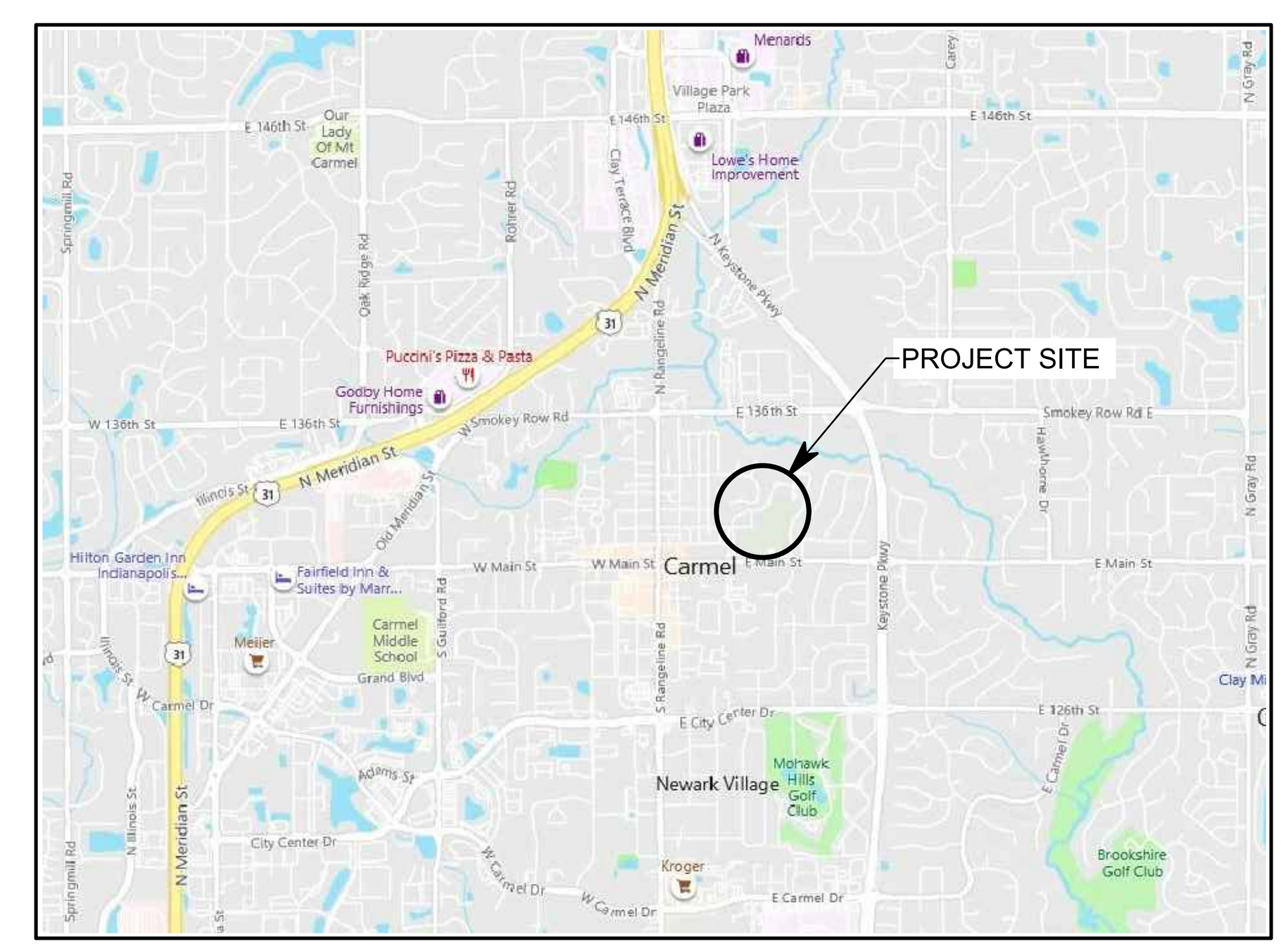
"I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE CONSTRUCTION GENERAL STORMWATER PERMIT AND THE STORMWATER POLLUTION PREVENTION PLAN THAT AUTHORIZES THE STORMWATER DISCHARGE ASSOCIATED WITH ACTIVITIES FROM THE CONSTRUCTION SITE. A TRAINED INDIVIDUAL, AS DEFINED BY THE NPDES GENERAL PERMIT APPENDIX B, WILL BE USED FOR STORMWATER IMPLEMENTATION, SELF-MONITORING AND STORMWATER PROJECT MANAGEMENT.

____
CONTRACTOR SIGNATURE

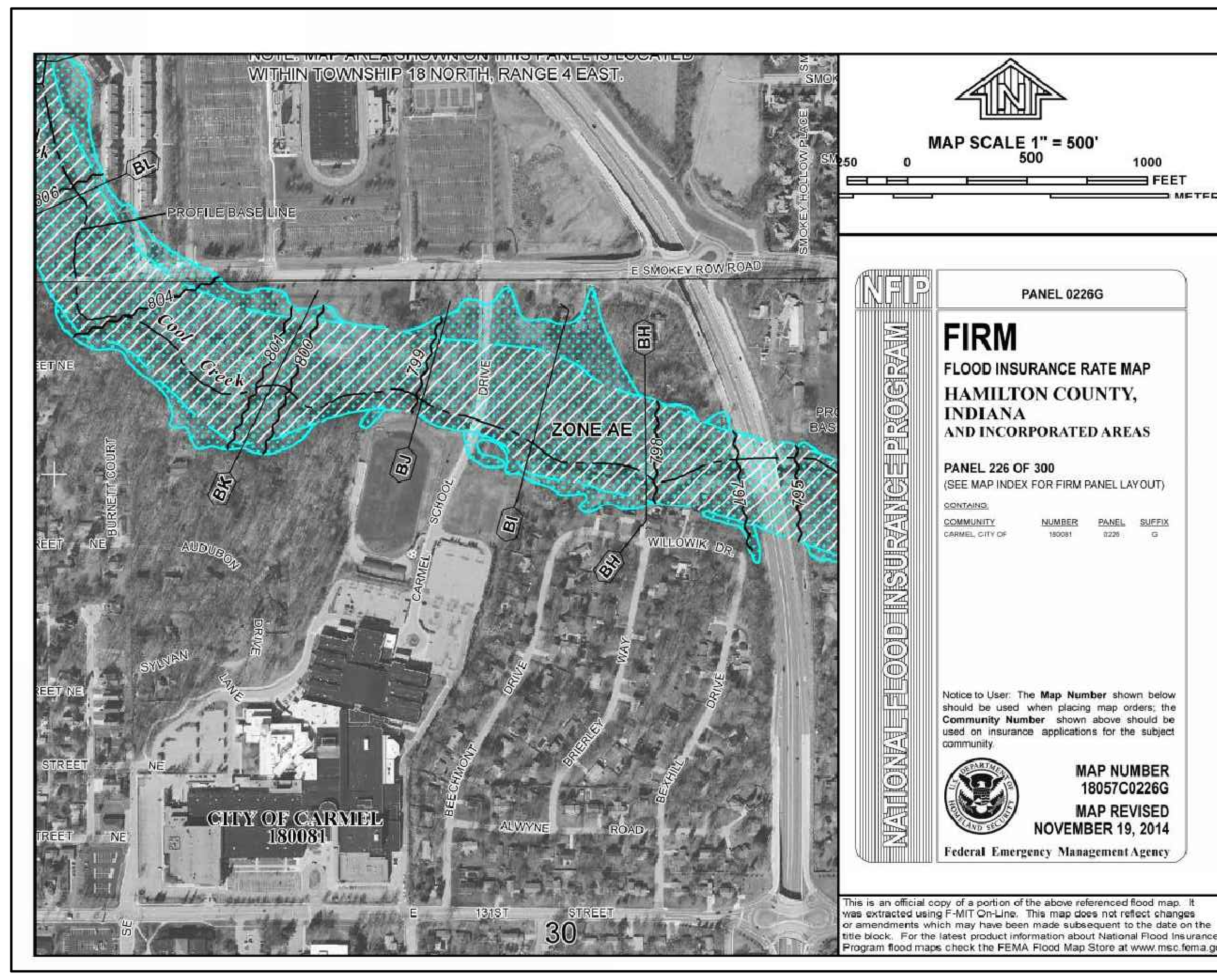
SURVEYED LAND DESCRIPTION

PART OF THE EAST HALF OF THE NORTHWEST QUARTER OF SECTION 30, TOWNSHIP 18 NORTH, RANGE 4 EAST, OF THE SECOND PRINCIPAL MERIDIAN, CLAY TOWNSHIP, HAMILTON COUNTY, INDIANA, BEING MORE PARTICULARLY DESCRIBED BY TYLER J. THOMPSON, LS21400006 OF CIVIL & ENVIRONMENTAL CONSULTANTS, INC., AS PART OF PROJECT NUMBER 303-103.0014 ON MAY 19, 2023, AS FOLLOWS:

COMMENCING AT A HARRISON MONUMENT MARKING THE SOUTHEAST CORNER OF THE NORTHWEST QUARTER OF SAID SECTION 30; THENCE SOUTH 89 DEGREES 45 MINUTES 01 SECONDS WEST (INDIANA STATE PLANE EAST ZONE GRID BEARINGS) ALONG THE SOUTH LINE OF SAID NORTHWEST QUARTER A DISTANCE OF 168.60 FEET TO THE SOUTHERLY EXTENSION OF THE WEST LINE OF HARROWGATE ADDITION AS RECORDED IN PLAT BOOK 2, PAGES 203-205 IN THE OFFICE OF THE RECORDER OF HAMILTON COUNTY, INDIANA; THENCE NORTH 00 DEGREES 27 MINUTES 19 SECONDS WEST ALONG SAID SOUTHERLY EXTENSION A DISTANCE OF 50.00 FEET TO THE NORTH RIGHT-OF-WAY OF MAIN STREET; THENCE SOUTH 89 DEGREES 45 MINUTES 01 SECONDS WEST ALONG SAID RIGHT-OF-WAY A DISTANCE OF 493.49 FEET TO THE SOUTHWEST CORNER OF A PARCEL CONVEYED TO CARMEL-CLAY SCHOOL BUILDING CORPORATION IN DEED BOOK 215, PAGE 147 IN SAID RECORDER'S OFFICE AND BEING THE POINT OF BEGINNING; THENCE CONTINUING SOUTH 89 DEGREES 45 MINUTES 01 SECONDS WEST ALONG SAID RIGHT-OF-WAY A DISTANCE OF 291.08 FEET; THENCE NORTH 00 DEGREES 14 MINUTES 59 SECONDS WEST ALONG SAID RIGHT-OF-WAY A DISTANCE OF 2.00 FEET TO THE NORTH RIGHT-OF-WAY OF MAIN STREET PER ROAD PLANS PREPARED BY H.N.T.B. AS JOB NO. 8905-21-00 DATED APRIL 17, 1985; THENCE SOUTH 89 DEGREES 45 MINUTES 01 SECONDS WEST ALONG SAID RIGHT-OF-WAY A DISTANCE OF 331.37 FEET TO THE EAST RIGHT-OF-WAY OF 4TH AVENUE NE PER A RIGHT-OF-WAY PARCEL CONVEYED TO THE CITY OF CARMEL IN INSTRUMENT NUMBER 2021005901 IN SAID RECORDER'S OFFICE; THENCE ALONG SAID RIGHT-OF-WAY PARCEL FOR THE FOLLOWING FIVE (5) COURSES: 1) NORTH 44 DEGREES 56 MINUTES 58 SECONDS WEST A DISTANCE OF 17.82 FEET; 2) THENCE NORTH 00 DEGREES 24 MINUTES 34 SECONDS EAST A DISTANCE OF 44.74 FEET; 3) THENCE NORTH 00 DEGREES 22 MINUTES 10 SECONDS WEST A DISTANCE OF 56.58 FEET; 4) THENCE NORTH 01 DEGREES 51 MINUTES 04 SECONDS WEST A DISTANCE OF 44.83 FEET; 5) THENCE NORTH 86 DEGREES 11 MINUTES 16 SECONDS WEST A DISTANCE OF 24.47 FEET TO THE WEST LINE OF THE EAST HALF OF THE NORTHWEST QUARTER OF SAID SECTION 30; THENCE NORTH 00 DEGREES 20 MINUTES 38 SECONDS WEST ALONG SAID WEST LINE A DISTANCE OF 412.48 FEET TO THE SOUTHWEST CORNER OF A PARCEL CONVEYED TO CARMEL CLAY SCHOOLS IN INSTRUMENT NUMBER 200200073064 IN SAID RECORDER'S OFFICE; THENCE CONTINUING NORTH 00 DEGREES 20 MINUTES 38 SECONDS WEST ALONG SAID WEST LINE A DISTANCE OF 264.00 FEET TO THE SOUTHWEST CORNER OF LOT 15 IN CARMELWOOD AS RECORDED IN DEED BOOK 136, PAGE 365 IN SAID RECORDER'S OFFICE; THENCE NORTH 89 DEGREES 45 MINUTES 01 SECONDS EAST ALONG THE SOUTH LINES OF SAID LOT 15 AND LOT 16 IN CARMELWOOD A DISTANCE OF 200.27 FEET TO AN IRON PIPE MARKING THE SOUTHEAST CORNER OF SAID LOT 16; THENCE NORTH 00 DEGREES 14 MINUTES 59 SECONDS WEST ALONG THE EAST LINE OF SAID LOT 16 A DISTANCE OF 165.52 FEET TO THE SOUTH RIGHT-OF-WAY OF RE-LOCATED SYLVAN STREET PER INSTRUMENT NUMBER 200500083518 IN SAID RECORDER'S OFFICE, BEING A POINT ON A NON-TANGENT CURVE TO THE RIGHT HAVING A RADIUS OF 113.00 FEET, THE RADIUS POINT OF WHICH BEARS SOUTH 24 DEGREES 48 MINUTES 09 SECONDS EAST; THENCE ALONG SAID RIGHT-OF-WAY FOR THE FOLLOWING FIVE (5) COURSES: 1) EASTERLY ALONG SAID CURVE AN ARC DISTANCE OF 43.30 FEET TO A POINT WHICH BEARS NORTH 02 DEGREES 50 MINUTES 51 SECONDS WEST FROM SAID RADIUS POINT BEING A POINT ON A NON-TANGENT CURVE TO THE RIGHT HAVING A RADIUS OF 65.00 FEET, THE RADIUS POINT OF WHICH BEARS SOUTH 03 DEGREES 42 MINUTES 04 SECONDS EAST; 2) THENCE EASTERLY ALONG SAID CURVE AN ARC DISTANCE OF 44.29 FEET TO A POINT WHICH BEARS NORTH 35 DEGREES 20 MINUTES 28 SECONDS EAST FROM SAID RADIUS POINT BEING A POINT ON A NON-TANGENT CURVE TO THE LEFT HAVING A RADIUS OF 200.65 FEET, THE RADIUS POINT OF WHICH BEARS NORTH 35 DEGREES 19 MINUTES 35 SECONDS EAST; 3) THENCE EASTERLY ALONG SAID CURVE AN ARC DISTANCE OF 211.24 FEET TO A POINT WHICH BEARS SOUTH 24 DEGREES 59 MINUTES 37 SECONDS EAST FROM SAID RADIUS POINT BEING A POINT ON A NON-TANGENT CURVE TO THE LEFT HAVING A RADIUS OF 141.29 FEET, THE RADIUS POINT OF WHICH BEARS NORTH 30 DEGREES 22 MINUTES 42 SECONDS WEST; 4) THENCE NORTHEASTERLY ALONG SAID CURVE AN ARC DISTANCE OF 134.65 FEET TO A POINT WHICH BEARS SOUTH 84 DEGREES 58 MINUTES 50 SECONDS EAST FROM SAID RADIUS POINT; 5) THENCE NORTH 03 DEGREES 58 MINUTES 25 SECONDS EAST A DISTANCE OF 48.45 FEET TO THE SOUTHWEST CORNER OF LOT 5 IN SAID CARMELWOOD; THENCE NORTH 89 DEGREES 35 MINUTES 21 SECONDS EAST ALONG THE SOUTH LINE OF SAID LOT 5 A DISTANCE OF 101.58 FEET TO THE WEST LINE OF SAID PARCEL RECORDED IN DEED BOOK 215, PAGE 147; THENCE SOUTH 00 DEGREES 20 MINUTES 38 SECONDS EAST ALONG SAID WEST LINE A DISTANCE OF 1,141.40 FEET TO THE POINT OF BEGINNING, CONTAINING 14.572 ACRES OF LAND, MORE OR LESS.



VICINITY MAP



FIRM

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

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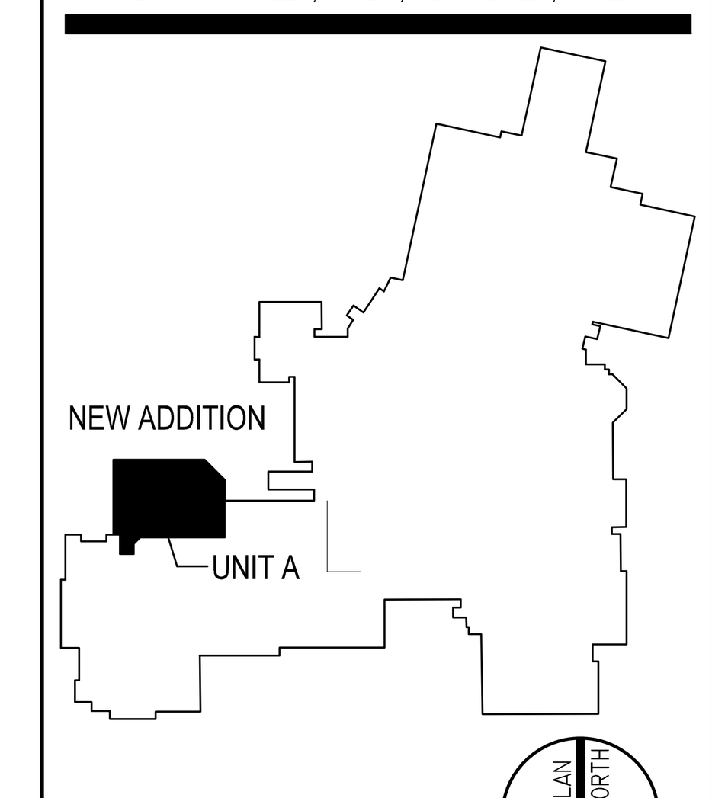


KEY PLAN

100% CONSTRUCTION DOCUMENTS

PETE MILOMIR RANKOVICH REGISTERED No. 19700317 STATE OF INDIANA PROFESSIONAL ENGINEER

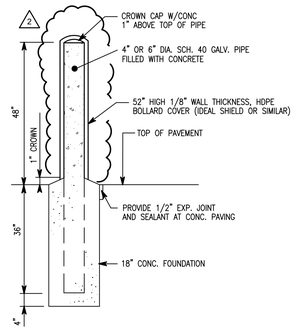
DRAWN BY: ARS
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	TAC REVIEW	9-19-2023
2	ADDENDUM 2	10-04-2023

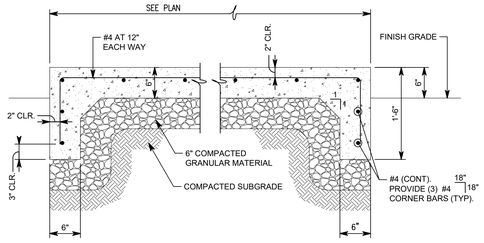
STORMWATER POLLUTION PREVENTION PLAN

G3.3

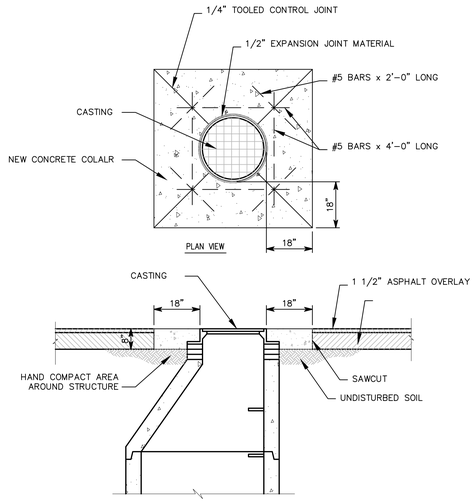
Drawing Path: P:\2023\100\119\CAD\Civil\Active\11_2023-119_G3.3_SWPPP.dwg Last Edited: 10/3/23 - 11:01am
Plotted By: asheller Time of Plot: 10/3/23 - 4:10pm



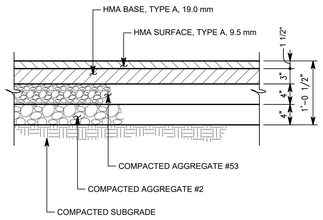
BOLLARD - DETAIL Q
NO SCALE



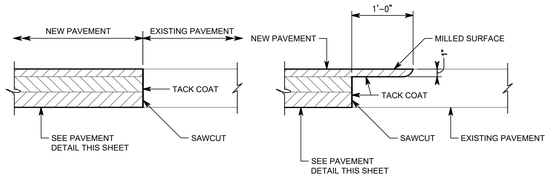
CONCRETE EQUIPMENT PAD - DETAIL M
1" = 1'-0"



CONCRETE COLLAR - DETAIL N
NONE



MEDIUM DUTY ASPHALT PAVEMENT - DETAIL O
1" = 1'-0"



PAVEMENT INTERFACE - DETAIL P
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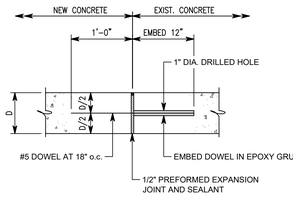
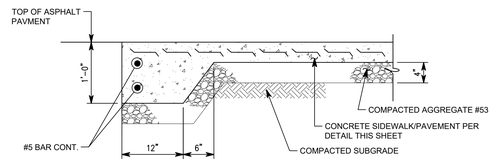
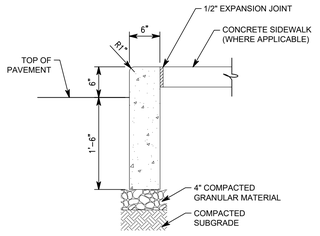


CONCRETE CONNECTION - DETAIL F
1" = 1'-0"

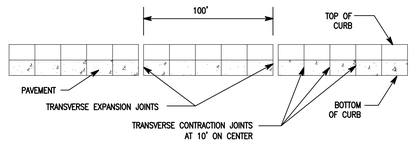


CONCRETE / ASPHALT PAVEMENT INTERFACE - DETAIL G
1" = 1'-0"

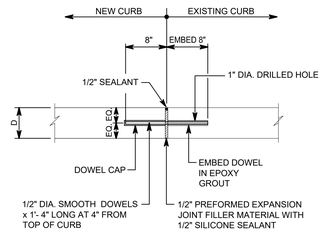


NOTES:
1. PROVIDE CONTROL JOINTS AT 10' MAX. SPACING.
2. PROVIDE EXPANSION JOINTS AT 80' MAX. SPACING AND AT ENDS OF ALL RADII.

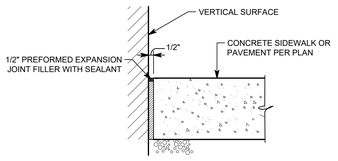
6" CONCRETE CURB (STRAIGHT) - DETAIL H
1" = 1'-0"



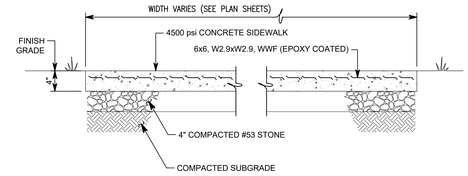
CURB JOINT - DETAIL J
NO SCALE



CONCRETE CURB CONNECTION - DETAIL K
1" = 1'-0"

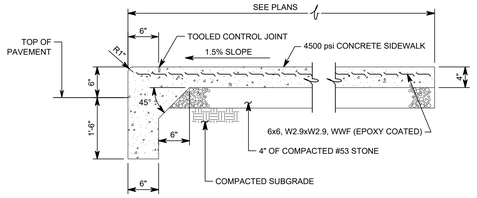


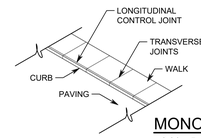
PAVEMENT ISOLATION JOINT - DETAIL L
1/2" = 1'-0"



NOTES:
1. CONTROL JOINTS, EXPANSION JOINTS AND EDGES OF SIDEWALK SHALL BE HAND-TOOLED AFTER EACH FINISHING OPERATION.
2. PROVIDE EXPANSION JOINT AT INTERSECTION WITH ANOTHER SIDEWALK, BETWEEN WALKS AND BUILDINGS AND AT SUCH OTHER POINTS AS INDICATED ON THE DRAWINGS.
3. SIDEWALK SHALL HAVE 1/2" EXP. JTS. @ 48' MAX. & CONTROL JOINTS @ 6' MAX.

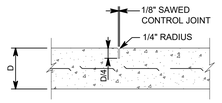
4" CONCRETE SIDEWALK - DETAIL A
1" = 1'-0"





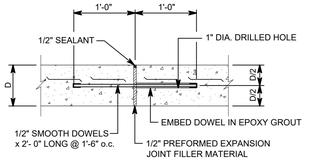
NOTES:
1. CURB SHALL HAVE 1/2" EXPANSION JOINTS AT 48'-0" MAX. AND AT ENDS OF RADII. CONTROL JOINTS AT 6'-0" MAX. UNLESS OTHERWISE NOTED ON PLANS.
2. CONTROL JOINTS SHALL BE CUT 1/4 DEPTH OF TOTAL THICKNESS OF SLAB.

MONOLITHIC CURB AND WALK - DETAIL B
NO SCALE



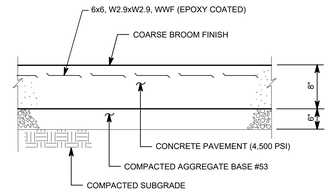
NOTE:
CONSTRUCT CONTROL JOINTS AS SHOWN ON PLAN (MAX. SPACING @ 6'-0" o.c.)

CONTROL JOINT - (SJ)

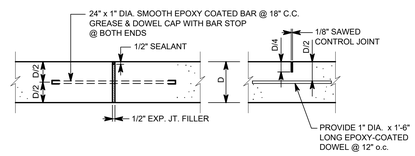


EXPANSION JOINT - (EJ)

CONCRETE SIDEWALK CONTROL JOINT - DETAIL C
NO SCALE



8" CONCRETE PAVEMENT - DETAIL D
NO SCALE



EXPANSION JOINT - "EJ" CONTROL JOINT - "CJ"

NOTE:
1. CONSTRUCT EXPANSION JOINTS @ 40' MAX. AND CONTROL JOINTS @ 10' MAX. UNLESS OTHERWISE NOTED.
2. JOINT SEALANT SHALL BE FUEL RESISTANT, TRAFFIC GRADE, POLYSULFIDE, THIOKOL 2282 OR EQUAL SEALANT PER FEDERAL SPECIFICATION SS-S-200E

CONCRETE PAVEMENT JOINT - DETAIL E
NO SCALE

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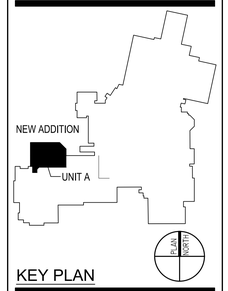
CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 E MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

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

CONSULTANT
TLF
317-334-1500 TLF-ENGINEERS.COM
3901 WEST 86TH STREET, ST# 200, INDIANAPOLIS, IN 46268



KEY PLAN

100% CONSTRUCTION DOCUMENTS

PETER MICHAEL RANKIN
REGISTERED
No.
19700317
STATE OF
INDIANA
PROFESSIONAL ENGINEER

DRAWN BY: ARS

PROJECT NUMBER: 221165.01

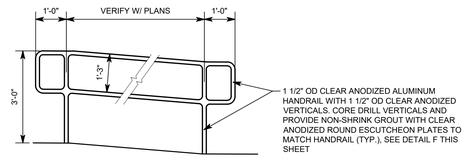
PROJECT ISSUE DATE: 08/31/2023

REV. NO.△	DESCRIPTION	DATE
1	TAC REVIEW	9-19-2023
2	ADDENDUM 2	10-04-2023

SITE DETAILS

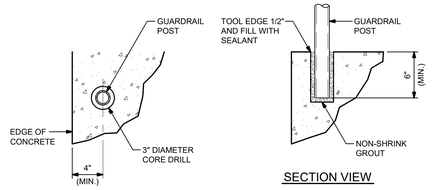
G4.1

Drawing Path: P:\2023\100\119\CAD\Civil\Active\13_2023-119_G4.1_Site Details.dwg
Plotted By: ostheller Time of Plot: 10/3/23 - 4:10pm Last Edited: 10/3/23 - 11:30am



HANDRAIL - DETAIL E

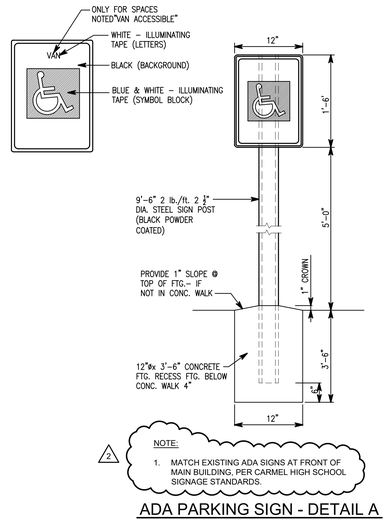
1/2" = 1'-0"



PLAN VIEW

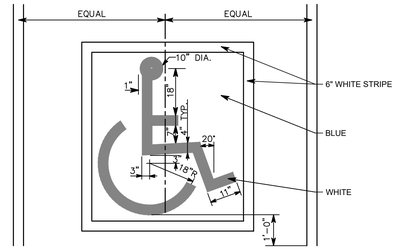
SECTION VIEW

TYPICAL GUARDRAIL POST
CORED INTO CONCRETE - DETAIL F



ADA PARKING SIGN - DETAIL A

NO SCALE

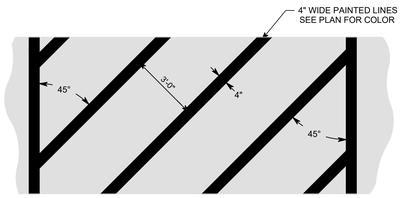


NOTE:

1. SEE SPECIFICATIONS SECTION 321723 FOR PAINT REQUIREMENTS.

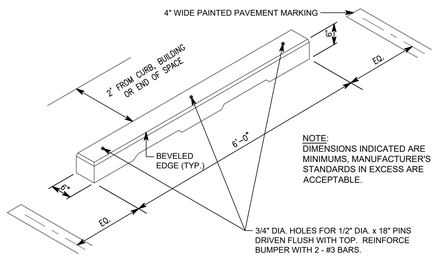
PAINTED A.D.A. SYMBOL - DETAIL B

NONE



PAINTED PARKING ISLANDS - DETAIL C

NO SCALE



PARKING BUMPER - DETAIL D

NO SCALE

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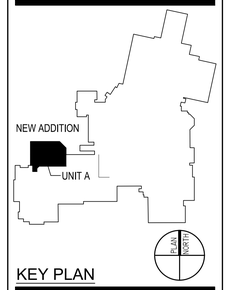


KEY PLAN

100% CONSTRUCTION DOCUMENTS

PETER MILOMIR RADWICH
REGISTERED
No. 19700317
STATE OF INDIANA
PROFESSIONAL ENGINEER

DRAWN BY: ARS

PROJECT NUMBER: 221165.01

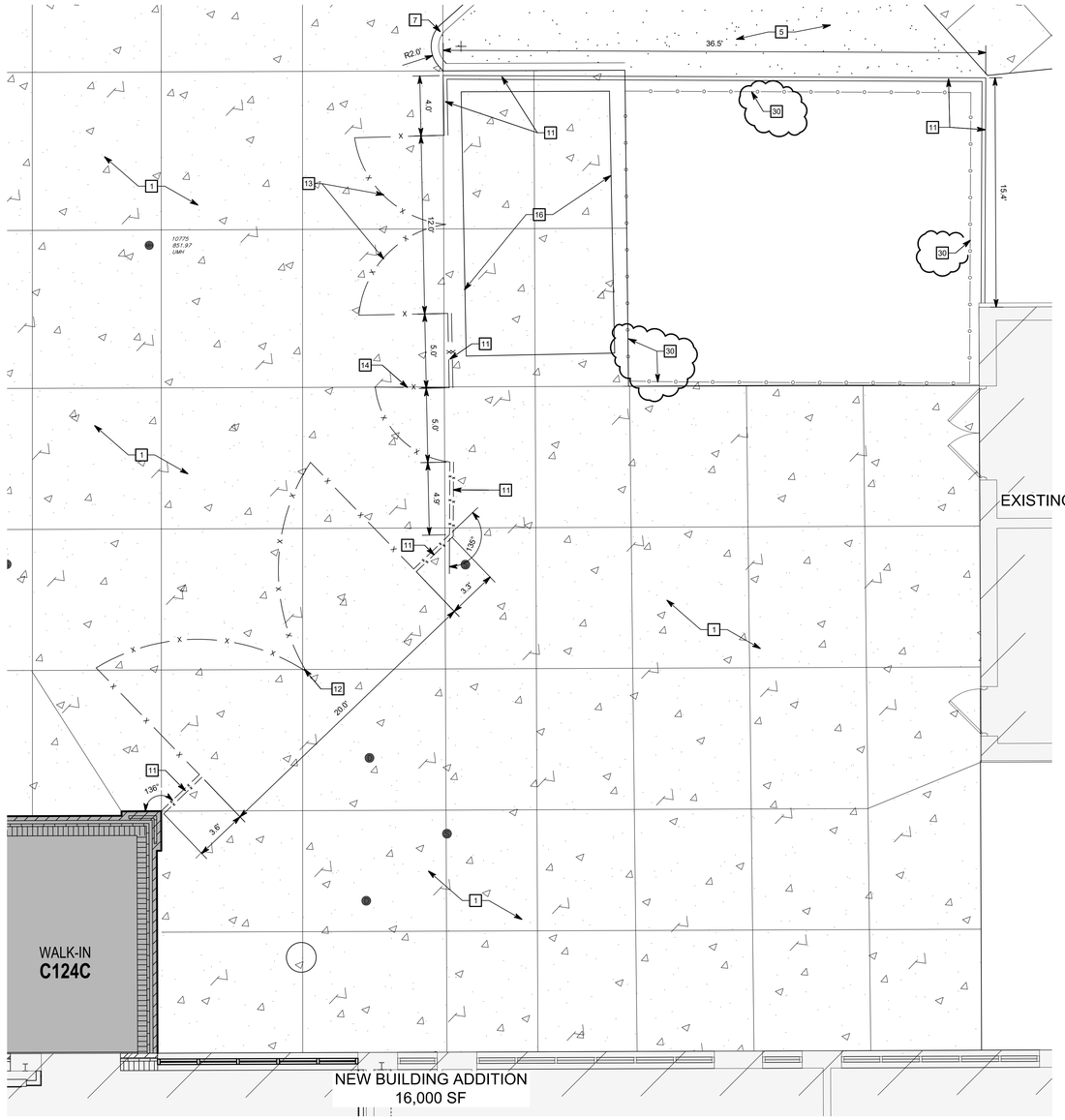
PROJECT ISSUE DATE: 08/31/2023

REV. NO.△	DESCRIPTION	DATE
1	TAC REVIEW	9-19-2023
2	ADDENDUM 2	10-04-2023

SITE DETAILS

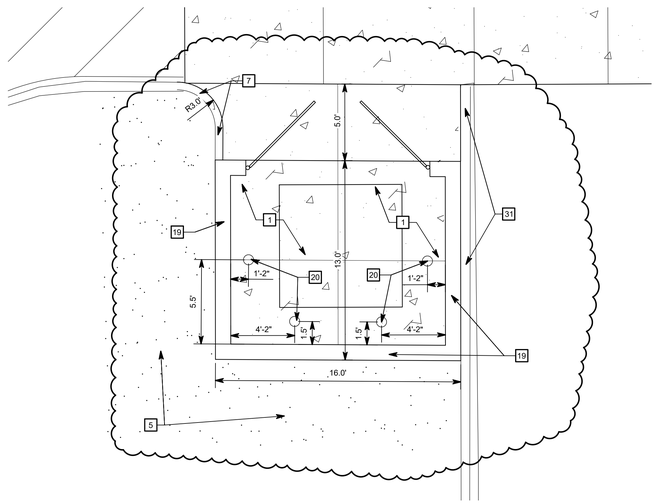
G4.2

Drawing Path: P:\2023\ 100\ 119\ CAD\ Civil\ Active\ 13_2023-119_G4.1_Site Details.dwg
Plotted By: catheiser Time of Plot: 10/3/23 - 4:15pm Last Edited: 10/3/23 - 11:30am



ENLARGED SITE PLAN A

1/4" = 1'-0"



ENLARGED SITE PLAN B

1/4" = 1'-0"

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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.

NORTH

4 0 4 8 12

GENERAL NOTES

1. SEE DRAWING GD0.1 FOR GENERAL NOTES AND ADDITIONAL LEGEND.
2. TOPOGRAPHIC CONDITIONS AND EXISTING UTILITIES SHOWN WERE PROVIDED BY CEC - CIVIL & ENVIRONMENTAL CONSULTANTS, INC DATED MAY 19, 2023. 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.
4. SEE SHEET G1.2 FOR STRIPING AND SIGNAGE PLAN.
5. SEE SHEET G1.3 FOR CONCRETE JOINTING PLAN.

SITE KEYNOTES

1	CONCRETE PAVEMENT - SEE DETAIL D/G4.1
5	LAWN AREA - SEE LANDSCAPE PLAN L1.0
7	CONCRETE CURB - SEE DETAIL H/G4.1
11	8' HT. CITY SCAPES COVRIT SCREENWALL ENCLOSURE WITH VERTICAL PLANKS AND STANDARD STIFFENER, FENCE PANELS AND POSTS, DOUBLE SWING GATE
12	DOUBLE SWING GATE (TWO 10'-0" GATES) WITH CITY SCAPES - TOUGHGATE (PVC VERTICAL PLANK INFILL SERIES - MADISON STYLE) 8'-0" HEIGHT
13	DOUBLE SWING GATE (2 - 6'-0" GATES) WITH CITY SCAPES - TOUGHGATE (PVC VERTICAL PLANK INFILL SERIES - MADISON STYLE) 6'-0" HEIGHT
14	5' WIDE SWING GATE WITH CITY SCAPES - TOUGHGATE (PVC VERTICAL PLANK INFILL SERIES - MADISON STYLE) 8'-0" HEIGHT WITH WEATHERPROOF PANIC HARDWARE MOUNTED TO DOOR
16	CONCRETE EQUIPMENT PAD (12' X 20') WITH ABOVE GROUND TANK - SEE DETAIL M/G4.1 (REFER TO MEP PLANS FOR SIZE AND LOCATION)
19	TRASH DUMPSTER ENCLOSURE - SEE ARCHITECTURAL PLANS & DWG 10/S3.01 PROVIDE TWO SWING GATES, CITY SCAPES - TOUGHGATE (PVC VERTICAL PLANK INFILL SERIES - MADISON STYLE)
20	STEEL BOLLARD - PER DETAIL Q/G4.1
27	~~TAPER CURB FROM 6" TO 1"~~
30	EXISTING FENCE TO REMAIN
31	EXISTING CURB/WALL TO REMAIN

PROPOSED SITE LEGEND

- EXISTING BUILDING
- PROPOSED BUILDING ADDITION
- PROPOSED CONCRETE PAVEMENT/SIDEWALK
- PROPOSED ASPHALT PAVEMENT
- PROPOSED LAWN AREA
- EXISTING LIGHT POLE
- EXISTING STORM STRUCTURE
- EXISTING SANITARY STRUCTURE
- EXISTING FIRE HYDRANT
- PROPOSED STORM STRUCTURE
- PROPOSED SANITARY STRUCTURE

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CARMEL CLAY SCHOOLS

ARCHITECT

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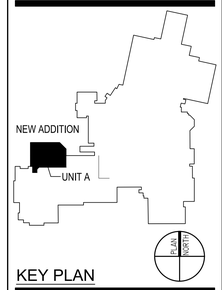


KEY PLAN

100% CONSTRUCTION DOCUMENTS

DRAWN BY: ARS

PROJECT NUMBER: 221165.01

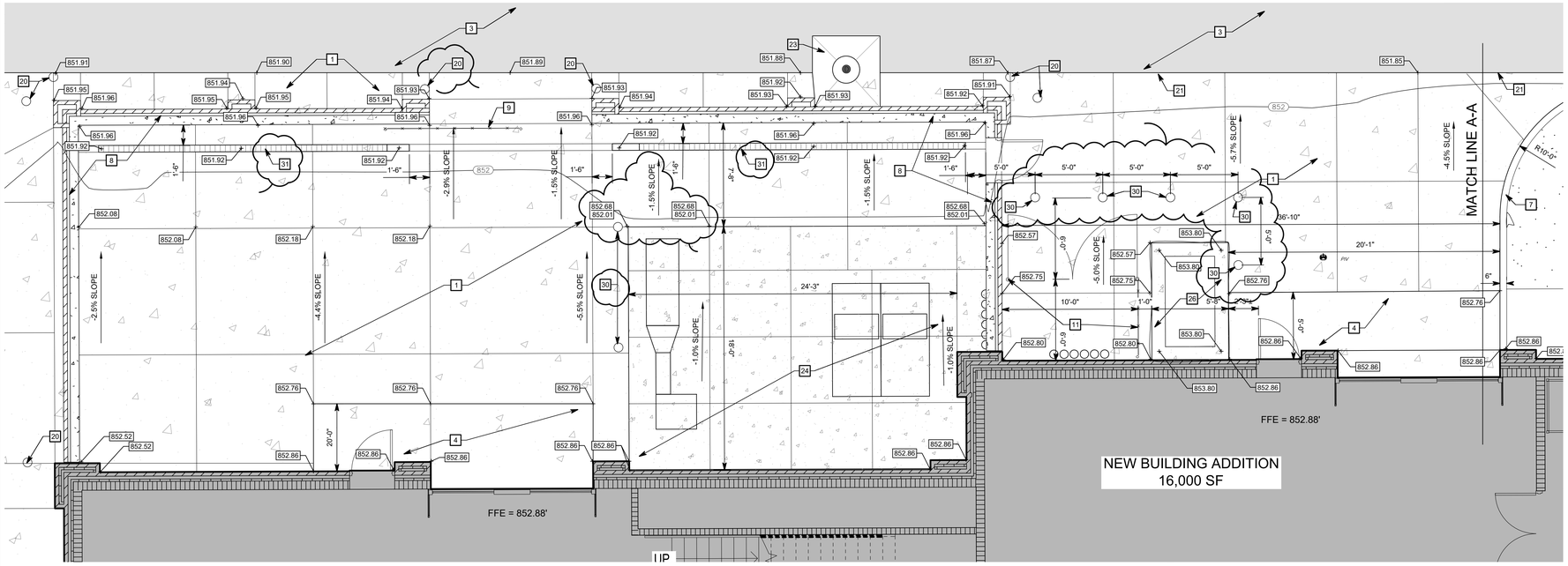
PROJECT ISSUE DATE: 08/31/2023

REV. NO.△	DESCRIPTION	DATE
1	TAC REVIEW	9-19-2023
2	ADDENDUM 2	10-04-2023

ENLARGED SITE PLAN

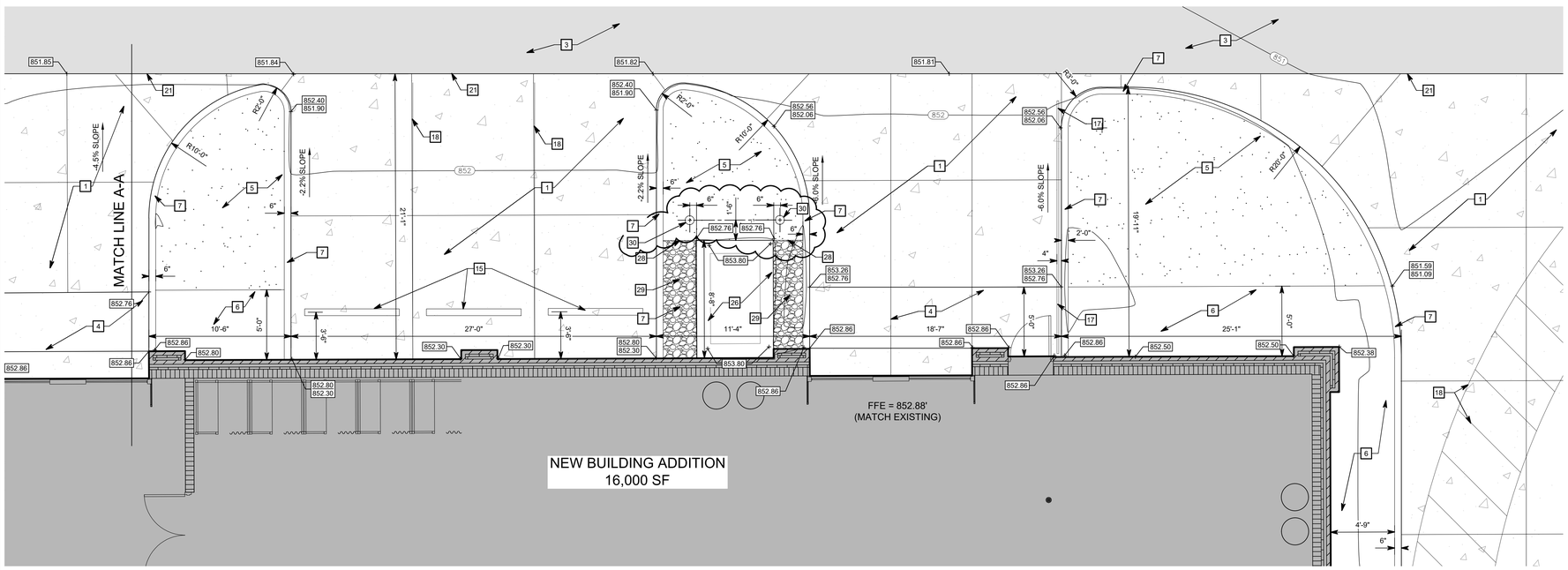
G5.1

Drawing Path: P:\2023_100_119_CAD\Active\14_2023-119_G5.1_Enlarged Plan.dwg
Plotted By: catheiler Time of Plot: 10/3/23 - 4:16pm Last Edited: 10/3/23 - 3:51pm



ENLARGED PLAN - WEST END OF NEW BUILDING

1/4" = 1'-0"



ENLARGED PLAN - EAST END OF NEW BUILDING

1/4" = 1'-0"

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NORTH

4 0 4 8 12

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

GENERAL NOTES

1. SEE DRAWING GD0.1 FOR GENERAL NOTES AND ADDITIONAL LEGEND.
2. TOPOGRAPHIC CONDITIONS AND EXISTING UTILITIES SHOWN WERE PROVIDED BY CEC - CIVIL & ENVIRONMENTAL CONSULTANTS, INC DATED MAY 19, 2023. 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.
4. SEE SHEET G1.2 FOR STRIPING AND SIGNAGE PLAN.
5. SEE SHEET G1.3 FOR CONCRETE JOINTING PLAN.

SITE KEYNOTES

1	CONCRETE PAVEMENT - SEE DETAIL D/G4.1
3	ASPHALT PAVEMENT - SEE DETAIL O/G4.1
4	CONCRETE STOOP/APRON - SEE STRUCTURAL DRAWING
5	LAWN AREA - SEE LANDSCAPE PLAN L1.0
6	SHREDDED HARDWOOD MULCH PLANTING BED - SEE LANDSCAPE PLAN L1.0
7	CONCRETE CURB - SEE DETAIL H/G4.1
8	EXTERIOR STORAGE MASONRY SCREEN WALL - SEE ARCHITECTURAL PLANS
9	ROLLING GATE WITH CITY SCAPES - TOUGHGATE (PVC VERTICAL PLANK INFILL SERIES - MADISON STYLE) FOR A 12'-0" WIDE OPENING AND 8'-0" HEIGHT
11	8' HT. CITY SCAPES COVRIT SCREENWALL ENCLOSURE WITH VERTICAL PLANKS AND STANDARD STIFFENER, FENCE PANELS AND POSTS, DOUBLE SWING GATE
15	PRECAST PARKING BUMPER - SEE DETAIL D/G4.2
17	ALUMINUM HANDRAIL - SEE DETAIL E/G4.2
18	PAVEMENT MARKING - SEE STRIPING AND SIGNAGE PLAN G1.2
20	4" DIA. STEEL BOLLARD - PER DETAIL Q/G4.1
21	CONCRETE/ASPHALT INTERFACE - DETAIL G/G4.1
23	CONCRETE COLLAR - SEE DETAIL N/G4.1
24	CONCRETE EQUIPMENT PAD (±25'-0" X ±20'-0") FOR DUST COLLECTOR AND WELDING EXHAUST - SEE DETAIL M/G4.1 (COORDINATE WITH MEP PLANS FOR SIZE AND LOCATION)
26	OIL CONTAINMENT TANK, CONCRETE PIT AND CANOPY, SEE SHEET G4.2 FOR ADDITIONAL LAYOUT INFORMATION AND STRUCTURAL DETAIL XX/S5.X
28	WASHED RIVER ROCK - PER LANDSCAPE PLAN L2.0
29	STEEL EDGING - PER LANDSCAPE PLAN L2.0
30	6" DIA. PIPE BOLLARD - SEE DETAIL Q/G4.1
31	TRENCH DRAIN - PER SHEET SU1.1 AND DETAIL ON SHEET SU2.1

PROPOSED SITE LEGEND

- EXISTING BUILDING
- PROPOSED BUILDING ADDITION
- PROPOSED CONCRETE PAVEMENT/SIDEWALK
- PROPOSED ASPHALT PAVEMENT
- PROPOSED LAWN AREA
- EXISTING LIGHT POLE
- EXISTING STORM STRUCTURE
- EXISTING SANITARY STRUCTURE
- EXISTING FIRE HYDRANT
- PROPOSED STORM STRUCTURE
- PROPOSED SANITARY STRUCTURE

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 E MAIN STREET
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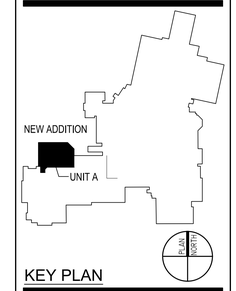
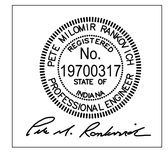


KEY PLAN

100% CONSTRUCTION DOCUMENTS



DRAWN BY: ARS

PROJECT NUMBER: 221165.01

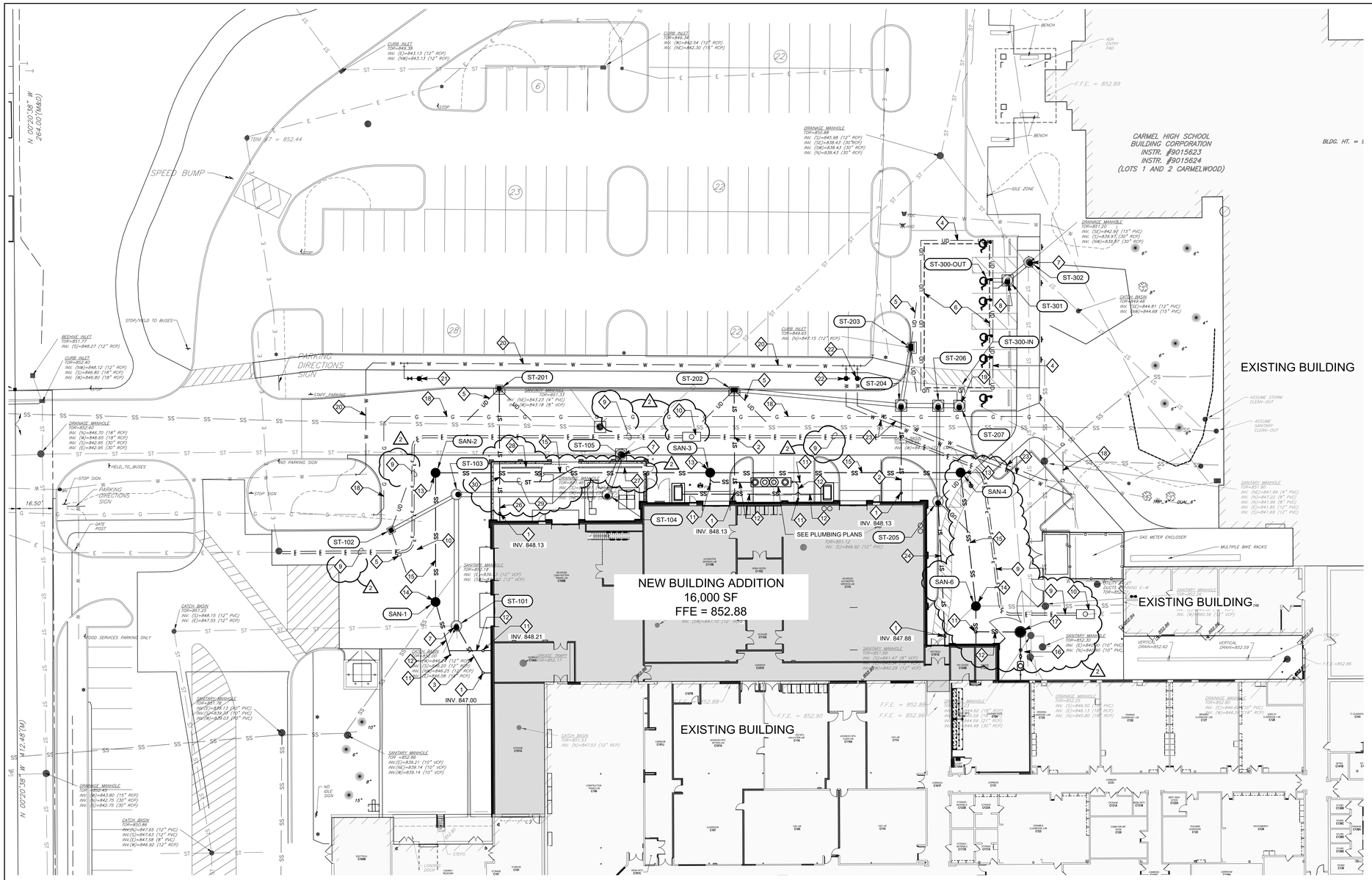
PROJECT ISSUE DATE: 08/31/2023

REV. NO.△	DESCRIPTION	DATE
1	TAC REVIEW	9-19-2023
2	ADDENDUM 2	10-04-2023

ENLARGED SITE PLAN

G5.2

Drawing Path: P:\2023_100_119_CAD\Active\14_2023-119_G5.1_Enlarged Plan.dwg
Plotted By: gcameron Time of Plot: 10/5/23 - 1:58pm Last Edited: 10/5/23 - 1:59pm



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3901 WEST 86TH STREET, ST# 200, INDIANAPOLIS, IN 46268

NEW ADDITION
UNIT A
PLAN NORTH

KEY PLAN

100% CONSTRUCTION DOCUMENTS

PETER MILOMIR RANKOVIC
REGISTERED
No. 19700317
STATE OF INDIANA
PROFESSIONAL ENGINEER

DRAWN BY: ARS
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	TAC REVIEW	9-19-2023
2	ADDENDUM 2	10-04-2023

UTILITY PLAN

SU1.1

NORTH

20 0 20 40 60

GENERAL NOTES

1. SEE DRAWING GD0.1 FOR GENERAL NOTES AND ADDITIONAL LEGEND.
2. TOPOGRAPHIC CONDITIONS AND EXISTING UTILITIES SHOWN WERE PROVIDED BY THE SURVEYOR. 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.

◇ UTILITY KEYNOTES

1. PROPOSED STORM CLEANOUT
2. PROPOSED 6" PVC STORM LATERAL @ 1.50% MIN. SLOPE
3. PROPOSED 10" PVC STORM LATERAL @ 1.50% MIN. SLOPE
4. PROPOSED 6" PERIMETER UNDERDRAIN, CONNECT TO ST-301.
5. PROPOSED PAVEMENT UNDERDRAIN, REQUIRED FOR EACH PROPOSED INLET.
6. PROPOSED UNDERGROUND DETENTION CHAMBER SYSTEM. STORM TECH MC-3500 (32 CHAMBERS)
7. CONNECT PROPOSED STORM PIPE(S) TO EXISTING STRUCTURE. MODIFY OR REPLACE EXISTING STORM STRUCTURE AS NECESSARY. ADJUST TOP OF CASTING TO MATCH PROPOSED GRADE AS NECESSARY.
8. PROPOSED OUTLET CONTROL STORM MANHOLE
9. PROPOSED ELECTRICAL CONDUITS (TWO 6"), SEE ELECTRICAL SITE PLAN FOR ADDITIONAL INFORMATION.
10. PROPOSED PRECAST CONCRETE ELECTRICAL MANHOLE (8'x4'x6' DEPTH). SEE ELECTRICAL SITE PLAN FOR ADDITIONAL INFORMATION.
11. PROPOSED SANITARY CLEANOUT
12. PROPOSED 6" PVC SANITARY LATERAL @ 1.04% MIN. SLOPE
13. PROPOSED SANITARY MANHOLE
14. CONNECT PROPOSED SANITARY PIPE(S) TO EXISTING STRUCTURE. MODIFY EXISTING SANITARY STRUCTURE AS NECESSARY.
15. PROPOSED 12" PVC SANITARY SEWER
16. GREASE INTERCEPTOR (SEE PLUMBING PLANS)
17. MONITORING MANHOLE / SAMPLING PORT (SEE PLUMBING PLANS)
18. PROPOSED 4" GAS LINE (COORDINATE INSTALLATION WITH CENTERPOINT ENERGY)
19. PROPOSED AQUA-SWIRL XC-6 BMP STRUCTURE
20. PROPOSED 10" DUCTILE IRON PIPE WATER LINE
21. FIRE HYDRANT ASSEMBLY
22. POST INDICATOR VALVE (P.I.V.)
23. PROPOSED 8" DUCTILE IRON PIPE FIRE PROTECTION LINE
24. PROPOSED 8" PVC STORM LATERAL @ 1.50% MIN. SLOPE
25. CONNECT EXISTING 8" VCP SANITARY PIPE TO NEW 8" PVC PIPE WITH A FERNCO COUPLING
26. PROPOSED 8" PVC STORM LATERAL AT 1.80% SLOPE.
27. 26.24' OF ACO K100 TRENCH DRAIN (SEE ACO TRENCH DRAIN DETAIL ON SHEET SU2.1)
28. 23' OF ACO K100 TRENCH DRAIN (SEE ACO TRENCH DRAIN DETAIL ON SHEET SU2.1) FLOWING WEST TO EAST TO A K1 SERIES 900 INLINE CATCH BASIN. T/RIM ELEV. = 851.92'
29. 4" PVC STORM LATERAL @ 2.00% SLOPE
30. PROVIDE A PVC WYE FITTING 8"x8"x4"

UTILITY PLAN LEGEND

- ST — EXISTING STORM LINE
- SS — EXISTING SANITARY LINE
- G — EXISTING GAS LINE
- W — EXISTING WATER LINE
- EXISTING LIGHT POLE
- EXISTING STORM STRUCTURE
- EXISTING SANITARY STRUCTURE
- EXISTING FIRE HYDRANT
- ST — PROPOSED STORM LINE
- SS — PROPOSED SANITARY LINE
- PROPOSED MANHOLE STRUCTURE
- PROPOSED STORM INLET STRUCTURE
- G — PROPOSED / RELOCATED GAS LINE

SANITARY STRUCTURE TABLE

STR. NO.	STRUCTURE	STRUCTURE DETAIL REFERENCE	CASTING TYPE	RIM	INCOMING PIPE DATA (DIRECTION) [FROM STR]	OUTGOING PIPE DATA (DIRECTION) [TO STR]	OUTGOING PIPE L.F.	OUTGOING PIPE SIZE	OUTGOING GRADE	CONNECT TO STR.	REMARKS
SAN-1	48" SAN. MANHOLE	Sheet SU2.2	R-1642-A	851.82	12" PVC Pipe 839.55 (N) [SAN-2]	12" PVC Pipe 839.53 (SW) []	2'	12"	0.00%		-
SAN-2	48" SAN. MANHOLE	Sheet SU2.2	R-1642-A	851.83	12" PVC Pipe 839.67 (E) [SAN-3]	12" PVC Pipe 839.67 (S) [SAN-1]	57'	12"	0.21%	SAN-1	-
SAN-3	48" SAN. MANHOLE	Sheet SU2.2	R-1642-A	852.33	12" PVC Pipe 839.93 (E) [SAN-4]	12" PVC Pipe 839.93 (W) [SAN-2]	122'	12"	0.21%	SAN-2	-
SAN-4	48" SAN. MANHOLE	Sheet SU2.2	R-1642-A	851.07	12" PVC Pipe 840.16 (S) [SAN-6]	12" PVC Pipe 840.16 (W) [SAN-3]	111'	12"	0.21%	SAN-3	-
SAN-6	Existing Manhole	-	-	851.99	12" PVC Pipe 840.34 (E) [] 8" PVC Pipe 841.47 (S) [SAN-CO2]	12" PVC Pipe 840.28 (N) [SAN-4]	60'	12"	0.20%	SAN-4	-

STORM STRUCTURE TABLE

STR. NO.	STRUCTURE	STRUCTURE DETAIL REFERENCE	CASTING TYPE	RIM	INCOMING PIPE DATA (DIRECTION) [FROM STR]	OUTGOING PIPE DATA (DIRECTION) [TO STR]	OUTGOING PIPE L.F.	OUTGOING PIPE SIZE	OUTGOING GRADE	CONNECT TO STR.	REMARKS
101	Existing Manhole	-	-	852.00	12" RCP 846.24 (W) [] 12" RCP 846.20 (S) [] 10" PVC Pipe 846.58 (SE) []	18" RCP 846.08 (N) [103]	58'	18"	0.60%	103	CONNECT 10" ROOF DRAIN
102	Inlet Type "A"	Sheet SU2.1	R-3472	851.30		12" RCP 846.54 (NE) [103]	33'	12"	0.32%	103	-
103	Type "C" Manhole	Sheet SU2.1	R-1772	851.98	18" RCP 845.73 (S) [101] 12" RCP 846.43 (SW) [102]	18" RCP 845.63 (E) [104]	67'	18"	0.70%	104	-
104	Type "C" Manhole	Sheet SU2.1	R-1772	852.64	18" RCP 845.16 (W) [103]	18" RCP 845.06 (N) [105]	19'	18"	0.70%	105	-
105	Existing Manhole	-	-	851.87	18" RCP 844.93 (S) [104] 30" RCP 842.56 (W) []	30" RCP 840.05 (NE) []		30"		-	
201	Inlet Type "A"	Sheet SU2.1	R-3286-8V	851.54	8" PVC Pipe 847.10 (S) []	12" RCP 847.03 (E) [202]	104'	12"	0.32%	202	CONNECT 6" ROOF DRAIN
202	Inlet Type "M"	Sheet SU2.1	R-3287-10V	850.58	12" RCP 846.70 (W) [201] 6" PVC Pipe 846.20 (S) []	15" RCP 846.20 (E) [204]	75'	15"	0.32%	204	CONNECT 6" ROOF DRAIN
203	Inlet Type "M"	Sheet SU2.1	R-3287-SB10	849.65		12" RCP 845.96 (S) [204]	26'	12"	0.75%	204	-
204	Type "C" Manhole		R-1772	849.96	15" RCP 845.96 (W) [202] 12" RCP 845.76 (N) [203] 6" PVC Pipe 846.00 (S) []	18" RCP 845.66 (E) [206]	16'	18"	0.40%	206	CONNECT 6" ROOF DRAIN
205	Type "C" Manhole		R-3286-8V	851.18		12" RCP 845.23 (N) [206]	42'	12"	0.32%	206	-
206	Type "C" Manhole	Sheet SU2.1	R-1772	850.35	18" RCP 845.60 (W) [204] 12" RCP 845.10 (S) [205]	18" RCP 841.10 (E) [207]	9'	18"	0.55%	207	-
207	Aqua-Swirl XC-6	Sheet SU2.1	PER MAN.	850.57	18" RCP 841.04 (W) [206]	18" RCP 841.04 (N) [300-IN]	8'	18"	0.55%	300-IN	-
300-IN	Detention Chambers	Sheet SU2.1	-	850.45	18" RCP 841.00 (S) [207]					-	
300-OUT	Detention Chambers	Sheet SU2.1	-	850.84		15" RCP 841.00 (E) [301]	8'	15"	0.00%	301	-
301	Outlet Control Structure	Sheet SU2.1	R-1772	851.04	15" RCP 841.00 (W) [300-OUT]	15" RCP 840.25 (NE) [302]	13'	15"	0.00%	302	-
302	Existing Manhole	-	-	851.19	15" RCP 840.25 (SW) [301] 30" RCP 839.97 (S) [] 15" RCP 842.97 (SE) []	30" RCP 839.87 (NW) []		30"		-	

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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.

Drawing Path: P:\2023\100\119\CAD\Civil\Active\15_2023-119_SU1.1_Site Utility Plan.dwg
Plotted By: gcameron Time of Plot: 10/4/23 - 12:09pm Last Edited: 10/4/23 - 9:41am

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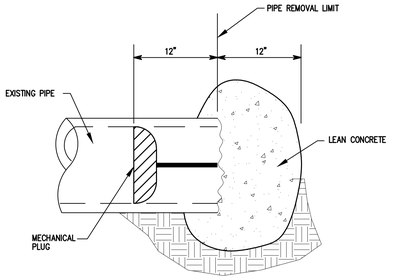
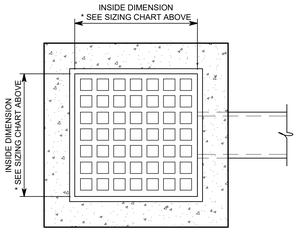
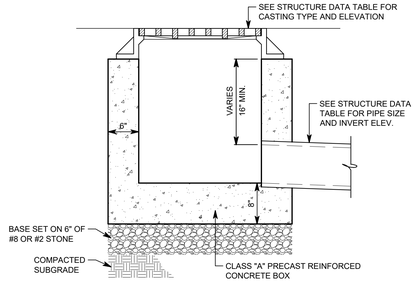


PIPE CAP DETAIL
NO SCALE

STRUCTURE SIZING CHART

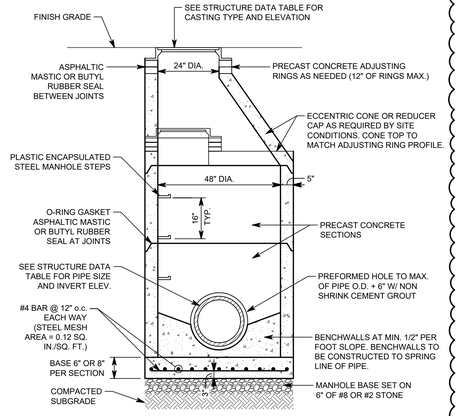
INSIDE DIMENSIONS	INLET TYPE	PIPE SIZE	MAX. NUMBER OF SIDES OF THE INLET WITH PIPES
24" X 24"	"A"	12" TO 15"	3
30" X 30"	"F"	15" TO 18"	3
24" X 36"	"M"	18" TO 24"	3





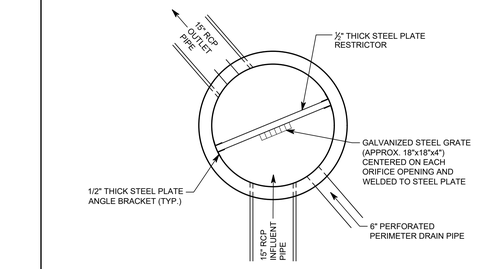
NOTES:
1. ALL STORM SEWER CASTINGS SHALL BE MARKED "DUMP NO WASTE DRAINS TO WATERWAYS".
2. SEE UTILITY PLAN FOR STORM SEWER STRUCTURE DATA TABLE.

STORM INLET DETAIL
1" = 1'-0"

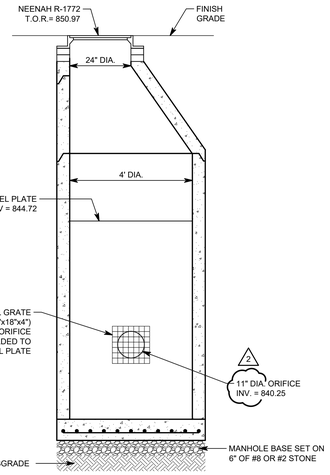


NOTES:
1. MANHOLE CONFORMS TO ASTM C478, JOINTS CONFORM TO ASTM C443.
2. ALL STORM SEWER CASTINGS SHALL BE MARKED "DUMP NO WASTE DRAINS TO WATERWAYS".
3. SEE UTILITY PLAN FOR STORM SEWER STRUCTURE DATA TABLE.

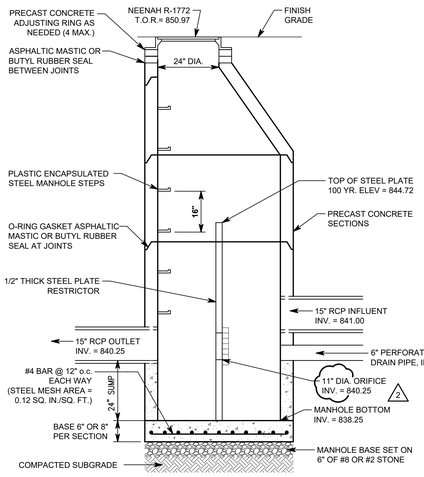
STORM MANHOLE TYPE "C" DETAIL
1/2" = 1'-0"



PLAN VIEW



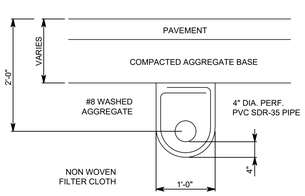
FRONT VIEW

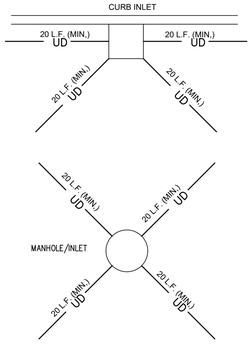


SIDE VIEW

NOTE:
SEE "STANDARD 4' STORM MANHOLE DETAIL" ON THIS SHEET FOR ADDITION DETAIL INFORMATION.

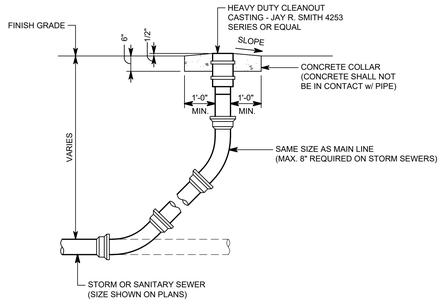
OUTLET CONTROL STRUCTURE DETAIL
NOT TO SCALE





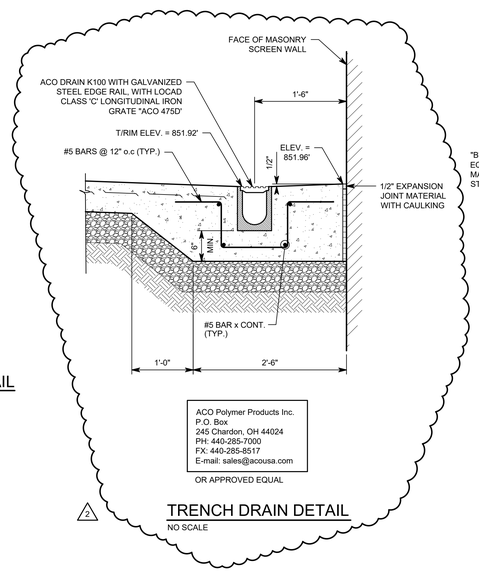
NOTES:
1. TAP STRUCTURES IN PAVEMENT AS SHOWN OR AS DIRECTED ON THE PLAN SHEET
2. ADJUST UNDERDRAIN AS REQUIRED TO AVOID SEWER LINES AND OTHER UTILITIES.
3. GROUT SOLID THE CONNECTION TO STORM STRUCTURE

PAVEMENT UNDERDRAIN DETAIL
NONE



NOTE: CLEANOUTS IN PAVED AREAS TO BE ACCESSIBLE VIA YARD BOXES OR EXTENDED FLUSH WITH THE PAVING. COVER SHOULD BE THREADED TYPE, WATER TIGHT AND CAPPED.

CLEANOUT DETAIL
1/2" = 1'-0"



ACO Polymer Products Inc.
P.O. Box
245 Chardon, OH 44024
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E-mail: sales@acousa.com

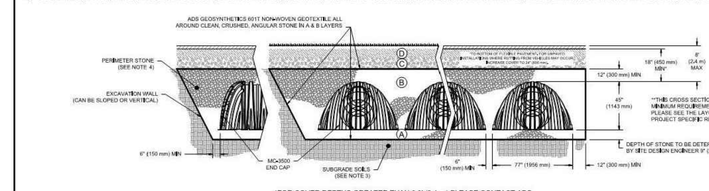
OR APPROVED EQUAL

TRENCH DRAIN DETAIL
NO SCALE

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1]: A-1, A-2, A-3 OR AASHTO M43[1]: 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX. LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1]: 3, 4	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1]: 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

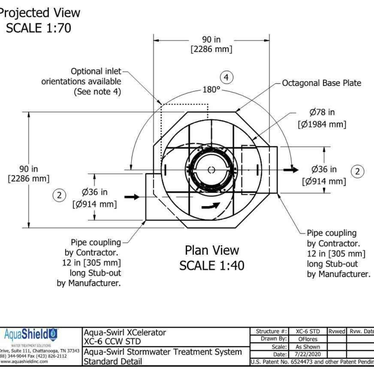


*FOR COVER DEPTHS GREATER THAN 8.0' (2.4 m) PLEASE CONTACT ADS

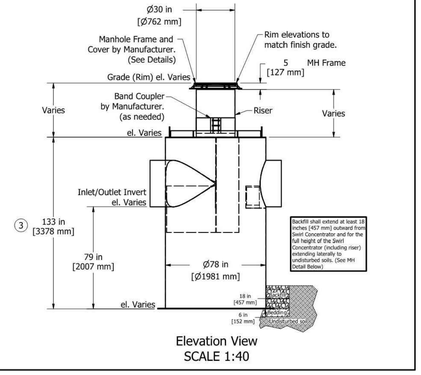
NOTES:
1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45475 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, ψ, THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT/%, AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

Aqua-Swirl Polymer Coated Steel (PCS) Stormwater Treatment System

Projected View
SCALE 1:70



Plan View
SCALE 1:40

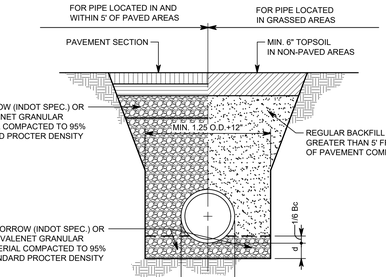


Elevation View
SCALE 1:40

Please see accompanied Aqua-Swirl specification notes. See Site Plan for actual System orientation. Approximate dry (pick) weight: 3000 lbs [1400 kg].

1. As an alternative, 42 in [1067 mm] diameter, HS-20/25 rated precast concrete rings may be substituted. 14 in [356 mm] thickness must be maintained.
2. XC-6 inlet/outlet pipe size ranges up to 36 in [914 mm].
3. XC-6 chamber height may vary up to 133 in [3378 mm], depending on inlet/outlet pipe size.
4. Orientation may vary from a minimum of 90° to a maximum of 180°. Clockwise or counterclockwise orientation as needed.

AquaShield	Aqua-Swirl XCelerator XC-6 CCW STD	Structure #: XC-6 STD; Drawn By: Offshore; Scale: As Shown; Date: 7/22/2020
2733 Kanawha Drive, Suite 111, Chattanooga, TN 37340 Phone (865) 344-6644 Fax (423) 826-2112 www.aquashieldinc.com	Aqua-Swirl Stormwater Treatment System Standard Detail	Rvwed: Rvw. Date:
		ETS: Patent No. 6524473 and other Patent Pending

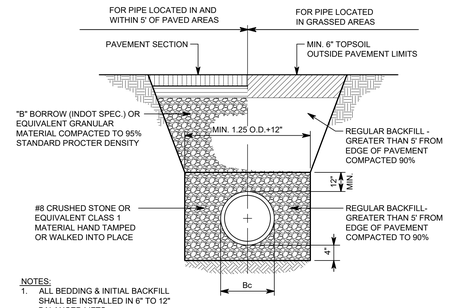


DEPTH OF BEDDING MATERIAL BELOW PIPE	
D	(d) MIN.
27" & SMALLER	3"
30" TO 60"	4"
66" & LARGER	6"

NOTES:
1. ALL BEDDING & INITIAL BACKFILL SHALL BE INSTALLED IN 6" TO 12" BALANCED LIFTS.
2. A MIN. 9" CLEARANCE EACH SIDE OR PIPE FOR 42" DIA. AND LESS.

LEGEND
Bc = OUTSIDE DIAMETER
D = INSIDE DIAMETER
d = DEPTH OF BEDDING MATERIAL BELOW PIPE

STORM SEWER (RCP) TRENCH DETAIL
3/4" = 1'-0"



NOTES:
1. ALL BEDDING & INITIAL BACKFILL SHALL BE INSTALLED IN 6" TO 12" BALANCED LIFTS.
2. A MIN. 9" CLEARANCE EACH SIDE OR PIPE FOR 42" DIA. AND LESS.

STORM SEWER (PVC & HDPE) TRENCH DETAIL
NO SCALE

Drawing Path: P:\2023\100\119\CAD\Civil\Active\16_2023-119_SU2.1_Site Utility Details.dwg
Plotted By: geomeron Time of Plot: 10/4/23 - 12:10pm Last Edited: 10/4/23 - 12:08pm

MC-3500 STANDARD CROSS SECTION	DRAWN: RLJ
DATE: 8/31/2023	CHECKED: RLJ
PROJECT #: 221165.01	

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SHEET 1 OF 1

CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

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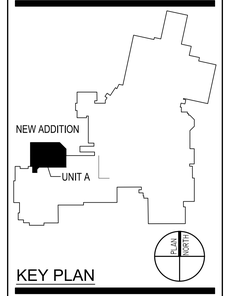
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

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

CONSULTANT
TLF
317-334-1500 TLF-ENGINEERS.COM
3901 WEST 86TH STREET, ST# 200, INDIANAPOLIS, IN 46268



KEY PLAN

100% CONSTRUCTION DOCUMENTS

REGISTERED No. 19700317 STATE OF INDIANA PROFESSIONAL ENGINEER
PETER M. RANKOVICH

DRAWN BY: ARS

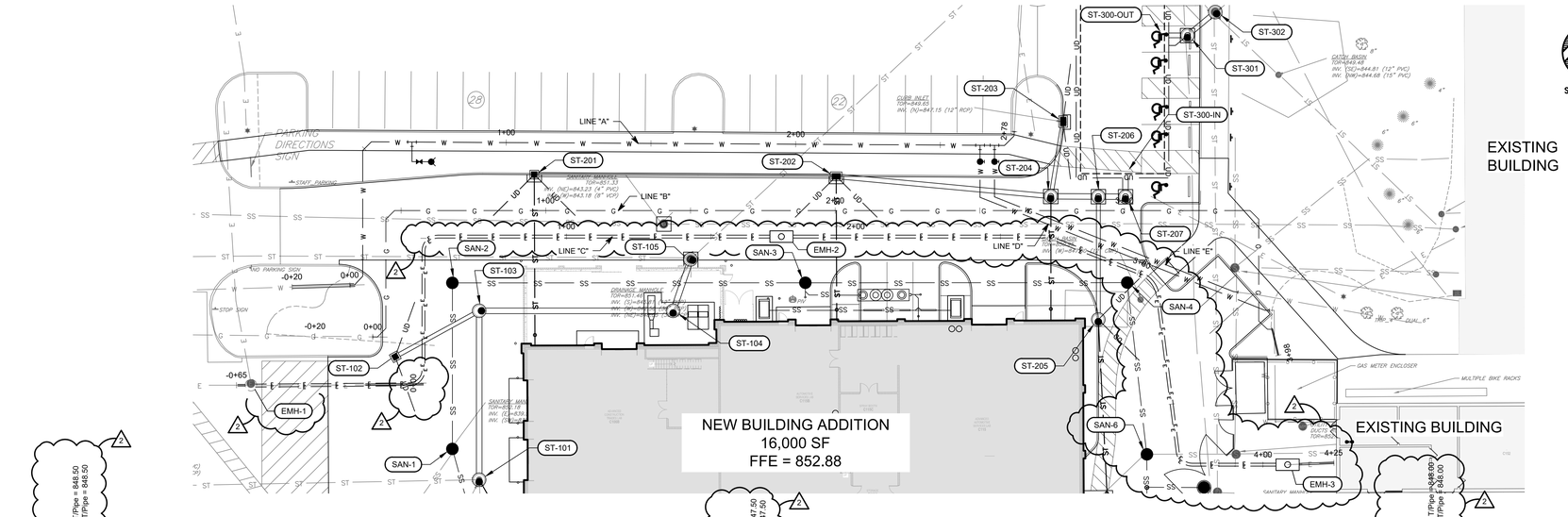
PROJECT NUMBER: 221165.01

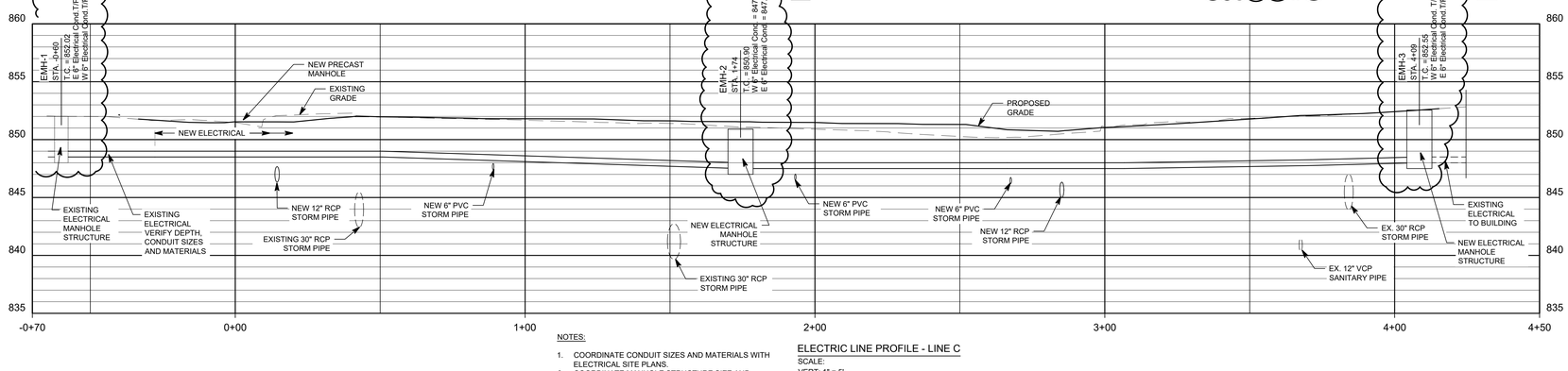
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	TAC REVIEW	9-19-2023
2	ADDENDUM 2	10-04-2023

SITE UTILITY DETAILS

SU2.1



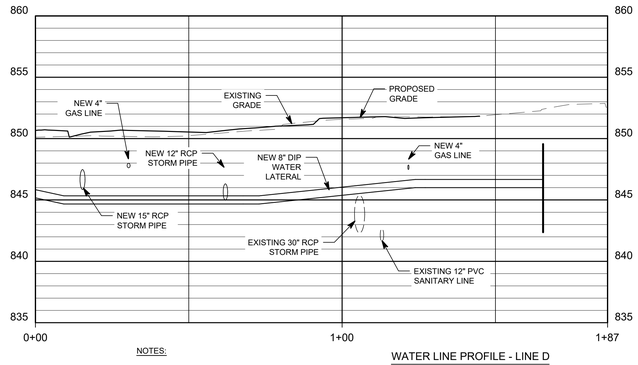


NOTES:

1. COORDINATE CONDUIT SIZES AND MATERIALS WITH ELECTRICAL SITE PLANS.
2. COORDINATE MANHOLE STRUCTURE SIZE AND SPECIFICATIONS WITH ELECTRICAL SITE PLANS

ELECTRIC LINE PROFILE - LINE C

SCALE:
VERT: 1" = 5'
HORIZ: 1" = 20'

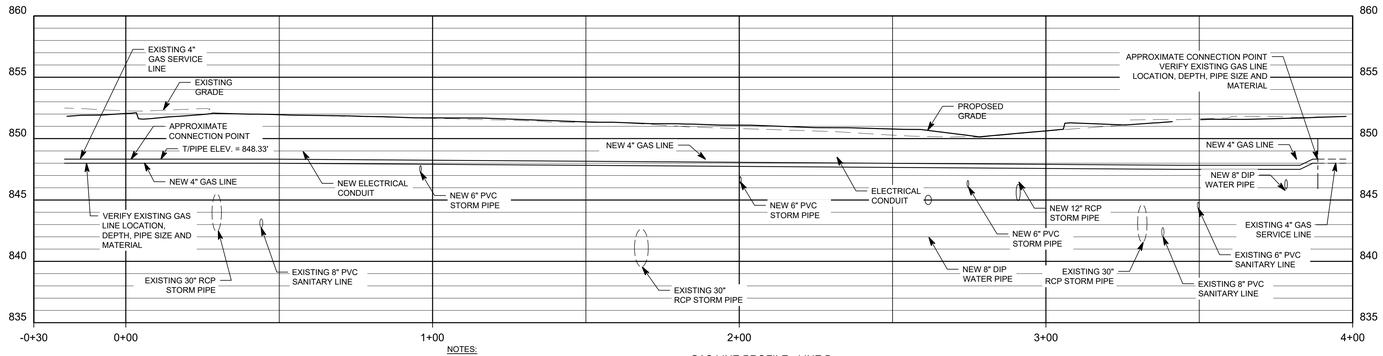


NOTES:

1. TOP OF PIPE ELEVATION SHALL BE -5'-0" FROM FINISHED GRADE

WATER LINE PROFILE - LINE D

SCALE:
VERT: 1" = 5'.
HORIZ: 1" = 20'

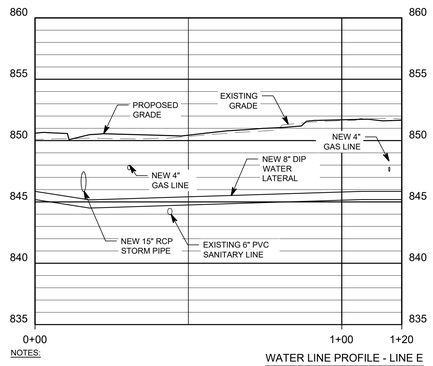


NOTES:

1. COORDINATE GAS PIPE RELOCATION AND NEW INSTALLATION WITH CENTERPOINT ENERGY.
2. GAS SERVICE LINE SIZE AND ELEVATIONS ARE FOR BUDGETARY PURPOSES.

GAS LINE PROFILE - LINE B

SCALE:
VERT: 1" = 5'
HORIZ: 1" = 20'

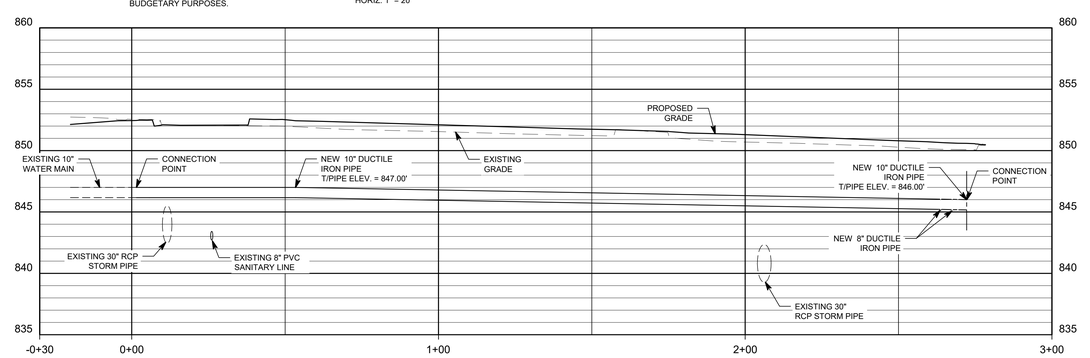


NOTES:

1. TOP OF PIPE ELEVATION SHALL BE -5'-0" FROM FINISHED GRADE

WATER LINE PROFILE - LINE E

SCALE:
VERT: 1" = 5'
HORIZ: 1" = 20'



NOTES:

1. TOP OF PIPE ELEVATION SHALL BE -5'-0" FROM FINISHED GRADE

WATER LINE PROFILE - LINE A

SCALE:
VERT: 1" = 5'
HORIZ: 1" = 20'

811 Know what's **below.** **Call** before you dig.
Call 811 or 1-800-382-5544 Before You Begin Any Digging Project.
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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.

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 E MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

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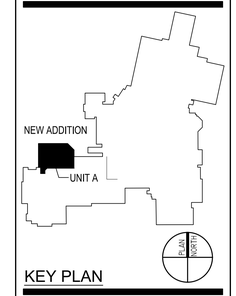


KEY PLAN

100% CONSTRUCTION DOCUMENTS

PETE L. KOMIR RANDOLPH
REGISTERED
No. 19700317
STATE OF INDIANA
PROFESSIONAL ENGINEER

DRAWN BY: ARS

PROJECT NUMBER: 221165.01

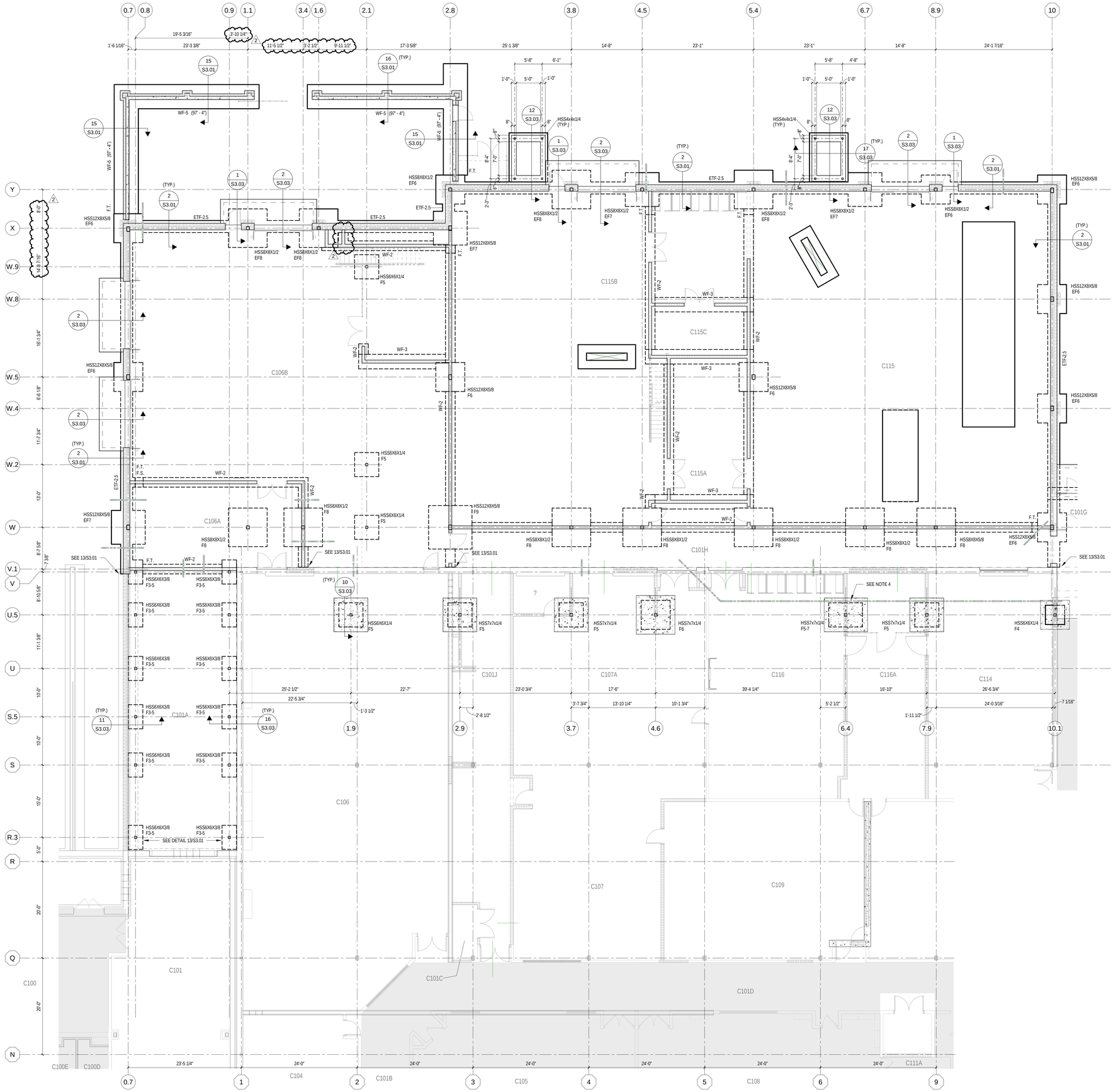
PROJECT ISSUE DATE: 08/31/2023

REV. NO△	DESCRIPTION	DATE
1	TAC REVIEW	9-19-2023
2	ADDENDUM 2	10-04-2023

UTILITY PLAN AND PROFILES

SU3.3

Drawing Path: P:\2023\100\119\CAD\Cad\Active\21_2023-119_SU3.3_Utility Profiles.dwg
Plotted By: gsameron Time of Plot: 10/3/23 - 8:37am Last Edited: 9/28/23 - 10:05am



UNIT A - FOUNDATION PLAN

1/8" = 1'-0"

NORTH

PLAN NOTES:

1. REFERENCE ELEVATION = TOP OF EXISTING FINISH FLOOR = 100'-0" (852.88' U.S.G.S.).
2. TOP OF FOOTING (T/FOOTING) ELEVATION = 98'-8" (U.O.N.).
3. (XXX'-X") INDICATES TOP OF FOOTING OR PIER ELEVATION.
4. TAKE CARE NOT TO CUT EXISTING 4" BELOW SLAB SANITARY LINE DURING DEMOLITION OF EXISTING SLAB ON GRADE. NOTIFY EOR IF EXISTING SANITARY IS WITHIN FOOTPRINT OF NEW FOOTING(S) SO SIZE/LOCATION OF FOOTINGS CAN BE REEAVLUATED FOR THE CONFLICT.

FOUNDATION PLAN NOTES:

1. SEE SHEET S0.01 FOR GENERAL NOTES.
2. SEE S3.01 THROUGH S3.03 FOR FOUNDATION DETAILS. TYPICAL DETAILS MAY NOT BE CUT ON PLANS, BUT APPLY UNLESS OTHERWISE NOTED.
3. CENTER WALL FOOTINGS UNDER WALLS UNLESS NOTED OTHERWISE.
4. FX, EFX INDICATES INTERIOR FOUNDATION F"X" OR EXTERIOR FOUNDATION EF"X". SEE COLUMN FOOTING SCHEDULE ON S3.01.
5. ETF-X INDICATES EXTERIOR TRENCH FOOTING ETF-"X". SEE TYPICAL EXTERIOR TRENCH FOOTING DETAIL ON S3.01.
6. WF-X, INDICATES INTERIOR WALL FOOTING WF-"X". TYPICAL INTERIOR WALL FOOTING DETAIL ON S3.01.
7. RWFX INDICATES RETAINING WALL FOOTING RWF"X" SEE TYPICAL RETINING WALL DETAIL ON S3.01.
8. P1, P2, ETC. INDICATES CONCRETE PIER. SEE TYPICAL PIER DETAIL ON S3.01. TOP OF PIER ELEVATION = 98'-8" (U.O.N.).
9. MP1, MP2, ETC. INDICATES MASONRY PILASTER. SEE MASONRY PILASTER (MP).
10. SEE S3.01 FOR TYPICAL INTERIOR COLUMN FOOTING DETAIL.
11. SEE 5-S3.01 FOR TYPICAL COLUMN BASE.
12. SEE 3-S3.01 FOR TYPICAL COLUMN BASE PLATE.
13. FOOTINGS MAY BE EARTH-FORMED WHERE COHESIVE SOILS EXIST AT FOUNDATION ELEVATION. REFER TO THE PROJECT MANUAL. THE CONTRACTOR SHALL INCLUDE IN THEIR BID FORMING OF FOOTINGS WHERE REVIEW OF THE GEOTECHNICAL ENGINEERING REPORT INDICATES EARTH-FORMING MAY NOT BE POSSIBLE.
14. VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND PLUMBING LINES. SEE SHEET S3.02 FOR REQUIREMENTS WHEN PLUMBING LINES CROSS FOUNDATIONS AT ALL ELEVATIONS.
15. SEE 6-S3.03 FOR TYPICAL SLAB ON GRADE.
16. SEE 7-S3.03 FOR SLAB ISOLATIONS.
17. SEE ARCHITECTURAL PLANS FOR RAISED LOCKER BASES.
18. F.T. INDICATES FOOTING TRANSITION. SEE 11-S3.01.
19. F.S. INDICATES STEPPED FOOTING. SEE S3.01 FOR DETAILS
20. LEGEND:

INDICATES UNDERGROUND PLUMBING OR UTILITY LINE. VERIFY LOCATION AND ELEVATIONS. SEE S3.02 FOR REQUIREMENTS WHEN PLUMBING LINES CROSS FOUNDATIONS AT ALL ELEVATIONS.

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

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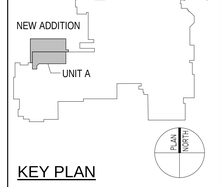
TLF Job No: 2023-119



KEY PLAN

100% CONSTRUCTION DOCUMENTS

DRAWN BY: JDR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

UNIT A - FOUNDATION PLAN

S1.01

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

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Phone: 317-334-1500
Fax: 317-334-1552
TLF Job No: 2023-119

UNIT A - SLAB AND MASONRY PLAN

1/8" = 1'-0"

NORTH

SLAB AND MASONRY PLAN NOTES:

1. SEE SHEET S0.01 FOR GENERAL NOTES.
2. SEE S3.03, S3.04 AND S4.01 THROUGH S4.03 FOR TYPICAL SLAB AND MASONRY DETAILS. TYPICAL DETAILS MAY NOT BE CUT ON PLANS, BUT APPLY UNLESS OTHERWISE NOTED.
3. REFERENCE ELEVATION = TOP OF EXISTING FINISH FLOOR = 100'-0" (852.88' U.S.G.S.).
4. SLAB-ON-GRADE SHALL BE 6" THICK AND FLUSH WITH EXISTING FIRST FLOOR SLAB, U.O.N. 6" SLAB-ON-GRADE SHALL BE REINFORCED WITH 6x6-W2.9xW2.9 WIRE MESH REINFORCING IN SHEET FORM. 8" SLAB-ON-GRADE SHALL BE REINFORCED WITH #4 AT 12" o.c. EACH WAY. 10" SLAB ON GRADE SHALL BE REINFORCED WITH #5 AT 12" o.c. EACH WAY. ALL SLABS SHALL BE PLACED ON VAPOR BARRIER OVER A MINIMUM OF 6" GRANULAR MATERIAL.
5. ALL MASONRY WALLS AND MASONRY WALL INFILL SHALL BE LAID IN A STACKED BOND PATTERN.
6. L, ML, SML INDICATES MASONRY LINTEL. SEE SHEET S4.03.
7. LBX INDICATES STEEL ANGLE LINTEL. SEE SHEET S4.03.
8. SL-X INDICATES STEEL LINTEL. SEE SHEET S4.03. FOR SCHEDULE. VERIFY MASONRY OPENING AND ELEVATION WITH ARCHITECTURAL PLANS.
9. BPX INDICATES BEARING PLATE REQUIRED. SEE S5.01.
10. MPX INDICATES MASONRY PILASTER. SEE SHEET S4.01.
11. CJ INDICATES CONTROL JOINT IN CMU. COORDINATE LOCATION WITH BONDING PATTERN AND WALL ELEVATION (SEE S4.02).
12. (*) INDICATES LINTEL REQUIRED FOR MECHANICAL OPENING. ONLY A PORTION OF THESE LINTELS REQUIRED FOR MASONRY OPENINGS ARE SHOWN ON THE PLANS. THE CONTRACTOR IS REQUIRED TO FURNISH AND INSTALL LINTELS REQUIRED FOR MECHANICAL OPENINGS WHETHER OR NOT SHOWN ON THE PLANS. COORDINATE NUMBER, SIZE, ELEVATION, AND LOCATION OF ALL LINTELS FOR MECHANICAL OPENINGS.

    SEE S4.03 FOR LINTELS IN NON-BEARING WALLS. SUBMIT SHOP DRAWINGS FOR REVIEW FOR LINTELS REQUIRED AT MECHANICAL OPENINGS IN BEARING WALLS AND OUTSIDE LIMITS OF S4.03.
13. FOR MULTI-SPAN CONTINUOUS LINTELS, MAINTAIN 16" MINIMUM CMU BETWEEN OPENINGS (U.O.N.).
14. SEE S4.01 FOR MASONRY WALL BRACING REQUIREMENTS.
15. SEE MASONRY WALL ELEVATIONS FOR ADDITIONAL REINFORCEMENT REQUIREMENTS.
16. SEE THE PROJECT MANUAL FOR CONTRACTION AND CONSTRUCTION JOINT SPACING. THE CONTRACTOR IS ENCOURAGED TO SUBMIT A SLAB PLAN SHOWING ALTERNATE SPACINGS AND LOCATIONS THAT ADAPTS TO THEIR PLANNED CONSTRUCTION SEQUENCE.
17. SEE ARCHITECTURAL PLANS FOR RAISED LOCKER BASES.
18. PROVIDE LINTEL AT RECESSED FIRE EXTINGUISHER CABINET AND/OR ELECTRICAL PANEL BOARD. SEE TYPICAL CMU WALL OPENING AT RECESSED EQUIPMENT ON S4.02.
19. DEMOLISH EXISTING SLAB AT LEAST 1'-0" BEYOND LIMITS OF SMI-100 MINI MILL, SMI-101 CNC LATHE AND SMI-102 OMAX WATERJET FOOTPRINTS. PROVIDE NEW 12" THICK SLAB REINFORCED WITH #4 BARS AT 18" o.c. EACH WAY TOP & BOTTOM AT EACH LOCATION. PROVIDE 1/2" EXPANSION MATERIAL AROUND PERIMETER OF NEW SLABS TO ISOLATE EQUIPMENT. COORDINATE WITH ARCH AND EQUIPMENT SUPPLIER FOR EXACT LOCATION AND EXTENTS.
20. LEGEND:

- INDICATES SLAB DEPRESSION FROM FINISHED FLOOR ELEVATION. SEE THE PROJECT MANUAL FOR REQUIRED DEPRESSION.
- PANEL XX — INDICATES MASONRY WALL SUPPORTED ON FOOTING. SEE S4.01 FOR MASONRY WALL PANEL SCHEDULE
- INDICATES THICKENED SLAB. SEE 6C-S3.03.
- INDICATES END OF LINTEL SUPPORTED AT STEEL COLUMN.

NEW ADDITION

UNIT A

PLAN NORTH

KEY PLAN

100% CONSTRUCTION DOCUMENTS

TRACY A. CHARITON REGISTERED No. 10700903 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: JDR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

UNIT A - SLAB AND MASONRY PLAN

S1.02

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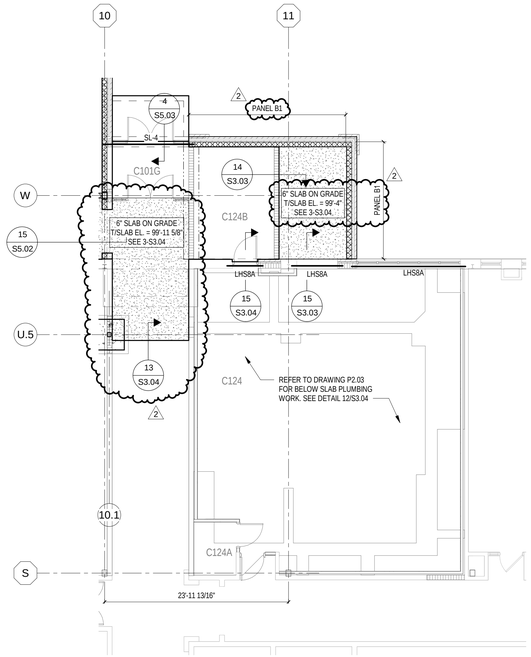


UNIT B - SLAB AND MASONRY PLAN

1/8" = 1'-0"

NORTH

SLAB AND MASONRY PLAN NOTES:

1. SEE SHEET S0.01 FOR GENERAL NOTES.
2. SEE S3.03, S3.04 AND S4.01 THROUGH S4.03 FOR TYPICAL SLAB AND MASONRY DETAILS. TYPICAL DETAILS MAY NOT BE CUT ON PLANS, BUT APPLY UNLESS OTHERWISE NOTED.
3. REFERENCE ELEVATION = TOP OF EXISTING FINISH FLOOR = 100'-0" (852.88' U.S.G.S.).
4. SLAB-ON-GRADE SHALL BE 6" THICK AND FLUSH WITH EXISTING FIRST FLOOR SLAB, U.O.N. 6" SLAB-ON-GRADE SHALL BE REINFORCED WITH 6x6-W2.9xW2.9 WIRE MESH REINFORCING IN SHEET FORM. 8" SLAB-ON-GRADE SHALL BE REINFORCED WITH #4 AT 12" o.c. EACH WAY. 10" SLAB ON GRADE SHALL BE REINFORCED WITH #5 AT 12" o.c. EACH WAY. ALL SLABS SHALL BE PLACED ON VAPOR BARRIER OVER A MINIMUM OF 6" GRANULAR MATERIAL.
5. ALL MASONRY WALLS AND MASONRY WALL INFILL SHALL BE LAID IN A STACKED BOND PATTERN.
6. L, ML, SML INDICATES MASONRY LINTEL. SEE SHEET S4.03.
7. LBX INDICATES STEEL ANGLE LINTEL. SEE SHEET S4.03.
8. SL-X INDICATES STEEL LINTEL. SEE SHEET S4.03. FOR SCHEDULE. VERIFY MASONRY OPENING AND ELEVATION WITH ARCHITECTURAL PLANS.
9. BPX INDICATES BEARING PLATE REQUIRED. SEE S5.01.
10. MPX INDICATES MASONRY PILASTER. SEE SHEET S4.01.
11. CJ INDICATES CONTROL JOINT IN CMU. COORDINATE LOCATION WITH BONDING PATTERN AND WALL ELEVATION (SEE S4.02).
12. (*) INDICATES LINTEL REQUIRED FOR MECHANICAL OPENING. ONLY A PORTION OF THESE LINTELS REQUIRED FOR MASONRY OPENINGS ARE SHOWN ON THE PLANS. THE CONTRACTOR IS REQUIRED TO FURNISH AND INSTALL LINTELS REQUIRED FOR MECHANICAL OPENINGS WHETHER OR NOT SHOWN ON THE PLANS. COORDINATE NUMBER, SIZE, ELEVATION, AND LOCATION OF ALL LINTELS FOR MECHANICAL OPENINGS.

    SEE S4.03 FOR LINTELS IN NON-BEARING WALLS. SUBMIT SHOP DRAWINGS FOR REVIEW FOR LINTELS REQUIRED AT MECHANICAL OPENINGS IN BEARING WALLS AND OUTSIDE LIMITS OF S4.03.
13. FOR MULTI-SPAN CONTINUOUS LINTELS, MAINTAIN 16" MINIMUM CMU BETWEEN OPENINGS (U.O.N.).
14. SEE S4.01 FOR MASONRY WALL BRACING REQUIREMENTS.
15. SEE MASONRY WALL ELEVATIONS FOR ADDITIONAL REINFORCEMENT REQUIREMENTS.
16. SEE THE PROJECT MANUAL FOR CONTRACTION AND CONSTRUCTION JOINT SPACING. THE CONTRACTOR IS ENCOURAGED TO SUBMIT A SLAB PLAN SHOWING ALTERNATE SPACINGS AND LOCATIONS THAT ADAPTS TO THEIR PLANNED CONSTRUCTION SEQUENCE.
17. SEE ARCHITECTURAL PLANS FOR RAISED LOCKER BASES.
18. PROVIDE LINTEL AT RECESSED FIRE EXTINGUISHER CABINET AND/OR ELECTRICAL PANEL BOARD. SEE TYPICAL CMU WALL OPENING AT RECESSED EQUIPMENT ON S4.02.
19. DEMOLISH EXISTING SLAB AT LEAST 1'-0" BEYOND LIMITS OF SMI-100 MINI MILL, SMI-101 CNC LATHE AND SMI-102 OMAX WATERJET FOOTPRINTS. PROVIDE NEW 12" THICK SLAB REINFORCED WITH #4 BARS AT 18" o.c. EACH WAY TOP & BOTTOM AT EACH LOCATION. PROVIDE 1/2" EXPANSION MATERIAL AROUND PERIMETER OF NEW SLABS TO ISOLATE EQUIPMENT. COORDINATE WITH ARCH AND EQUIPMENT SUPPLIER FOR EXACT LOCATION AND EXTENTS.
20. LEGEND:

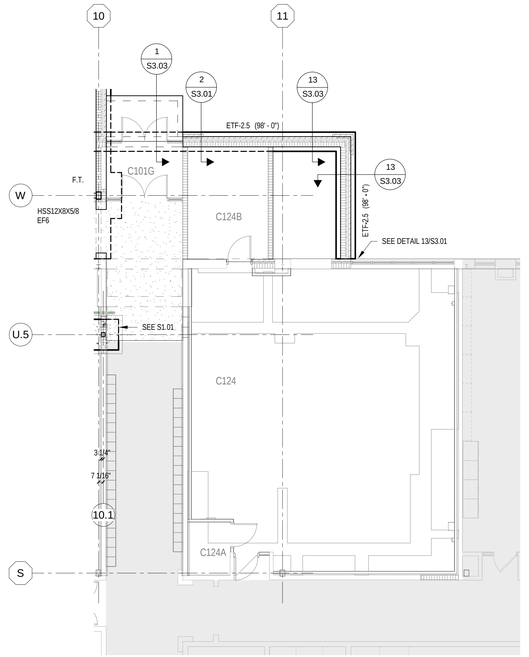
    INDICATES SLAB DEPRESSION FROM FINISHED FLOOR ELEVATION. SEE THE PROJECT MANUAL FOR REQUIRED DEPRESSION.

    PANEL XX

    INDICATES MASONRY WALL SUPPORTED ON FOOTING. SEE S4.01 FOR MASONRY WALL PANEL SCHEDULE

    INDICATES THICKENED SLAB. SEE 6C-S3.03.

    INDICATES END OF LINTEL SUPPORTED AT STEEL COLUMN.



UNIT B - FOUNDATION PLAN

1/8" = 1'-0"

NORTH

PLAN NOTES:

1. REFERENCE ELEVATION = TOP OF EXISTING FINISH FLOOR = 100'-0" (852.88' U.S.G.S.).
2. TOP OF FOOTING (T/FOOTING) ELEVATION = 98'-8" (U.O.N.).
3. (XXX'-X") INDICATES TOP OF FOOTING OR PIER ELEVATION.
4. TAKE CARE NOT TO CUT EXISTING 4" BELOW SLAB SANITARY LINE DURING DEMOLITION OF EXISTING SLAB ON GRADE. NOTIFY EOR IF EXISTING SANITARY IS WITHIN FOOTPRINT OF NEW FOOTING(S) SO SIZE/LOCATION OF FOOTINGS CAN BE REEAVLUATED FOR THE CONFLICT.

FOUNDATION PLAN NOTES:

1. SEE SHEET S0.01 FOR GENERAL NOTES.
2. SEE S3.01 THROUGH S3.03 FOR FOUNDATION DETAILS. TYPICAL DETAILS MAY NOT BE CUT ON PLANS, BUT APPLY UNLESS OTHERWISE NOTED.
3. CENTER WALL FOOTINGS UNDER WALLS UNLESS NOTED OTHERWISE.
4. FX, EFX INDICATES INTERIOR FOUNDATION F"X" OR EXTERIOR FOUNDATION EF"X". SEE COLUMN FOOTING SCHEDULE ON S3.01.
5. ETF-X INDICATES EXTERIOR TRENCH FOOTING ETF-"X". SEE TYPICAL EXTERIOR TRENCH FOOTING DETAIL ON S3.01.
6. WF-X, INDICATES INTERIOR WALL FOOTING WF-"X". TYPICAL INTERIOR WALL FOOTING DETAIL ON S3.01.
7. RWFX INDICATES RETAINING WALL FOOTING RWF"X" SEE TYPICAL RETINING WALL DETAIL ON S3.03.
8. P1, P2, ETC. INDICATES CONCRETE PIER. SEE TYPICAL PIER DETAIL ON S3.01. TOP OF PIER ELEVATION = 98'-8" (U.O.N.).
9. MP1, MP2, ETC. INDICATES MASONRY PILASTER. SEE MASONRY PILASTER (MP).
10. SEE S3.01 FOR TYPICAL INTERIOR COLUMN FOOTING DETAIL.
11. SEE 5-S3.01 FOR TYPICAL COLUMN BASE.
12. SEE 3-S3.01 FOR TYPICAL COLUMN BASE PLATE.
13. FOOTINGS MAY BE EARTH-FORMED WHERE COHESIVE SOILS EXIST AT FOUNDATION ELEVATION. REFER TO THE PROJECT MANUAL. THE CONTRACTOR SHALL INCLUDE IN THEIR BID FORMING OF FOOTINGS WHERE REVIEW OF THE GEOTECHNICAL ENGINEERING REPORT INDICATES EARTH-FORMING MAY NOT BE POSSIBLE.
14. VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND PLUMBING LINES. SEE SHEET S3.02 FOR REQUIREMENTS WHEN PLUMBING LINES CROSS FOUNDATIONS AT ALL ELEVATIONS.
15. SEE 6-S3.03 FOR TYPICAL SLAB ON GRADE.
16. SEE 7-S3.03 FOR SLAB ISOLATIONS.
17. SEE ARCHITECTURAL PLANS FOR RAISED LOCKER BASES.
18. F.T. INDICATES FOOTING TRANSITION. SEE 11-S3.01.
19. F.S. INDICATES STEPPED FOOTING. SEE S3.01 FOR DETAILS
20. LEGEND:

    INDICATES UNDERGROUND PLUMBING OR UTILITY LINE. VERIFY LOCATION AND ELEVATIONS. SEE S3.02 FOR REQUIREMENTS WHEN PLUMBING LINES CROSS FOUNDATIONS AT ALL ELEVATIONS.

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

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ARCHITECT

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

STRUCTURAL ENGINEER

TLF

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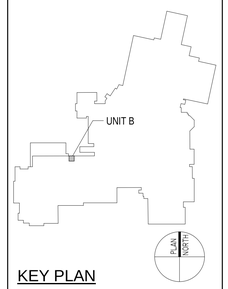
Indianapolis, Indiana 46268
Phone: 317-334-1500
Fax: 317-334-1552
TLF Job No: 2023-119



KEY PLAN

100% CONSTRUCTION DOCUMENTS

DRAWN BY: JDR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

UNIT B - FOUNDATION PLAN / SLAB AND MASONRY PLAN

S1.03

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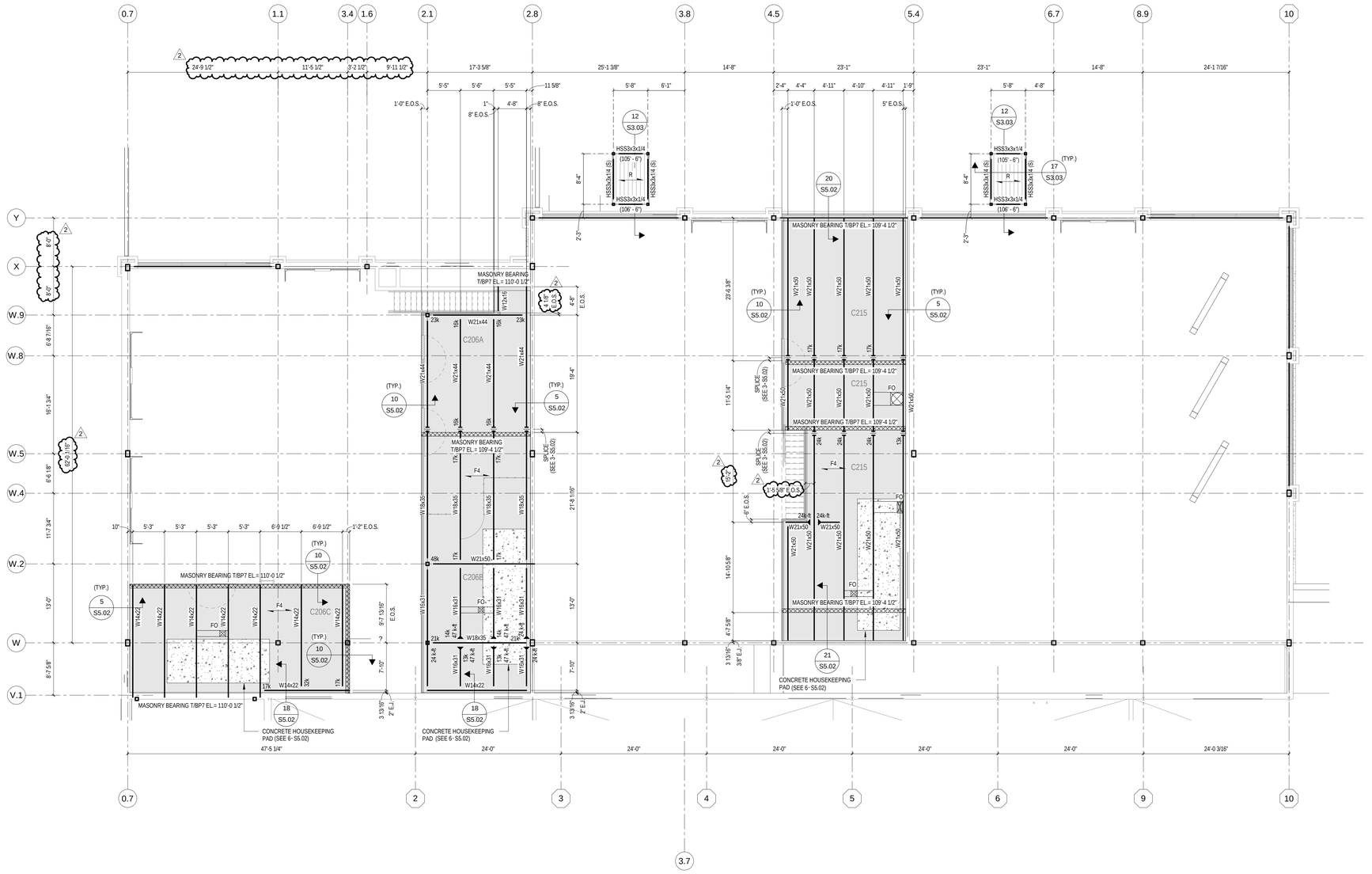

UNIT A - MEZZANINE FRAMING PLAN

1/8" = 1'-0"

NORTH

PLAN NOTES:

1. REFERENCE ELEVATION = TOP OF EXISTING FINISH FLOOR = 100'-0" (852.88' U.S.G.S.).
2. TOP OF STEEL (T/STEEL) ELEVATION = 110'-8" (U.O.N.).

FRAMING PLAN NOTES:

1. SEE SHEET S0.01 FOR GENERAL NOTES.
2. SEE DRAWINGS S5.01 THROUGH S5.02 FOR STEEL FRAMING DETAILS. TYPICAL DETAILS MAY NOT BE CUT ON PLANS BUT APPLY UNLESS OTHERWISE NOTED.
3. SEE S5.01 FOR TYPICAL STEEL FRAMING CONNECTIONS.
4. SEE S4.01 FOR MASONRY WALL BRACING REQUIREMENTS
5. PROVIDE MINIMUM L3x3x1/4 (U.O.N.) ROOF EDGE SUPPORT ANGLES AT ALL ROOF EDGES AND ROOF EXPANSION JOINTS.

BEAM LEGEND:

(*) INDICATES DECK SUPPORT REQUIRED BETWEEN JOISTS. SEE EDGE OF DECK SUPPORT.

(S) INDICATES SLOPED BEAM. ELEVATIONS AT ENDS ARE TOP OF SLOPED BEAM AT CENTERLINE COLUMN OR AT INTERSECTION WITH OTHER BEAMS.

(E) INDICATES EXISTING FRAMING MEMBER.

BP INDICATES BEARING PLATE. SEE BEARING PLATE SCHEDULE.

(TCX) INDICATES THAT THE TOP CHORD OF THE JOIST IS TO BE EXTENDED. (SEE PLAN FOR LENGTH)

(DJB) INDICATES DEEP JOIST BEARING.

(BC) INDICATES BOLTED CONNECTION AT JOIST BEARING.

RV INDICATES FRAME REQUIRED FOR ROOF VENT. SEE TYP OPENING FRAME (RV). (VERIFY LOCATION WITH ROOF PLAN)

RD INDICATES FRAME REQUIRED FOR ROOF DRAIN. SEE TYP OPENING FRAME (RD). (VERIFY LOCATION WITH ROOF PLAN)

RH INDICATES FRAME REQUIRED FOR ROOF HATCH. SEE TYP OPENING FRAME (RH).

FO INDICATES FRAME REQUIRED FOR FLOOR OPENING. SEE TYP OPENING FRAME (FO).

PB INDICATES FRAME REQUIRED FOR POUR BOX OPENING.

INDICATES BEAM SPLICE. SEE TYPICAL STEEL FRAMING DETAIL S5.01-1F.

F4 INDICATES DIRECTION OF FLOOR DECK SPAN (4" COMP. CONC., U.O.N.).

R INDICATES DIRECTION OF 1 1/2" ROOF DECK SPAN (WR20, U.O.N.).

INDICATES BEAM MOMENT CONNECTION.

10k W12x16 10k (110'-8 1/2") — INDICATES THAT THE W12x16 BEAM IS LEVEL WITH THE TOP FLANGE AT ELEVATION 110'-8 1/2" WITH A 10 KIP REACTION AT EACH END.

W12x16 (S) (110'-0) (110'-11") — INDICATES THAT THE W12x16 BEAM IS SLOPED WITH THE TOP OF ITS FLANGE AT ELEVATION 110'-0" AND ELEVATION 110'-11", RESPECTIVELY, AT THE CENTERLINE OF THE TWO COLUMNS. THE BEAM FRAMES OVER THE TOP OF THE RIGHT COLUMN AND INTO THE SIDE OF THE LEFT COLUMN.

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
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CARMEL CLAY SCHOOLS

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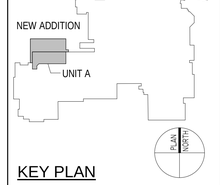
TLF Job No: 2023-119



KEY PLAN

100% CONSTRUCTION DOCUMENTS

DRAWN BY: JDR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

UNIT A - MEZZANINE FRAMING PLAN

S2.01

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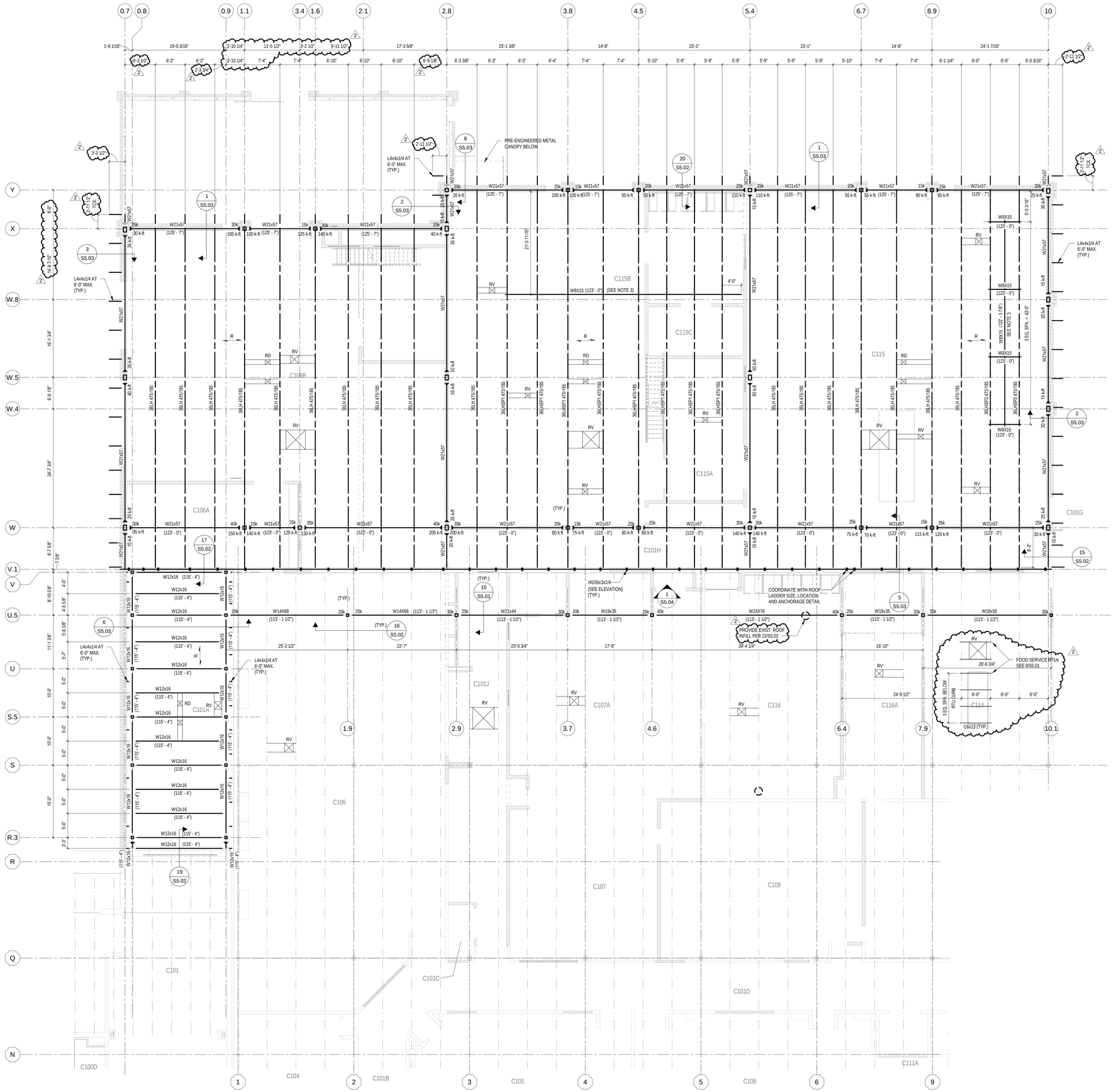

UNIT A - ROOF FRAMING PLAN

1/8" = 1'-0"

NORTH

PLAN NOTES:

1. REFERENCE ELEVATION = TOP OF EXISTING FINISH FLOOR = 100'-0" (852.88' U.S.G.S.).
2. TOP OF STEEL (T/STEEL) ELEVATION = 126'-0" (U.O.N.).
3. COORDINATE LENGTH AND LOCATION OF HOIST SUPPORT BEAM WITH EQUIPMENT PROVIDER.

FRAMING PLAN NOTES:

1. SEE SHEET S0.01 FOR GENERAL NOTES.
2. SEE DRAWINGS SS.01 THROUGH SS.02 FOR STEEL FRAMING DETAILS. TYPICAL DETAILS MAY NOT BE CUT ON PLANS BUT APPLY UNLESS OTHERWISE NOTED.
3. SEE SS.01 FOR TYPICAL STEEL FRAMING CONNECTIONS.
4. SEE S4.01 FOR MASONRY WALL BRACING REQUIREMENTS
5. PROVIDE MINIMUM L3x3x1/4 (U.O.N.) ROOF EDGE SUPPORT ANGLES AT ALL ROOF EDGES AND ROOF EXPANSION JOINTS.

BEAM LEGEND:

(*)	INDICATES DECK SUPPORT REQUIRED BETWEEN JOISTS. SEE EDGE OF DECK SUPPORT.
(S)	INDICATES SLOPED BEAM. ELEVATIONS AT ENDS ARE TOP OF SLOPED BEAM AT CENTERLINE COLUMN OR AT INTERSECTION WITH OTHER BEAMS.
(E)	INDICATES EXISTING FRAMING MEMBER.
BP	INDICATES BEARING PLATE. SEE BEARING PLATE SCHEDULE.
(TCX)	INDICATES THAT THE TOP CHORD OF THE JOIST IS TO BE EXTENDED. (SEE PLAN FOR LENGTH)
(DJB)	INDICATES DEEP JOIST BEARING.
(BC)	INDICATES BOLTED CONNECTION AT JOIST BEARING.
RV	INDICATES FRAME REQUIRED FOR ROOF VENT. SEE TYP OPENING FRAME (RV). (VERIFY LOCATION WITH ROOF PLAN)
RD	INDICATES FRAME REQUIRED FOR ROOF DRAIN. SEE TYP OPENING FRAME (RD). (VERIFY LOCATION WITH ROOF PLAN)
RH	INDICATES FRAME REQUIRED FOR ROOF HATCH. SEE TYP OPENING FRAME (RH).
FO	INDICATES FRAME REQUIRED FOR FLOOR OPENING. SEE TYP OPENING FRAME (FO).
PB	INDICATES FRAME REQUIRED FOR POUR BOX OPENING.
	INDICATES BEAM SPLICE. SEE TYPICAL STEEL FRAMING DETAIL SS.01-1F.
F4	INDICATES DIRECTION OF FLOOR DECK SPAN (4" COMP. CONC., U.O.N.).
R	INDICATES DIRECTION OF 1 1/2" ROOF DECK SPAN (WR20, U.O.N.).
	INDICATES BEAM MOMENT CONNECTION.

10k W12x16 10k (110'-8 1/2") — INDICATES THAT THE W12x16 BEAM IS LEVEL WITH THE TOP FLANGE AT ELEVATION 110'-8 1/2" WITH A 10 KIP REACTION AT EACH END.

W12x16 (S) (110'-0) (110'-11") — INDICATES THAT THE W12x16 BEAM IS SLOPED WITH THE TOP OF ITS FLANGE AT ELEVATION 110'-0" AND ELEVATION 110'-11", RESPECTIVELY, AT THE CENTERLINE OF THE TWO COLUMNS. THE BEAM FRAMES OVER THE TOP OF THE RIGHT COLUMN AND INTO THE SIDE OF THE LEFT COLUMN.

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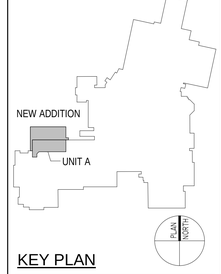

KEY PLAN

100% CONSTRUCTION DOCUMENTS

DRAWN BY: JDR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

UNIT A - ROOF FRAMING PLAN

S2.02

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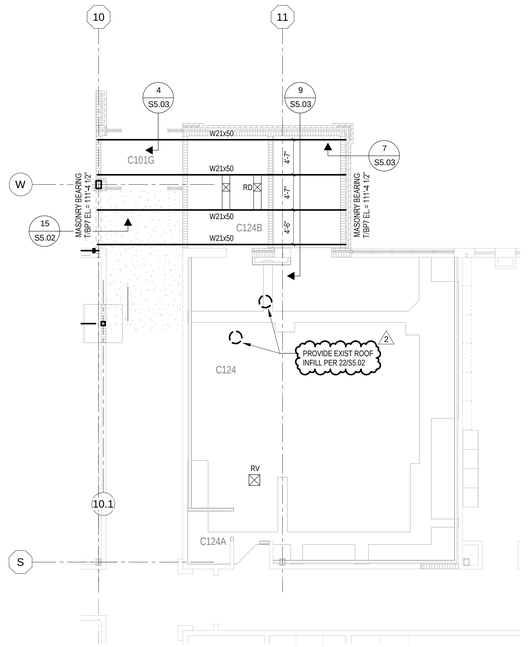

NORTH

UNIT B - ROOF FRAMING PLAN

1/8" = 1'-0"

PLAN NOTES:

1. REFERENCE ELEVATION = TOP OF EXISTING FINISH FLOOR = 100'-0" (852.88' U.S.G.S.).
2. TOP OF STEEL (T/STEEL) ELEVATION = 113'-0" (U.O.N.).

FRAMING PLAN NOTES:

1. SEE SHEET S0.01 FOR GENERAL NOTES.
2. SEE DRAWINGS S5.01 THROUGH S5.02 FOR STEEL FRAMING DETAILS. TYPICAL DETAILS MAY NOT BE CUT ON PLANS BUT APPLY UNLESS OTHERWISE NOTED.
3. SEE S5.01 FOR TYPICAL STEEL FRAMING CONNECTIONS.
4. SEE S4.01 FOR MASONRY WALL BRACING REQUIREMENTS
5. PROVIDE MINIMUM L3x3x1/4 (U.O.N.) ROOF EDGE SUPPORT ANGLES AT ALL ROOF EDGES AND ROOF EXPANSION JOINTS.

BEAM LEGEND:

(*) INDICATES DECK SUPPORT REQUIRED BETWEEN JOISTS. SEE EDGE OF DECK SUPPORT.

(S) INDICATES SLOPED BEAM. ELEVATIONS AT ENDS ARE TOP OF SLOPED BEAM AT CENTERLINE COLUMN OR AT INTERSECTION WITH OTHER BEAMS.

(E) INDICATES EXISTING FRAMING MEMBER.

BP INDICATES BEARING PLATE. SEE BEARING PLATE SCHEDULE.

(TCX) INDICATES THAT THE TOP CHORD OF THE JOIST IS TO BE EXTENDED. (SEE PLAN FOR LENGTH)

(DJB) INDICATES DEEP JOIST BEARING.

(BC) INDICATES BOLTED CONNECTION AT JOIST BEARING.

RV INDICATES FRAME REQUIRED FOR ROOF VENT. SEE TYP OPENING FRAME (RV). (VERIFY LOCATION WITH ROOF PLAN)

RD INDICATES FRAME REQUIRED FOR ROOF DRAIN. SEE TYP OPENING FRAME (RD). (VERIFY LOCATION WITH ROOF PLAN)

RH INDICATES FRAME REQUIRED FOR ROOF HATCH. SEE TYP OPENING FRAME (RH).

FO INDICATES FRAME REQUIRED FOR FLOOR OPENING. SEE TYP OPENING FRAME (FO).

PB INDICATES FRAME REQUIRED FOR POUR BOX OPENING.

INDICATES BEAM SPLICE. SEE TYPICAL STEEL FRAMING DETAIL S5.01-1F.

F4 INDICATES DIRECTION OF FLOOR DECK SPAN (4" COMP. CONC., U.O.N.).

R INDICATES DIRECTION OF 1 1/2" ROOF DECK SPAN (WR20, U.O.N.).

INDICATES BEAM MOMENT CONNECTION.

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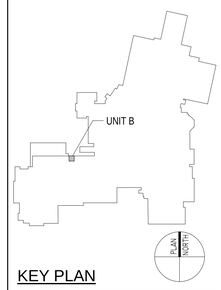

KEY PLAN

100% CONSTRUCTION DOCUMENTS

DRAWN BY: JDR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

UNIT B - ROOF FRAMING PLAN

S2.03

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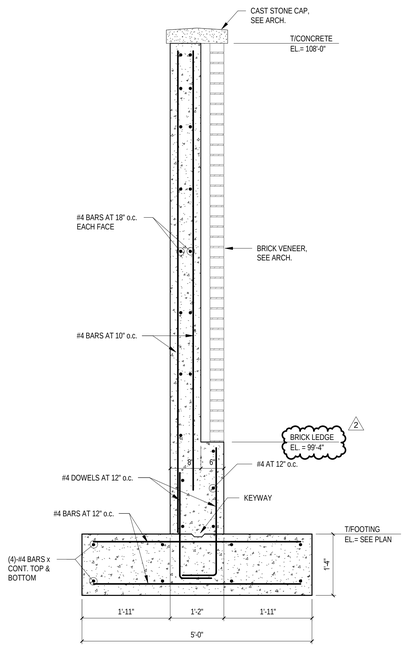
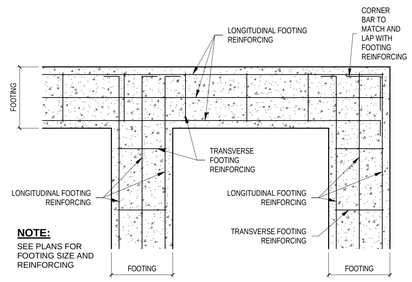


15 TYPICAL MASONRY SCREEN WALL

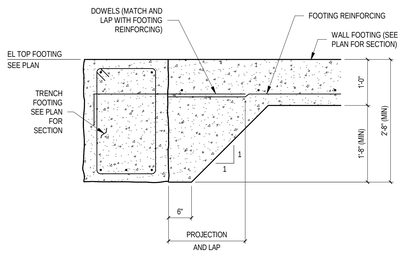
SCALE: 3/4" = 1'-0"



NOTE:
SEE PLANS FOR FOOTING SIZE AND REINFORCING

10 TYPICAL FOOTING REINFORCING AT CORNERS

N.T.S.



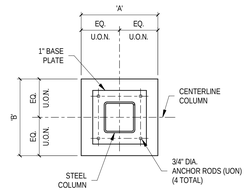
11 FOOTING TRANSITION (FT)

N.T.S.

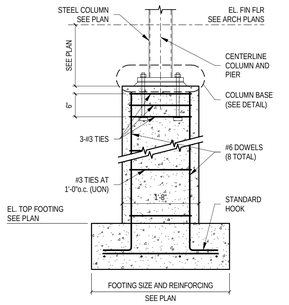
COLUMN SIZE	MARK	
	A	B
P1	1'-8"	1'-8"
P2	2'-0"	2'-0"
P3	2'-0"	2'-8"

NOTES:

1. CENTER PIER ON COLUMN UNLESS OTHERWISE NOTED. (SEE PLAN)



PLAN

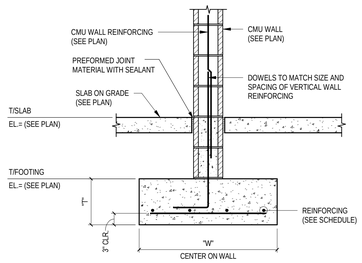


SECTION

7 TYPICAL PIER DETAIL

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

INTERIOR WALL FOOTING SCHEDULE			2000 PSF ALLOWABLE SOIL BEARING PRESSURE	
FTG MARK	DIMENSIONS		REINFORCING	
	"W"	"T"	LONGITUDINAL	TRANSVERSE
WF-2	2'-0"	1'-0"	(3)-#5 BARS CONT.	#4 BARS AT 24"o.c.
WF-2.5	2'-6"	1'-0"	(4)-#5 BARS CONT.	#4 BARS AT 24"o.c.
WF-3	3'-0"	1'-2"	(4)-#5 BARS CONT.	#4 BARS AT 24"o.c.
WF-4	4'-0"	1'-4"	(5)-#6 BARS CONT.	#5 BARS AT 24"o.c.
WF-4.5	4'-6"	1'-4"	(5)-#6 BARS CONT.	#5 BARS AT 24"o.c.
WF-5	5'-0"	1'-6"	(6)-#6 BARS CONT.	#5 BARS AT 24"o.c.
WF-6	6'-0"	2'-0"	(7)-#6 BARS CONT.	#5 BARS AT 12"o.c.



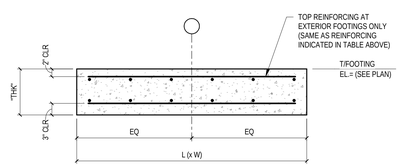
NOTES:

1. PROVIDE PARTIAL HEIGHT STARTER COURSE AS REQUIRED.
2. MASONRY COURSING SHALL MATCH TOP OF SLAB ELEVATION UNLESS OTHERWISE NOTED.
3. FULLY GROUT ALL MASONRY CELLS BELOW THE TOP OF SLAB ELEVATION.

4 TYPICAL INTERIOR WALL FOOTING DETAIL

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

COLUMN FOOTING SCHEDULE			2500 PSF ALLOWABLE SOIL BEARING PRESSURE
MARK	SIZE (L x W x H*)	REINFORCING STEEL	REMARKS
F3	3'-0" x 3'-0" x 1'-0"	(4)-#5 EACH WAY	-
F3.5	3'-6" x 3'-6" x 1'-0"	(4)-#5 EACH WAY	-
F4	4'-0" x 4'-0" x 1'-0"	(5)-#5 EACH WAY	-
F4.5	4'-6" x 4'-6" x 1'-0"	(5)-#5 EACH WAY	-
F5	5'-0" x 5'-0" x 1'-0"	(6)-#5 EACH WAY	-
F6	6'-0" x 6'-0" x 1'-0"	(7)-#6 EACH WAY	-
F6.5	6'-6" x 6'-6" x 1'-0"	(7)-#6 EACH WAY	-
F7	7'-0" x 7'-0" x 1'-3"	(8)-#6 EACH WAY	-
F7.5	7'-6" x 7'-6" x 1'-3"	(8)-#6 EACH WAY	-
F8	8'-0" x 8'-0" x 1'-3"	(9)-#6 EACH WAY	-
F9	9'-0" x 9'-0" x 1'-6"	(10)-#6 EACH WAY	-
F10	10'-0" x 10'-0" x 1'-6"	(11)-#6 EACH WAY	-



FOUNDATION SCHEDULE NOTES:

1. ALL FOUNDATIONS SHALL BE CLASS 'B' CONCRETE.
2. SEE CONCRETE COLUMN AND/OR PIER SCHEDULES FOR DOWELS AT COLUMNS.
3. SEE TYPICAL SECTIONS FOR WALL REINFORCEMENT DOWELS.
4. (*) EXTERIOR COLUMN FOOTINGS (EFX) TO HAVE SAME LENGTH AND WIDTH AS SHOWN IN TABLE. SEE TYPICAL EXTERIOR FOOTING AT COLUMN DETAIL 14-S3.01 FOR THICKNESS.

1 COLUMN FOUNDATION SCHEDULE

N.T.S.

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PROJECT NUMBER: 221165.01
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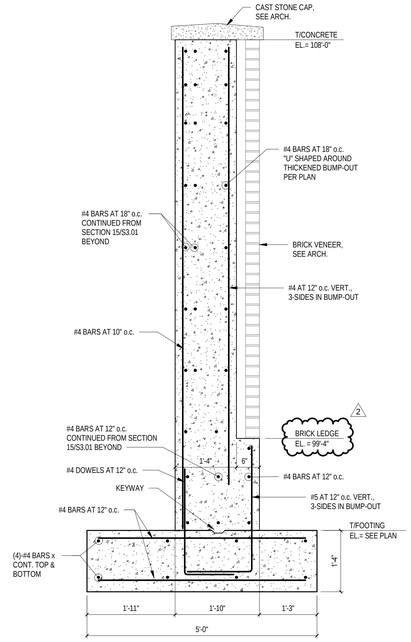
REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

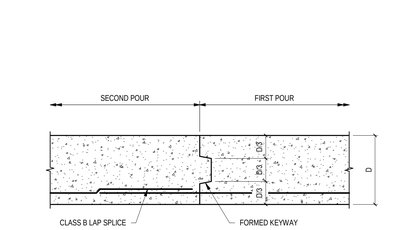
FOUNDATION DETAILS

S3.01



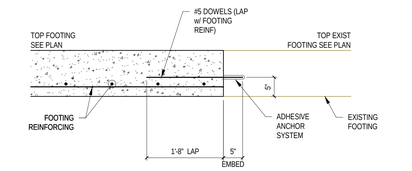
16 MASONRY SCREEN WALL PILASTER

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



12 TYPICAL WALL FOOTING CONSTRUCTION JOINT

N.T.S.



13 FOOTING AT EXISTING

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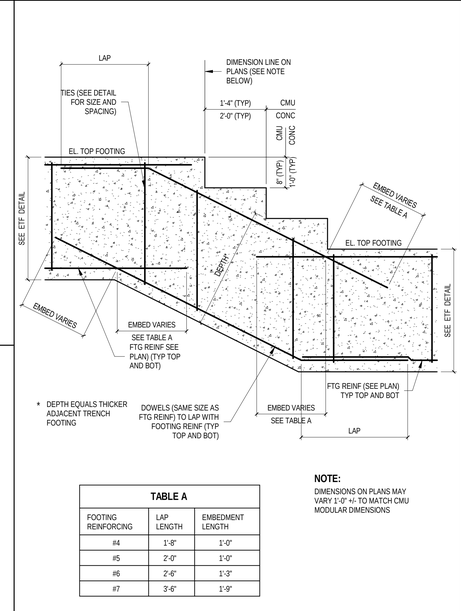
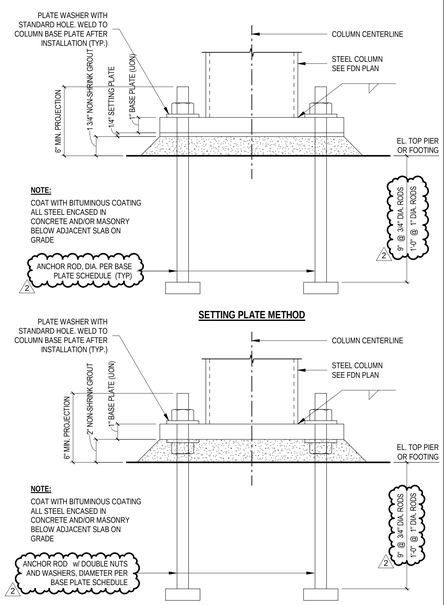


TABLE A		
FOOTING REINFORCING	LAP LENGTH	EMBEDMENT LENGTH
#4	1'-8"	1'-0"
#5	2'-0"	1'-0"
#6	2'-6"	1'-3"
#7	3'-6"	1'-9"

NOTE:
DIMENSIONS ON PLANS MAY VARY 1'-0" +/- TO MATCH CMU MODULAR DIMENSIONS

8 TYPICAL STEPPED TRENCH FOOTING

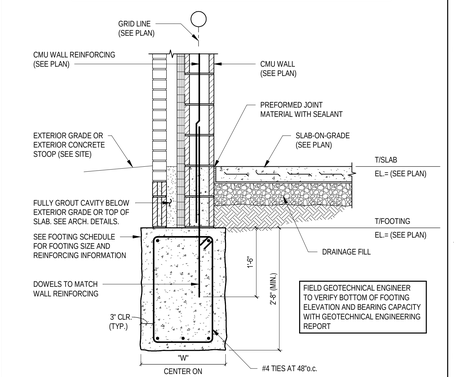
N.T.S.



5 TYPICAL COLUMN BASE

SCALE: 3" = 1'-0"

EXTERIOR TRENCH FOOTING SCHEDULE			
FTG MARK	DIMENSIONS	REINFORCING	
	"W"	TOP	BOTTOM
ETF-2	2'-0"	(2)-#6 BARS CONT.	(3)-#6 BARS CONT.
ETF-2.5	2'-6"	(3)-#6 BARS CONT.	(4)-#6 BARS CONT.
ETF-3	3'-0"	(3)-#6 BARS CONT.	(4)-#6 BARS CONT.
ETF-3.5	3'-6"	(3)-#6 BARS CONT.	(5)-#6 BARS CONT.

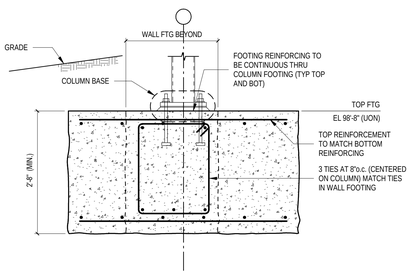


NOTES:

1. USE CONCRETE BRICK ABOVE FOOTING TO MAINTAIN FACE BRICK AT GRADE.
2. SEE PLAN FOR FOOTING MARK AND TOP OF FOOTING ELEVATION.
3. PROVIDE "ETF-22" FOOTING UNLESS OTHERWISE NOTED (U.O.N.).
4. FOOTINGS SHALL BE EXCAVATED TO CREATE VERTICAL FACES TO INDICATED DIMENSIONS WITHIN THE TOLERANCE OF +6" AND -0".
5. GROUT ALL CORES OF CMU BELOW FINISHED FLOOR.

2 TYPICAL EXTERIOR TRENCH FOOTING DETAIL (ETF-X)

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



14 EXTERIOR FOOTING AT COLUMN (EF)

N.T.S.

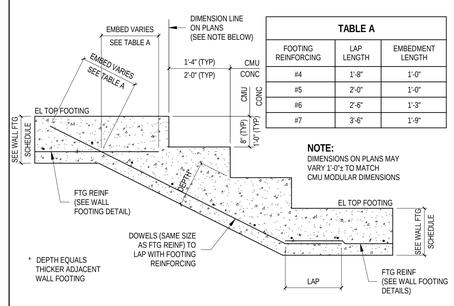
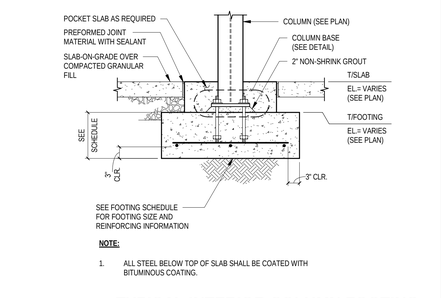


TABLE A		
FOOTING REINFORCING	LAP LENGTH	EMBEDMENT LENGTH
#4	1'-8"	1'-0"
#5	2'-0"	1'-0"
#6	2'-6"	1'-3"
#7	3'-6"	1'-9"

NOTE:
DIMENSIONS ON PLANS MAY VARY 1'-0"± TO MATCH CMU MODULAR DIMENSIONS

9 TYPICAL STEPPED FOOTING

N.T.S.



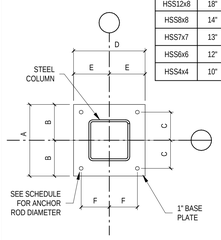
NOTE:

1. ALL STEEL BELOW TOP OF SLAB SHALL BE COATED WITH BITUMINOUS COATING.

6 TYPICAL INTERIOR COLUMN FOOTING DETAIL

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

COLUMN SIZE	MARK						ANCHOR DIAMETER
	A	B	C	D	E	F	
HSS12x8	18"	9"	7 1/2"	14"	7"	5 1/2"	1"
HSS8x8	14"	7"	5 1/2"	14"	7"	5 1/2"	3/4"
HSS7x7	13"	6 1/2"	5"	13"	6 1/2"	5"	3/4"
HSS6x6	12"	6"	4 1/2"	12"	6"	4 1/2"	3/4"
HSS4x4	10"	5"	3 1/2"	10"	5"	3 1/2"	3/4"



3 TYPICAL BASE PLATE

SCALE: 1" = 1'-0"

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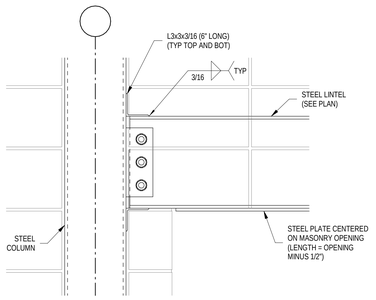
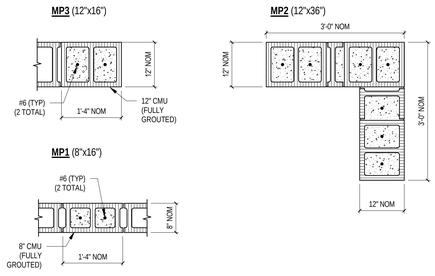
10/4/2023 11:14:34 AM



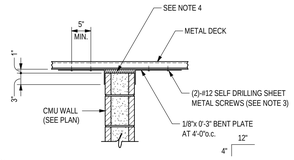
9 **TORSION END CONNECTION (TE)**

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



10 **MASONRY PILASTERS (MP)**

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

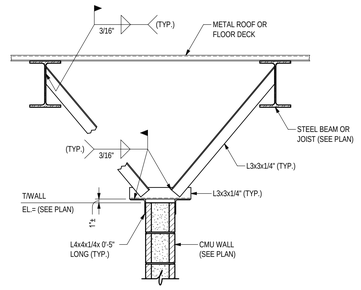


NOTE:

1. PROVIDE LATERAL SUPPORT FOR CMU WALL AT 4'-0"o.c. ALONG THE LENGTH OF THE WALL FOR ALL MASONRY WALLS THAT EXTEND FOR MORE THAN 18 TIMES THE WALL THICKNESS BETWEEN BRACING INSTERSECTING WALLS OR THAT DO NOT HAVE BRACING INTERSECTING WALLS AT BOTH ENDS.
2. ADDITIONAL LATERAL SUPPORT IS NOT REQUIRED WITHIN 6'-0" OF BRACING INTERSECTING WALLS.
3. PROVIDE A SINGLE 3/8" DIA. EXPANSION ANCHOR (2 1/2" EMBED.) ON EITHER SIDE OF CMU WALL AT LOCATIONS WHERE METAL DECK SUPPORTS A CONCRETE FLOOR SLAB.
4. FILL DECK FLUTES WITH BATT INSULATION. PACK FIRE SAFING MATERIAL TIGHT INTO EACH DECK FLUTE AT FIRE RATED WALLS.

6 **MASONRY WALL LATERAL SUPPORT DETAIL AT METAL DECK**

N.T.S.

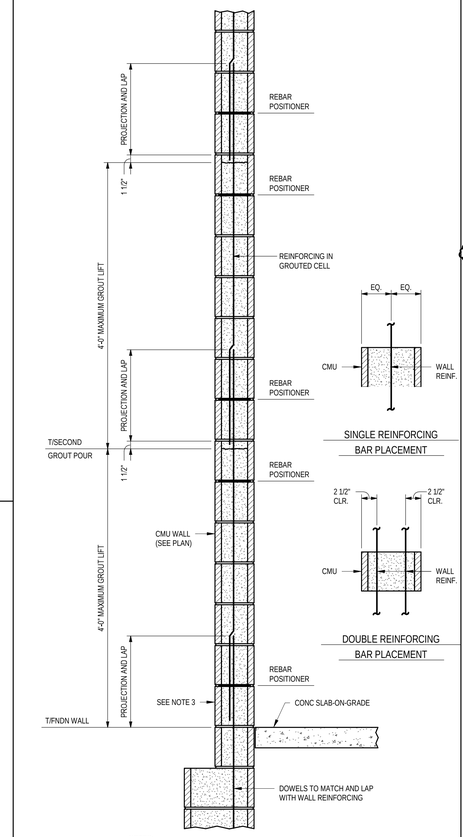


NOTE:

1. PROVIDE LATERAL SUPPORT FOR CMU WALL AT 4'-0"o.c. ALONG THE LENGTH OF THE WALL FOR ALL MASONRY WALLS THAT EXTEND FOR MORE THAN 18 TIMES THE WALL THICKNESS BETWEEN BRACING INSTERSECTING WALLS OR THAT DO NOT HAVE BRACING INTERSECTING WALLS AT BOTH ENDS.
2. ADDITIONAL LATERAL SUPPORT IS NOT REQUIRED WITHIN 6'-0" OF BRACING INTERSECTING WALLS.

7 **MASONRY WALL LATERAL SUPPORT DETAIL AT PARTIAL HEIGHT WALLS**

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



NOTES:

1. SEE PLANS FOR REINFORCING REQUIREMENTS.
2. MULTI-WYTHE WALLS MAY REQUIRE REINFORCING IN EACH WYTHE.
3. 3"x 3" MINIMUM CUT MASONRY INSPECTION AND CLEANOUT HOLE AT REINFORCING (REQUIRED FOR GROUT POUR HEIGHTS GREATER THAN 5'-0").
4. SEE GENERAL NOTES FOR MASONRY REINFORCING LAP LENGTHS.

3 **TYPICAL REINFORCED CMU WALL DETAIL**

N.T.S.

MASONRY WALL PANEL SCHEDULE

MARK	NOM. CMU	VERTICAL REINFORCING		TOP/BOND BEAM ELEVATION	REMARKS
		SIZE	SPACING		
A1	8"	#6	32"	103'-4", 107'-4", 111'-4", 115'-4", 119'-4", 123'-4"	NOTES 1, 4
A2	8"	#5	48"	103'-2", 106'-6", 110'-6", 114'-6", 117'-10"	NOTES 1, 4
A3	8"	#4	48"	102'-8", 106'-8", 110'-8", 123'-4"	NOTES 1, 4
A4	8"	#4	48"	104'-0", 108'-0", 112'-0", 116'-0", 120'-8"	NOTES 1, 4
A5	8"	#4	48"	109'-4", 112'-0", 116'-0", 120'-8"	NOTES 1, 4
A6	8"	#4	48"	104'-0", 108'-8", 110'-8"	NOTES 1, 4
A7	8"	#4	32"	102'-8", 106'-0", 109'-4"	NOTES 1, 4, 5
A8	8"	#4	32"	102'-8" 106'-0", 110'-0"	NOTES 1, 4, 5
A9	8"	#4	32"	102'-8", 106'-0", 110'-0", 112'-8", 115'-4"	NOTES 1, 4, 5
B1	8"	#4	48"	103'-4", 107'-4", 111'-4", 112'-8"	NOTES 2, 4, 5

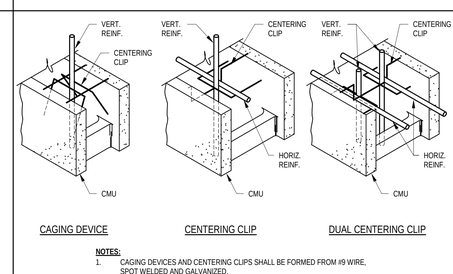
2

NOTES:

1. GROUT SOLID FROM HIGHEST BOND BEAM TO TOP OF WALL.
2. GROUT WALL SOLID BETWEEN TOP TWO BOND BEAMS.
3. GROUT WALL SOLID.
4. GROUT ALL COURSES BELOW FINISHED FLOOR.
5. CELL IMMEDIATELY BELOW OR ADJACENT TO BEAM BEARING SHALL BE GROUTED/ REINFORCED.

1 **MASONRY WALL PANEL SCHEDULE**

N.T.S.



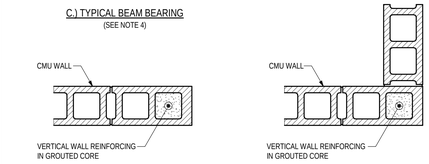
CAGING DEVICE CENTERING CLIP DUAL CENTERING CLIP

NOTES:

1. CAGING DEVICES AND CENTERING CLIPS SHALL BE FORMED FROM #9 WIRE, SPOT WELDED AND GALVANIZED.
2. REINFORCEMENT SHALL BE CENTERED IN CELLS (U.O.N.).

4 **TYPICAL CMU REINFORCEMENT POSITIONING DETAILS**

N.T.S.



A.) TYPICAL INTERSECTION

C.) TYPICAL BEAM BEARING
(SEE NOTE 4)

D.) TYPICAL JAMB

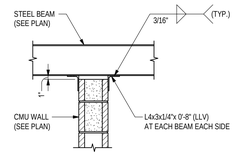
B.) TYPICAL CORNER

NOTES:

1. REINFORCING SHOWN IN ADDITION TO REINFORCING SHOWN ON PLANS AND SPECIAL DETAILS.
2. REINFORCING TO BE SAME SIZE AS ADJACENT WALL REINFORCING INDICATED ON PLANS.
3. TYPICAL DETAILS APPLIES TO ALL EXTERIOR WALLS, INTERIOR LOAD BEARING WALLS, AND ALL WALLS SCHEDULED TO BE REINFORCED.
4. SEE TYPICAL STEEL BEAM BEARING ON NEW MASONRY DETAIL FOR ADDITIONAL REQUIREMENTS.

8 **TYPICAL VERTICAL CMU WALL REINFORCING DETAILS**

N.T.S.

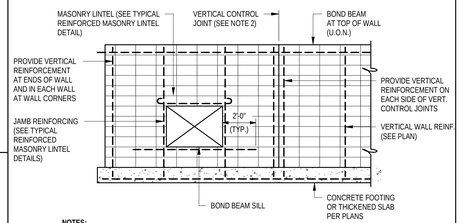


NOTE:

1. PROVIDE LATERAL SUPPORT FOR CMU WALL AT 4'-0"o.c. ALONG THE LENGTH OF THE WALL FOR ALL MASONRY WALLS THAT EXTEND FOR MORE THAN 18 TIMES THE WALL THICKNESS BETWEEN BRACING INSTERSECTING WALLS OR THAT DO NOT HAVE BRACING INTERSECTING WALLS AT BOTH ENDS.
2. ADDITIONAL LATERAL SUPPORT IS NOT REQUIRED WITHIN 6'-0" OF BRACING INTERSECTING WALLS.

5 **MASONRY WALL LATERAL SUPPORT DETAIL AT STEEL BEAMS**

N.T.S.



NOTES:

1. IN ADDITION TO THE MASONRY WALL REINFORCEMENT SHOWN, ALL MASONRY WALLS SHALL HAVE CONTINUOUS GALVANIZED LADDER TYPE HORIZONTAL JOINT REINFORCING WITH MINIMUM 9 GAUGE SIDE RODS AT 16"o.c. UNLESS OTHERWISE NOTED.
2. CONTROL JOINTS FOR REINFORCED CMU WALLS SHALL BE LOCATED AT NO MORE THAN 20'-0" o.c., AT 1.5 x WALL HEIGHT AND AT CHANGES IN WALL HEIGHT OR THICKNESS.
3. SEE TYPICAL HORIZONTAL JOINT REINFORCING DETAILS FOR ADDITIONAL REQUIREMENTS.
4. SEE PLANS AND WALL PANEL SCHEDULE FOR VERTICAL REINFORCING BAR SIZE AND SPACING.
5. SEE TYPICAL LINTEL BEARING DETAILS FOR MASONRY REINFORCING AT OPENINGS WITH LINTELS.
6. PROVIDE BOND BEAMS AT TOP OF WALL AND AT 4' o.c. U.O.N.
7. PROVIDE (2) BARS EACH SIDE OF ALL OPENINGS ON WALLS GREATER THAN 20 FEET TALL.

2 **TYPICAL CMU WALL REINFORCEMENT ELEVATION**

N.T.S.

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TLF Job No: 2023-119

100% CONSTRUCTION DOCUMENTS

DRAWN BY: JDR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

MASONRY DETAILS

S4.01

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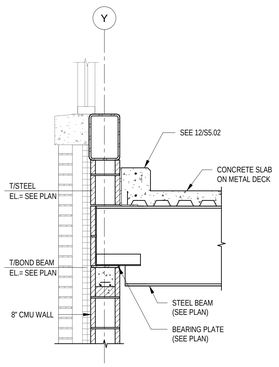
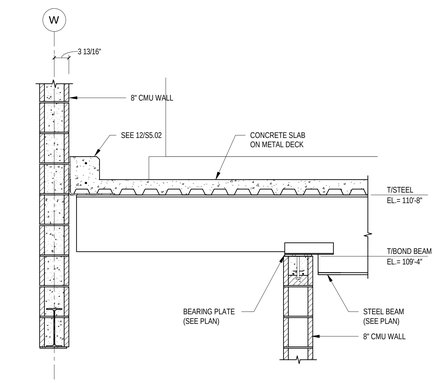


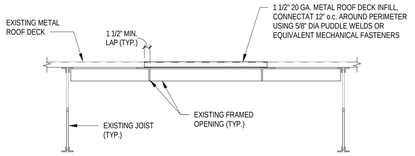
20 **SECTION**

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



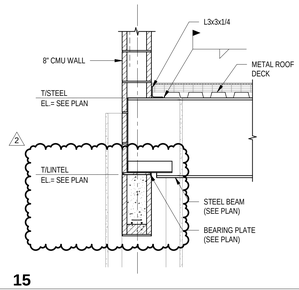
21 **SECTION**

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



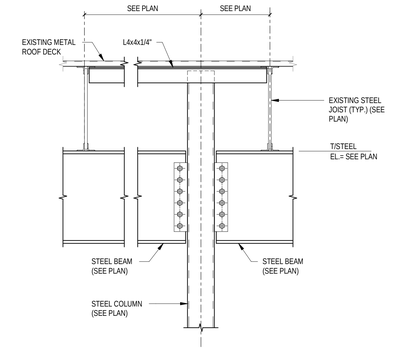
22 **TYPICAL ROOF OPENING INFILL DETAIL**

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



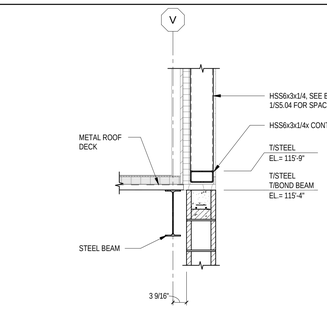
15 **SECTION**

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



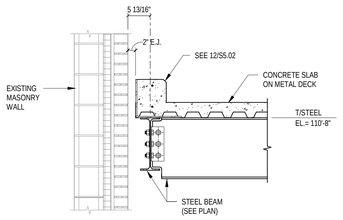
16 **SECTION**

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



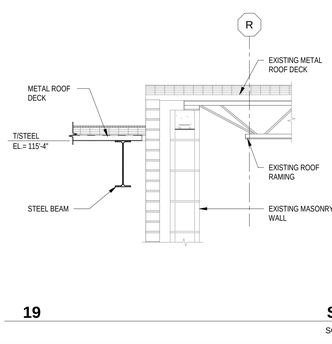
17 **SECTION**

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



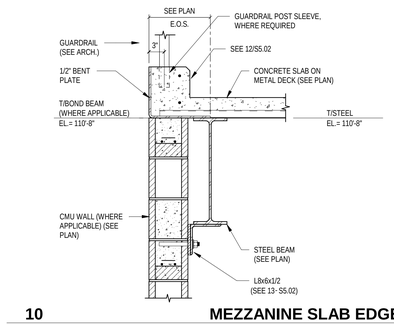
18 **SECTION**

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



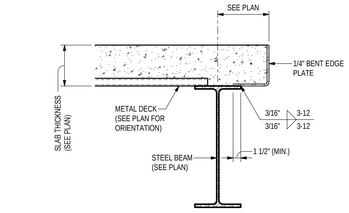
19 **SECTION**

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



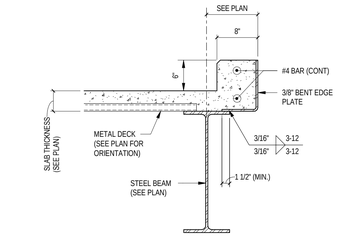
10 **MEZZANINE SLAB EDGE**

SCALE: 1" = 1'-0"



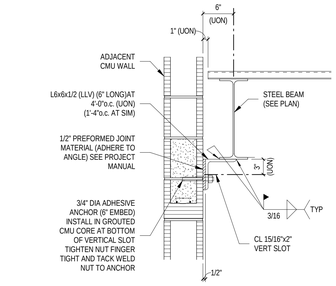
11 **SLAB EDGE DETAIL**

SCALE: 1" = 1'-0"



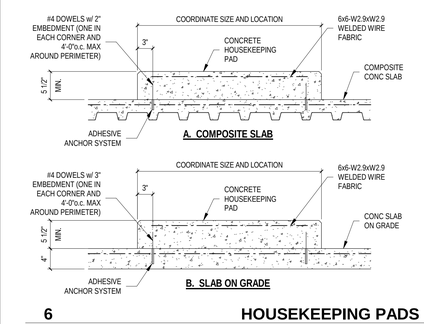
12 **SLAB EDGE DETAIL**

SCALE: 1" = 1'-0"



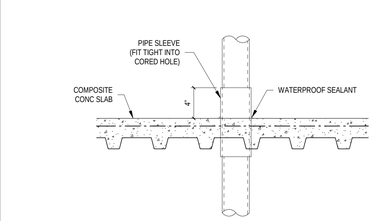
13 **TYPICAL ROOF EDGE CONNECTION**

SCALE: 1" = 1'-0"



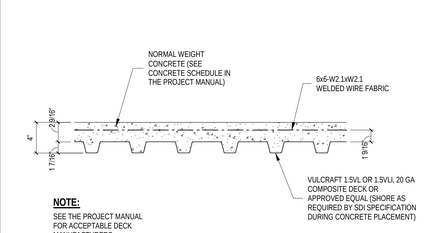
6 **HOUSEKEEPING PADS**

N.T.S.



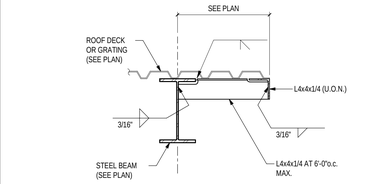
7 **PIPE SLEEVE THRU CONCRETE SLAB**

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



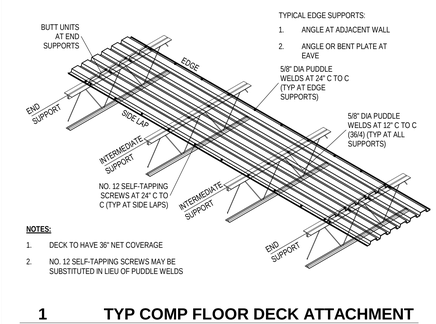
8 **4" COMPOSITE CONCRETE SLAB**

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



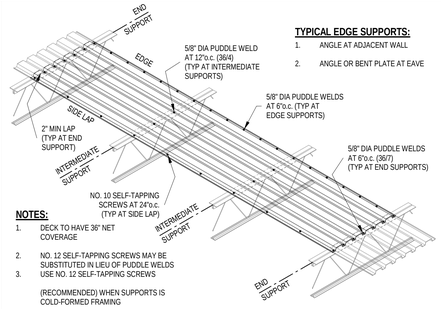
9 **OVERHANG ROOF DECK EDGE SUPPORT DETAILS**

SCALE: 1" = 1'-0"



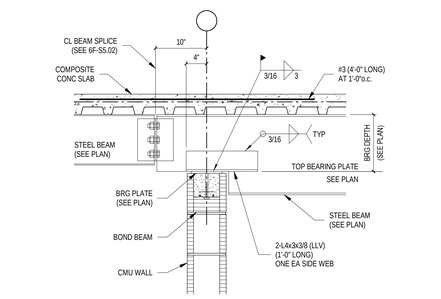
1 **TYP COMP FLOOR DECK ATTACHMENT**

N.T.S.



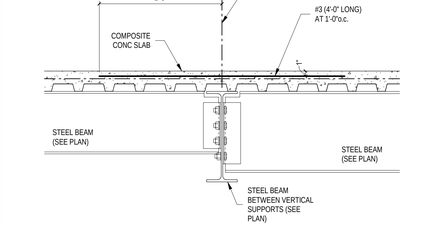
2 **TYPICAL ROOF DECK ATTACHMENT**

N.T.S.



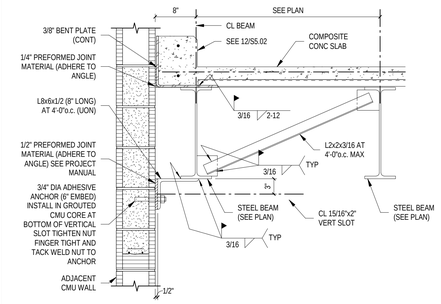
3 **BEAM TO BEAM CONNECTIONS**

SCALE: 1" = 1'-0"



4 **TYPICAL SLAB REINFORCEMENT AT GIRDER**

SCALE: 1" = 1'-0"



5 **TYPICAL FLOOR EDGE CONNECTION**

SCALE: 1" = 1'-0"

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

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TLF Job No: 2023-119

100% CONSTRUCTION DOCUMENTS

TRACY A. CHARITON REGISTERED No. 10700203 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: JDR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

FRAMING DETAILS

S5.02

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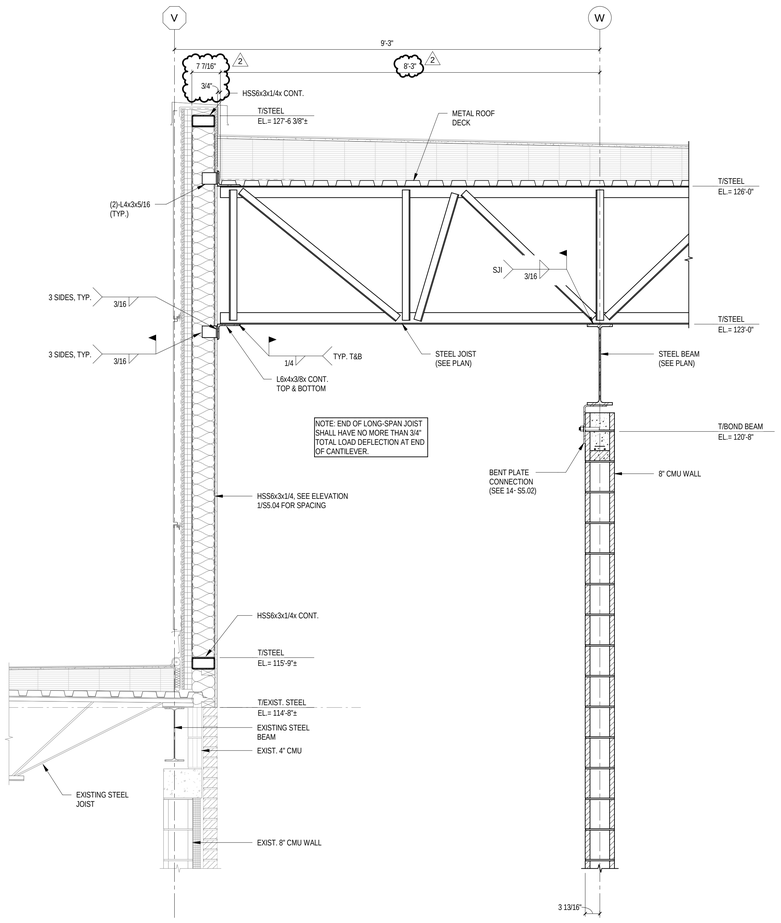
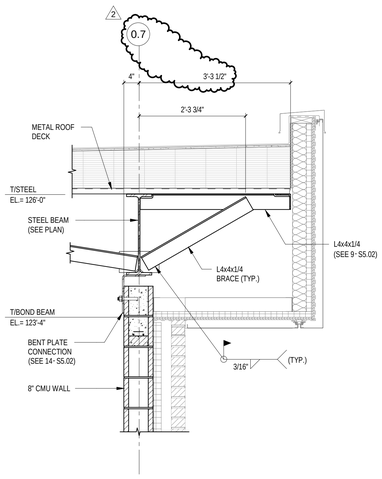


5 SECTION

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



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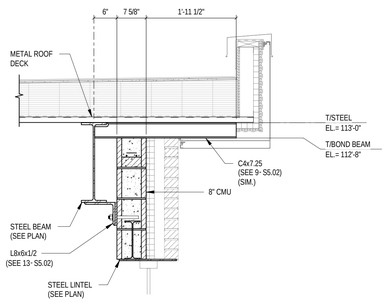

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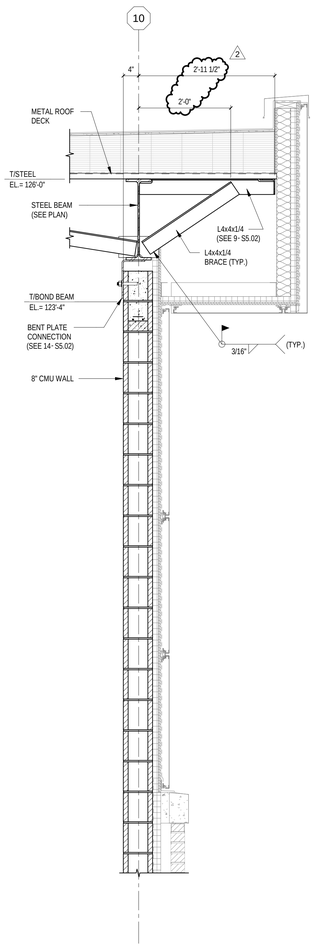

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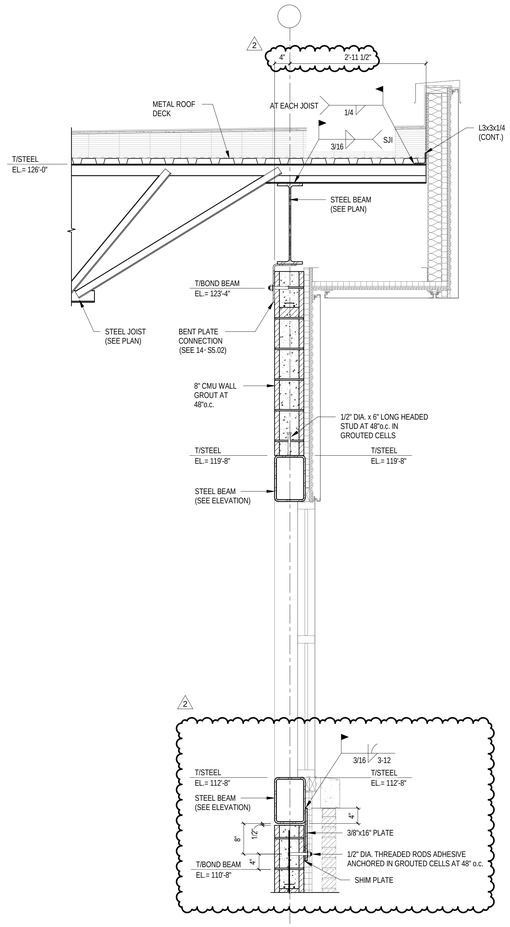

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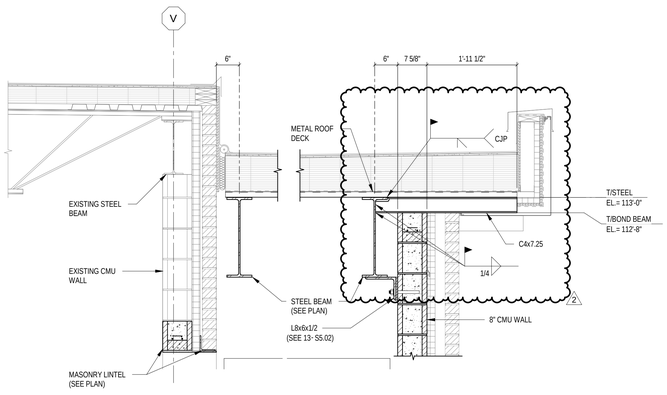

9 SECTION

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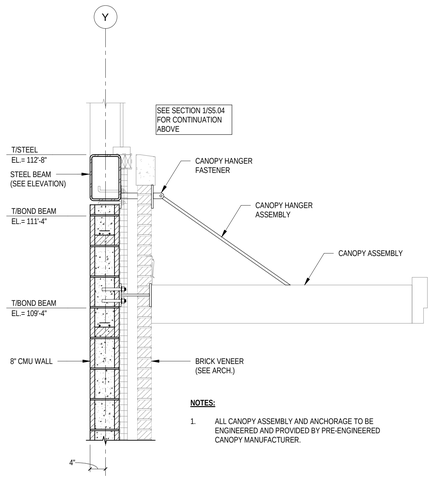

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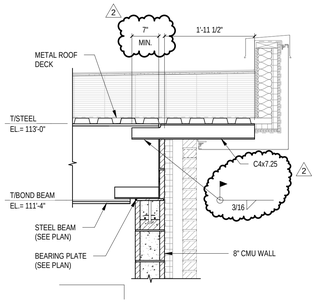
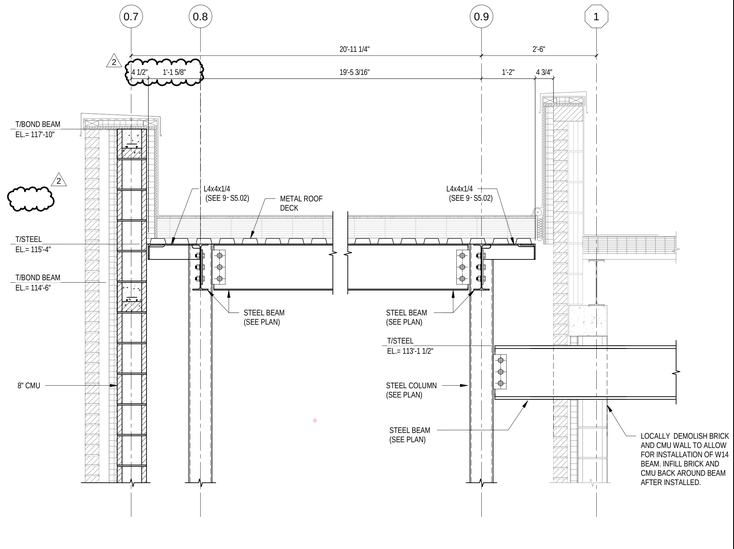


7 SECTION

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



6 SECTION

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

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

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TLF Job No: 2023-119

100% CONSTRUCTION DOCUMENTS

DRAWN BY: JDR
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

SECTIONS AND DETAILS

S5.03

BUILDING CODE INFORMATION

1. BUILDING DESCRIPTION: EXISTING HIGH SCHOOL - NEW ADDITION AND RENOVATION TO EXISTING VOCATIONAL AREAS

2. APPLICABLE CODE:
2012 INTERNATIONAL BUILDING CODE - INDIANA BUILDING CODE, 2014 EDITION (675 IAC 13-2.6)
2012 INTERNATIONAL FIRE CODE - INDIANA FIRE CODE, 2014 EDITION (675 IAC 22-2)
2012 INTERNATIONAL MECHANICAL CODE - INDIANA MECHANICAL CODE, 2014 EDITION (675 IAC 18-1.6)
2012 INTERNATIONAL PLUMBING CODE - INDIANA PLUMBING CODE, 2012 EDITION (675 IAC 16-1.4)
2012 INTERNATIONAL ELECTRICAL CODE - INDIANA ELECTRICAL CODE, 2009 EDITION [NFPA 70-2008] (675 IAC 17-1.8)
INDIANA ENERGY CONSERVATION CODE 2010 (ASHRAE 90.1, 2007 AMENDED) (672 IAC 19-4)
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

3. BUILDING AREA AND HEIGHT

A. OCCUPANCY / USE GROUP: E, EDUCATION NON SEPARATED
A1, AUDITORIUM (EXISTING)
A2, CAFETERIA / COMMONS (EXISTING)
A3, GYMNASIUM (EXISTING)
B, ADMINISTRATION
USES (302.1)

B. CONSTRUCTION TYPE: IIB (601)

C. AREA LIMITATION: UNLIMITED
1. ACTUAL AREA:
NEW ADDITION, FIRST FLOOR: 16,188 SF
EXISTING BUILDING: 1,100,932 SF
TOTAL GROSS SF 1,117,120 SF

D. HEIGHT LIMITATION: 2 STORY, 55'-0" (TABLE 503)
1. HEIGHT MODIFICATIONS: 3 STORY, 75'-0" (504.2)
2. ACTUAL HEIGHT: 1 STORY, 28'-0" (NEW ADDITION)

4. USE AND OCCUPANCY CLASSIFICATION INDIANA BUILDING CODE CHAPTER 3:
E - EDUCATION, B - BUSINESS, A2/A3 - ASSEMBLY, A4 - ASSEMBLY

INCIDENTAL USE AREAS INDIANA BUILDING CODE SECTION AND TABLE 508.2

SMOKE PARTITION & AUTO SPRINKLER SYSTEM

ACCESSORY USE AREAS INDIANA BUILDING CODE SECTION 508.3.1.

ACCESSORY OCCUPANCIES ARE THOSE OCCUPANCIES SUBSIDIARY TO THE MAIN OCCUPANCY OF THE BUILDING OR PORTION THEREOF. AGGREGATE ACCESSORY OCCUPANCIES SHALL NOT OCCUPY MORE THAN 10% OF THE AREA OF THE STORY IN TABLE 503 WITHOUT HEIGHT AND AREA INCREASES IN ACCORDANCE WITH SECTIONS 504 AND 506 FOR SUCH ACCESSORY OCCUPANCIES (2012 INTERNATIONAL BUILDING CODE)

AREA LIMITATION INDIANA BUILDING CODE SECTION 503

5. TYPE OF CONSTRUCTION INDIANA BUILDING CODE CHAPTER 6 (SEE TABLE)

TYPE IIB

FIRE SEPARATION DISTANCES INDIANA BUILDING CODE TABLE 602:

REFER TO THE SITE PLAN DRAWINGS FOR LOCATION OF BUILDING(S) ON SITE; DISTANCES TO CLOSEST INTERIOR LOT LINES; TO THE CENTER OF A STREET, ALLEY OR PUBLIC WAY; OR TO AN IMAGINARY LINE BETWEEN TWO BUILDINGS ON THE SAME LOT.

6. FIRE RESISTANCE RATED CONSTRUCTION INDIANA BUILDING CODE CHAPTER 7:

REFER TO THE CODE PLANS FOR MAXIMUM AREAS OF EXTERIOR OPENINGS BASED ON THE FIRE SEPARATION DISTANCES.

PENETRATIONS THROUGH FIRE-RESISTANCE-RATED ASSEMBLIES SHALL BE PROVIDED WITH FIRESTOPPING PER PROJECT MANUAL.

CEILING AND FLOOR OPENINGS THROUGH NON-FIRE-RESISTANCE-RATED ASSEMBLIES SHALL BE PROVIDED WITH FIREBLOCKING PER PROJECT MANUAL.

7. INTERIOR FINISHES TO COMPLY WITH INDIANA BUILDING CODE CHAPTER 8

8. FIRE PROTECTION SYSTEMS INDIANA BUILDING CODE CHAPTER 9:

THE ENTIRE BUILDING IS PROTECTED WITH AN AUTOMATIC SPRINKLER SYSTEM, EXCEPT FOR THE EXISTING AUDITORIUM, WHICH IS SEPARATED BY 2 HOUR FIRE BARRIERS.

THE NEW ADDITION SHALL BE PROVIDED WITH AN AUTOMATIC SPRINKLER SYSTEM THROUGHOUT. REFER TO FIRE PROTECTION DRAWINGS.

9. MEANS OF EGRESS INDIANA BUILDING CODE CHAPTER 10:

THE MEANS OF EGRESS REQUIREMENTS SHALL BE DETERMINED BY THE ACTUAL OR COMPUTED NUMBER OF OCCUPANTS WHICHEVER IS THE LARGEST NUMBER. REFER TO THE CODE PLANS FOR ROOM OCCUPANT LOADS. AREAS OR ROOMS WITH 50 OR MORE OCCUPANTS SHALL BE PROVIDED WITH TWO OR MORE MEANS OF EGRESS; 500 OR MORE OCCUPANTS SHALL BE PROVIDED WITH THREE OR MORE MEANS OF EGRESS; AND 1000 OR MORE OCCUPANTS SHALL BE PROVIDED WITH FOUR OR MORE MEANS OF EGRESS.

10. STRUCTURAL DESIGN LOADS:

REFER TO STRUCTURAL DRAWINGS FOR CODE REQUIREMENTS

BUILDING DESIGNED FOR:
5,400 STUDENTS AND 500 STAFF

XXXX — ROOM NAME
XXXX — ROOM NUMBER
ES — OCCUPANCY CLASSIFICATION - REFER TO KEY
45 — CALCULATED MAXIMUM OCCUPANT LOAD

ROOM LEGEND - FIRST FLOOR UNIT A

ROOM NO.	ROOM NAME	AREA (SF)
C101	STORAGE	1015 SF
C101A	STORAGE	1287 SF
C101C	MEDIA DATA	61 SF
C101F	CORRIDOR	976 SF
C101G	VESTIBULE	70 SF
C101H	CORRIDOR	992 SF
C101J	CORRIDOR	832 SF
C104	OFFICE	638 SF
C106	CONSTRUCTION TRADES LAB	3699 SF
C106A	STORAGE	622 SF
C106B	ADVANCED CONSTRUCTION TRADES LAB	3867 SF
C107	CLASSROOM	1015 SF
C107A	ADVANCED MFG. ARTISAN LAB	1695 SF
C107B	FINISHING ROOM	97 SF
C109	CAD LAB	1347 SF
C110	CAD LAB	1217 SF
C111	MEDIA DATA	83 SF
C114	CAD LAB	1188 SF
C115	ADVANCED AUTOMOTIVE SERVICES LAB	4790 SF
C115A	STORAGE	468 SF
C115B	AUTOMOTIVE SERVICES LAB	2828 SF
C115C	FINISHING ROOM	201 SF
C116	ADVANCED MFG. INNOVATION LAB	1278 SF
C116A	ADVANCED MFG. CLEAN LAB	762 SF
C206A	MEZZANINE	617 SF
C206B	MECHANICAL MEZZANINE	577 SF
C206C	MECHANICAL MEZZANINE	651 SF
C215	MEZZANINE	1416 SF

ROOM LEGEND - FIRST FLOOR UNIT B

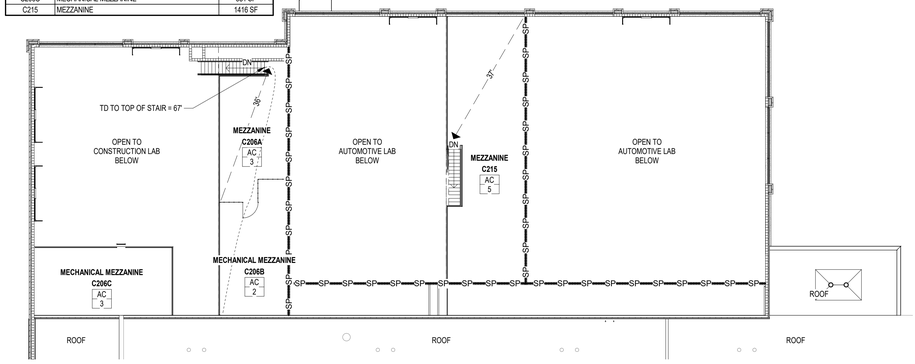
ROOM NO.	ROOM NAME	AREA (SF)
C124	CULINARY ARTS	1299 SF
C124A	CLOSET	39 SF
C124B	DRY GOODS	154 SF
C124C	WALK-IN	129 SF

ROOM LEGEND - FIRST FLOOR UNIT C

ROOM NO.	ROOM NAME	AREA (SF)
C132	STUDIO	244 SF
C133	PODCAST	144 SF
C134	PASSAGE	36 SF
C135	STUDIO	63 SF
C136	STORAGE	105 SF
C136A	COMPUTER LAB	201 SF
C142	STUDIO B	196 SF
C143	STUDIO A	1036 SF
C144	TV CONTROL	251 SF
C144A	EQUIPMENT ROOM	120 SF

OCCUPANCY CLASSIFICATION - KEY

Class Abbreviation	Classification	Area Per Occupant	Occupancy Gross or Net
A1	A1 - Assembly With Fixed Seats		
A2	A2 - Assembly Without Fixed Seats - Unconcentrated (Tables and Chairs)	15 SF	Net
A3	A3 - Assembly Without Fixed Seats - Concentrated (Chairs Only - Not Fixed)	7 SF	Net
A4	A4 - Assembly Without Fixed Seats - Standing Space	5 SF	Net
AC	AC - Accessory Storage Areas, Mechanical Equipment Rooms	300 SF	Gross
AG	AG - Assembly - Gaming Floors (Keni, Slots, etc.)	11 SF	Gross
AH	AH - Aircraft Hangars	500 SF	Gross
AR	AR - Agricultural Building	300 SF	Gross
AT1	AT1 - Airport Terminal - Baggage Claim	20 SF	Gross
AT2	AT2 - Airport Terminal - Baggage Handling	300 SF	Gross
AT3	AT3 - Airport Terminal - Concourse	100 SF	Gross
AT4	AT4 - Airport Terminal - Waiting Area	15 SF	Gross
B	B - Business Areas	100 SF	Gross
BC	BC - Bowling Centers (Allow 5 Persons per Lane, 15 ft of Runway) Additional Areas	7 SF	Net
CB	CB - Concentrated Business Use Area	50 SF	Gross
CR	CR - Courtrooms - (Other than fixed seating area)	40 SF	Net
D	D - Dormitories	50 SF	Gross
DC	DC - Day Care	35 SF	Net
EC	EC - Educational - Classroom Areas	20 SF	Net
ES	ES - Educational - Shops and other Vocational Room Areas	50 SF	Net
EX	EX - Exercise Rooms	50 SF	Gross
H5	H-5 Fabrication and Manufacturing Areas	200 SF	Gross
IIP	IIP - Institutional Areas - Inpatient Treatment Areas	240 SF	Gross
IND	IND - Industrial Areas	100 SF	Gross
IOP	IOP - Institutional Areas - Outpatient Areas	100 SF	Gross
ISA	ISA - Institutional Areas - Sleeping Areas	120 SF	Gross
KIT	KIT - Kitchens - commercial	200 SF	Gross
L	L - Locker Rooms	50 SF	Gross
LR	LR - Library - Reading Rooms	50 SF	Net
LS	LS - Library - Stack Areas	100 SF	Gross
MBF	MBF - Mercantile - Basement and grade Floor Areas	30 SF	Gross
MOF	MOF - Mercantile - Areas on other Floors	60 SF	Gross
MSA	MSA - Mercantile - Storage, Stock, Shipping Areas	300 SF	Gross
PG	PG - Parking Garages	200 SF	Gross
RES	RES - Residential	200 SF	Gross
S	S - Stages and Platforms	15 SF	Net
SSD	SSD - Skating Rings, Swimming Pools - Decks	15 SF	Gross
SSR	SSR - Skating Rinks, Swimming Pools - Rink and Pool	50 SF	Gross
U	U - Unoccupied - Corridors	0 SF	Gross
W	W - Warehouses	500 SF	Gross



2 MEZZANINE - CODE PLAN

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

1 FIRST FLOOR - CODE PLAN

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

CODE PLAN LEGEND

FIRE WALLS
TO EXTEND 30 INCHES ABOVE THE ROOF OR EXTEND TO THE BOTTOM OF A NON-COMBUSTIBLE ROOF DECK
3 — 3 — INDICATES 3 HOUR FIRE-RESISTANT RATED FIRE WALL WITH 3 HOUR RATED OPENING PROTECTIVES, SECTION 706
2 — 2 — INDICATES 2 HOUR FIRE-RESISTANT RATED FIRE WALL WITH 1-1/2 HOUR RATED OPENING PROTECTIVES, SECTION 706

FIRE BARRIERS
TO EXTEND TO THE FLOOR/ROOF DECK
INDICATES 3 HOUR FIRE-RESISTANT RATED FIRE BARRIER THAT WITH 3 HOUR RATED OPENING PROTECTIVES, SECTION 707
90 — 90 — INDICATES 2 HOUR FIRE-RESISTANT RATED FIRE BARRIER WITH 1-1/2 HOUR RATED OPENING PROTECTIVES, SECTION 707
INDICATES 2 HOUR FIRE-RESISTANT RATED SHAFT AND/OR EXIT ENCLOSURE FIRE BARRIER WITH 90 MINUTE RATED OPENING PROTECTIVES, SECTION 707
INDICATES 1 HOUR FIRE-RESISTANT RATED SHAFT AND/OR EXIT ENCLOSURE FIRE BARRIER WITH 1 HOUR RATED OPENING PROTECTIVES, SECTION 707
1 — 1 — INDICATES 1 HOUR FIRE-RESISTANT RATED FIRE BARRIER WITH 3/4 HOUR RATED OPENING PROTECTIVES, SECTION 707

FIRE PARTITIONS
TO EXTEND TO THE FLOOR/ROOF DECK OR FIRE-RESISTANCE-RATED FLOOR/CEILING OR ROOF/CEILING ASSEMBLY
20 — 20 — INDICATES 1 HOUR FIRE-RESISTANT RATED EXIT ACCESS ENCLOSURE FIRE PARTITION WITH 1/3 HOUR RATED OPENING PROTECTIVES, SECTION 709
45 — 45 — INDICATES 1 HOUR FIRE-RESISTANT RATED FIRE PARTITION WITH 3/4 HOUR RATED OPENING PROTECTIVES, SECTION 709

SMOKE BARRIERS
TO EXTEND TO THE FLOOR/ROOF DECK
SB — SB — INDICATES 1 HOUR FIRE-RESISTANT RATED SMOKE BARRIER WITH 20 MINUTE (1/3 HOUR) RATED OPENING PROTECTIVES, SECTION 709

SMOKE PARTITIONS
TO EXTEND TO THE FLOOR/ROOF DECK
SP — SP — INDICATES SMOKE PARTITION WITH AUTOMATIC AND/OR SELF CLOSING SMOKE AND DRAFT CONTROL OPENINGS, SECTION 710

HORIZONTAL ASSEMBLIES FLOOR AND ROOF ASSEMBLIES
INDICATES 2 HOUR FIRE-RESISTANT RATED FLOOR CONSTRUCTION, TABLE 601 AND SECTION 712
INDICATES 1 HOUR FIRE-RESISTANT RATED ROOF CONSTRUCTION, TABLE 601 AND SECTION 712
INDICATES 1 HOUR FIRE-RESISTANT RATED FLOOR CONSTRUCTION, TABLE 601 AND SECTION 712

MISCELLANEOUS
S — S — INDICATES INCIDENTAL ACCESSORY OCCUPANCY PARTITION WITH CONSTRUCTION CAPABLE OF RESISTING THE PASSAGE OF SMOKE THAT EXTENDS TO THE FLOOR/ROOF DECK ABOVE AND HAS SELF CLOSING AND/OR AUTOMATIC CLOSING DOORS WITH SMOKE DETECTORS, SECTION 509
NR — NR — INDICATES NON FIRE-RESISTANT RATED WALL THAT EXTENDS TO THE FLOOR/ROOF DECK

BUILDING
INDICATES AREA NOT IN PROJECT (EXISTING)
INDICATES AREA OF NEW CONSTRUCTION
INDICATES AREA OF RENOVATION

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
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CARMEL CLAY SCHOOLS

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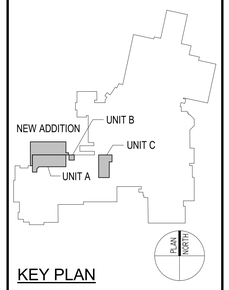
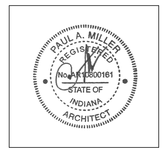


KEY PLAN

100% CONSTRUCTION DOCUMENTS



DRAWN BY: DSR
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

CODE PLAN

A0.01

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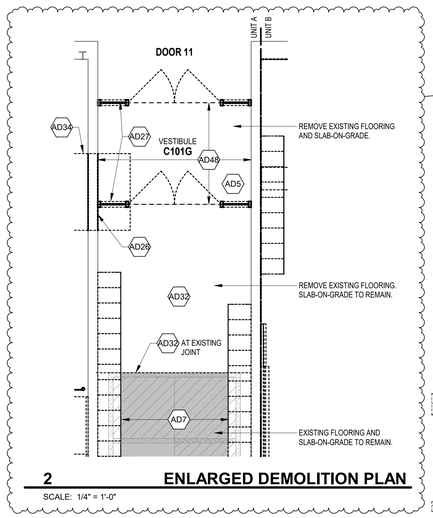


2 ENLARGED DEMOLITION PLAN

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

PLAN LEGEND

- NEW DOOR
- EXISTING DOOR TO REMAIN
- DEMO DOOR
- NEW WALL
- EXISTING WALL TO REMAIN
- DEMO WALL
- INDICATES RECESSED SLAB -3/8"

NOTE:
SEE SHEET A1.03 FOR UNIT B AND C DEMOLITION PLANS.

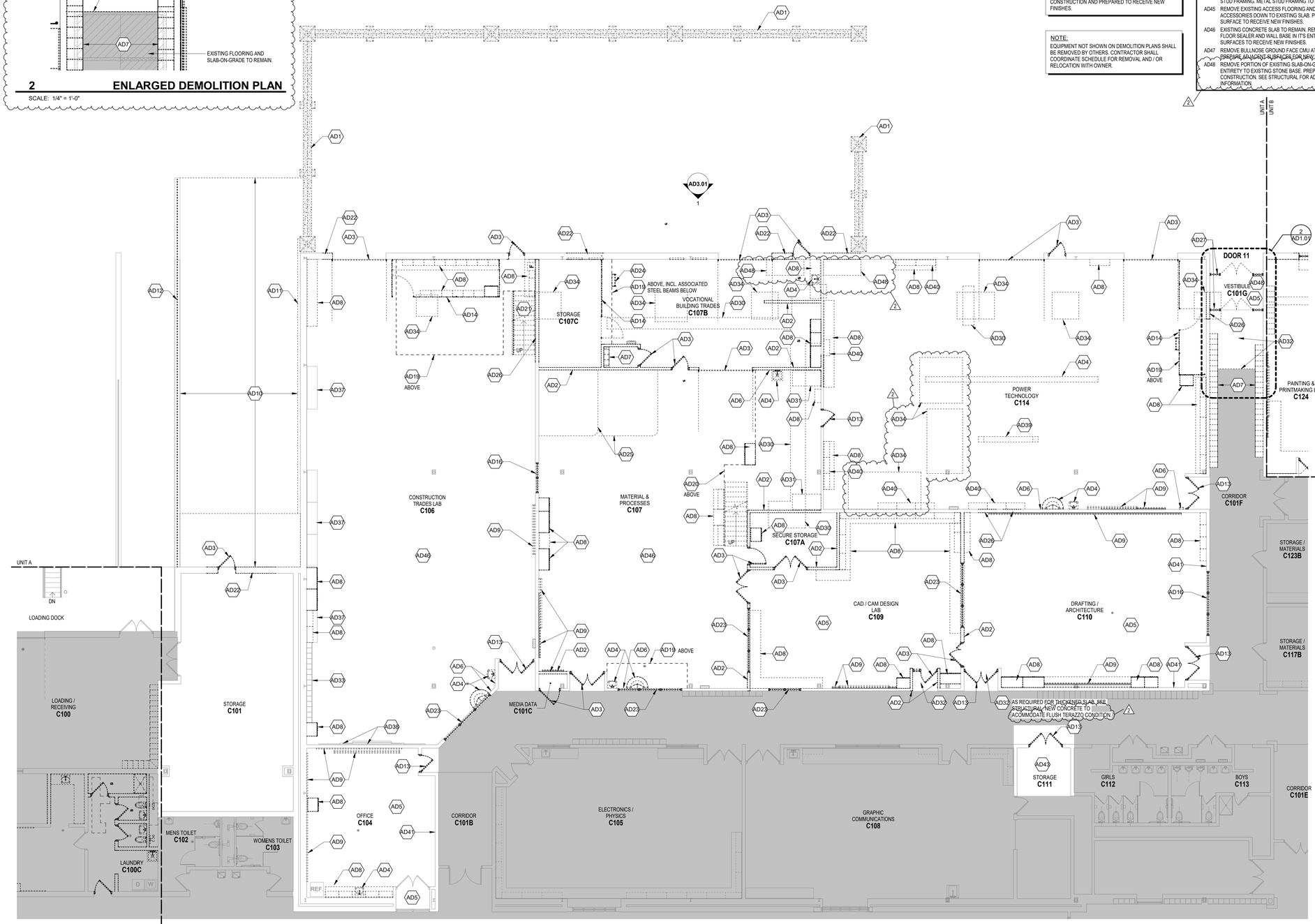
NOTE:
AFTER REMOVAL OF ITEMS, ALL EXISTING MASONRY WALL SURFACES (IF EXPOSED) SHALL BE PATCHED BY TOOTHING IN NEW TO SHOW NO EVIDENCE OF CONSTRUCTION AND PREPARED TO RECEIVE NEW FINISHES.

NOTE:
EQUIPMENT NOT SHOWN ON DEMOLITION PLANS SHALL BE REMOVED BY OTHERS. CONTRACTOR SHALL COORDINATE SCHEDULE FOR REMOVAL AND / OR RELOCATION WITH OWNER.

DEMOLITION PLAN NOTES (CONTINUED) X

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
AD35	REMOVE ACOUSTICAL WALL PANELS IN THEIR ENTIRETY. EXISTING CMU WALL TO REMAIN. PREPARE CMU TO RECEIVE NEW FINISHES.
AD36	REMOVE WALL CARPET IN IT'S ENTIRETY. REMOVE ADHESIVES BACK TO EXISTING CMU SUBSTRATE. GRINDING MAY BE REQUIRED TO REMOVE ADHESIVE AND CREATE A SMOOTH SUBSTRATE SUITABLE FOR NEW MATERIAL.
AD37	SALVAGE EXISTING STEEL BASE AND WOOD TOP WORK BENCHES. RELOCATE AS REQUIRED FOR INSTALLATION OF NEW WORK. COORDINATE NEW LOCATION WITH OWNER.
AD38	EXISTING DISPLAY BOARD / CASE / PROJECTION SCREEN TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION. REMOVE AND RE-INSTALL AS REQUIRED FOR NEW WORK.
AD39	DISCONNECT AND REMOVE EXISTING VEHICLE LIFT IN IT'S ENTIRETY.
AD40	REMOVE EXISTING WALL MOUNTED RED TOOL CABINETS. SALVAGE AND PROVIDE TO OWNER.
AD41	REMOVE VINYL WALL COVERING AND TACK SURFACE / CORK, BACK TO CMU SUBSTRATE. REMOVE ADHESIVES BACK TO EXISTING CMU SUBSTRATE. GRINDING MAY BE REQUIRED TO REMOVE ADHESIVE AND CREATE A SMOOTH SUBSTRATE SUITABLE FOR NEW MATERIAL.
AD42	REMOVE EXISTING PRE-CAST BUILDING IN IT'S ENTIRETY, INCLUDING ANY BELOW GRADE FOUNDATIONS. SEE CIVIL FOR ADDITIONAL INFORMATION.
AD43	REMOVE EXISTING VCT FLOORING, WALL BASE AND TRANSITIONS. REMOVE ADHESIVES DOWN TO EXISTING SLAB. PREPARE SURFACE TO RECEIVE NEW FINISHES.
AD44	REMOVE GYP. BOARD IN IT'S ENTIRETY BACK TO METAL STUD FRAMING. METAL STUD FRAMING TO REMAIN.
AD45	REMOVE EXISTING ACCESS FLOORING AND ALL SUPPORTS / ACCESSORIES DOWN TO EXISTING SLAB. PREPARE SURFACE TO RECEIVE NEW FINISHES.
AD46	EXISTING CONCRETE SLAB TO REMAIN. REMOVE EXISTING FLOOR SEALER AND WALL BASE IN IT'S ENTIRETY. PREPARE SURFACES TO RECEIVE NEW FINISHES.
AD47	REMOVE BULLNOSE GROUND FACE CMU AT CORNERS. PREPARE AS REQUIRED FOR NEW WORK.
AD48	REMOVE PORTION OF EXISTING SLAB-ON-GRADE IN IT'S ENTIRETY TO EXISTING STONE BASE. PREPARE FOR NEW CONSTRUCTION. SEE STRUCTURAL FOR ADDITIONAL INFORMATION.



UNIT A - FIRST FLOOR 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. 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. OWNER TO REMOVE EXISTING FURNITURE AND MISCELLANEOUS ITEMS NOT SHOWN AND NOT TO BE DEMOLISHED. CONTRACTOR TO NOTIFY OWNER IN ADVANCE WHEN ITEMS NEED TO BE REMOVED. CONTRACTOR IS RESPONSIBLE FOR OTHER ITEMS TO BE REMOVED.
M. ITEMS TO BE PATCHED: REMOVE ALL LOOSE OR DAMAGED MATERIAL. REFINISH TO LIKE NEW CONDITION, OR IF CONDITION WARRANTS REPLACE IN ENTIRETY.
N. THE OWNER SHALL RESERVE RIGHT TO CLAIM ANY MATERIALS THAT ARE BEING DEMOLISHED PRIOR TO THE CONTRACTOR DISPOSING OF THEM OFF SITE.
O. "TURNED OVER TO THE OWNER" DENOTES: 1) TAG AND IDENTIFY ITEMS; 2) STORE IN AN ORDERLY FASHION IN A LOCATION DESIGNATED BY THE OWNER.
P. ITEMS MADE OBSOLETE TO ACCOMODATE NEW CONSTRUCTION OR RENOVATION SHALL BE REMOVED.
Q. ITEMS TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY.
R. 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)

NO.	DESCRIPTION
AD1	REMOVE BRICK VENEER / CMU SCREEN WALL IN ITS ENTIRETY, INCLUDING ALL STONE CAPS AND ALL BELOW-GRADE FOUNDATIONS. SEE CIVIL FOR ADDITIONAL INFORMATION.
AD2	REMOVE MASONRY WALL IN IT'S ENTIRETY. PREPARE ADJACENT SURFACES FOR NEW CONSTRUCTION.
AD3	REMOVE DOOR, FRAME AND ALL ASSOCIATED HARDWARE IN IT'S ENTIRETY. PREPARE OPENING AND ADJACENT SURFACES FOR NEW WORK.
AD4	REMOVE PLUMBING FIXTURE IN IT'S ENTIRETY. SEE PLUMBING FOR ADDITIONAL INFORMATION.
AD5	REMOVE EXISTING CARPET, WALL BASE AND TRANSITIONS. REMOVE ADHESIVES DOWN TO EXISTING SLAB. PREPARE SURFACE TO RECEIVE NEW FINISHES.
AD6	REMOVE ALL WALL MOUNTED ACCESSORIES IN THEIR ENTIRETY, INCLUDING MIRRORS, SOAP DISPENSERS, PAPER TOWEL DISPENSERS, FEMININE NAPKIN DISPOSALS, TOILET PAPER DISPENSERS AND FIRE EXTINGUISHER CABINETS.
AD7	REMOVE EXISTING LOCKERS AND BASE IN THEIR ENTIRETY.
AD8	REMOVE EXISTING CASEWORK, SHELVING AND / OR MILLWORK ITEMS, ALONG WITH ALL RELATED ACCESSORIES. PATCH AND REPAIR ADJACENT WALL AND FLOOR SURFACES AND PREPARE TO ACCEPT NEW FINISHES.
AD9	REMOVE WALL MOUNTED DISPLAY BOARD / CASE / PROJECTION SCREEN IN IT'S ENTIRETY.
AD10	REMOVE EXISTING CONCRETE PAVING IN IT'S ENTIRETY TO EXISTING STONE BASE. PREPARE FOR NEW CONSTRUCTION. SEE CIVIL / STRUCTURAL FOR ADDITIONAL INFORMATION.
AD11	REMOVE EXISTING CONCRETE CURB IN IT'S ENTIRETY. PROTECT ADJACENT WALL FROM DAMAGE DURING CONSTRUCTION. SEE CIVIL.
AD12	REMOVE EXISTING GUARDRAIL IN IT'S ENTIRETY. PREPARE TOP OF EXISTING, RETAINING WALL FOR NEW CONSTRUCTION. SEE STRUCTURAL AND CIVIL FOR ADDITIONAL INFORMATION.
AD13	REMOVE DOOR, FRAME AND ALL ASSOCIATED HARDWARE IN IT'S ENTIRETY. PREPARE OPENING FOR NEW DOOR / FRAME.
AD14	REMOVE CHAIN LINK FENCE / GATE IN IT'S ENTIRETY.
AD15	EXISTING CASEWORK TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION.
AD16	REMOVE HOLLOW METAL FRAME / WINDOW UNIT IN ITS ENTIRETY. PREPARE WALL FOR NEW WORK.
AD17	REMOVE ACOUSTICAL WALL PANELS AND WOOD DIFFUSER PANELS IN THEIR ENTIRETY. REMOVE GYP. BOARD BACK TO METAL STUD WALL FRAMING / FURRING. METAL STUD FRAMING / FURRING TO REMAIN. PREPARE TO RECEIVE NEW FINISHES.
AD18	REMOVE EXISTING WOOD TRIM IN IT'S ENTIRETY. EXISTING WINDOW / FRAME TO REMAIN. PREPARE TO RECEIVE NEW FINISHES.
AD19	REMOVE EXISTING 2X WOOD FRAMED AND PLYWOOD FLOOR STORAGE MEZZANINE AND RAILING IN IT'S ENTIRETY.
AD20	REMOVE EXISTING STEEL FRAMED AND CONCRETE / METAL DECK WITH STEEL BEAM STORAGE MEZZANINE IN IT'S ENTIRETY, INCLUDING METAL GRATING STAIRS AND PIPE RAILINGS.
AD21	REMOVE WOOD FRAMED STAIRS AND RAILING IN THEIR ENTIRETY.
AD22	REMOVE PORTION OF EXISTING MASONRY / BRICK VENEER WALL. PREPARE FOR NEW OPENING. PROVIDE ALL NECESSARY SHORING / SUPPORT FOR REMAINING WALL DURING CONSTRUCTION. SEE STRUCUTRAL FOR ADDITIONAL INFORMATION.
AD23	REMOVE WOOD FRAMED WINDOW UNIT IN IT'S ENTIRETY. PREPARE OPENING FOR NEW WORK.
AD24	REMOVE METAL ACCESS LADDER IN IT'S ENTIRETY.
AD25	REMOVE WELDING CURTAIN, HOOD AND ALL ASSOCIATED ACCESSORIES. SEE MECHANICAL FOR ADDITIONAL INFORMATION.
AD26	REMOVE PORTION OF EXISTING MASONRY WALL. PREPARE FOR NEW OPENING. PROVIDE ALL NECESSARY SHORING / SUPPORT FOR REMAINING WALL DURING CONSTRUCTION. SEE STRUCUTRAL FOR ADDITIONAL INFORMATION.
AD27	REMOVE ALUMINUM STOREFRONT DOOR / GLAZING SYSTEM IN IT'S ENTIRETY, INCLUDING ALL ASSOCIATED SUPPORTS / BRACING. PREPARE ADJACENT SURFACES FOR NEW FINISHES.
AD28	REMOVE ALUMINUM FRAMED GLAZING SYSTEM IN IT'S ENTIRETY. PREPARE ADJACENT SURFACES FOR NEW FINISHES.
AD29	REMOVE VINYL WALL COVERING AND GYP. BOARD BACK TO CMU SUBSTRATE. PREPARE CMU FOR NEW FINISHES.
AD30	SAWCUT AND REMOVE PORTION OF EXISTING SLAB FOR NEW PLUMBING PIPING. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
AD31	REMOVE PAINT BOOTH IN IT'S ENTIRETY, INCLUDING ALL ASSOCIATED DUCTWORK AND EQUIPMENT. SEE MECHANICAL FOR ADDITIONAL INFORMATION.
AD32	REMOVE PORTION OF TERAZZO FLOORING DOWN TO CONCRETE SLAB BELOW TO ACOMMODATE NEW CONSTRUCTION. PROVIDE SELF-LEVELING FLOOR PATCH AS REQUIRED AND PREPARE SLAB FOR NEW FINISHES.
AD33	EXISTING LOCKERS TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION.
AD34	SAWCUT AND REMOVE PORTION OF EXISTING SLAB FOR NEW FOOTING. SEE STRUCTURAL FOR ADDITIONAL 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.

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

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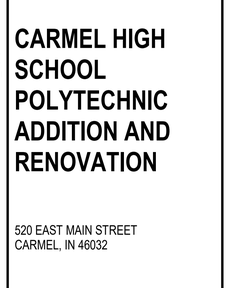

KEY PLAN

100% CONSTRUCTION DOCUMENTS

DRAWN BY: DSR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

UNIT A - FIRST FLOOR DEMOLITION PLAN

AD1.01

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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. OWNER TO REMOVE EXISTING FURNITURE AND MISCELLANEOUS ITEMS NOT SHOWN AND NOT TO BE DEMOLISHED. CONTRACTOR TO NOTIFY OWNER IN ADVANCE WHEN ITEMS NEED TO BE REMOVED. CONTRACTOR IS RESPONSIBLE FOR OTHER ITEMS TO BE REMOVED.
M. ITEMS TO BE PATCHED: REMOVE ALL LOOSE OR DAMAGED MATERIAL. REFINISH TO LIKE NEW CONDITION, OR IF CONDITION WARRANTS REPLACE IN ENTIRETY.
N. THE OWNER SHALL RESERVE RIGHT TO CLAIM ANY MATERIALS THAT ARE BEING DEMOLISHED PRIOR TO THE CONTRACTOR DISPOSING OF THEM OFF SITE.
O. "TURNED OVER TO THE OWNER" DENOTES: 1) TAG AND IDENTIFY ITEMS; 2) STORE IN AN ORDERLY FASHION IN A LOCATION DESIGNATED BY THE OWNER.
P. ITEMS MADE OBSOLETE TO ACCOMODATE NEW CONSTRUCTION OR RENOVATION SHALL BE REMOVED.
Q. ITEMS TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY.
R. AFTER REMOVAL OF ITEMS, THE EXISTING WALL SURFACES (IF EXPOSED) SHALL BE REPAIRED/PATCHED AS REQUIRED TO RECEIVE NEW FINISHES.

DEMOLITION ELEVATION NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
1	REMOVE BRICK VENEER / CMU SCREEN WALL IN ITS ENTIRETY, INCLUDING ALL STONE CAPS AND ALL BELOW-GRADE FOUNDATIONS. SEE CIVIL FOR ADDITIONAL INFORMATION.
2	REMOVE ALUMINUM STOREFRONT DOOR / GLAZING SYSTEM IN IT'S ENTIRETY. PREPARE ADJACENT SURFACES FOR NEW FINISHES.
3	REMOVE DOOR, FRAME AND ALL ASSOCIATED HARDWARE IN IT'S ENTIRETY.
4	REMOVE PORTION OF EXISTING MASONRY / BRICK VENEER WALL. PREPARE FOR NEW OPENING. PROVIDE ALL NECESSARY SHORING / SUPPORT FOR REMAINING WALL DURING CONSTRUCTION. SEE STRUCTURAL FOR ADDITIONAL INFORMATION.
5	REMOVE EXISTING GUARDRAIL IN IT'S ENTIRETY. PREPARE TOP OF EXISTING RETAINING WALL FOR NEW CONSTRUCTION. SEE STRUCTURAL FOR ADDITIONAL INFORMATION.
6	REMOVE ALUMINUM FRAMED GLAZING SYSTEM IN IT'S ENTIRETY, INCLUDING ASSOCIATED STEEL CHANNEL FRAMING. PREPARE ADJACENT SURFACES FOR NEW FINISHES.
7	REMOVE METAL GRAVEL STOP AND METAL FASCIA IN IT'S ENTIRETY. PREPARE EXISTING WALL FOR NEW CONSTRUCTION.
8	REMOVE METAL COPING IN IT'S ENTIRETY. WALL STRUCTURE BELOW TO REMAIN. PREPARE FOR NEW CONSTRUCTION.
9	MECHANICAL / PLUMBING EQUIPMENT TO BE REMOVED. SEE MECHANICAL / PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION. PATCH ALL WALL PENETRATIONS. REMOVE AFFECTED BRICK AND TOOTH-IN NEW TO SHOW NO EVIDENCE OF CONSTRUCTION.
10	ELECTRICAL FIXTURE TO BE REMOVED. SEE ELETRICAL DRAWINGS. PATCH ALL WALL PENETRATIONS. REMOVE AFFECTED BRICK AND TOOTH-IN NEW TO SHOW NO EVIDENCE OF CONSTRUCTION.
11	EXISTING BRICK TO REMAIN. PREPARE FOR NEW FINISHES.
12	REMOVE EXISTING EIFS ABOVE WINDOW IN IT'S ENTIRETY, INCLUDING ASSOCIATED METAL STUD FRAMING AND INSULATION. PREPARE ADJACENT SURFACES FOR NEW WORK.
13	EXISTING METAL GRAVEL STOP AND METAL FASCIA TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION. PREPARE ADJACENT SURFACES FOR CONNECTION TO NEW WORK.
14	EXISTING BRICK CONTROL JOINT. REMOVE OLD SEALANT ENTIRELY AND REPLACE WITH NEW. PREPARE FOR APPLICATION OF NEW FINISHES.
15	REMOVE PORTION OF EXISTING PARAPET TO ALLOW NEW EXTERIOR WALL CONSTRUCTION TO PASS CONTINUOUSLY.

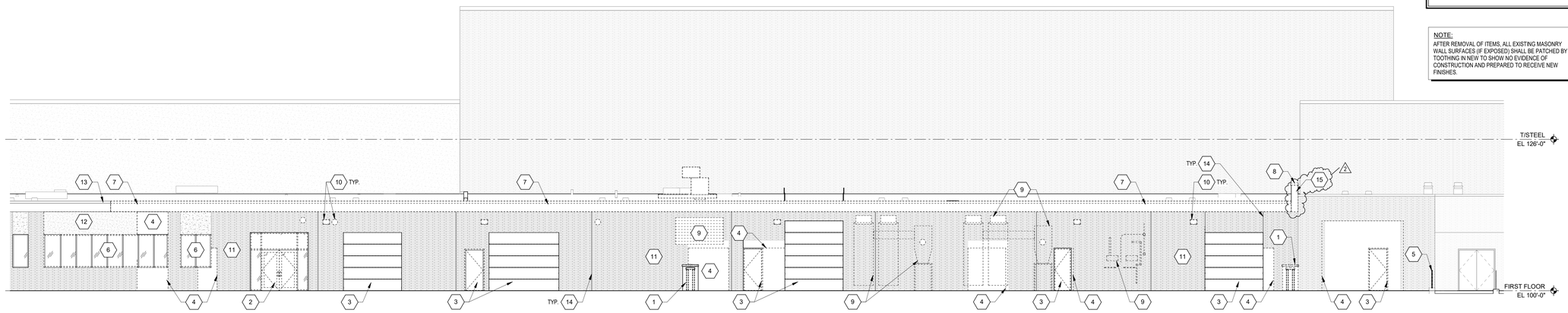
NOTE:
DEMOLITION ELEVATIONS ARE INTENDED AS A GUIDE AND SHALL NOT BE CONSIDERED TO BE ALL INCLUSIVE. REFER TO ALL DEMOLITION SHEETS FOR SPECIFIC REQUIREMENTS. COORDINATE DEMOLITION BETWEEN ALL TRADES.

NOTE:
AFTER REMOVAL OF ITEMS, ALL EXISTING MASONRY WALL SURFACES (IF EXPOSED) SHALL BE PATCHED BY TOOTHING IN NEW TO SHOW NO EVIDENCE OF CONSTRUCTION AND PREPARED TO RECEIVE NEW FINISHES.

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.



1 DEMOLITION ELEVATION - NORTH

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

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

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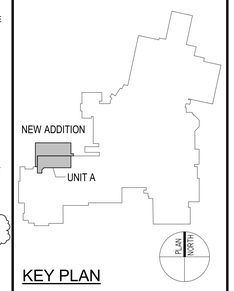

KEY PLAN

100% CONSTRUCTION DOCUMENTS

PAUL A. MILLER REGISTERED No. A 11000161 STATE OF INDIANA ARCHITECT

DRAWN BY: DSR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

DEMOLITION ELEVATIONS

AD3.01

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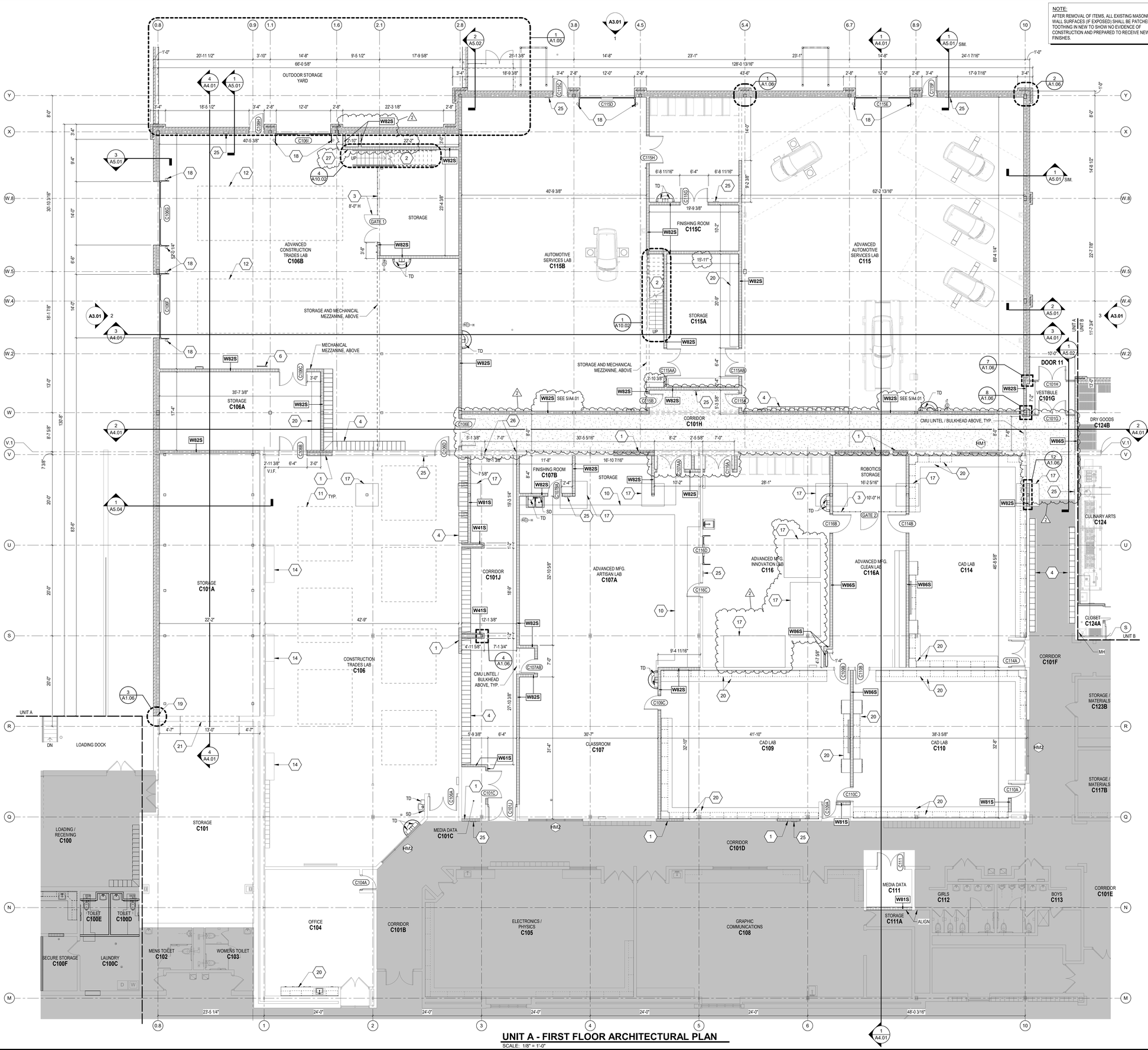

UNIT A - FIRST FLOOR ARCHITECTURAL PLAN

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

NOTE:
AFTER REMOVAL OF ITEMS, ALL EXISTING MASONRY WALL SURFACES (IF EXPOSED) SHALL BE PATCHED BY TOOTHING IN NEW TO SHOW NO EVIDENCE OF CONSTRUCTION AND PREPARED TO RECEIVE NEW FINISHES.

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 A1.06.
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 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. PROVIDE WOOD BLOCKING AS REQUIRED. WITHIN METAL STUD WALLS FOR WALL MOUNTED ITEMS.
M. REFER TO MASTERCODE PLANS FOR CODE INFORMATION AND FIRE RATED WALL LOCATIONS.
N. PROVIDE SPRAY FOAM INSULATION AND THERMAL BARRIER CONTINUOUS AT INTERSECTION OF EXTERIOR WALLS AND DECK.

ARCHITECTURAL PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

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

NO.	DESCRIPTION
1	INFILL OPENING TO MATCH EXISTING WALL CONSTRUCTION. FINISH FLUSH WITH ADJACENT SURFACES TO SHOW NO EVIDENCE OF CONSTRUCTION. TOOTH-IN MASONRY WITH EXISTING.
2	CONCRETE FILLED, METAL PAN STAIRS. SEE A10.02 FOR ADDITIONAL INFORMATION.
3	WIRE MESH PARTITION SYSTEM. INCORPORATE MORTISE LOCK CYLINDER AND CORE IN GATE. SEE DOOR SCHEDULE AND SPECIFICAITONS.
4	PRE-FINISHED STEEL LOCKERS. SEE EQUIPMENT PLANS FOR ADDITIONAL INFORMATION.
5	PROVIDE NEW ACOUSTICAL WALL TREATMENT. SEE FINISH PLANS, INTERIOR ELEVATIONS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
6	24" WIDE, FIXED ALUMINUM ACCESS LADDER. SEE DETAIL 8/A10.02.
7	MEMBRANE ROOF SYSTEM. SEE ROOF PLAN FOR ADDITIONAL INFORMATION.
8	METAL PIPE GUARDRAIL SYSTEM. SEE A10.02.
9	KITCHEN EQUIPMENT. SEE FOOD SERVICE DRAWINGS FOR ADDITIONAL INFORMATION.
10	INFILL PORTION OF CONCRETE SLAB. FINISH FLUSH WITH EXISTING. SEE PLUMBING FOR ADDITIONAL INFORMATION.
11	INDICATES 12' x 12' AREA FOR STUDENT-BUILT HOUSE BUILD. (FOR REFERENCE ONLY)
12	INDICATES 12' x 32' AREA FOR STUDENT-BUILT TINY HOMES. (FOR REFERENCE ONLY)
13	ACOUSTICALLY SEAL ALL WALL PENETRATIONS ABOVE CEILING, BOTH SIDES OF WALL. INFILL MASONRY OPENINGS WITH CMU SOAP / MORTAR AS REQUIRED.
14	EXISTING STEEL BASE AND WOOD TOP WORKBENCHES. COORDINATE FINAL LOCATION WITH OWNER UPON COMPLETION OF OTHER FINISHES.
15	2-LAYERS OF 5/8" TYPE "X" GYP. BOARD OVER EXISTING METAL FURRING. EXTEND GYP. BOARD AND SEAL TOP EDGE TO CONCRETE DECK ABOVE.
16	PROVIDE WOOD FLOOR FRAMING TO MATCH EXISTING DEPTH AND REPLACE TILE ACCESS FLOOR. SEE DETAIL 2/A1.07.
17	INFILL PORTION OF CONCRETE SLAB. FINISH FLUSH WITH EXISTING. SEE STRUCTURAL FOR ADDITIONAL INFORMATION.
18	CONCRETE FILLED STEEL PIPE BOLLARD WITH COVER. SEE DETAIL 7/A1.07 FOR ADDITIONAL INFORMATION.
19	1 1/2" PRE-COMPRESSED BUILDING EXPANSION JOINT WITH CONTINUOUS SEALANT.
20	PLASTIC LAMINATE CASEWORK. SEE EQUIPMENT PLANS FOR ADDITIONAL INFORMATION.
21	13'W x 12'H MASONRY OPENING. SEE STRUCTURAL.
22	GUARDRAIL GATE - SEE 5-7/A10.01.
23	INFILL OPENING TO MATCH EXISTING WALL CONSTRUCTION. GROUND FACE CMU (PROVIDED BY OWNER) TO MATCH EXISTING, FULL HEIGHT. FINISH FLUSH WITH ADJACENT SURFACES TO SHOW NO EVIDENCE OF CONSTRUCTION. TOOTH-IN MASONRY WITH EXISTING.
24	PAINT BOOTH EXHAUST, UP THROUGH ROOF. SEE EQUIPMENT PLANS AND SCHEDULE FOR ADDITIONAL INFORMATION. COORDINATE FINAL LOCATION, DIMENSIONS AND OPENINGS BETWEEN ALL TRADES AND EQUIPMENT MANUFACTURER.
25	SEMI-RECESSED FIRE EXTINGUISHER CABINET. SEE 3/A1.07 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
26	SALVAGE EXISTING BRICK VENEER FROM DEMOLITION AND RE-USE TO INFILL BRICK OPENING.
27	RATED ACCESS PANEL FOR DUST COLLECTION CLEANOUT. COORDINATE EXACT REQUIREMENTS WITH DUST COLLECTION SYSTEM MANUFACTURER. SEE MECHANICAL FOR ADDITIONAL INFORMATION.
28	PROVIDE IN-WALL BLOCKING AS REQUIRED FOR MONITOR. COORDINATE EXACT LOCATION WITH EQUIPMENT SUPPLIER. SEE AV DRAWINGS FOR ADDITIONAL INFORMATION.

PLAN LEGEND

- NEW DOOR
- EXISTING DOOR TO REMAIN
- DEMO DOOR
- NEW WALL
- EXISTING WALL TO REMAIN
- DEMO WALL
- INDICATES RECESSED SLAB -3/8"

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.

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NEW ADDITION
UNIT A
PLAN NORTH

KEY PLAN

100% CONSTRUCTION DOCUMENTS

PAUL A. MILLER REGISTERED No. A 20000161 STATE OF INDIANA ARCHITECT

DRAWN BY: DSR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

UNIT A - FIRST FLOOR ARCHITECTURAL PLAN

A1.01

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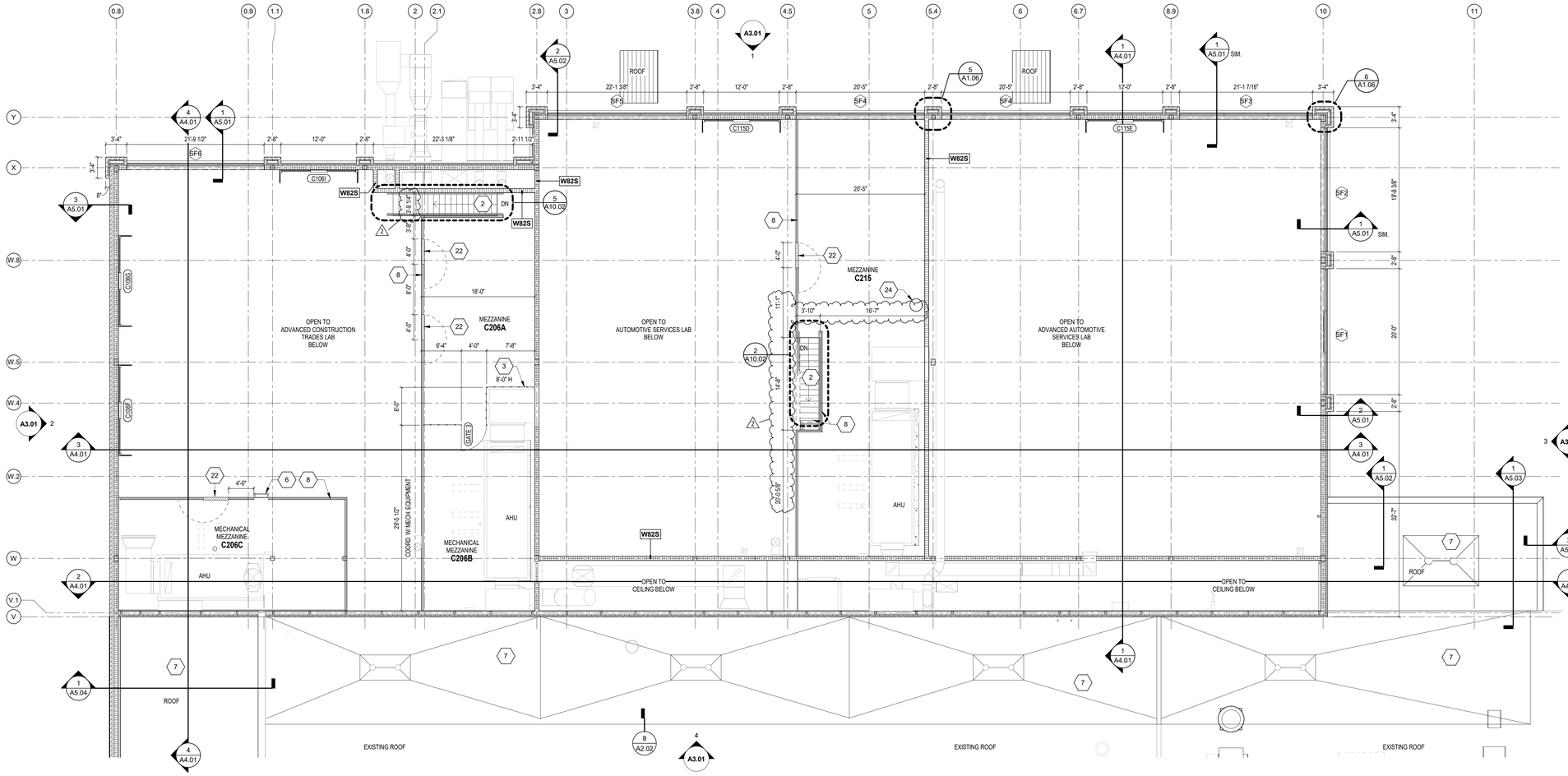

UNIT A - MEZZANINE ARCHITECTURAL PLAN

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

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 A1.06.
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 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. PROVIDE WOOD BLOCKING AS REQUIRED. WITHIN METAL STUD WALLS FOR WALL MOUNTED ITEMS.
M. REFER TO MASTERCODE PLANS FOR CODE INFORMATION AND FIRE RATED WALL LOCATIONS.
N. PROVIDE SPRAY FOAM INSULATION AND THERMAL BARRIER CONTINUOUS AT INTERSECTION OF EXTERIOR WALLS AND DECK.

ARCHITECTURAL PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

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

NO.	DESCRIPTION
1	INFILL OPENING TO MATCH EXISTING WALL CONSTRUCTION. FINISH FLUSH WITH ADJACENT SURFACES TO SHOW NO EVIDENCE OF CONSTRUCTION. TOOTH-IN MASONRY WITH EXISTING.
2	CONCRETE FILLED, METAL PAN STAIRS. SEE A10.02 FOR ADDITIONAL INFORMATION.
3	WIRE MESH PARTITION SYSTEM. INCORPORATE MORTISE LOCK CYLINDER AND CORE IN GATE. SEE DOOR SCHEDULE AND SPECIFICAITONS.
4	PRE-FINISHED STEEL LOCKERS. SEE EQUIPMENT PLANS FOR ADDITIONAL INFORMATION.
5	PROVIDE NEW ACOUSTICAL WALL TREATMENT. SEE FINISH PLANS, INTERIOR ELEVATIONS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
6	24" WIDE, FIXED ALUMINUM ACCESS LADDER. SEE DETAIL 8/A10.02.
7	MEMBRANE ROOF SYSTEM. SEE ROOF PLAN FOR ADDITIONAL INFORMATION.
8	METAL PIPE GUARDRAIL SYSTEM. SEE A10.02.
9	KITCHEN EQUIPMENT. SEE FOOD SERVICE DRAWINGS FOR ADDITIONAL INFORMATION.
10	INFILL PORTION OF CONCRETE SLAB. FINISH FLUSH WITH EXISTING. SEE PLUMBING FOR ADDITIONAL INFORMATION.
11	INDICATES 12' x 12' AREA FOR STUDENT-BUILT HOUSE BUILD. (FOR REFERENCE ONLY)
12	INDICATES 12' x 32' AREA FOR STUDENT-BUILT TINY HOMES. (FOR REFERENCE ONLY)
13	ACOUSTICALLY SEAL ALL WALL PENETRATIONS ABOVE CEILING, BOTH SIDES OF WALL. INFILL MASONRY OPENINGS WITH CMU SOAP / MORTAR AS REQUIRED.
14	EXISTING STEEL BASE AND WOOD TOP WORKBENCHES. COORDINATE FINAL LOCATION WITH OWNER UPON COMPLETION OF OTHER FINISHES.
15	2-LAYERS OF 5/8" TYPE "X" GYP. BOARD OVER EXISTING METAL FURRING. EXTEND GYP. BOARD AND SEAL TOP EDGE TO CONCRETE DECK ABOVE.
16	PROVIDE WOOD FLOOR FRAMING TO MATCH EXISTING DEPTH AND REPLACE TILE ACCESS FLOOR. SEE DETAIL 2/A1.07.
17	INFILL PORTION OF CONCRETE SLAB. FINISH FLUSH WITH EXISTING. SEE STRUCTURAL FOR ADDITIONAL INFORMATION.
18	CONCRETE FILLED STEEL PIPE BOLLARD WITH COVER. SEE DETAIL 7/A1.07 FOR ADDITIONAL INFORMATION.
19	1 1/2" PRE-COMPRESSED BUILDING EXPANSION JOINT WITH CONTINUOUS SEALANT.
20	PLASTIC LAMINATE CASEWORK. SEE EQUIPMENT PLANS FOR ADDITIONAL INFORMATION.
21	13'W x 12'H MASONRY OPENING. SEE STRUCTURAL.
22	GUARDRAIL GATE - SEE 5-7/A10.01.
23	INFILL OPENING TO MATCH EXISTING WALL CONSTRUCTION. GROUND FACE CMU (PROVIDED BY OWNER) TO MATCH EXISTING. FULL HEIGHT. FINISH FLUSH WITH ADJACENT SURFACES TO SHOW NO EVIDENCE OF CONSTRUCTION. TOOTH-IN MASONRY WITH EXISTING.
24	PAINT BOOTH EXHAUST, UP THROUGH ROOF. SEE EQUIPMENT PLANS AND SCHEDULE FOR ADDITIONAL INFORMATION. COORDINATE FINAL LOCATION, DIMENSIONS AND OPENINGS BETWEEN ALL TRADES AND EQUIPMENT MANUFACTURER.
25	SEMI-RECESSED FIRE EXTINGUISHER CABINET. SEE 3/A1.07 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
26	SALVAGE EXISTING BRICK VENEER FROM DEMOLITION AND RE-USE TO WRAP BRICK BACK TO CMU AT JAMBS.
27	RATED ACCESS PANEL FOR DUST COLLECTION CLEANOUT. COORDINATE EXACT REQUIREMENTS WITH DUST COLLECTION SYSTEM MANUFACTURER. SEE MECHANICAL FOR ADDITIONAL INFORMATION.
28	PROVIDE IN-WALL BLOCKING AS REQUIRED FOR MONITOR. COORDINATE EXACT LOCATION WITH EQUIPMENT SUPPLIER. SEE AV DRAWINGS FOR ADDITIONAL 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.

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

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CARMEL CLAY SCHOOLS

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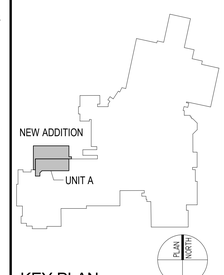
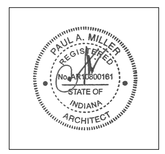


KEY PLAN

100% CONSTRUCTION DOCUMENTS



DRAWN BY: DSR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

UNIT A - MEZZANINE ARCHITECTURAL PLAN

A1.02

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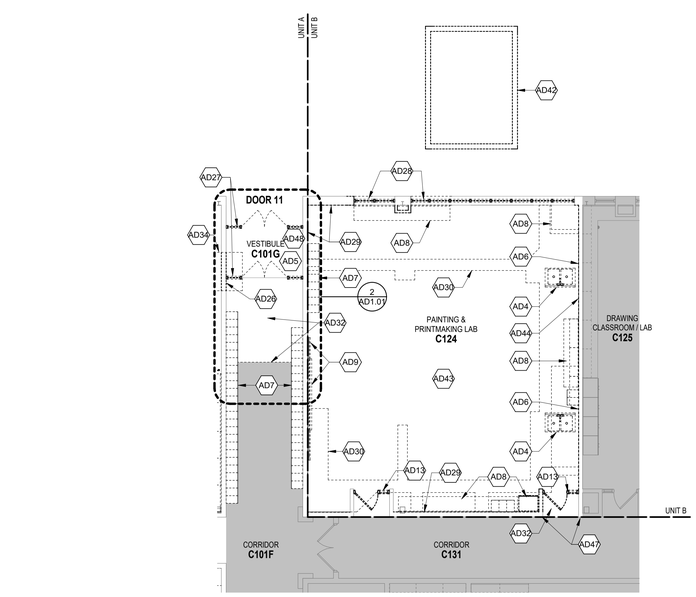
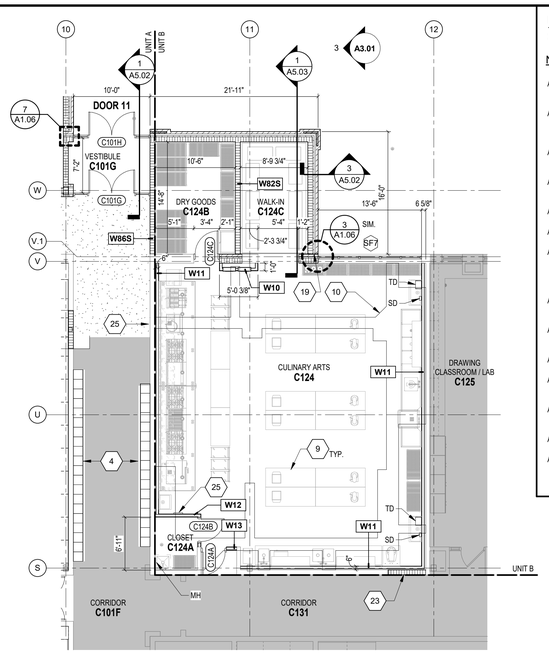


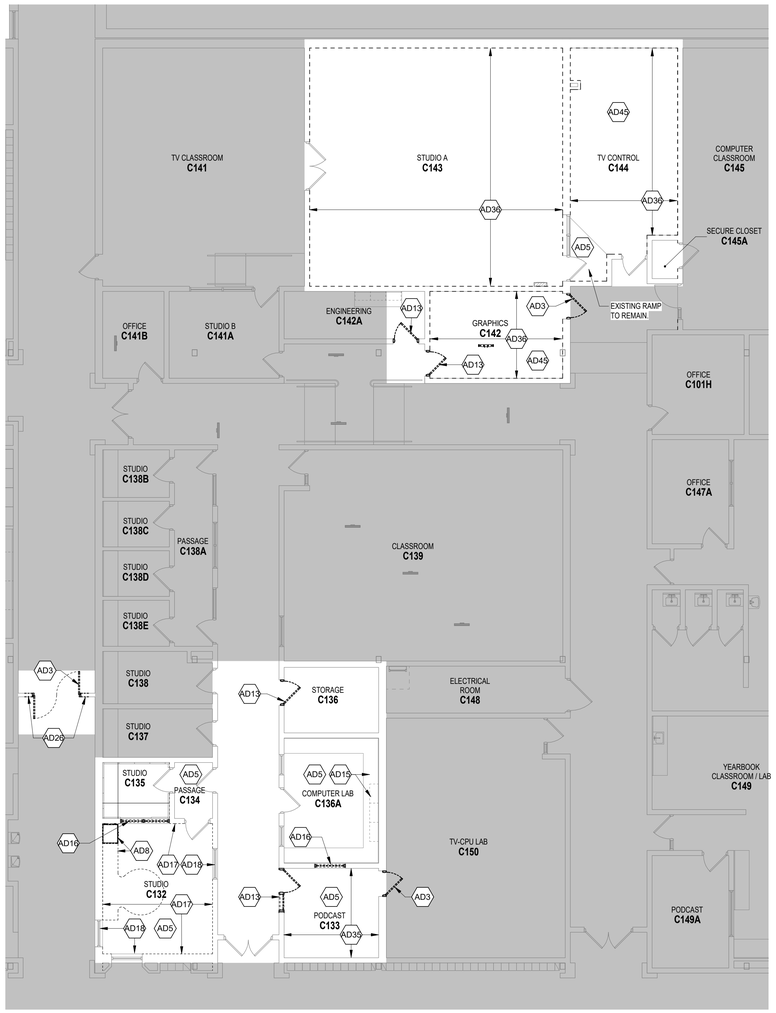
UNIT B - FIRST FLOOR DEMOLITION PLAN

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



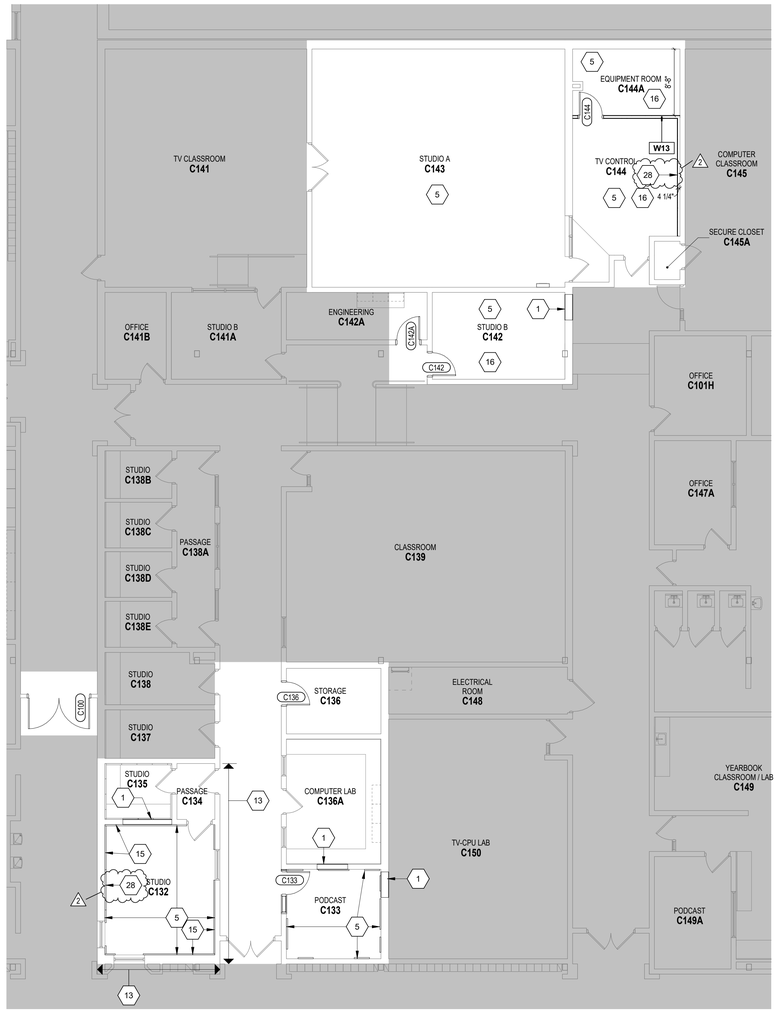
UNIT B - FIRST FLOOR ARCHITECTURAL PLAN

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



UNIT C - FIRST FLOOR DEMOLITION PLAN

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



UNIT C - FIRST FLOOR ARCHITECTURAL PLAN

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

DEMOLITION PLAN NOTES (CONTINUED) (X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
AD35	REMOVE ACOUSTICAL WALL PANELS IN THEIR ENTIRETY. EXISTING CMU WALL TO REMAIN. PREPARE CMU TO RECEIVE NEW FINISHES.
AD36	REMOVE WALL CARPET IN IT'S ENTIRETY. REMOVE ADHESIVES BACK TO EXISTING CMU SUBSTRATE. GRINDING MAY BE REQUIRED TO REMOVE ADHESIVE AND CREATE A SMOOTH SUBSTRATE SUITABLE FOR NEW MATERIAL.
AD37	SALVAGE EXISTING STEEL BASE AND WOOD TOP WORK BENCHES. RELOCATE AS REQUIRED FOR INSTALLATION OF NEW WORK. COORDINATE NEW LOCATION WITH OWNER.
AD38	EXISTING DISPLAY BOARD / CASE / PROJECTION SCREEN TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION. REMOVE AND RE-INSTALL AS REQUIRED FOR NEW WORK.
AD39	DISCONNECT AND REMOVE EXISTING VEHICLE LIFT IN IT'S ENTIRETY.
AD40	REMOVE EXISTING WALL MOUNTED RED TOOL CABINETS. SALVAGE AND PROVIDE TO OWNER.
AD41	REMOVE VINYL WALL COVERING AND TACK SURFACE / CORK, BACK TO CMU SUBSTRATE. REMOVE ADHESIVES BACK TO EXISTING CMU SUBSTRATE. GRINDING MAY BE REQUIRED TO REMOVE ADHESIVE AND CREATE A SMOOTH SUBSTRATE SUITABLE FOR NEW MATERIAL.
AD42	REMOVE EXISTING PRE-CAST BUILDING IN IT'S ENTIRETY, INCLUDING ANY BELOW GRADE FOUNDATIONS. SEE CIVIL FOR ADDITIONAL INFORMATION.
AD43	REMOVE EXISTING VCT FLOORING, WALL BASE AND TRANSITIONS. REMOVE ADHESIVES DOWN TO EXISTING SLAB. PREPARE SURFACE TO RECEIVE NEW FINISHES.
AD44	REMOVE GYP. BOARD IN IT'S ENTIRETY BACK TO METAL STUD FRAMING. METAL STUD FRAMING TO REMAIN.
AD45	REMOVE EXISTING ACCESS FLOORING AND ALL SUPPORTS / ACCESSORIES DOWN TO EXISTING SLAB. PREPARE SURFACE TO RECEIVE NEW FINISHES.
AD46	EXISTING CONCRETE SLAB TO REMAIN. REMOVE EXISTING FLOOR SEALER AND WALL BASE IN IT'S ENTIRETY. PREPARE SURFACES TO RECEIVE NEW FINISHES.
AD47	REMOVE BULLNOSE GROUND FACE CMU AT CORNERS. PREPARE ADJACENT SURFACES FOR NEW WORK.
AD48	REMOVE PORTION OF EXISTING SLAB-ON-GRADE IN IT'S ENTIRETY TO EXISTING STONE BASE. PREPARE FOR NEW CONSTRUCTION. SEE STRUCTURAL FOR ADDITIONAL INFORMATION.

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 SIDES.
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. OWNER TO REMOVE EXISTING FURNITURE AND MISCELLANEOUS ITEMS NOT SHOWN AND NOT TO BE DEMOLISHED. CONTRACTOR TO NOTIFY OWNER IN ADVANCE WHEN ITEMS NEED TO BE REMOVED. CONTRACTOR IS RESPONSIBLE FOR OTHER ITEMS TO BE REMOVED.
M. ITEMS TO BE PATCHED, REMOVE ALL LOOSE OR DAMAGED MATERIAL, REFINISH TO LIKE NEW CONDITION, OR IF CONDITION WARRANTS REPLACE IN ENTIRETY.
N. THE OWNER SHALL RESERVE RIGHT TO CLAIM ANY MATERIALS THAT ARE BEING DEMOLISHED PRIOR TO THE CONTRACTOR DISPOSING OF THEM OFF SITE.
O. "TURNED OVER TO THE OWNER" DENOTES: 1) TAG AND IDENTIFY ITEMS: 2) STORE IN AN ORDERLY FASHION IN A LOCATION DESIGNATED BY THE OWNER.
P. ITEMS MADE OBSOLETE TO ACCOMODATE NEW CONSTRUCTION OR RENOVATION SHALL BE REMOVED.
Q. ITEMS TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY.
R. 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)

NO.	DESCRIPTION
AD1	REMOVE BRICK VENEER / CMU SCREEN WALL IN ITS ENTIRETY, INCLUDING ALL STONE CAPS AND ALL BELOW-GRADE FOUNDATIONS. SEE CIVIL FOR ADDITIONAL INFORMATION.
AD2	REMOVE MASONRY WALL IN IT'S ENTIRETY. PREPARE ADJACENT SURFACES FOR NEW CONSTRUCTION.
AD3	REMOVE DOOR, FRAME AND ALL ASSOCIATED HARDWARE IN IT'S ENTIRETY. PREPARE OPENING AND ADJACENT SURFACES FOR NEW WORK.
AD4	REMOVE PLUMBING FIXTURE IN IT'S ENTIRETY. SEE PLUMBING FOR ADDITIONAL INFORMATION.
AD5	REMOVE EXISTING CARPET, WALL BASE AND TRANSITIONS. REMOVE ADHESIVES DOWN TO EXISTING SLAB. PREPARE SURFACE TO RECEIVE NEW FINISHES.
AD6	REMOVE ALL WALL MOUNTED ACCESSORIES IN THEIR ENTIRETY, INCLUDING MIRRORS, SOAP DISPENSERS, PAPER TOWEL DISPENSERS, FEMININE NAPKIN DISPOSALS, TOILET PAPER DISPENSERS AND FIRE EXTINGUISHER CABINETS.
AD7	REMOVE EXISTING LOCKERS AND BASE IN THEIR ENTIRETY.
AD8	REMOVE EXISTING CASEWORK, SHELVING AND / OR MILLWORK ITEMS, ALONG WITH ALL RELATED ACCESSORIES. PATCH AND REPAIR ADJACENT WALL AND FLOOR SURFACES AND PREPARE TO ACCEPT NEW FINISHES.
AD9	REMOVE WALL MOUNTED DISPLAY BOARD / CASE / PROJECTION SCREEN IN IT'S ENTIRETY.
AD10	REMOVE EXISTING CONCRETE PAVING IN IT'S ENTIRETY TO EXISTING STONE BASE. PREPARE FOR NEW CONSTRUCTION. SEE CIVIL / STRUCTURAL FOR ADDITIONAL INFORMATION.
AD11	REMOVE EXISTING CONCRETE CURB IN IT'S ENTIRETY. PROTECT ADJACENT WALL FROM DAMAGE DURING CONSTRUCTION. SEE CIVIL.
AD12	REMOVE EXISTING GUARDRAIL IN IT'S ENTIRETY. PREPARE TOP OF EXISTING, RETAINING WALL FOR NEW CONSTRUCTION. SEE STRUCTURAL AND CIVIL FOR ADDITIONAL INFORMATION.
AD13	REMOVE DOOR, FRAME AND ALL ASSOCIATED HARDWARE IN IT'S ENTIRETY. PREPARE OPENING FOR NEW DOOR / FRAME.
AD14	REMOVE CHAIN LINK FENCE / GATE IN IT'S ENTIRETY.
AD15	EXISTING CASEWORK TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION.
AD16	REMOVE HOLLOW METAL FRAME / WINDOW UNIT IN ITS ENTIRETY. PREPARE WALL FOR NEW WORK.
AD17	REMOVE ACOUSTICAL WALL PANELS AND WOOD DIFFUSER PANELS IN THEIR ENTIRETY. REMOVE GYP. BOARD BACK TO METAL STUD WALL FRAMING / FURRING. METAL STUD FRAMING / FURRING TO REMAIN. PREPARE TO RECEIVE NEW FINISHES.
AD18	REMOVE EXISTING WOOD TRIM IN IT'S ENTIRETY. EXISTING WINDOW / FRAME TO REMAIN. PREPARE TO RECEIVE NEW FINISHES.
AD19	REMOVE EXISTING 2X WOOD FRAMED AND PLYWOOD FLOOR STORAGE MEZZANINE AND RAILING IN IT'S ENTIRETY.
AD20	REMOVE EXISTING STEEL FRAMED AND CONCRETE / METAL DECK WITH STEEL BEAM STORAGE MEZZANINE IN IT'S ENTIRETY, INCLUDING METAL GRATING STAIRS AND PIPE RAILINGS.
AD21	REMOVE WOOD FRAMED STAIRS AND RAILING IN THEIR ENTIRETY.
AD22	REMOVE PORTION OF EXISTING MASONRY / BRICK VENEER WALL. PREPARE FOR NEW OPENING. PROVIDE ALL NECESSARY SHORING / SUPPORT FOR REMAINING WALL DURING CONSTRUCTION. SEE STRUCUTRAL FOR ADDITIONAL INFORMATION.
AD23	REMOVE WOOD FRAMED WINDOW UNIT IN IT'S ENTIRETY. PREPARE OPENING FOR NEW WORK.
AD24	REMOVE METAL ACCESS LADDER IN IT'S ENTIRETY.
AD25	REMOVE WELDING CURTAIN, HOOD AND ALL ASSOCIATED ACCESSORIES. SEE MECHANICAL FOR ADDITIONAL INFORMATION.
AD26	REMOVE PORTION OF EXISTING MASONRY WALL. PREPARE FOR NEW OPENING. PROVIDE ALL NECESSARY SHORING / SUPPORT FOR REMAINING WALL DURING CONSTRUCTION. SEE STRUCUTRAL FOR ADDITIONAL INFORMATION.
AD27	REMOVE ALUMINUM STOREFRONT DOOR / GLAZING SYSTEM IN IT'S ENTIRETY. INCLUDING ALL ASSOCIATED SUPPORTS / BRACING. PREPARE ADJACENT SURFACES FOR NEW FINISHES.
AD28	REMOVE ALUMINUM FRAMED GLAZING SYSTEM IN IT'S ENTIRETY. PREPARE ADJACENT SURFACES FOR NEW FINISHES.
AD29	REMOVE VINYL WALL COVERING AND GYP. BOARD BACK TO CMU SUBSTRATE. PREPARE CMU FOR NEW FINISHES.
AD30	SAWCUT AND REMOVE PORTION OF EXISTING SLAB FOR NEW PLUMBING PIPING. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
AD31	REMOVE PAINT BOOTH IN IT'S ENTIRETY, INCLUDING ALL ASSOCIATED DUCTWORK AND EQUIPMENT. SEE MECHANICAL FOR ADDITIONAL INFORMATION.
AD32	REMOVE PORTION OF TERAZZO FLOORING DOWN TO CONCRETE SLAB BELOW TO ACCOMMODATE NEW CONSTRUCTION. PROVIDE SELF-LEVELING FLOOR PATCH AS REQUIRED AND PREPARE SLAB FOR NEW FINISHES.
AD33	EXISTING LOCKERS TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION.
AD34	SAWCUT AND REMOVE PORTION OF EXISTING SLAB FOR NEW FOOTING. SEE STRUCTURAL FOR ADDITIONAL 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.

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 A1.06.
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 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. PROVIDE WOOD BLOCKING AS REQUIRED. WITHIN METAL STUD WALLS FOR WALL MOUNTED ITEMS.
M. REFER TO MASTERCODE PLANS FOR CODE INFORMATION AND FIRE RATED WALL LOCATIONS.
N. 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 A1.00 FOR WALL THICKNESS, HEIGHT AND COMPOSITION.

NO.	DESCRIPTION
1	INFILL OPENING TO MATCH EXISTING WALL CONSTRUCTION. FINISH FLUSH WITH ADJACENT SURFACES TO SHOW NO EVIDENCE OF CONSTRUCTION. TOOTH-IN MASONRY WITH EXISTING.
2	CONCRETE FILLED, METAL PAN STAIRS. SEE A10.02 FOR ADDITIONAL INFORMATION.
3	WIRE MESH PARTITION SYSTEM. INCORPORATE MORTISE LOCK CYLINDER AND CORE IN GATE. SEE DOOR SCHEDULE AND SPECIFICAITONS.
4	PRE-FINISHED STEEL LOCKERS. SEE EQUIPMENT PLANS FOR ADDITIONAL INFORMATION.
5	PROVIDE NEW ACOUSTICAL WALL TREATMENT. SEE FINISH PLANS, INTERIOR ELEVATIONS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
6	24" WIDE, FIXED ALUMINUM ACCESS LADDER. SEE DETAIL 8/A10.02.
7	MEMBRANE ROOF SYSTEM. SEE ROOF PLAN FOR ADDITIONAL INFORMATION.
8	METAL PIPE GUARDRAIL SYSTEM. SEE A10.02.
9	KITCHEN EQUIPMENT. SEE FOOD SERVICE DRAWINGS FOR ADDITIONAL INFORMATION.
10	INFILL PORTION OF CONCRETE SLAB. FINISH FLUSH WITH EXISTING. SEE PLUMBING FOR ADDITIONAL INFORMATION.
11	INDICATES 12' x 12' AREA FOR STUDENT-BUILT HOUSE BUILD. (FOR REFERENCE ONLY)
12	INDICATES 12' x 32' AREA FOR STUDENT-BUILT TINY HOMES. (FOR REFERENCE ONLY)
13	ACOUSTICALLY SEAL ALL WALL PENETRATIONS ABOVE CEILING, BOTH SIDES OF WALL. INFILL MASONRY OPENINGS WITH CMU SOAP / MORTAR AS REQUIRED.
14	EXISTING STEEL BASE AND WOOD TOP WORKBENCHES. COORDINATE FINAL LOCATION WITH OWNER UPON COMPLETION OF OTHER FINISHES.
15	2-LAYERS OF 5/8" TYPE "X" GYP. BOARD OVER EXISTING METAL FURRING. EXTEND GYP. BOARD AND SEAL TOP EDGE TO CONCRETE DECK ABOVE.
16	PROVIDE WOOD FLOOR FRAMING TO MATCH EXISTING DEPTH AND REPLACE TILE ACCESS FLOOR. SEE DETAIL 2/A1.07.
17	INFILL PORTION OF CONCRETE SLAB. FINISH FLUSH WITH EXISTING. SEE STRUCTURAL FOR ADDITIONAL INFORMATION.
18	CONCRETE FILLED STEEL PIPE BOLLARD WITH COVER. SEE DETAIL 7/A1.07 FOR ADDITIONAL INFORMATION.
19	1 1/2" PRE-COMPRESSED BUILDING EXPANSION JOINT WITH CONTINUOUS SEALANT.
20	PLASTIC LAMINATE CASEWORK. SEE EQUIPMENT PLANS FOR ADDITIONAL INFORMATION.
21	13'W x 12'H MASONRY OPENING. SEE STRUCTURAL.
22	GUARDRAIL GATE - SEE 5-7/A10.01.
23	INFILL OPENING TO MATCH EXISTING WALL CONSTRUCTION. GROUND FACE CMU (PROVIDED BY OWNER) TO MATCH EXISTING, FULL HEIGHT AND FLUSH WITH ADJACENT SURFACES TO SHOW NO EVIDENCE OF CONSTRUCTION. TOOTH-IN MASONRY WITH EXISTING.
24	PAINT BOOTH EXHAUST, UP THROUGH ROOF. SEE EQUIPMENT PLANS AND SCHEDULE FOR ADDITIONAL INFORMATION. COORDINATE FINAL LOCATION, DIMENSIONS AND OPENINGS BETWEEN ALL TRADES AND EQUIPMENT MANUFACTURER.
25	SEMI-RECESSED FIRE EXTINGUISHER CABINET. SEE 3/A1.07 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
26	SALVAGE EXISTING BRICK VENEER FROM DEMOLITION AND RE-USE TO WRAP BRICK BACK TO CMU AT JAMBS.
27	RATED ACCESS PANEL FOR DUST COLLECTION CLEANOUT. COORDINATE EXACT REQUIREMENTS WITH DUST COLLECTION SYSTEM MANUFACTURER. SEE MECHANICAL FOR ADDITIONAL INFORMATION.
28	PROVIDE IN-WALL BLOCKING AS REQUIRED FOR MONITOR. COORDINATE EXACT LOCATION WITH EQUIPMENT SUPPLIER. SEE AV DRAWINGS FOR ADDITIONAL 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.

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

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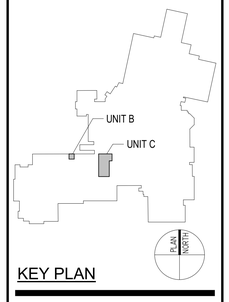
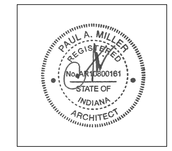


KEY PLAN

100% CONSTRUCTION DOCUMENTS



DRAWN BY: DSR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

UNIT B AND C - DEMOLITION AND FIRST FLOOR ARCHITECTURAL PLAN

A1.03

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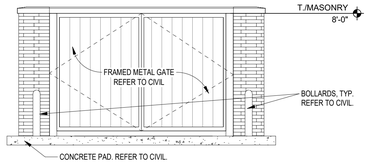
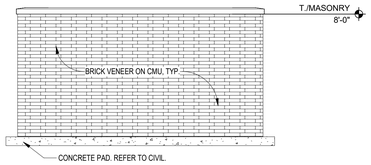


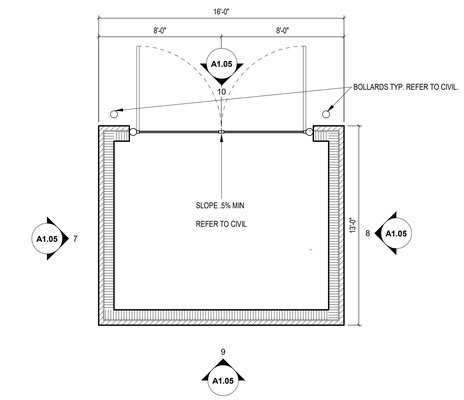
10 DUMPSTER ENCLOSURE NORTH ELEVATION

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



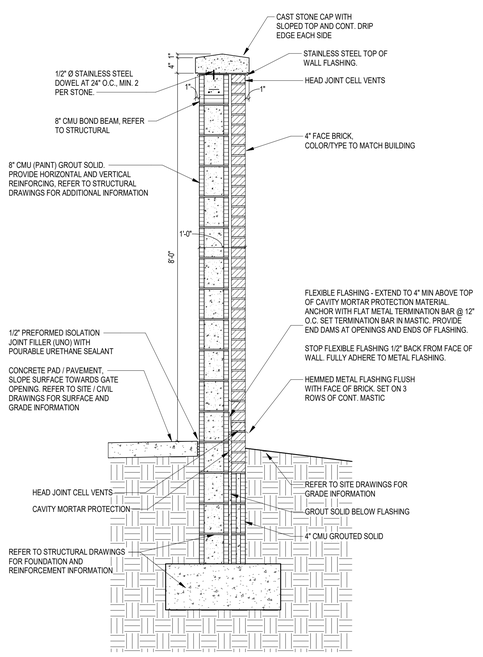
9 DUMPSTER ENCLOSURE SOUTH ELEVATION

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



6 DUMPSTER ENCLOSURE - PLAN

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



5 DUMPSTER ENCLOSURE - WALL SECTION

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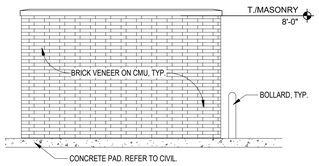
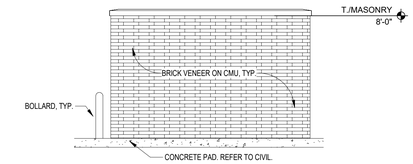


8 DUMPSTER ENCLOSURE EAST ELEVATION

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



7 DUMPSTER ENCLOSURE WEST ELEVATION

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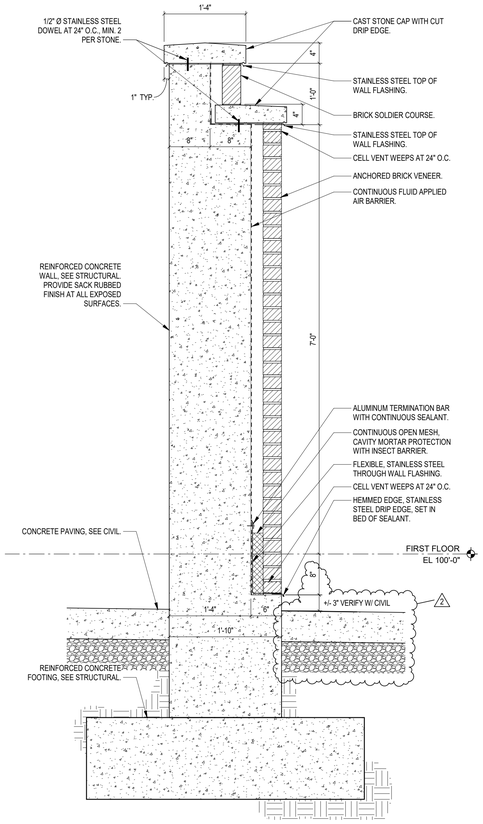
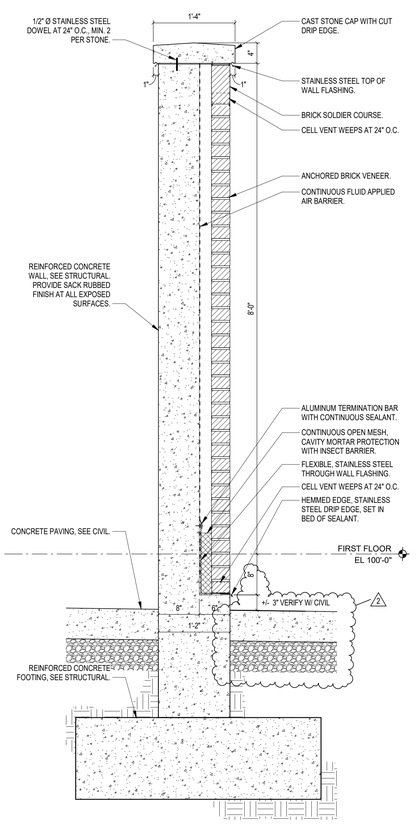


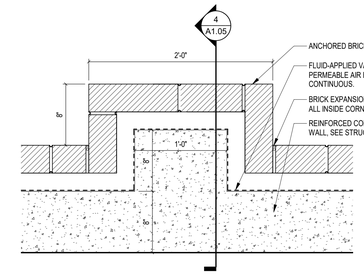
4 WALL SECTION

SCALE: 1" = 1'-0"



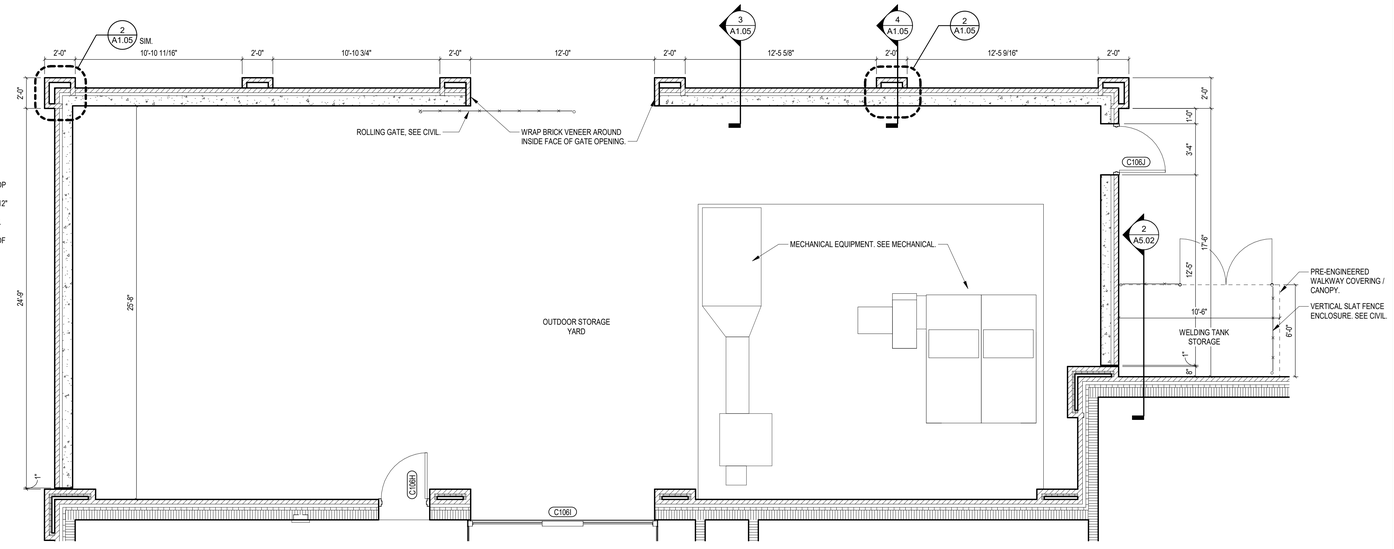
3 WALL SECTION

SCALE: 1" = 1'-0"



2 PLAN DETAIL

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



1 ENLARGED PLAN - OUTDOOR STORAGE YARD

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

CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

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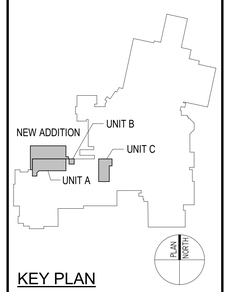

KEY PLAN

100% CONSTRUCTION DOCUMENTS

PAUL A. MILLER REGISTERED No. A 11800161 STATE OF INDIANA ARCHITECT

DRAWN BY: DSR/CLP
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/312023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

ENLARGED PLANS

A1.05

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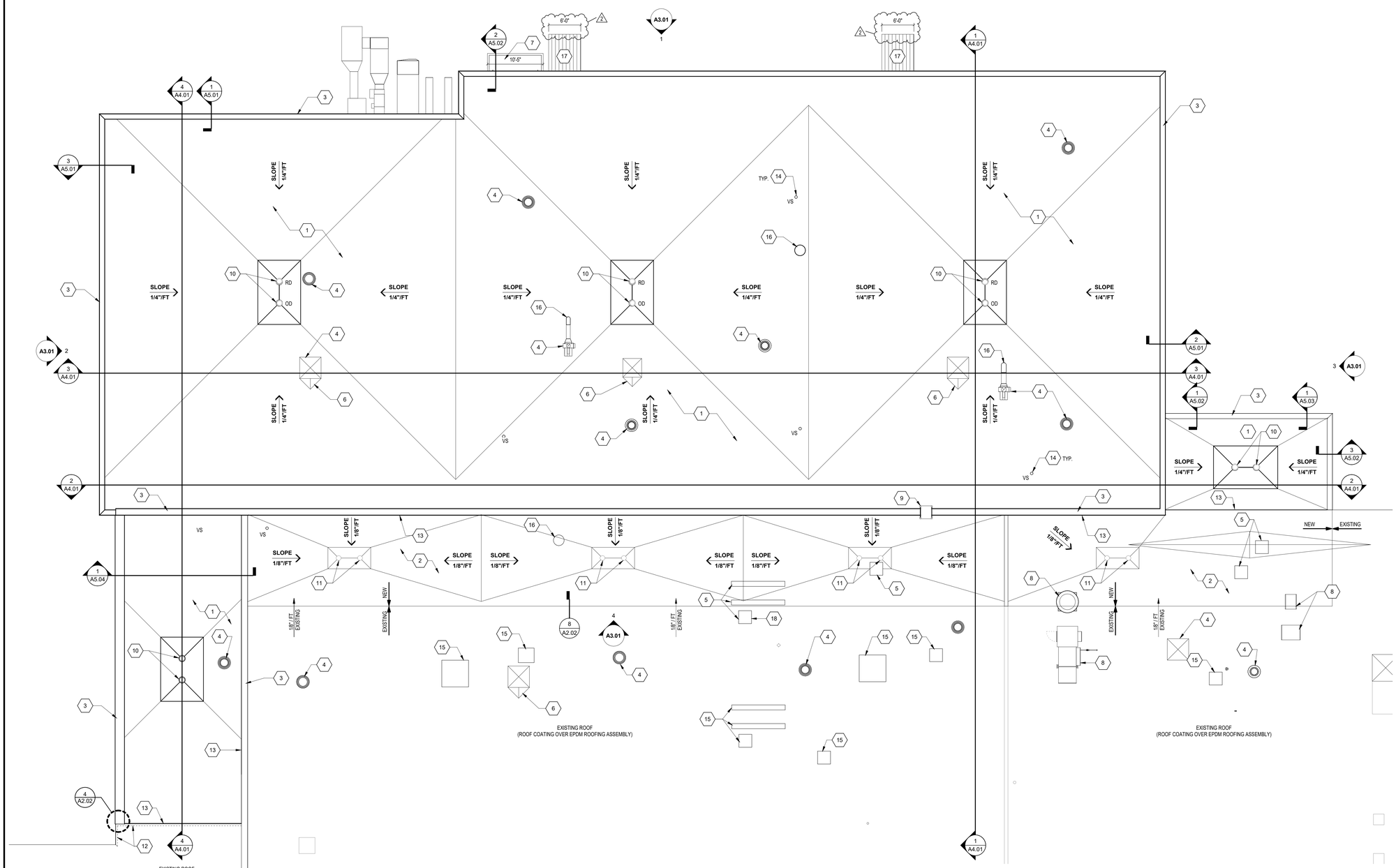

UNIT A - ROOF PLAN

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

* 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.

NO.	DESCRIPTION
1	MEMBRANE ROOFING SYSTEM (ADHERED) ON 1/4" COVER BOARD OVER FLAT AND TAPERED ROOF INSULATION (1/4" PER FT) OVER VAPOR BARRER ON METAL ROOF DECK.
2	MEMBRANE ROOFING SYSTEM (ADHERED) ON 1/4" COVER BOARD OVER FLAT AND TAPERED ROOF INSULATION TO MATCH EXISTING ROOF THICKNESS AND SLOPES INDICATED.
3	PRE-FINISHED METAL COPING SYSTEM.
4	MECHANICAL EQUIPMENT. SEE MECHANICAL DRAWINGS AND 5/A2.02.
5	PATCH EXISTING ROOF PENETRATION. SEE STRUCTURAL FOR METAL DECK PATCHING DETAILS / REQUIREMENTS.
6	PROVIDE TAPERED SADDLE AT MECHANICAL EQUIPMENT.
7	PRE-ENGINEERED METAL WALKWAY COVERING SYSTEM WITH INTEGRAL DOWNSPOUTS.
8	KITCHEN EQUIPMENT. SEE FOOD SERVICE DRAWINGS. PROVIDE INSULATED CURB SYSTEM.
9	24" WIDE FIXED ALUMINUM ACCESS LADDER WITH PLATFORM OVER PARAPET, SIMILAR TO O'KEEFES MODEL 503.
10	ROOF DRAIN / OVERFLOW DRAIN. SEE 1/A2.02 AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
11	RE-INSTALL EXISTING ROOF DRAIN ASSEMBLY. INSTALL PER DETAIL 1/A2.01/ FLUSH / JET EXISTING DRAIN PIPING UPON COMPLETION OF WORK.
12	PRE-FINISHED METAL FASCIA TO MATCH ADJACENT PROFILE AND COLOR OF EXISTING BUILDING. FLASH IN WITH EXISTING, BALLASTED, MEMBRANE ROOF SYSTEM.
13	2" ROOF EXPANSION JOINT ASSEMBLY. SEE WALL SECTIONS AND DETAILS.
14	VENT STACK. SEE PLUMBING DRAWINGS AND 6/A2.02.
15	PROVIDE INSULATED, STAINLESS STEEL CAP OVER EXISTING ROOF CURB. RE-FLASH EXISTING ROOF MEMBRANE AND RE-COAT AS REQUIRED FOR WEATHER-PROOF SEAL.
16	METAL DUCT / FLUE. SEE 7/A2.02
17	STANDING SEAM METAL ROOF ASSEMBLY OVER FULL COVERAGE SELF-ADHERED SHEET UNDERLAYMENT OVER 5/8" SUBSTRATE BOARD OVER METAL ROOF DECK. SEE 9/A2.02.
18	PATCH EXISTING ROOF PENETRATION WITH METAL DECK AND FLAT AND TAPERED INSULATION TO MATCH EXISTING ROOF THICKNESS / SLOPE. ADHERE NEW MEMBRANE TO EXISTING AND RE-COAT TO MATCH EXISTING.

ROOF PLAN SYMBOL LEGEND

- 12'-0" (UNO) / 12'-0" (UNO): INDICATES ROOF DRAIN (RD) AND OVERFLOW DRAIN (OD). (FLASH IN ACCORDANCE WITH ROOF MEMBRANE MANUFACTURER'S RECOMMENDATION.) REFER TO DETAIL 1/A2.02.
- VS: INDICATES VENT STACK - REFER TO PLUMBING DRAWINGS AND 6/A2.02.
- FL: INDICATES FLUE - REFER TO MECHANICAL DRAWINGS AND ?-A2.??
- INDICATES MECHANICAL EQUIPMENT - REFER TO MECHANICAL DRAWINGS AND 5/A2.02.
- SLOPE 7 / 12: INDICATES ROOF SLOPE
- INDICATES ROOF SADDLE - REFER TO PROJECT MANUAL.
- INDICATES EXPANSION JOINT - REFER TO ROOF PLAN AND WALL SECTIONS.
- INDICATES WALL LINE BELOW - REFER TO ARCHITECTURAL FLOOR PLANS
- DS: INDICATES METAL DOWNSPOUT. REFER TO ROOF PLAN AND BUILDING ELEVATIONS FOR LOCATIONS
- INDICATES WALKWAY PADS -REFER TO PROJECT MANUAL
- INDICATES ICE AND WATER SHIELD MEMBRANE FLASHING -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.

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NEW ADDITION
UNIT A
PLAN NORTH

KEY PLAN

100% CONSTRUCTION DOCUMENTS

PAUL A. MILLER REGISTERED No. A 10300161 STATE OF INDIANA ARCHITECT

DRAWN BY: DSR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

UNIT A - ROOF PLAN

A2.01

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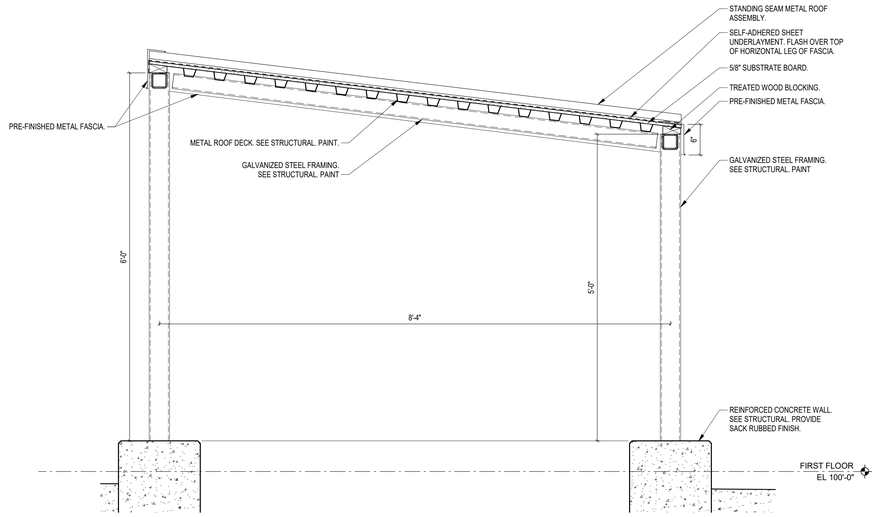
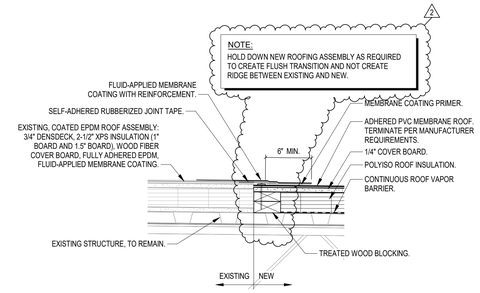


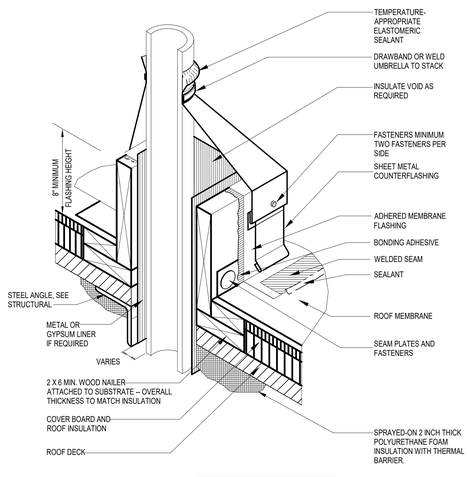
9 SECTION - METAL ROOF

SCALE: 1" = 1'-0"



8 ROOF DETAIL - EXIST. TO NEW ROOF

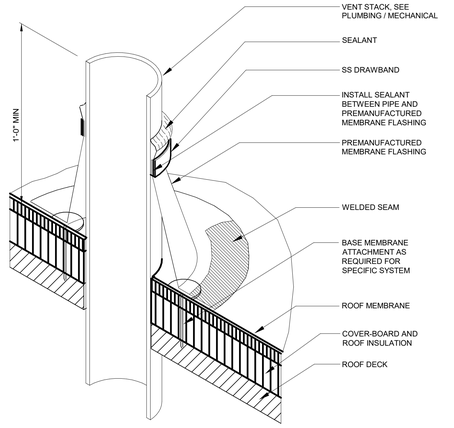
SCALE: 1 1/2" = 1'-0"



REFER TO N.R.C.A. DETAIL TS-17S

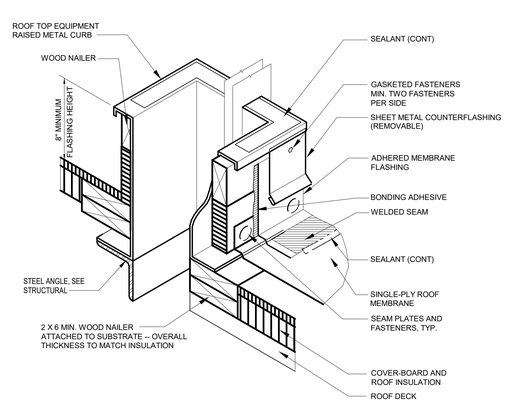
7 FLUE (HOT / COLD)

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



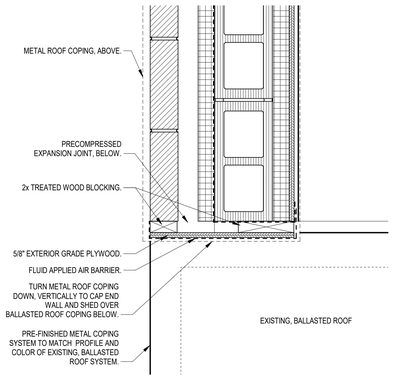
6 VENT STACK (VS)

SCALE: 12" = 1'-0"



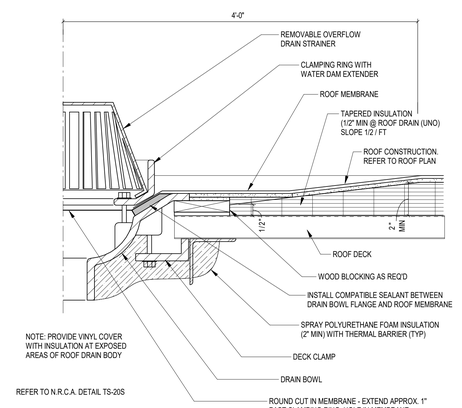
5 PREFABRICATED ROOF CURB

SCALE: 12" = 1'-0"



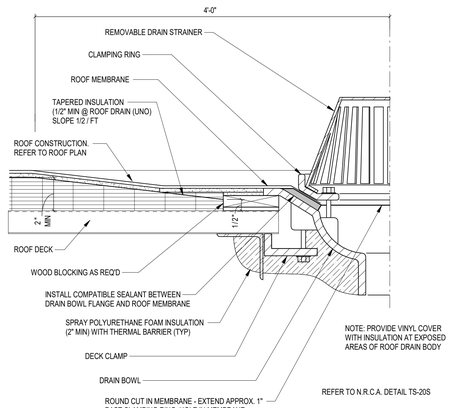
4 ROOF DETAIL - VERTICAL COPING

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



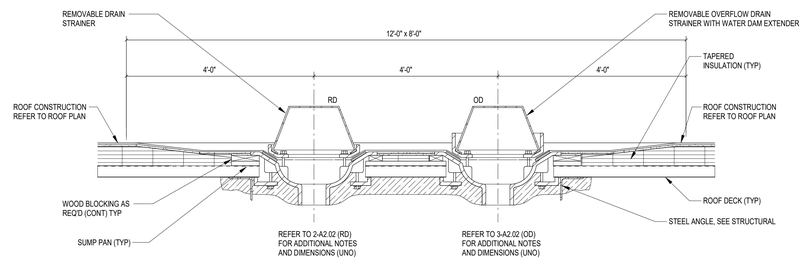
3 OVERFLOW DRAIN (OD)

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



2 ROOF DRAIN (RD)

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



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

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

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
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CARMEL CLAY SCHOOLS

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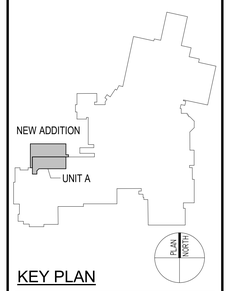
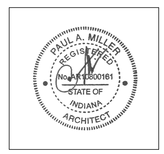


KEY PLAN

100% CONSTRUCTION DOCUMENTS

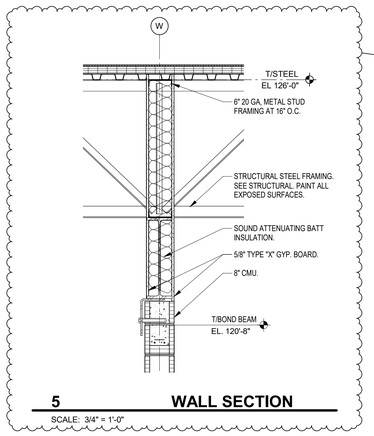


DRAWN BY: DSR
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

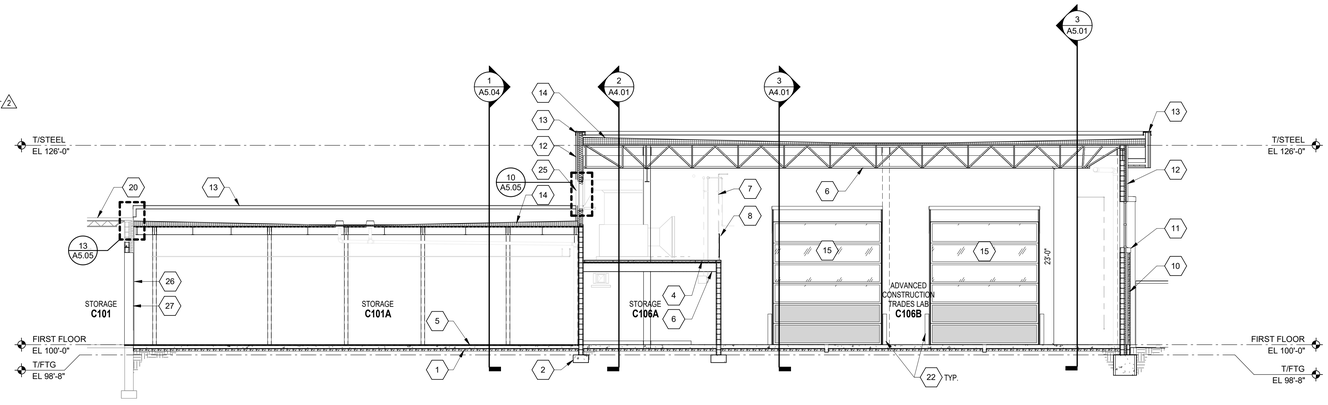
ROOF DETAILS

A2.02



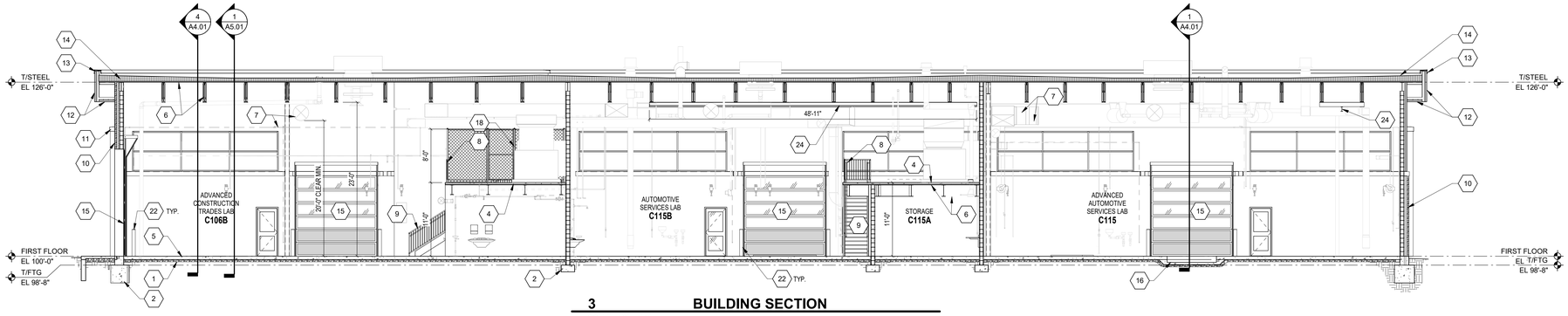
5 WALL SECTION

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



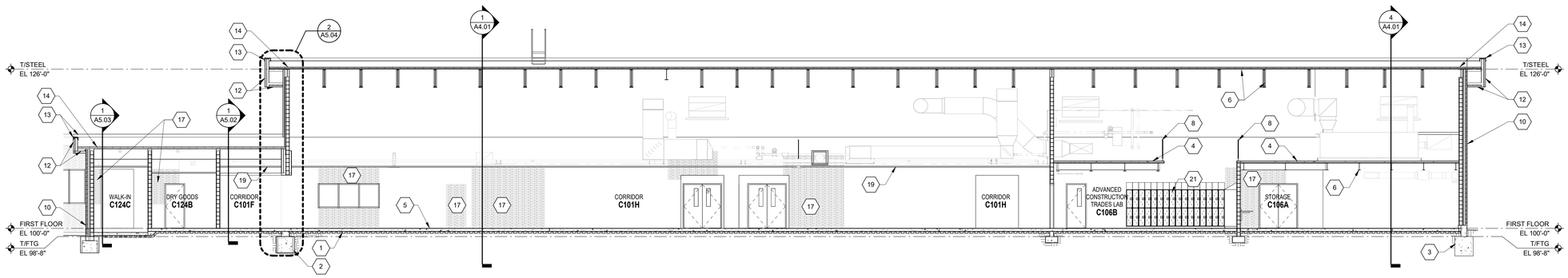
4 BUILDING SECTION

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



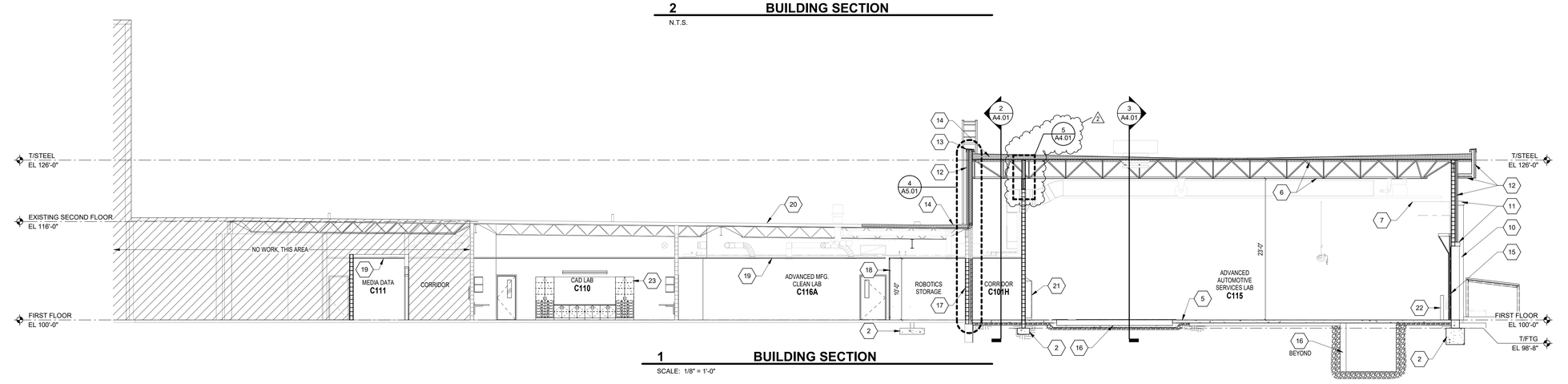
3 BUILDING SECTION

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



2 BUILDING SECTION

N.T.S.



1 BUILDING SECTION

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

BUILDING SECTION NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
1	COMPACTED GRANULAR FILL. SEE STRUCTURAL.
2	REINFORCED CONCRETE FOUNDATION. SEE STRUCTURAL.
3	EXISTING CONCRETE FOUNDATION. SEE STRUCTURAL.
4	REINFORCED CONCRETE SLAB ON METAL DECK. SEE STRUCTURAL.
5	REINFORCED CONCRETE SLAB-ON-GRADE. SEE STRUCTURAL.
6	PAINT ALL EXPOSED STRUCTURAL STEEL AND METAL DECK.
7	PAINT ALL EXPOSED DUCT, PIPING AND CONDUIT.
8	METAL PIPE GUARDRAIL SYSTEM.
9	CONCRETE FILLED, METAL PAN STAIRS.
10	ANCHORED BRICK VENEER.
11	CAST STONE BAND.
12	METAL COMPOSITE MATERIAL (MCM) PANEL SYSTEM.
13	METAL COPING SYSTEM.
14	MEMBRANE ROOFING SYSTEM (ADHERED) ON 1/4" COVER BOARD OVER FLAT AND TAPERED ROOF INSULATION OVER METAL ROOF DECK. SEE ROOF PLANS FOR ADDITIONAL INFORMATION.
15	GLAZED OVERHEAD DOOR SYSTEM.
16	RECESSED EQUIPMENT. SEE STRUCTURAL AND EQUIPMENT PLANS FOR ADDITIONAL INFORMATION.
17	INFILL OPENING TO MATCH EXISTING WALL CONSTRUCTION. FINISH FLUSH WITH ADJACENT SURFACES TO SHOW NO EVIDENCE OF CONSTRUCTION.
18	WIRE MESH PARTITION SYSTEM.
19	ACOUSTICAL CEILING SYSTEM. SEE REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
20	EXISTING MEMBRANE ROOF SYSTE TO REMAIN. PROTECT FROM DAMAGE DURING CONSTRUCTION.
21	PRE-FINISHED STEEL LOCKERS AND CMU BASE. SEE EQUIPMENT PLANS.
22	STEEL PIPE BOLLARD.
23	PLASTIC LAMINATE CASEWORK. SEE EQUIPMENT PLANS.
24	OVERHEAD CHAIN HOIST / TROLLEY BEAM. SEE EQUIPMENT PLANS AND STRUCTURAL.
25	PRE-FINISHED METAL LOUVER. SEE MECHANICAL.
26	1 1/2" PRE-COMPRESSED BUILDING EXPANSION JOINT.
27	13'W x 12'H MASONRY OPENING. SEE STRUCTURAL.

VERIFICATION NOTE

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

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

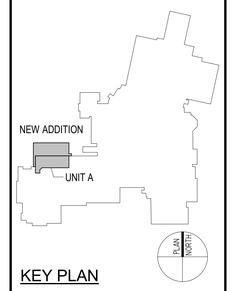
520 EAST MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

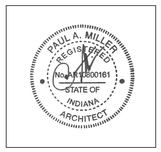
FANNING HOWEY

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



KEY PLAN

100% CONSTRUCTION DOCUMENTS



DRAWN BY: DSR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

BUILDING SECTIONS

A4.01

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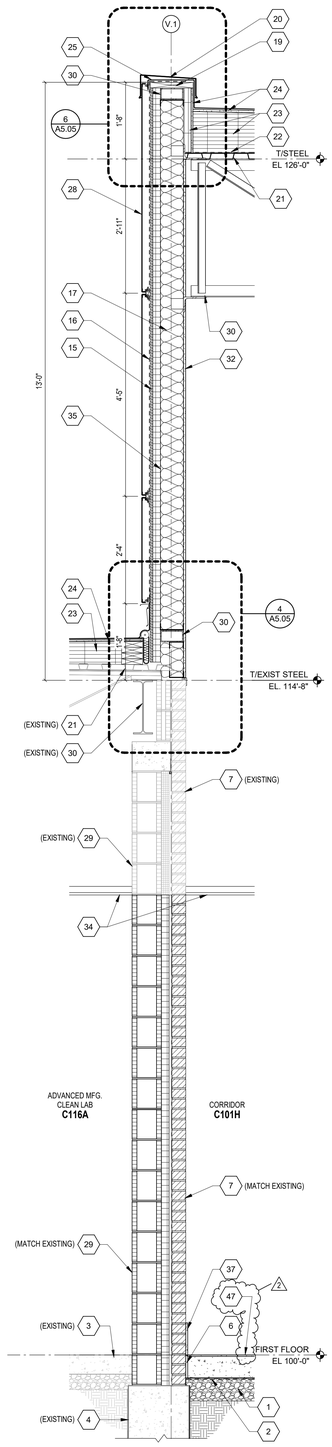
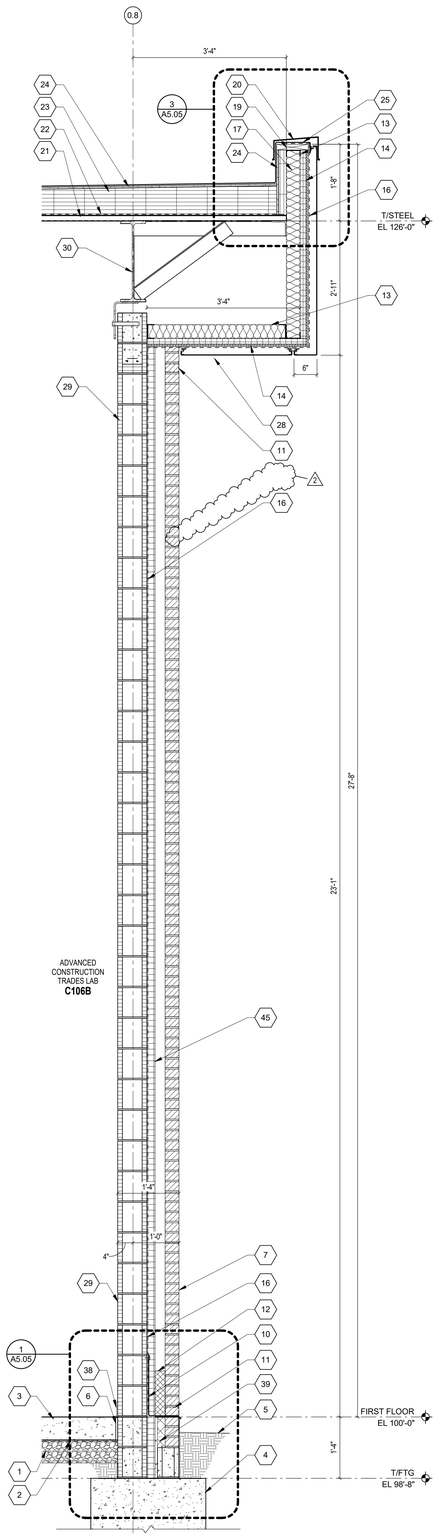


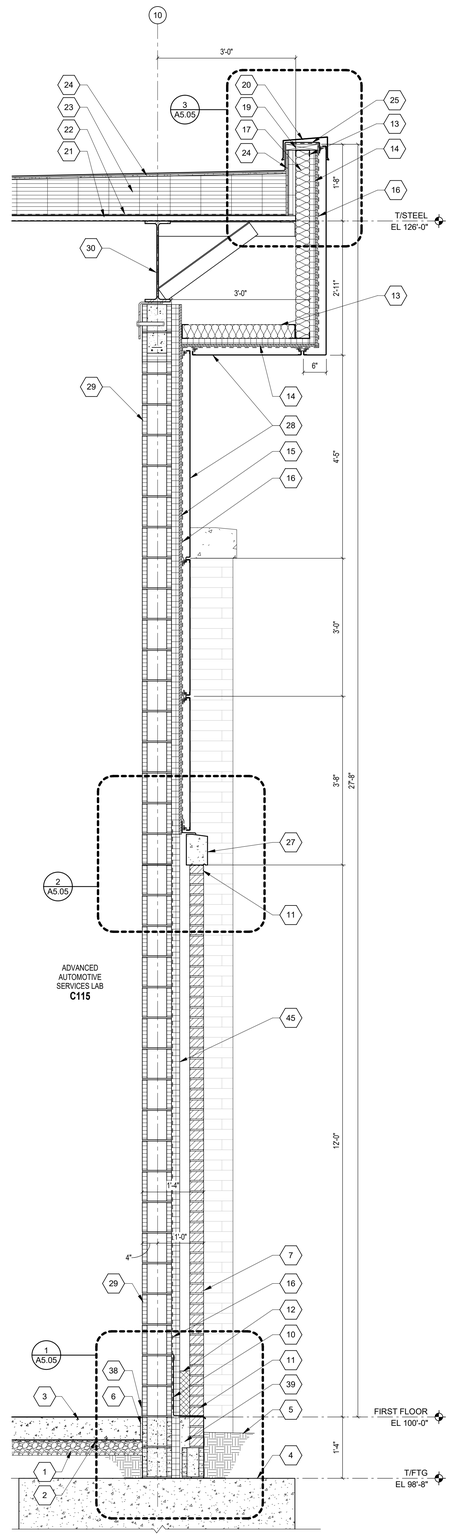
4 WALL SECTION

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



3 WALL SECTION

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



2 WALL SECTION

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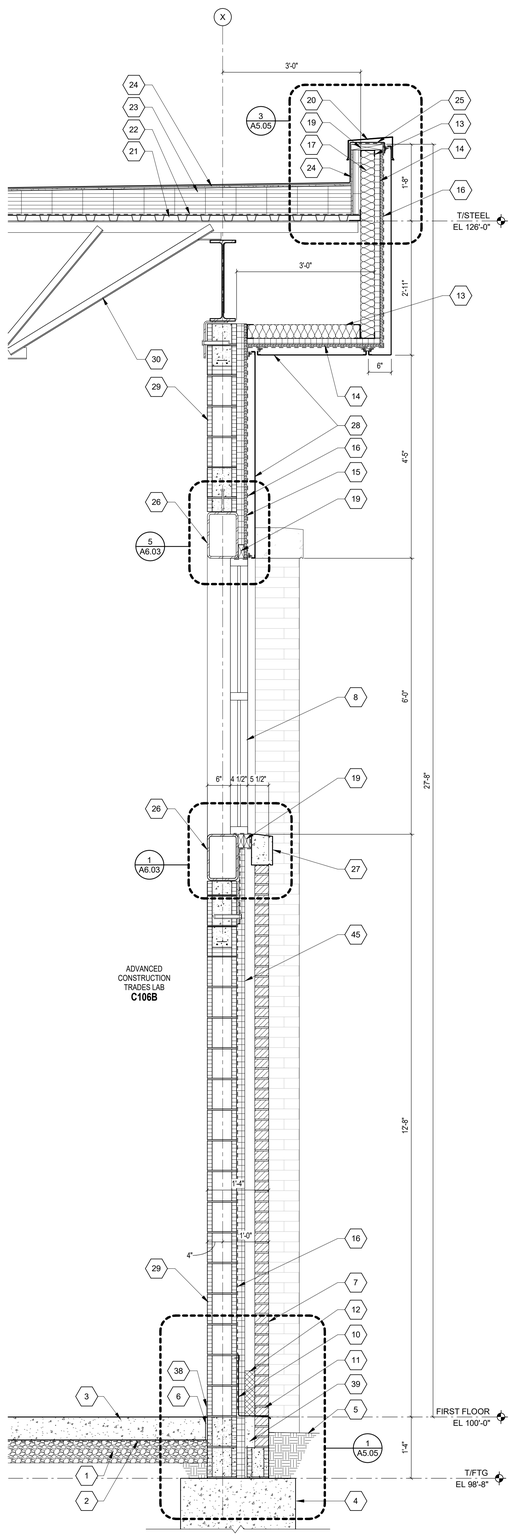

1 WALL SECTION

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

GENERAL NOTES

A. COORDINATE ALL LINTEL AND BOND BEAM REQUIREMENTS WITH STRUCTURAL DRAWINGS AND PROJECT MANUAL.
B. REFER TO THE STRUCTURAL DRAWINGS FOR ALL FOUNDATION AND FOOTING CONDITIONS.
C. PROVIDE HORIZ. JOINT REINFORCING, TIES, AND OTHER ANCHORAGE/REINFORCEMENT ITEMS AS REQ'D. PER PROJECT MANUAL.
D. ROOF TO EXTERIOR WALL JUNCTIONS: REFER TO DIVISION 07 SECTION "THERMAL INSULATION" FOR SPRAY POLYURETHANE INULATION REQUIRED AT THESE LOCATIONS.
E. WALL INSULATION PENETRATIONS: PROVIDE SPRAY POLYURETHANE INSULATION OR SEALANT AROUND ALL PENETRATIONS OF THE WALL INSULATION BY PIPING, CONDUITS, FRAMING, STRUCTURE, ETC.

WALL SECTION NOTES

X

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
1	COMPACTED GRANULAR FILL. SEE STRUCTURAL.
2	UNDERSLAB VAPOR BARRIER, CONTINUOUS.
3	REINFORCED CONCRETE SLAB-ON-GRADE. SEE STRUCTURAL.
4	REINFORCED CONCRETE FOUNDATION. SEE STRUCTURAL.
5	FINISH GRADE. SEE CIVIL.
6	1/2" FIBER EXPANSION MATERIAL WITH CONTINUOUS SEALANT. SEE SPECIFICATIONS.
7	ANCHORED BRICK VENEER.
8	ALUMINUM FRAMED STOREFRONT SYSTEM.
9	GALVANIZED STEEL LINTEL. SEE STRUCTURAL. PRIME AND PAINT ALL EXPOSED SURFACES.
10	FLEXIBLE, STAINLESS STEEL THROUGH WALL FLASHING WITH HEMMED EDGE STAINLESS STEEL DRIP EDGE SET IN 3 ROWS OF CONTINUOUS MASTIC.
11	CELL VENT WEEPS AT 24" O.C.
12	CONTINUOUS OPEN MESH, CAVITY MORTAR PROTECTION WITH INSECT BARRIER.
13	3-5/8" COLD FORMED METAL STUD FRAMING AT 16" O.C.
14	2-1/8" PLYWOOD FACED FOAM INSULATION BOARD. MIN. R-9.8.
15	2-5/8" PLYWOOD FACED FOAM INSULATION BOARD. MIN. R-12.9.
16	CONTINUOUS FLUID-APPLIED, VAPOR PERMEABLE AIR BARRIER. DETAIL ALL PENETRATIONS PER MANFUCATURER INSTRUCTIONS.
17	UNFACED, FIBERGLASS BATT INSULATION. MIN. R-13.
18	5/8" FRT PLYWOOD SHEATHING.
19	CONTINUOUS 2x FRT WOOD BLOCKING.
20	PRE-FINISHED METAL COPING SYSTEM.
21	1-1/2" METAL ROOF DECK, PAINT ALL EXPOSED SURFACES. SEE STRUCTURAL.
22	CONTINUOUS VAPOR BARRIER. SEE ROOF PLAN FOR ADDITIONAL INFORMATION.
23	POLYISO ROOF INSULATION. SEE ROOF PLAN FOR ADDITIONAL INFORMATION.
24	1/4" COVER BOARD. SEE ROOF PLAN AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
25	ADHERED ROOF MEMBRANE. OVERLAP WITH AIR BARRIER AS SHOWN.
26	HSS TUBE STEEL FRAMING, SEE STRUCTURAL. PAINT ALL EXPOSED SURFACES.
27	8" TALL CAST STONE BAND WITH CUT DRIP EDGE. PROVIDE BACKER ROD AND CONTINUOUS SEALANT AT ALL JOINTS.
28	METAL COMPOSITE MATERIAL (MCM) PANEL SYSTEM.
29	8" CMU WALL.
30	STEEL FRAMING, SEE STRUCTURAL. PAINT ALL EXPOSED STRUCTURAL STEEL.
31	METAL STUD FRAMING. SEE WALL TYPES FOR ADDITIONAL INFORMATION.
32	5/8" TYPE "X" GYP. BOARD. SEE WALL TYPES FOR ADDITIONAL INFORMATION.
33	SOUND ATTENUATING BATT INSULATION. SEE WALL TYPES FOR ADDITIONAL INFORMATION.
34	ACOUSTICAL CEILING SYSTEM. SEE REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
35	6" COLD FORMED METAL STUD FRAMING AT 16" O.C.
36	EXISTING COATED MEMBRANE ROOF SYSTEM TO REMAIN. REMOVE / MODIFY ONLY AS REQUIRED FOR INSTALLATION OF NEW WORK. REPLACE AND RE-COAT TO MATCH EXISTING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
37	EPOXY TERRAZZO BASE. SEE FINISH PLANS.
38	RUBBER BASE. SEE FINISH PLANS.
39	GROUT CAVITY AND CMU SOLID BELOW FLOOR LINE.
40	PRE-ENGINEERED METAL WALKWAY COVERING SYSTEM WITH INTEGRAL DOWNSPOUTS. SEE STRUCTURAL FOR CONNECTION DETAILS.
41	METAL FLASHING AND COUNTERFLASHING, BY METAL CANOPY MANUFACTURER.
42	VERTICAL SLAT FENCE ENCLOSURE AND GATE. SEE CIVIL.
43	RECESSED KITCHEN EQUIPMENT. SEE FOOD SERVICE DRAWINGS. COORDINATE EXACT REQUIREMENTS WITH KITCHEN EQUIPMENT PROVIDER FOR THRESHOLD AND FLUSH FLOOR TRANSITION.
44	2 LAYERS URETHANE INSULATION. SEE FOODSERVICE DRAWINGS AND COORDINATE EXACT REQUIREMENTS WITH KITCHEN EQUIPMENT PROVIDER.
45	2-1/8" THICK RIGID XPS FOAM CAVITY INSULATION. MIN. R-12.
46	5/8" TYPE "X" GYP. BOARD ON 3-5/8" METAL STUD FRAMING AT 16" O.C. SEE REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
47	EPOXY TERRAZZO FLOORING. RECESS CONCRETE SLAB-ON-GRADE 3/8" TO CREATE FLUSH FLOOR TRANSITION TO ADJACENT, EXISTING FLOORS. SEE STRUCTURAL AND FINISH PLANS FOR ADDITIONAL INFORMATION.

2

VERIFICATION NOTE

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

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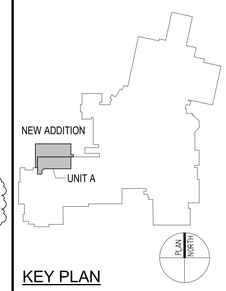
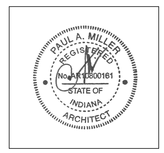


KEY PLAN

100% CONSTRUCTION DOCUMENTS



DRAWN BY: DSR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

WALL SECTIONS

A5.01

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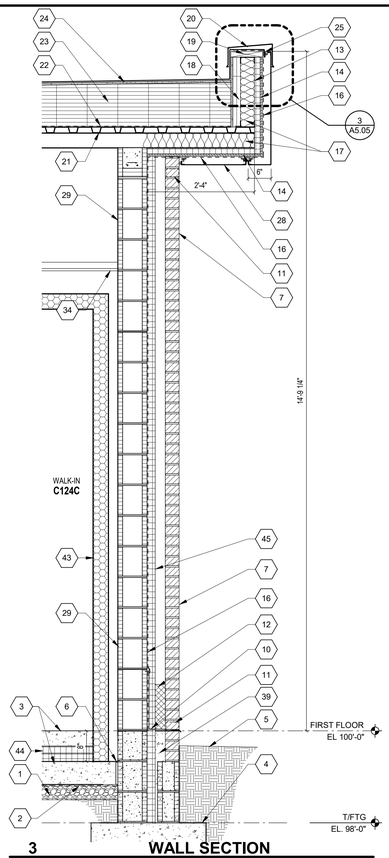
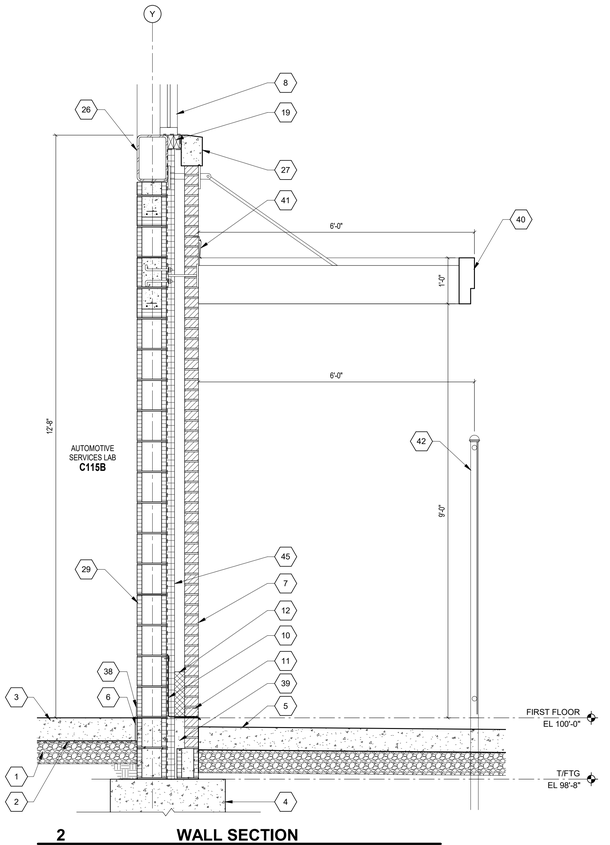


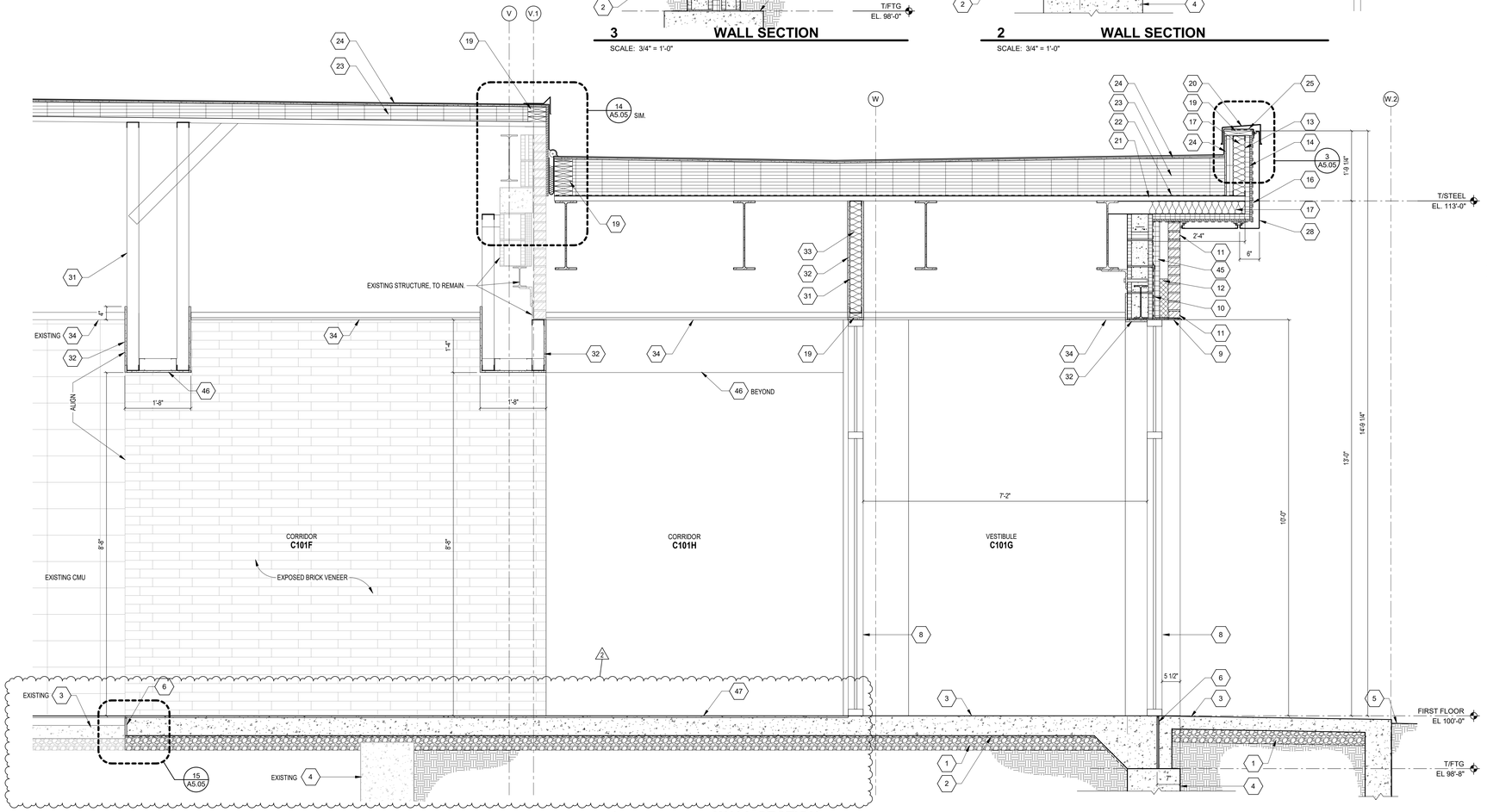
3 WALL SECTION

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



2 WALL SECTION

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



1 WALL SECTION

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

GENERAL NOTES

A. COORDINATE ALL LINTEL AND BOND BEAM REQUIREMENTS WITH STRUCTURAL DRAWINGS AND PROJECT MANUAL.
B. REFER TO THE STRUCTURAL DRAWINGS FOR ALL FOUNDATION AND FOOTING CONDITIONS.
C. PROVIDE HORIZ. JOINT REINFORCING, TIES, AND OTHER ANCHORAGE/REINFORCEMENT ITEMS AS REQ'D. PER PROJECT MANUAL.
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WALL SECTION NOTES (X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
1	COMPACTED GRANULAR FILL. SEE STRUCTURAL.
2	UNDERSLAB VAPOR BARRIER, CONTINUOUS.
3	REINFORCED CONCRETE SLAB-ON-GRADE. SEE STRUCTURAL.
4	REINFORCED CONCRETE FOUNDATION. SEE STRUCTURAL.
5	FINISH GRADE. SEE CIVIL.
6	1/2" FIBER EXPANSION MATERIAL WITH CONTINUOUS SEALANT. SEE SPECIFICATIONS.
7	ANCHORED BRICK VENEER.
8	ALUMINUM FRAMED STOREFRONT SYSTEM.
9	GALVANIZED STEEL LINTEL. SEE STRUCTURAL. PRIME AND PAINT ALL EXPOSED SURFACES.
10	FLEXIBLE, STAINLESS STEEL THROUGH WALL FLASHING WITH HEMMED EDGE STAINLESS STEEL DRIP EDGE SET IN 3 ROWS OF CONTINUOUS MASTIC.
11	CELL VENT WEEPS AT 24" O.C.
12	CONTINUOUS OPEN MESH, CAVITY MORTAR PROTECTION WITH INSECT BARRIER.
13	3-5/8" COLD FORMED METAL STUD FRAMING AT 16" O.C.
14	2-1/8" PLYWOOD FACED FOAM INSULATION BOARD. MIN. R-9.8.
15	2-5/8" PLYWOOD FACED FOAM INSULATION BOARD. MIN. R-12.9.
16	CONTINUOUS FLUID-APPLIED, VAPOR PERMEABLE AIR BARRIER. DETAIL ALL PENETRATIONS PER MANFUCATURER INSTRUCTIONS.
17	UNFACED, FIBERGLASS BATT INSULATION. MIN. R-13.
18	5/8" FRT PLYWOOD SHEATHING.
19	CONTINUOUS 2x FRT WOOD BLOCKING.
20	PRE-FINISHED METAL COPING SYSTEM.
21	1-1/2" METAL ROOF DECK, PAINT ALL EXPOSED SURFACES. SEE STRUCTURAL.
22	CONTINUOUS VAPOR BARRIER. SEE ROOF PLAN FOR ADDITIONAL INFORMATION.
23	POLYISO ROOF INSULATION. SEE ROOF PLAN FOR ADDITIONAL INFORMATION.
24	1/4" COVER BOARD. SEE ROOF PLAN AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
25	ADHERED ROOF MEMBRANE. OVERLAP WITH AIR BARRIER AS SHOWN.
26	HSS TUBE STEEL FRAMING, SEE STRUCTURAL. PAINT ALL EXPOSED SURFACES.
27	8" TALL CAST STONE BAND WITH CUT DRIP EDGE. PROVIDE BACKER ROD AND CONTINUOUS SEALANT AT ALL JOINTS.
28	METAL COMPOSITE MATERIAL (MCM) PANEL SYSTEM.
29	8" CMU WALL.
30	STEEL FRAMING, SEE STRUCTURAL. PAINT ALL EXPOSED STRUCTURAL STEEL.
31	METAL STUD FRAMING. SEE WALL TYPES FOR ADDITIONAL INFORMATION.
32	5/8" TYPE "X" GYP. BOARD. SEE WALL TYPES FOR ADDITIONAL INFORMATION.
33	SOUND ATTENUATING BATT INSULATION. SEE WALL TYPES FOR ADDITIONAL INFORMATION.
34	ACOUSTICAL CEILING SYSTEM. SEE RELFECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
35	6" COLD FORMED METAL STUD FRAMING AT 16" O.C.
36	EXISTING COATED MEMBRANE ROOF SYSTEM TO REMAIN. REMOVE / MODIFY ONLY AS REQUIRED FOR INSTALLATION OF NEW WORK. REPLACE AND RE-COAT TO MATCH EXISTING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
37	EPOXY TERRAZZO BASE. SEE FINISH PLANS.
38	RUBBER BASE. SEE FINISH PLANS.
39	GROUT CAVITY AND CMU SOLID BELOW FLOOR LINE.
40	PRE-ENGINEERED METAL WALKWAY COVERING SYSTEM WITH INTEGRAL DOWNSPOUTS. SEE STRUCTURAL FOR CONNECTION DETAILS.
41	METAL FLASHING AND COUNTERFLASHING, BY METAL CANOPY MANUFACTURER.
42	VERTICAL SLAT FENCE ENCLOSURE AND GATE. SEE CIVIL.
43	RECESSED KITCHEN EQUIPMENT. SEE FOOD SERVICE DRAWINGS. COORDINATE EXACT REQUIREMENTS WITH KITCHEN EQUIPMENT PROVIDER FOR THRESHOLD AND FLUSH FLOOR TRANSITION.
44	2 LAYERS URETHANE INSULATION. SEE FOODSERVICE DRAWINGS AND COORDINATE EXACT REQUIREMENTS WITH KITCHEN EQUIPMENT PROVIDER.
45	2-1/8" THICK RIGID XPS FOAM CAVITY INSULATION. MIN. R-12.
46	5/8" TYPE "X" GYP. BOARD ON 3-5/8" METAL STUD FRAMING AT 16" O.C. SEE REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
47	EPOXY TERRAZZO FLOORING. RECESS CONCRETE SLAB-ON-GRADE 3/8" TO CREATE FLUSH FLOOR TRANSITION TO ADJACENT, EXISTING FLOORS. SEE STRUCTURAL AND FINISH PLANS FOR ADDITIONAL INFORMATION.

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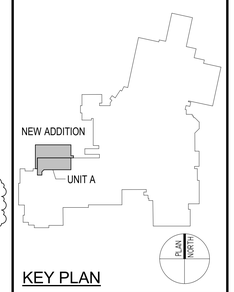

KEY PLAN

100% CONSTRUCTION DOCUMENTS

PAUL A. MILLER
REGISTERED
No. 11800161
STATE OF
INDIANA
ARCHITECT

DRAWN BY: DSR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

WALL SECTIONS

A5.02

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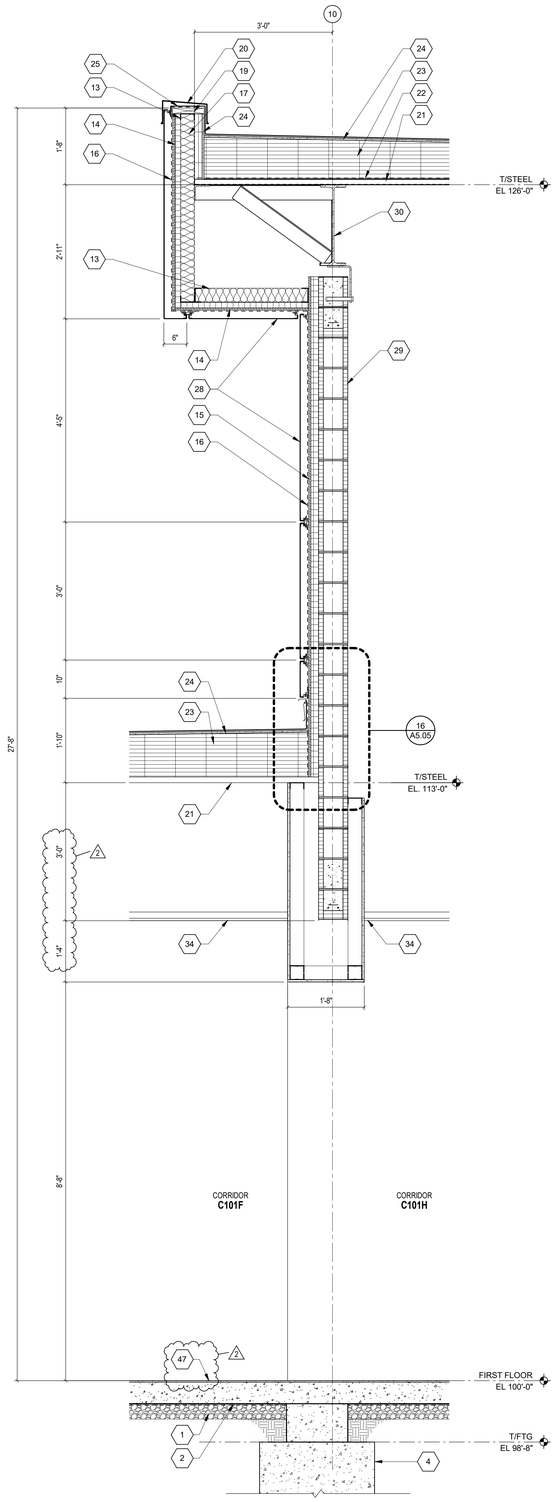
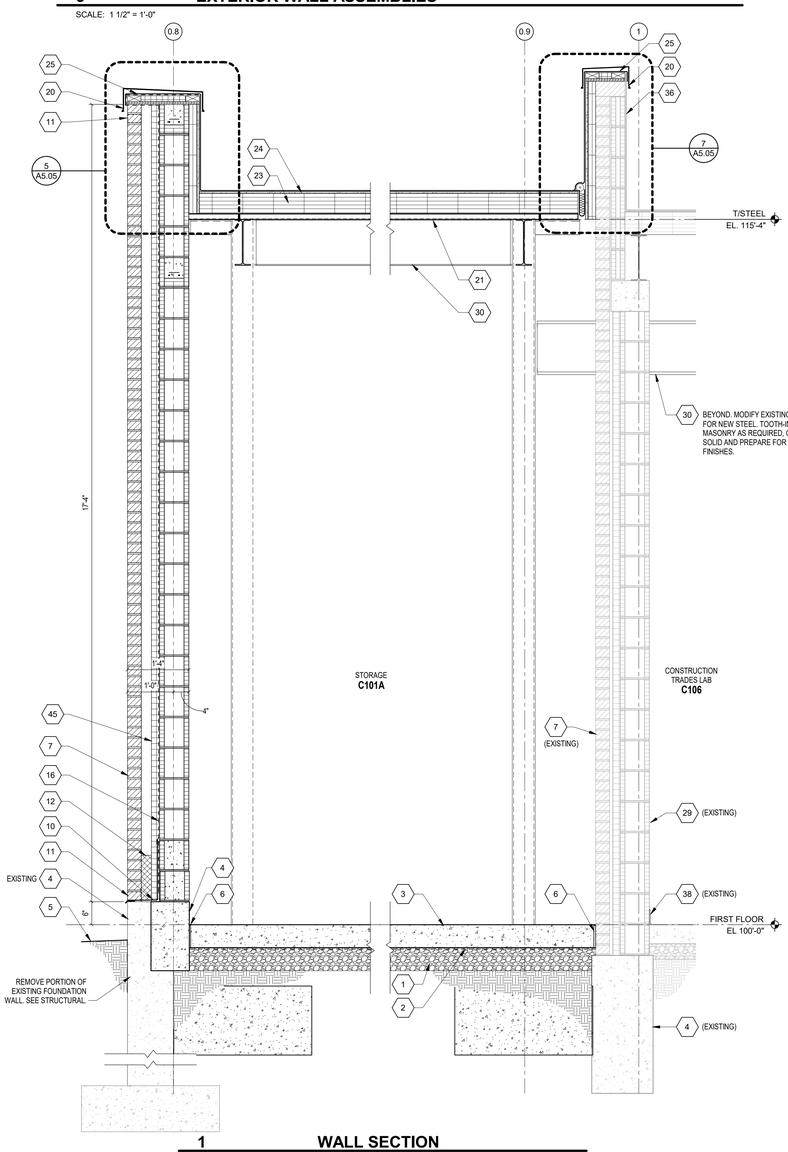


2 WALL SECTION

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

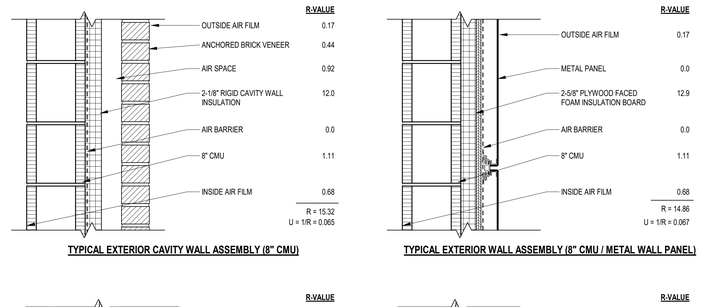


1 WALL SECTION

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

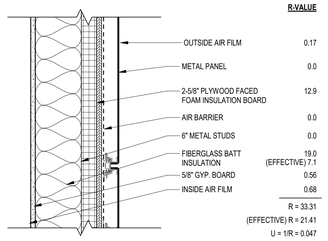
3 EXTERIOR WALL ASSEMBLIES

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

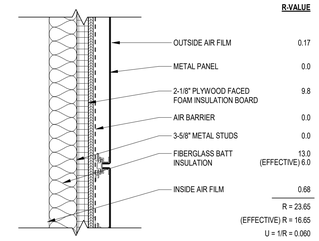


TYPICAL EXTERIOR CAVITY WALL ASSEMBLY (8" CMU)

TYPICAL EXTERIOR WALL ASSEMBLY (8" CMU / METAL WALL PANEL)



TYPICAL EXTERIOR WALL ASSEMBLY (6" METAL STUD / METAL WALL PANEL)



TYPICAL EXTERIOR WALL ASSEMBLY (3-5/8" METAL STUD / METAL WALL PANEL)

GENERAL NOTES

A. COORDINATE ALL LINTEL AND BOND BEAM REQUIREMENTS WITH STRUCTURAL DRAWINGS AND PROJECT MANUAL.
B. REFER TO THE STRUCTURAL DRAWINGS FOR ALL FOUNDATION AND FOOTING CONDITIONS.
C. PROVIDE HORIZ. JOINT REFINFORCING, TIES, AND OTHER ANCHORAGE/REINFORCEMENT ITEMS AS REQ'D. PER PROJECT MANUAL.
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E. WALL INSULATION PENETRATIONS: PROVIDE SPRAY POLYURETHANE INSULATION OR SEALANT AROUND ALL PENETRATIONS OF THE WALL INSULATION BY PIPING, CONDUITS, FRAMING, STRUCTURE, ETC.

WALL SECTION NOTES

(X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
1	COMPACTED GRANULAR FILL. SEE STRUCTURAL.
2	UNDERSLAB VAPOR BARRIER, CONTINUOUS.
3	REINFORCED CONCRETE SLAB-ON-GRADE. SEE STRUCTURAL.
4	REINFORCED CONCRETE FOUNDATION. SEE STRUCTURAL.
5	FINISH GRADE. SEE CIVIL.
6	1/2" FIBER EXPANSION MATERIAL WITH CONTINUOUS SEALANT. SEE SPECIFICATIONS.
7	ANCHORED BRICK VENEER.
8	ALUMINUM FRAMED STOREFRONT SYSTEM.
9	GALVANIZED STEEL LINTEL. SEE STRUCTURAL. PRIME AND PAINT ALL EXPOSED SURFACES.
10	FLEXIBLE, STAINLESS STEEL THROUGH WALL FLASHING WITH HEMMED EDGE STAINLESS STEEL DRIP EDGE SET IN 3 ROWS OF CONTINUOUS MASTIC .
11	CELL VENT WEEPS AT 24" O.C.
12	CONTINUOUS OPEN MESH, CAVITY MORTAR PROTECTION WITH INSECT BARRIER.
13	3-5/8" COLD FORMED METAL STUD FRAMING AT 16" O.C.
14	2-1/8" PLYWOOD FACED FOAM INSULATION BOARD. MIN. R-9.8.
15	2-5/8" PLYWOOD FACED FOAM INSULATION BOARD. MIN. R-12.9.
16	CONTINUOUS FLUID-APPLIED, VAPOR PERMEABLE AIR BARRIER. DETAIL ALL PENETRATIONS PER MANFUCATURER INSTRUCTIONS.
17	UNFACED, FIBERGLASS BATT INSULATION. MIN. R-13.
18	5/8" FRT PLYWOOD SHEATHING.
19	CONTINUOUS 2x FRT WOOD BLOCKING.
20	PRE-FINISHED METAL COPING SYSTEM.
21	1-1/2" METAL ROOF DECK, PAINT ALL EXPOSED SURFACES. SEE STRUCTURAL.
22	CONTINUOUS VAPOR BARRIER. SEE ROOF PLAN FOR ADDITIONAL INFORMATION.
23	POLYISO ROOF INSULATION. SEE ROOF PLAN FOR ADDITIONAL INFORMATION.
24	1/4" COVER BOARD. SEE ROOF PLAN AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
25	ADHERED ROOF MEMBRANE. OVERLAP WITH AIR BARRIER AS SHOWN.
26	HSS TUBE STEEL FRAMING, SEE STRUCTURAL. PAINT ALL EXPOSED SURFACES.
27	8" TALL CAST STONE BAND WITH CUT DRIP EDGE. PROVIDE BACKER ROD AND CONTINUOUS SEALANT AT ALL JOINTS.
28	METAL COMPOSITE MATERIAL (MCM) PANEL SYSTEM.
29	8" CMU WALL.
30	STEEL FRAMING, SEE STRUCTURAL. PAINT ALL EXPOSED STRUCTURAL STEEL.
31	METAL STUD FRAMING. SEE WALL TYPES FOR ADDITIONAL INFORMATION.
32	5/8" TYPE "X" GYP. BOARD. SEE WALL TYPES FOR ADDITIONAL INFORMATION.
33	SOUND ATTENUATING BATT INSULATION. SEE WALL TYPES FOR ADDITIONAL INFORMATION.
34	ACOUSTICAL CEILING SYSTEM. SEE RELFECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
35	6" COLD FORMED METAL STUD FRAMING AT 16" O.C.
36	EXISTING COATED MEMBRANE ROOF SYSTEM TO REMAIN. REMOVE / MODIFY ONLY AS REQUIRED FOR INSTALLATION OF NEW WORK. REPLACE AND RE-COAT TO MATCH EXISTING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
37	EPOXY TERRAZZO BASE. SEE FINISH PLANS.
38	RUBBER BASE. SEE FINISH PLANS.
39	GROUT CAVITY AND CMU SOLID BELOW FLOOR LINE.
40	PRE-ENGINEERED METAL WALKWAY COVERING SYSTEM WITH INTEGRAL DOWNSPOUTS. SEE STRUCTURAL FOR CONNECTION DETAILS.
41	METAL FLASHING AND COUNTERFLASHING, BY METAL CANOPY MANUFACTURER.
42	VERTICAL SLAT FENCE ENCLOSURE AND GATE. SEE CIVIL.
43	RECESSED KITCHEN EQUIPMENT. SEE FOOD SERVICE DRAWINGS. COORDINATE EXACT REQUIREMENTS WITH KITCHEN EQUIPMENT PROVIDER FOR THRESHOLD AND FLUSH FLOOR TRANSITION.
44	2 LAYERS URETHANE INSULATION. SEE FOODSERVICE DRAWINGS AND COORDINATE EXACT REQUIREMENTS WITH KITCHEN EQUIPMENT PROVIDER.
45	2-1/8" THICK RIGID XPS FOAM CAVITY INSULATION. MIN. R-12.
46	5/8" TYPE "X" GYP. BOARD ON 3-5/8" METAL STUD FRAMING AT 16" O.C. SEE REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
47	EPOXY TERRAZZO FLOORING. RECESS CONCRETE SLAB-ON-GRADE 3/8" TO CREATE FLUSH FLOOR TRANSITION TO ADJACENT, EXISTING FLOORS. SEE STRUCTURAL AND FINISH PLANS FOR ADDITIONAL INFORMATION.

(2)

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.

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
CARMEL, IN 46032

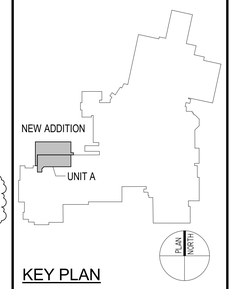
CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

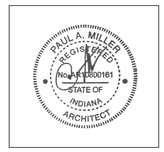
317-848-0966 WWW.FHAI.COM

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



KEY PLAN

100% CONSTRUCTION DOCUMENTS



DRAWN BY: DSR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

WALL SECTIONS

A5.04

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
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CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

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

NEW ADDITION
UNIT A
PLAN NORTH

KEY PLAN

100% CONSTRUCTION DOCUMENTS

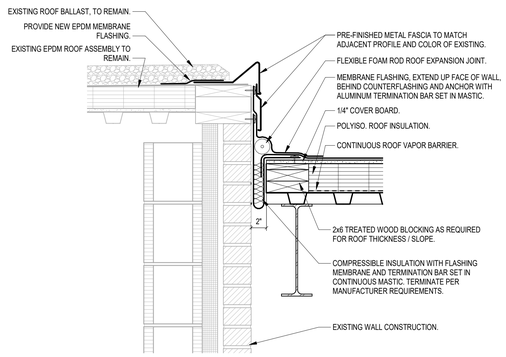
PAUL A. MILLER REGISTERED ARCHITECT No. A 10000161 STATE OF INDIANA ARCHITECT

DRAWN BY: DSR/CLP
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

SECTION DETAILS

A5.05



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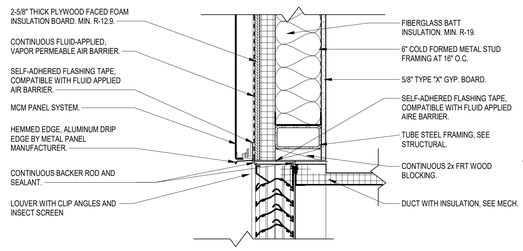

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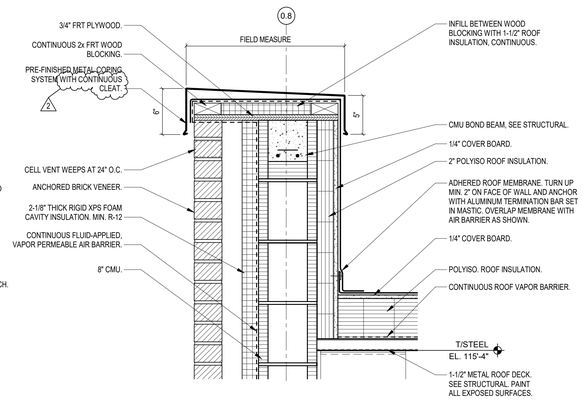

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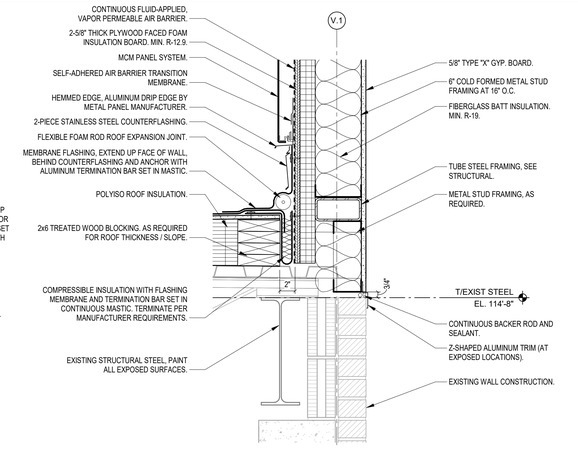

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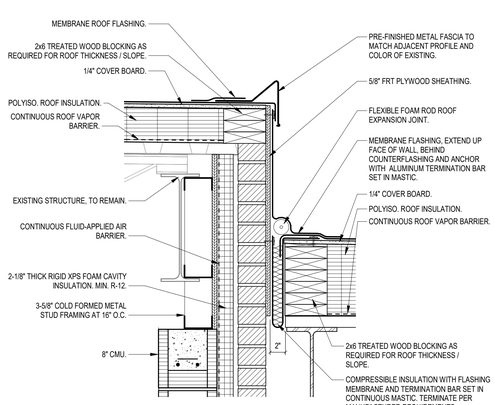

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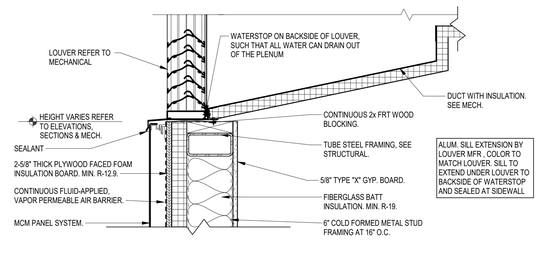

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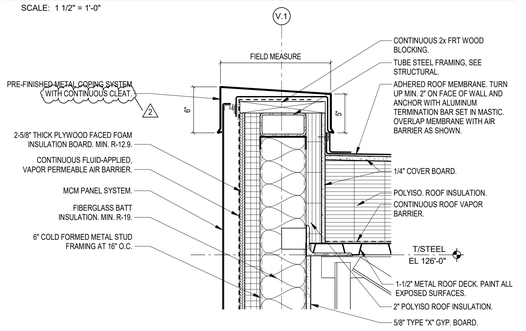

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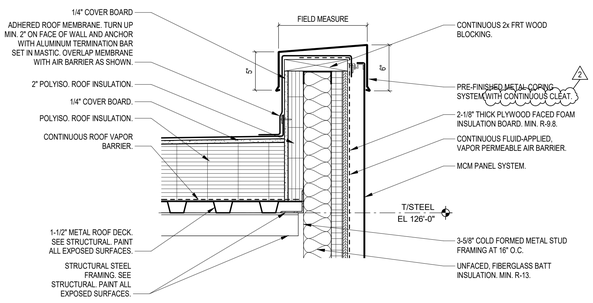

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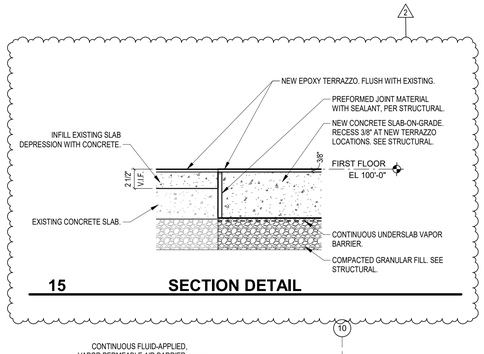

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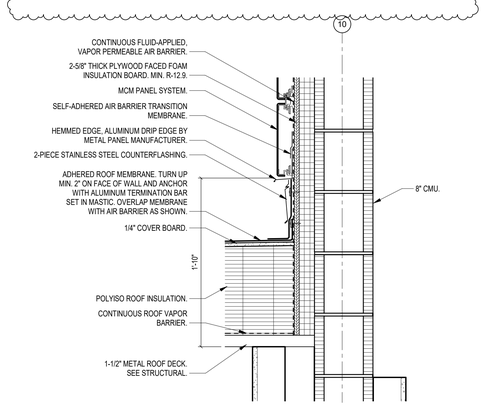

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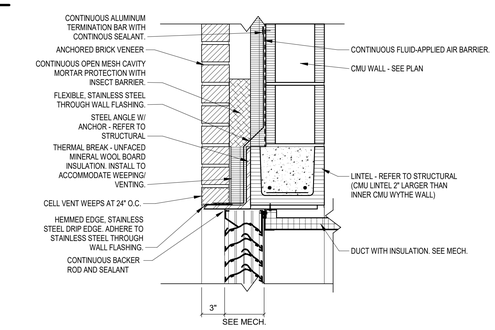

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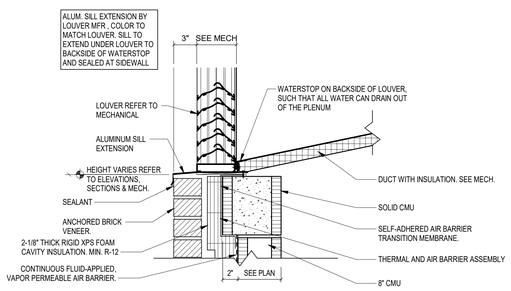

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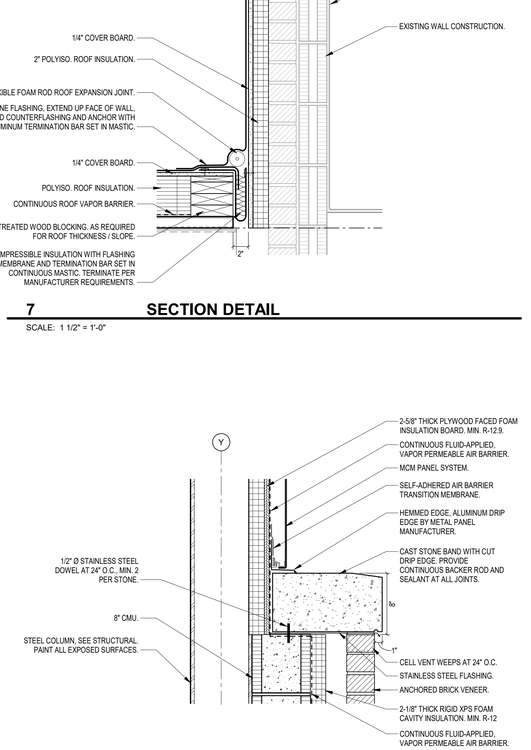

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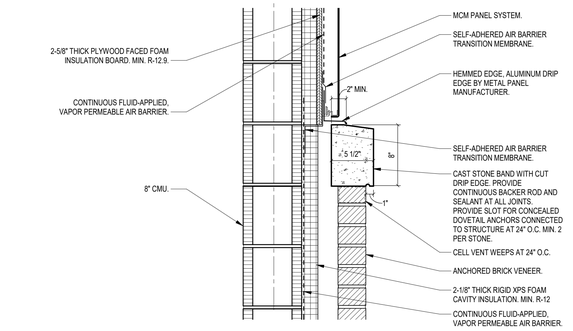
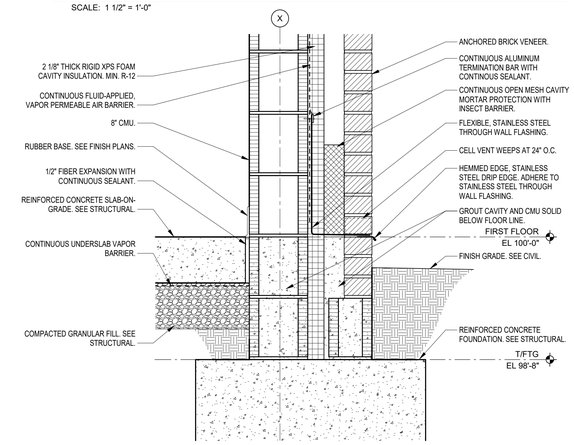


2 SECTION DETAIL
SCALE: 1 1/2" = 1'-0"

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



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

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UNIT A - FIRST FLOOR EQUIPMENT PLAN

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

EQUIPMENT GENERAL NOTES

A. ALL COUNTERTOPS TO HAVE CONTINUOUS 4" HIGH BACKSPLASHES AND ENDSPLASHES UNLESS NOTED OTHERWISE.
B. HIDDEN LINES (- - - -) INDICATE ITEMS TO BE PART OF LOOSE EQUIPMENT PACKAGE OR BY OWNER, NOT INCLUDED IN CONSTRUCTION CONTRACTS. DASHED LINES (– – –) INDICATE OVERHEAD ITEMS (INCLUDED IN CONSTRUCTION CONTRACTS).
C. ALL PROJECTION SCREENS (PS) ARE TO BE CEILING MOUNTED AND MANUAL UNLESS NOTED OTHERWISE. CONTRACTOR TO DETERMINE LOCATIONS AND AMOUNT OF EXTRA DROP REQUIRED ON CEILING MOUNTED SCREENS.
D. (TB) INDICATES 4' HIGH TACK BOARD LENGTH AS INDICATED. REFER TO MOUNTING HEIGHT DRAWING.
E. (MB) INDICATES 4' HIGH MARKER BOARD LENGTH AS INDICATED. REFER TO MOUNTING HEIGHT DRAWING.
F. (MH) INDICATES MOP HOLDER REFER TO A1.07.
G. PROVIDE FILLER STRIPS BETWEEN CASEWORK UNITS AND WALL OR BETWEEN ANY UNIT AS REQUIRED. EXTEND COUNTER TO FACE OF WALL OR ADJACENT TALL CABINET.
H. ALL CASEWORK DOORS AND DRAWERS SHALL BE LOCKABLE.
I. ALL EXPOSED ENDS AND BACKS OF CASEWORK SHALL BE FINISHED.
J. CASEWORK INSTALLER SHALL CUT CASEWORK AS REQUIRED FOR PLUMBING/ELECTRICAL LINES.
K. CASEWORK INSTALLER SHALL CAULK BETWEEN COUNTERS, BACKSPLASHES, AND WALLS.
L. ALL WALL-MOUNTED CASEWORK SHALL BE MOUNTED WITH THE TOP AT 7'-0" AFF UNLESS OTHERWISE NOTED.
M. REFER TO SPECIFICATIONS FOR VOCATIONAL SHOP EQUIPMENT SCHEDULE.
N. REMOVAL AND TEMPORARY PLACEMENT OF ALL EXISTING VOCATIONAL SHOP EQUIPMENT TO BE PROVIDED UNDER SEPARATE CONTRACT.

EQUIPMENT NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

1 4'-0" SQ. WELDING BOOTH. 3-SIDED PANELS, NO REAR PANEL. MOUNT AND FASTEN SIDE PANELS TO CMU WALL. INCLUDE FREESTANDING WORKTABLE SURFACE. REFER TO PROJECT MANUAL FOR ADDITIONAL INFORMATION.
2 EXISTING LOCKERS TO REMAIN. ELECTROSTATICALLY REPAINT INSIDE AND OUT TO MATCH NEW LOCKERS.
3 PLASTIC LAMINATE (PL-1) COUNTER 30" A.F.F. WITH 4"H BACKSPLASH. INSTALL RICHELIEU HEAVY-DUTY WORKSTATION BRACKETS MINIMUM OF ONE EVERY 3'-0" ON CENTER.
4 PROVIDE CONTINUOUS PLASTIC LAMINATE SHELF (PL-2) ACROSS TOP OF ALL WALL CABINETS. CONTINUE SHELF OVER DEAD CORNER (WHERE APPLICABLE) AND ADD SUPPORTS WHERE NECESSARY.
5 PROVIDE FILLER PANEL (PL-2) TO COVER SPACE CABINET TO CABINET OVER COLUMN.
6 PLASTIC LAMINATE (PL-3) COUNTER 34" A.F.F. WITH 4"H BACKSPLAS. INSTALL RAKKS EH L-SHAPED SUPPORT BRACKETS MINIMUM OF ONE EVERY 3'-0" ON CENTER.
7 LUMBERMETAL RACK BASIS OF DESIGN GREENE MANUFACTURING INC SINGLE SIDED CANTILEVER RACK WITH ADJUSTABLE ARMS 38"Dx72"H 24" CENTER TO CENTER MODEL GMCR-100-38 STARTER AND ADD ONS. PROVIDED BY AND INSTALLED BY CONTRACTOR.
8 REFER TO FOOD SERVICE DRAWINGS.
9 WALL MOUNTED PROJECTION SCREEN, BY OWNER.
10 FABRIC WRAPPED ACOUSTIC WALL PANELS ON ALL WALLS, REFER TO INTERIOR ELEVATIONS FOR DETAILS.
11 MARKERBOARD PROVIDED BY OWNER, INSTALLED BY CONTRACTOR.
12 EXISTING PROJECTION SCREEN (WALL/CEILING MOUNTED). TO REMAIN. REMOVE CEILING MOUNTED PROJECTION SCREENS WHERE CEILING WORK IS BEING DONE AND REINSTALL.
13 EXISTING CEILING MOUNTED PROJECTOR TO REMAIN.
14 OWNER PROVIDED PROJECTOR, REFER TO TECHNOLOGY DRAWINGS.
15 CEILING MOUNTED MONITOR. REFER TO TECHNOLOGY DRAWINGS.
16 INSTALL NEW AWT-2 PANELS APPROX. 2'WX4'H TO MATCH EXISTING DIMENSIONS AND MOUNTING HEIGHT.
17 WALL MOUNTED MONITOR. REFER TO TECHNOLOGY DRAWINGS.
18 REFER TO TECHNOLOGY DRAWINGS FOR EQUIPMENT.
19 REMOVE AND STORE EXISTING LOCKERS FOR REINSTALLATION. DEMOLISH EXISTING WOOD BASE AND CONSTRUCT NEW WOOD BASE TO MATCH EXISTING HEIGHT. RECESS NEW WOOD BASE APPROXIMATELY 1/2 INCH ON SIDES AND 1 INCH ON FRONT TO ACCEPT NEW TERRAZZO BASE. REINSTALL EXISTING LOCKERS IN SAME LOCATION.
20 REMOVE AND STORE EXISTING LOCKERS FOR REINSTALLATION. DEMOLISH EXISTING WOOD BASE AND CONSTRUCT NEW WOOD BASE TO MATCH EXISTING HEIGHT. RECESS NEW WOOD BASE APPROXIMATELY 1/2 INCH ON SIDES AND 1 INCH ON FRONT TO ACCEPT NEW TERRAZZO BASE. REINSTALL EXISTING LOCKERS IN SAME LOCATION.
21 EXISTING CASEWORK TO REMAIN. PROTECT DURING CONSTRUCTION.
22 DIGITALLY PRINTED CUSTOM GRAPHIC ON 3 ACRYLIC PANELS 2'-6"H x 4'-0"W x 0.250" THICK ON STANDOFFS. ARTWORK TO BE SUPPLIED BY ARCHITECT, REFER TO ALLOWANCE.
23 EMERGENCY EYEWASH STATION, REFER TO PLUMBING DRAWINGS.

EQUIPMENT LEGEND

EQUIPMENT TAG - REFER TO SCHEDULE IN PROJECT MANUAL
LOCKER TAG
CASEWORK TAG

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.

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

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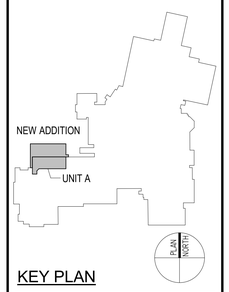

KEY PLAN

100% CONSTRUCTION DOCUMENTS

PROJECT MANAGER: MK
DRAWN BY: MKH
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1 (via text)	09/21/2023
2	ADDENDUM #2	10/05/2023

UNIT A - FIRST FLOOR EQUIPMENT PLAN

A7.01

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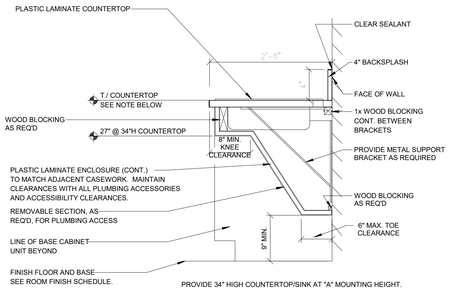
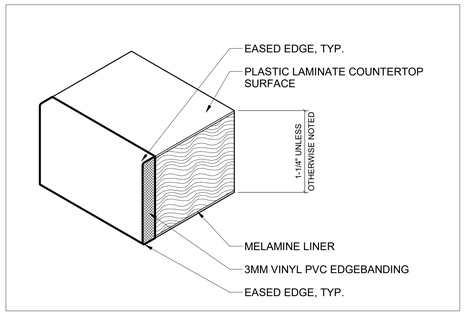
CASEWORK SCHEDULE

TYPE	NO.	SIZE W	SIZE D	SIZE H	DESCRIPTION
B	10	4'-0"	2'-0"	2'-6"	BASE CABINET WITH 3 DIVIDERS AND 15 REMOVABLE PLASTIC TOTE TRAYS. BASIS OF DESIGN STEVENS ADVANTAGE #10274.
B	11	2'-6"	2'-0"	2'-10"	BASE UNIT WITH ONE DRAWER, ONE ADJUSTABLE SHELF AND TWO HINGED DOORS.
B	12	2'-6"	1'-6"	2'-6"	BASE UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS.
B	13	2'-6"	2'-0"	2'-10"	BASE UNIT WITH TWO DRAWERS, ONE ADJUSTABLE SHELF AND TWO HINGED DOORS.
BO	14	2'-6"	2'-6"	2'-6"	OPEN BASE UNIT WITH ONE ADJUSTABLE SHELF.
BO	15	3'-0"	2'-6"	2'-6"	OPEN BASE UNIT WITH ONE ADJUSTABLE SHELF.
BS	16	3'-0"	2'-0"	2'-0"	ADULT ADA SINK BASE UNIT WITH A REMOVABLE ACCESS PANEL.
D	17	2'-0"	2'-0"	2'-10"	DRAWER UNIT WITH FOUR EQUAL DRAWERS. 4-1/2 INCHES DEEP INSIDE.
TT	18	3'-0"	2'-0"	7'-0"	TALL TOTE TRAY UNIT WITH TWO FULL HEIGHT DOORS, ONE FIXED SHELF DIVIDING LOWER AND UPPER PORTIONS. LOWER PORTION TO HAVE TWO VERTICAL DIVIDERS, AND 18 TRAYS. UPPER PORTION TO HAVE THREE ADJUSTABLE SHELVES. BASIS OF DESIGN STEVENS ADVANTAGE #25302 WITH FULL HEIGHT DOORS.
W	19	2'-6"	1'-2"	2'-6"	WALL UNIT WITH ONE ADJUSTABLE SHELF AND TWO HINGED DOORS.
WO	20	3'-0"	1'-2"	1'-3"	OPEN WALL UNIT.
WO	21	2'-0"	1'-2"	2'-6"	OPEN WALL UNIT WITH ONE ADJUSTABLE SHELF.
WO	22	2'-0"	1'-6"	2'-6"	OPEN WALL UNIT WITH TWO ADJUSTABLE SHELVES.
WO	23	2'-3"	1'-6"	2'-6"	OPEN WALL UNIT WITH TWO ADJUSTABLE SHELVES.
WO	24	2'-6"	1'-6"	2'-6"	OPEN WALL UNIT WITH TWO ADJUSTABLE SHELVES.
WO	25	3'-0"	1'-6"	2'-6"	OPEN WALL UNIT WITH TWO ADJUSTABLE SHELVES.



ADULT ADA SINK

SCALE: 1" = 1'-0"

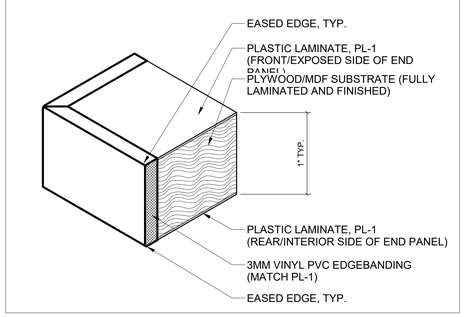


3MM PVC COUNTERTOP EDGE - TYP.

* NOT TO SCALE
* TYPICAL AT ALL COUNTERTOP EDGES UNLESS OTHERWISE NOTED

NOTE:

- DETAIL REFERS TO SECTION VIEW OF END PANEL CONSTRUCTION
- WIDTH AND LENGTH OF END PANELS VARIES.
- REFER TO EQUIPMENT PLANS, CASEWORK SCHEDULE, AND CASEWORK ELEVATIONS FOR LOCATIONS OF ALL END PANELS AND PROVIDE CORRECT SIZE OF END PANELS AS REQUIRED.



PLASTIC LAMINATE END PANEL DETAIL

* NOT TO SCALE
* REFER TO EQUIPMENT PLANS AND CASEWORK ELEVATIONS FOR LOCATIONS (MEDIA CENTER STACK SHELVING-TYP.)

LIST OF FINISHES

REFER TO A7 ARCH. DWG. SHEETS

EQUIPMENT MATERIALS

HP PLASTIC LAMINATE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
PL-1 (COUNTERS) PL-2 (CABINETS) PL-3 (SHOP COUNTERS)	WILSONART FORMICA WILSONART	MISTED ZEPHYR 4843-60 GRAY FABRIC 6129-58 MISTED ZEPHYR 4843-60

SOLID SURFACE MATERIAL

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
SSM-1 (SILLS)	CORIAN	CAMEO WHITE

LOCKERS

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
LKRS-A & E	REFER TO SPECIFICATIONS	ALL CORRIDOR LOCKERS ARE TO BE A CUSTOM COLOR (IF REQUIRED) TO MATCH EXISTING LOCKERS. ARCHITECT TO CHOOSE FROM STANDARD FINISHES FOR LOCKERS WITHIN ROOM LOCATIONS.
LKRS-B, C, & D	REFER TO SPECIFICATIONS	

TACKBOARD

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
TB-1	REFER TO SPECIFICATIONS	ARCHITECT TO CHOOSE FROM MANUF. STANDARDS

MARKERBOARD

WHITE

KICKPLATES

STAINLESS STEEL

ROLLER WINDOW SHADES

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
RWS	REFER TO SPECIFICATIONS	ARCHITECT TO CHOOSE FROM MANUF. STANDARDS

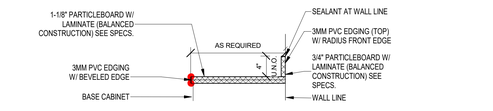
EQUIPMENT MATERIAL & FINISH GENERAL NOTES

A. COLOR SELECTION OF ALL FINISHES FOR ARCHITECTURAL WOODWORK/CUSTOM CASEWORK ITEMS ARE NOTED ON CASEWORK ELEVATIONS AND DETAIL DRAWINGS.

B. EDUCATION CASEWORK FINISHES ARE AS FOLLOWS:

- HIGH PRESSURE PLASTIC LAMINATE COUNTERTOPS AND WORKSURFACES ARE TO BE PL-1, UNLESS OTHERWISE NOTED.
- HIGH PRESSURE PLASTIC LAMINATE CABINETS/VERTICAL SURFACES ARE TO BE PL-2, UNLESS OTHERWISE NOTED.
- INTERIOR MELAMINE TO BE WHITE.
- 3MM AND 1MM PVC EDGES ON COUNTERTOPS AND WORKSURFACES ARE TO MATCH PL-1.
- 3MM AND 1MM PVC EDGES ON CASEWORK ARE TO MATCH PL-2.
- HANDLES TO BE BRUSHED CHROME.
- HINGES TO BE BRUSHED CHROME.
- GROMMETS - SUBMIT SAMPLES FOR APPROVAL.

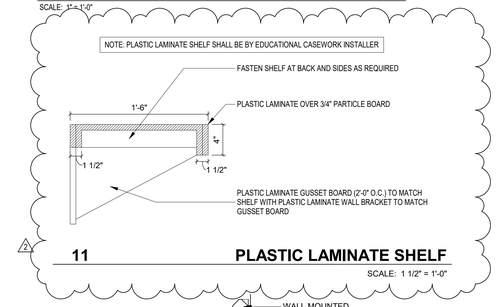
C. REFER TO ARCHITECTURAL SERIES FOR FIRE EXTINGUISHER CABINET PLACEMENTS (A1) AND DETAILS (A5).



REFER TO OTHER DETAILS ON A7 DRAWINGS SHEETS AND THE SECTIONS INDICATED ON PLANS FOR CONSTRUCTION REQUIRED BELOW TYPICAL COUNTERTOP

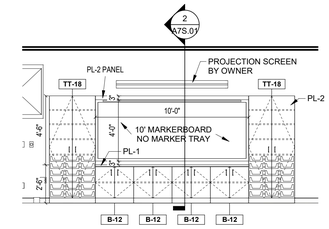
TYPICAL COUNTERTOP

SCALE: 1" = 1'-0"



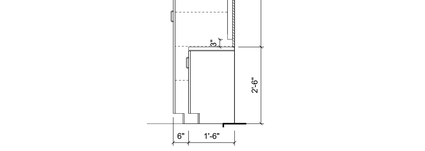
11 PLASTIC LAMINATE SHELF

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



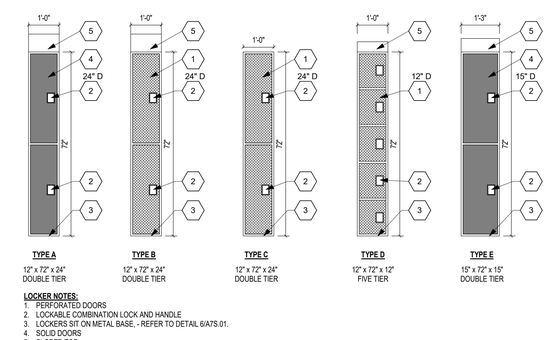
1 CAD LAB TEACHING WALL ELEVATION

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



2 TEACHING WALL SECTION (TYP)

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



TYPE A 12" x 72" x 24" DOUBLE TIER

TYPE B 12" x 72" x 24" DOUBLE TIER

TYPE C 12" x 72" x 24" DOUBLE TIER

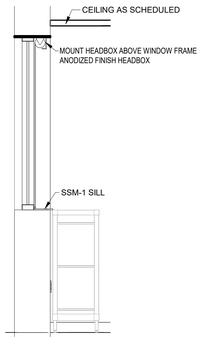
TYPE D 12" x 72" x 12" FIVE TIER

TYPE E 15" x 72" x 15" DOUBLE TIER

LOCKER NOTES:
1. PERFORATED DOORS
2. LOCKABLE COMBINATION LOCK AND HANDLE
3. LOCKERS SIT ON METAL BASE, - REFER TO DETAIL 6/A7S.01.
4. SOLID DOORS
5. SLOPED TOP

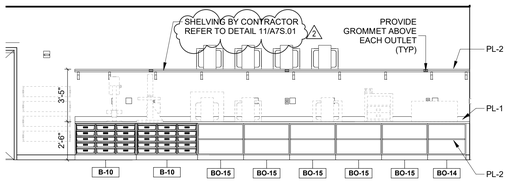
7 LOCKER DETAILS

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



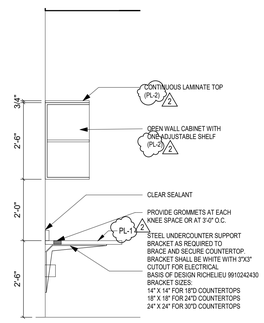
8 ROLLER WINDOW SHADE DETAIL

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



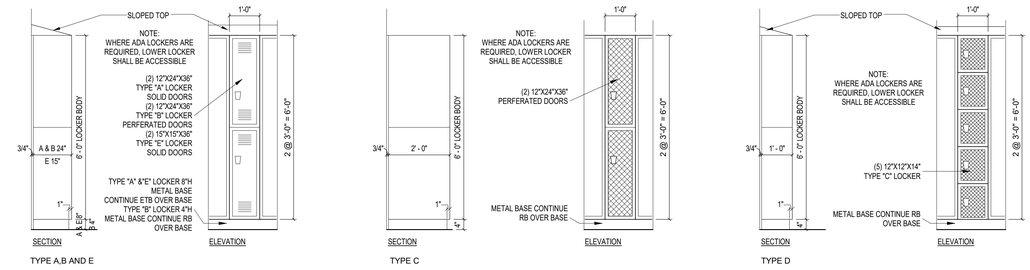
3 C116A EAST WALL

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

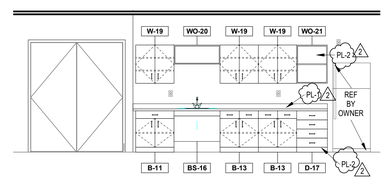


4 TYPICAL CAD LAB WORKSTATION

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

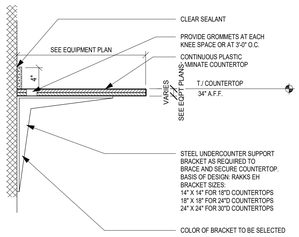


6 LOCKER DETAIL - SIZES



5 C104 SOUTH WALL

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



12 KNEE SPACE

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

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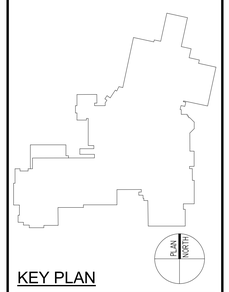

KEY PLAN

100% CONSTRUCTION DOCUMENTS

PROJECT MANAGER: MK
DRAWN BY: MKH
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

EDUCATIONAL CASEWORK SCHEDULES, ELEVATIONS AND EQUIPMENT FINISHES

A7S.01

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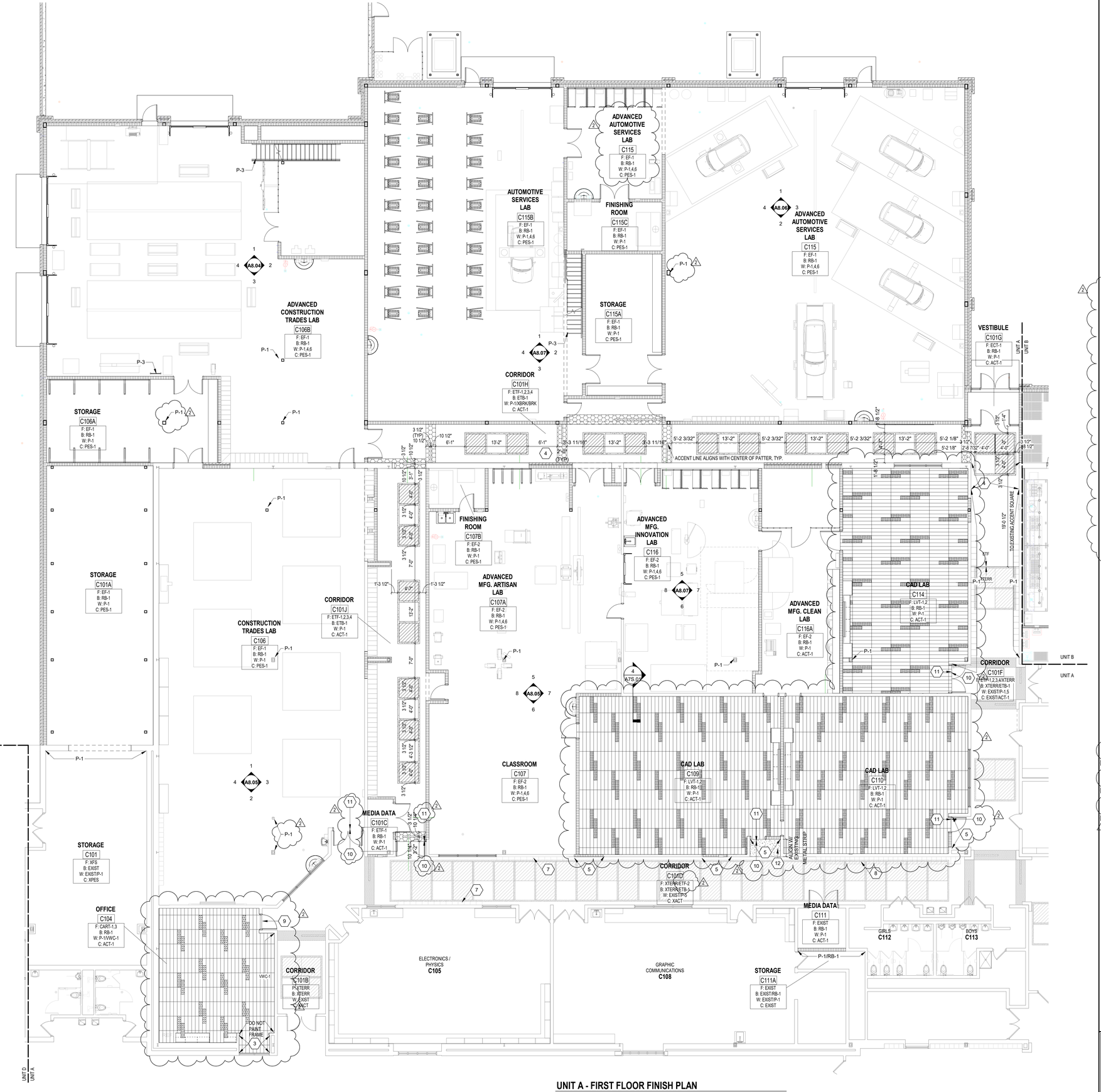

UNIT A - FIRST FLOOR FINISH PLAN

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

MATERIAL AND FINISH GENERAL NOTES

A. PROVIDE ANODIZED ALUMINUM SPECIAL PROFILE TRANSITION SYSTEM BETWEEN CERAMIC MOSAIC FLOOR TILE AND CARPET. PROVIDE SCHLUTER-RENO-TK OR APPROVED EQUAL. TYPICAL AT ALL LOCATIONS.
B. AT BUILDING EXPANSION JOINTS, PROVIDE PREFABRICATED MOVEMENT PROFILE SYSTEM IN MORTAR BED, SCHLUTER-DILEX-EP OR APPROVED EQUAL. TYPICAL AT ALL LOCATIONS.
C. AT BUILDING EXPANSION JOINTS, PROVIDE PREFABRICATED MOVEMENT PROFILE SYSTEM AT PORCELAIN TILE FLOORING. PROVIDE SCHLUTER-DILEX-BWS OR APPROVED EQUAL. TYPICAL AT ALL LOCATIONS.
D. PROVIDE ANODIZED ALUMINUM SPECIAL PROFILE TRANSITION SYSTEM BETWEEN PORCELAIN FLOOR TILE AND CARPET. PROVIDE SCHLUTER-RENO-TK OR APPROVED EQUAL. TYPICAL AT ALL LOCATIONS.

FLOOR FINISH GENERAL NOTES

A. CENTER TILE IN ROOM WHERE NO PATTERN OCCURS. WHERE PATTERN OCCURS, ALIGN AS SHOWN ON INTERIOR
B. REFER TO A1 ARCHITECTURAL SERIES FOR ALL WALL MATERIAL TYPES.
C. FLOORING FINISH MATERIAL TRANSITIONS SHALL OCCUR UNDER THE CENTER OF THE DOOR UNLESS OTHERWISES NOTED.
D. ALL WALLS TO HAVE RUBBER BASE (RB) UNLESS OTHERWISE NOTED.
E. COORDINATE CONTROL JOINTS IN CONCRETE FLOOR SLAB WITH STRUCTURAL DRAWINGS.
F. REFER TO A8.08 FOR FLOORING MATERIAL TRANSITION DETAILS.

FLOOR PATTERN/FINISH KEY NOTES (X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

1 NO WORK. PROTECT DURING CONSTRUCTION.
2 STAINLESS STEEL WALL FINISH REFER TO FOOD SERVICE DRAWINGS.
3 EXISTING WALL AND CEILING FINISHES TO REMAIN. REPLACE FLOORING AND BASE ONLY.
4 EXISTING BRICK AND NEW BRICK TO BE PAINTED P-1. INSTALL ETB-1 CONTINUOUSLY INCLUDING OVER BRICK.
5 PAINT WALL P-5 AND INSTALL NEW ETB-1.
6 FLOOR TO CEILING GFCMU. APPLY NEW ETB-1 BASE.
7 PROVIDE NEW WOOD BUILD UP UNDER EXISTING LOCKERS (REFER TO A7 DRAWINGS FOR MORE INFORMATION). PROVIDE NEW 6"H ETB-1 BASE OVER NEW WOOD BASE ASSEMBLY.
8 REFER TO A7 DRAWINGS FOR MORE INFORMATION ON BASE BUILD UP. PROVIDE NEW 4"H ETB-1 BASE OVER NEW WOOD BASE ASSEMBLY.
9 PAINT ALL SIDES OF DOOR FRAME P-8.
10 PAINT THIS SIDE OF DOOR FRAME P-8. TRANSITION TO OCCUR AT OUTSIDE CORNER BEHIND DOOR SLAB SO IT IT LEAST NOTICABLE.
11 PAINT THIS SIDE OF DOOR FRAME P-3. TRANSITION TO OCCUR AT OUTSIDE CORNER BEHIND DOOR SLAB SO IT IT LEAST NOTICABLE.
12 NEW TERRAZZO INFILL. FINAL TERRAZZO FINISH SHALL ALIGN WITH THE HEIGHT OF EXISTING TERRAZZO. EXISTING ACCENT/EXPANSION STRIP TO REMAIN.

FLOOR PATTERN LEGEND

ETF-1
ETF-2
ETF-3
ETF-4
CART-1
CART-3
LVT-1
LVT-2

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.

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CARMEL CLAY SCHOOLS

ARCHITECT
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NEW ADDITION
UNIT A
PLAN NORTH

KEY PLAN

100% CONSTRUCTION DOCUMENTS

PAUL A. MILLER REGISTERED ARCHITECT No. AR10800161 STATE OF INDIANA

PROJECT MANAGER: MK
DRAWN BY: MKH
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

UNIT A - FIRST FLOOR FINISH PLAN

A8.01

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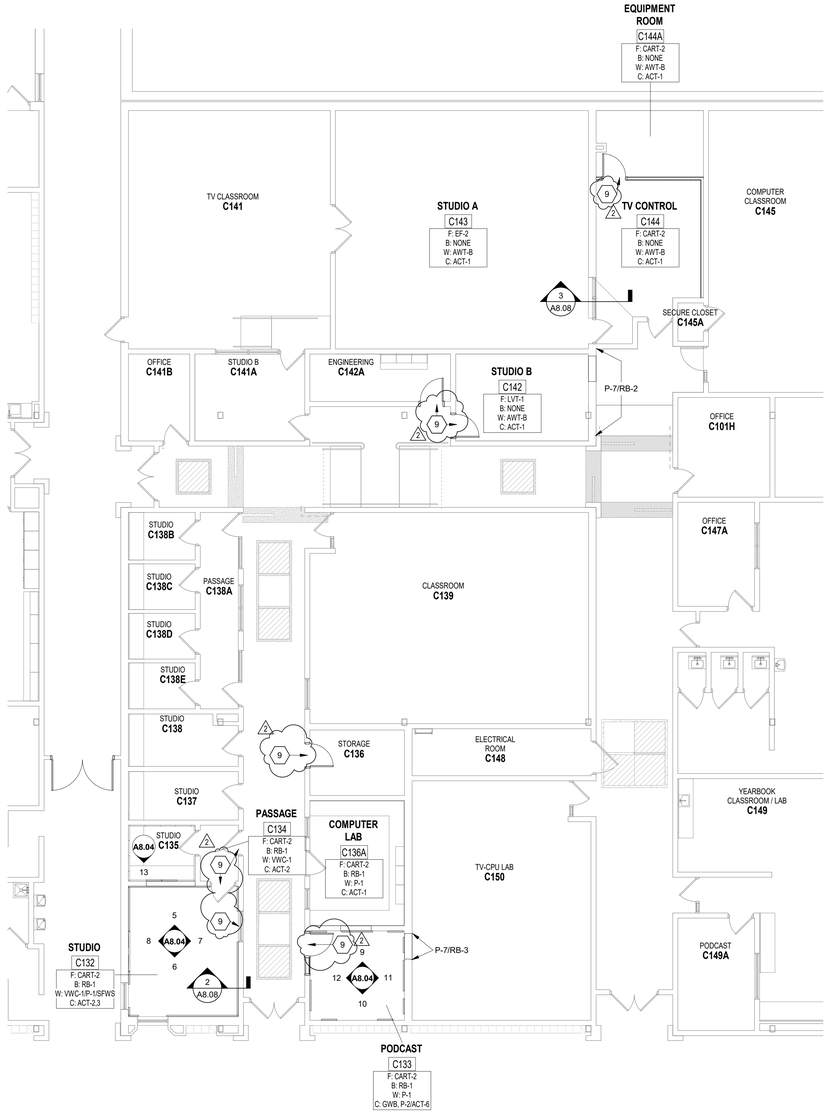
UNIT B - FIRST FLOOR FINISH PLAN

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



UNIT C - FIRST FLOOR FINISH PLAN

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

MATERIAL AND FINISH GENERAL NOTES

A. PROVIDE ANODIZED ALUMINUM SPECIAL PROFILE TRANSITION SYSTEM BETWEEN CERAMIC MOSAIC FLOOR TILE AND CARPET. PROVIDE SCHLUTER-RENO-TK OR APPROVED EQUAL. TYPICAL AT ALL LOCATIONS.
B. AT BUILDING EXPANSION JOINTS, PROVIDE PREFABRICATED MOVEMENT PROFILE SYSTEM IN MORTAR BED, SCHLUTER-DILEX-EP OR APPROVED EQUAL. TYPICAL AT ALL LOCATIONS.
C. AT BUILDING EXPANSION JOINTS, PROVIDE PREFABRICATED MOVEMENT PROFILE SYSTEM AT PORCELAIN TILE FLOORING. PROVIDE SCHLUTER-DILEX-BWS OR APPROVED EQUAL. TYPICAL AT ALL LOCATIONS.
D. PROVIDE ANODIZED ALUMINUM SPECIAL PROFILE TRANSITION SYSTEM BETWEEN PORCELAIN FLOOR TILE AND CARPET. PROVIDE SCHLUTER-RENO-TK OR APPROVED EQUAL. TYPICAL AT ALL LOCATIONS.

FLOOR FINISH GENERAL NOTES

A. CENTER TILE IN ROOM WHERE NO PATTERN OCCURS. WHERE PATTERN OCCURS, ALIGN AS SHOWN ON INTERIOR
B. REFER TO A1 ARCHITECTURAL SERIES FOR ALL WALL MATERIAL TYPES.
C. FLOORING FINISH MATERIAL TRANSITIONS SHALL OCCUR UNDER THE CENTER OF THE DOOR UNLESS OTHERWISES NOTED.
D. ALL WALLS TO HAVE RUBBER BASE (RB) UNLESS OTHERWISE NOTED.
E. COORDINATE CONTROL JOINTS IN CONCRETE FLOOR SLAB WITH STRUCTURAL DRAWINGS.
F. REFER TO A8.08 FOR FLOORING MATERIAL TRANSITION DETAILS.

FLOOR PATTERN/FINISH KEY NOTES (X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

1 NO WORK. PROTECT DURING CONSTRUCTION.
2 STAINLESS STEEL WALL FINISH REFER TO FOOD SERVICE DRAWINGS.
3 EXISTING WALL AND CEILING FINISHES TO REMAIN. REPLACE FLOORING AND BASE ONLY.
4 EXISTING BRICK AND NEW BRICK TO BE PAINTED P-1. INSTALL ETB-1 CONTINUOUSLY INCLUDING OVER BRICK.
5 PAINT WALL P-5 AND INSTALL NEW ETB-1.
6 FLOOR TO CEILING GFCMU. APPLY NEW ETB-1 BASE.
7 PROVIDE NEW WOOD BUILD UP UNDER EXISTING LOCKERS (REFER TO A7 DRAWINGS FOR MORE INFORMATION). PROVIDE NEW 6"H ETB-1 BASE OVER NEW WOOD BASE ASSEMBLY.
8 REFER TO A7 DRAWINGS FOR MORE INFORMATION ON BASE BUILD UP. PROVIDE NEW 4"H ETB-1 BASE OVER NEW WOOD BASE ASSEMBLY.
9 PAINT ALL SIDES OF DOOR FRAME P-8.
10 PAINT THIS SIDE OF DOOR FRAME P-8. TRANSITION TO OCCUR AT OUTSIDE CORNER BEHIND DOOR SLAB SO IT IT LEAST NOTICABLE.
11 PAINT THIS SIDE OF DOOR FRAME P-3. TRANSITION TO OCCUR AT OUTSIDE CORNER BEHIND DOOR SLAB SO IT IT LEAST NOTICABLE.
12 NEW TERRAZZO INFILL. FINAL TERRAZZO FINISH SHALL ALIGN WITH THE HEIGHT OF EXISTING TERRAZZO. EXISTING ACCENT/EXPANSION STRIP TO REMAIN.

FLOOR PATTERN LEGEND

ETF-1, ETF-2, ETF-3, ETF-4
CART-1, CART-3, LVT-1, LVT-2

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.

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

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CARMEL CLAY SCHOOLS

ARCHITECT

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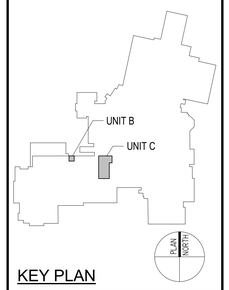
350 E. NEW YORK ST. SUITE 300, INDIANAPOLIS, IN 46204



KEY PLAN

100% CONSTRUCTION DOCUMENTS

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

PROJECT MANAGER: MK
DRAWN BY: MKH
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1 (via text)	09/21/2023
2	ADDENDUM #2	10/05/2023

UNIT B AND C - FIRST FLOOR FINISH PLAN

A8.03

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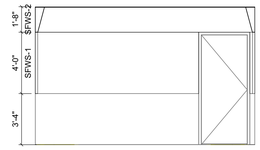
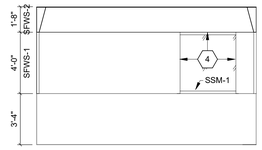


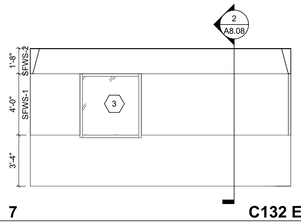
5 **C132 NORTH WALL**

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



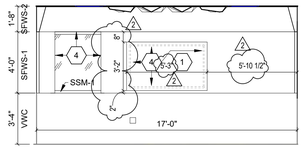
6 **C132 SOUTH WALL**

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



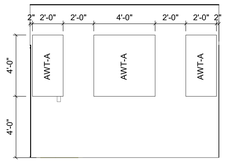
7 **C132 EAST WALL**

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



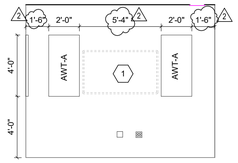
8 **C132 WEST WALL**

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



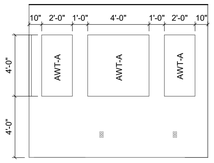
9 **C133 NORTH WALL**

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



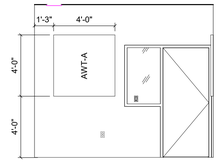
10 **C133 SOUTH WALL**

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



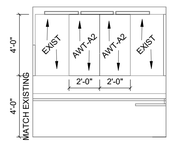
11 **C133 EAST WALL**

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



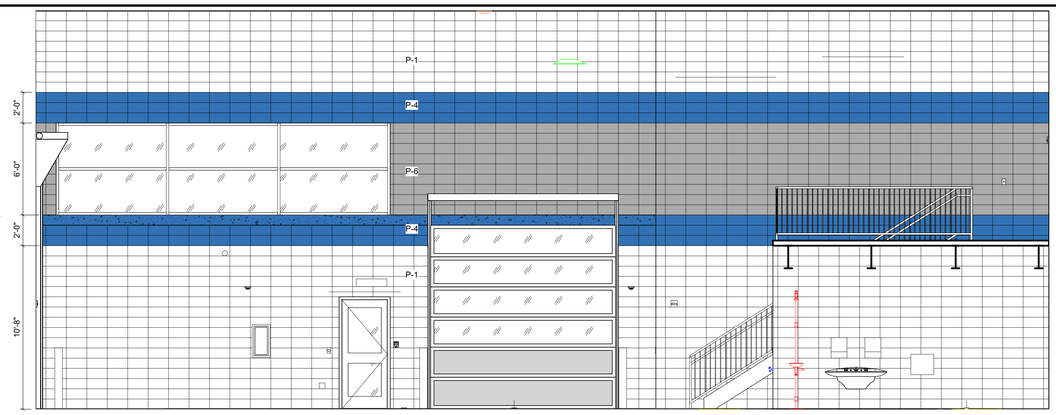
12 **C133 WEST WALL**

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



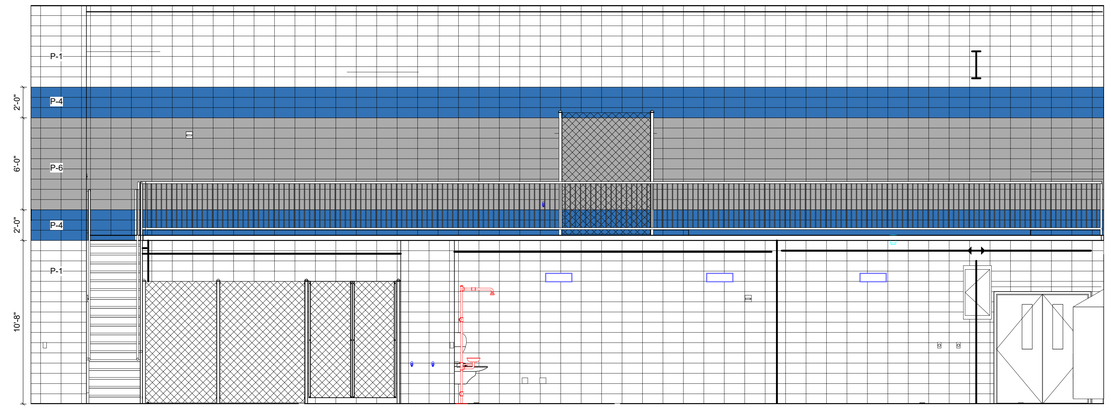
13 **C135 SOUTH WALL**

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



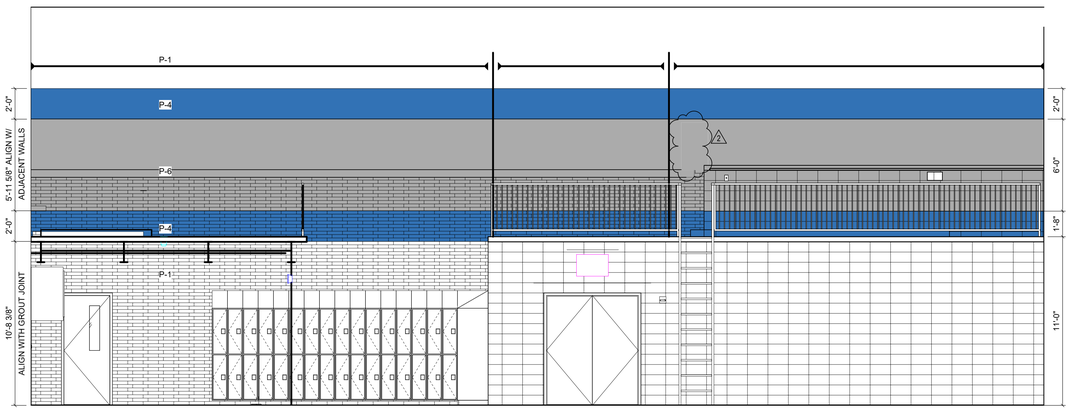
1 **C106B NORTH**

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



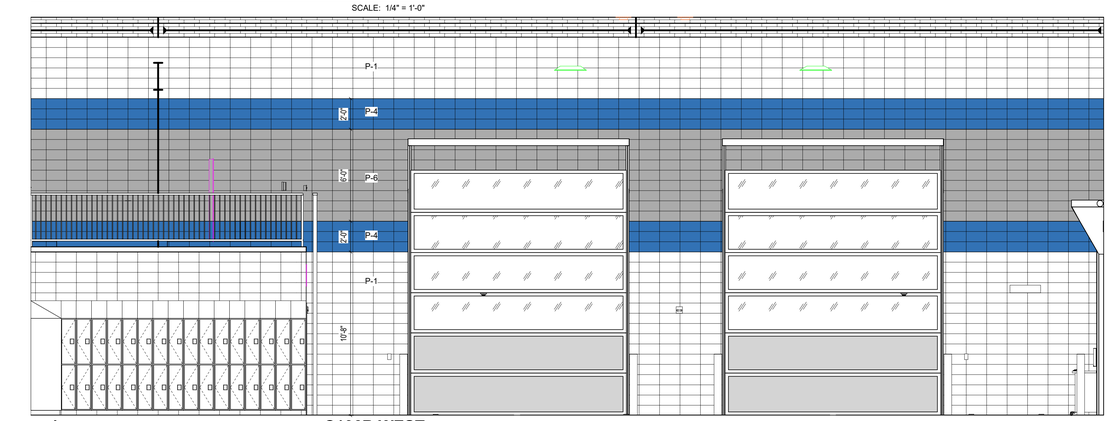
2 **C106B EAST**

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



3 **C106B SOUTH**

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



4 **C106B WEST**

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

INTERIOR ELEVATION NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

1. REFER TO AV DRAWINGS FOR SCREEN INFORMATION. COORDINATE FINAL OPENING/SPACING DIMENSIONS WITH AV EQUIPMENT.
2. EXISTING LOCKERS TO REMAIN, REPAINT INSIDE AND OUT TO MATCH NEW LOCKERS IN C106.
3. DO NOT INSTALL SOLID SURFACE SILL OR WRAP JAMBS AND HEADER IN SWFS. HM FRAME TO REMAIN EXPOSED.
4. FABRIC WRAPS CONER AND CONTINUES TO WALL OR WINDOW STILE/RAIL.

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.

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520 EAST MAIN STREET
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CARMEL CLAY SCHOOLS

ARCHITECT

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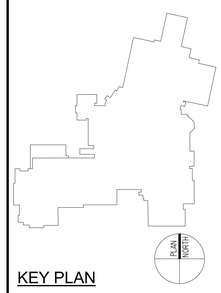
350 E. NEW YORK ST. SUITE 300, INDIANAPOLIS, IN 46204



KEY PLAN

100% CONSTRUCTION DOCUMENTS

PAUL A. MILLER REGISTERED ARCHITECT No. A10800161 STATE OF INDIANA

PROJECT MANAGER: MK

DRAWN BY: MKH

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

INTERIOR ELEVATIONS

A8.04

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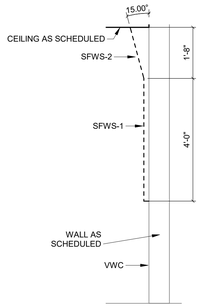
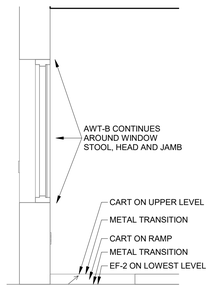


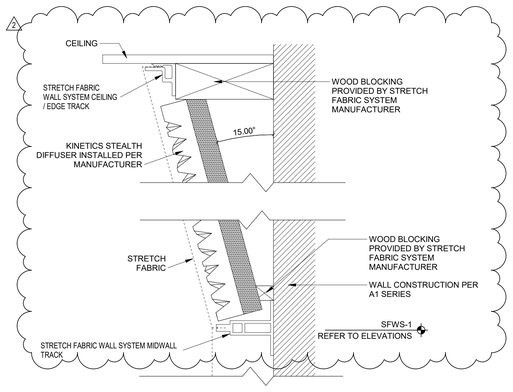
2 RADIO SFWS WALL SECTION

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



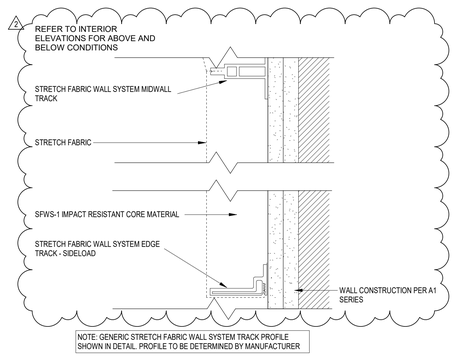
3 C144 SECTION DETAIL

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



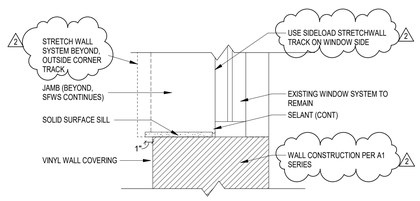
DETAIL - STRETCH FABRIC WALL SYSTEM 6 SFWS-2

SCALE: 6" = 1'-0"



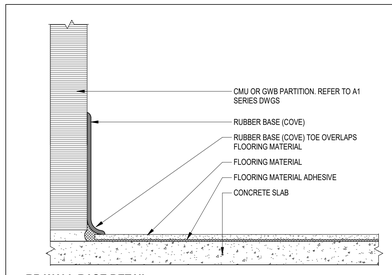
DETAIL - STRETCH FABRIC WALL SYSTEM 5 SFWS-1

SCALE: 6" = 1'-0"



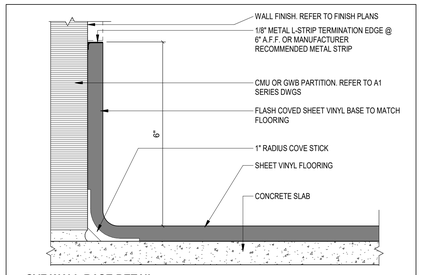
WALL DETAIL - STRETCH WALL RETURN @ WINDOW 4

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



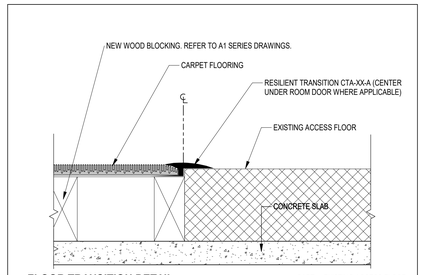
RB WALL BASE DETAIL

- SCALE: 6" = 1'-0"
- REFER TO PROJECT MANUAL FOR ADDITIONAL INFORMATION



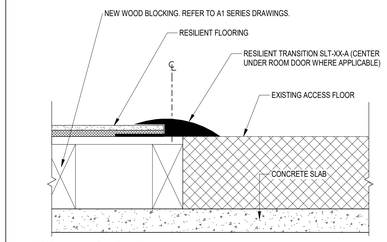
SVF WALL BASE DETAIL

- SCALE: 6" = 1'-0"
- REFER TO PROJECT MANUAL FOR ADDITIONAL INFORMATION



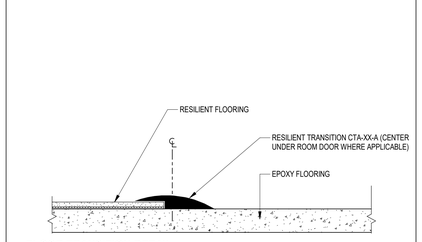
FLOOR TRANSITION DETAIL CART to EXISTING ACCESS FLOOR

- SCALE: NTS
- REFER TO PROJECT MANUAL FOR ADDITIONAL INFORMATION



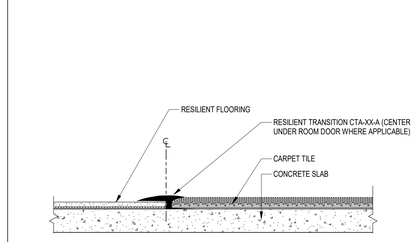
FLOOR TRANSITION DETAIL RESILIENT FLOORING to EXISTING ACCESS FLOOR

- SCALE: 6" = 1'-0"
- REFER TO PROJECT MANUAL FOR ADDITIONAL INFORMATION



FLOOR TRANSITION DETAIL EF to RESILIENT FLOORING

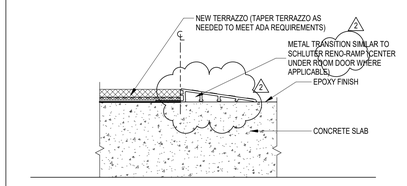
- SCALE: NTS
- REFER TO PROJECT MANUAL FOR ADDITIONAL INFORMATION



FLOOR TRANSITION DETAIL CART to RESILIENT FLOORING

- SCALE: NTS
- REFER TO PROJECT MANUAL FOR ADDITIONAL INFORMATION

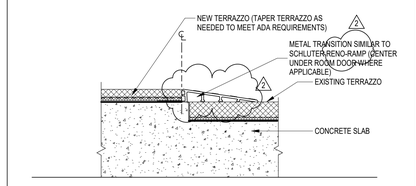
NOTE:
- REFER TO NTMA FOR ALL ADDITIONAL TERRAZZO GUIDELINE DETAILS AND TRANSITION RECOMMENDATIONS TO ADJACENT FLOORING MATERIALS.
- REUSE EXISTING METAL TRANSITIONS IN EXISTING TERRAZZO WHENEVER POSSIBLE.



FLOOR TRANSITION DETAIL TERR to EF

- SCALE: NTS
- REFER TO PROJECT MANUAL FOR ADDITIONAL INFORMATION

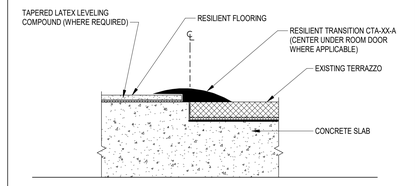
NOTE:
- REFER TO NTMA FOR ALL ADDITIONAL TERRAZZO GUIDELINE DETAILS AND TRANSITION RECOMMENDATIONS TO ADJACENT FLOORING MATERIALS.
- REUSE EXISTING METAL TRANSITIONS IN EXISTING TERRAZZO WHENEVER POSSIBLE.



FLOOR TRANSITION DETAIL TERR to XTERR

- SCALE: NTS
- REFER TO PROJECT MANUAL FOR ADDITIONAL INFORMATION

NOTE:
- REFER TO NTMA FOR ALL ADDITIONAL TERRAZZO GUIDELINE DETAILS AND TRANSITION RECOMMENDATIONS TO ADJACENT FLOORING MATERIALS.
- REUSE EXISTING METAL TRANSITIONS IN EXISTING TERRAZZO WHENEVER POSSIBLE.



FLOOR TRANSITION DETAIL XTERR to RESILIENT FLOORING

- SCALE: NTS
- REFER TO PROJECT MANUAL FOR ADDITIONAL INFORMATION

NOTE:
- REFER TO NTMA FOR ALL ADDITIONAL TERRAZZO GUIDELINE DETAILS AND TRANSITION RECOMMENDATIONS TO ADJACENT FLOORING MATERIALS.
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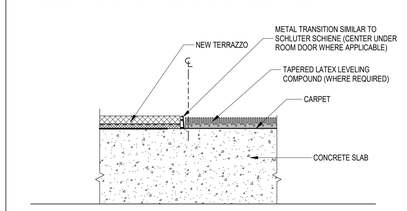
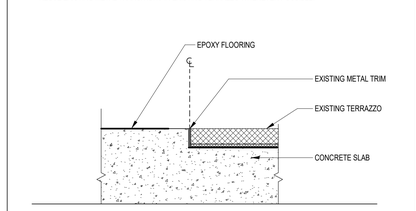


FLOOR TRANSITION DETAIL TERR to CART/ECT

- SCALE: NTS
- REFER TO PROJECT MANUAL FOR ADDITIONAL INFORMATION

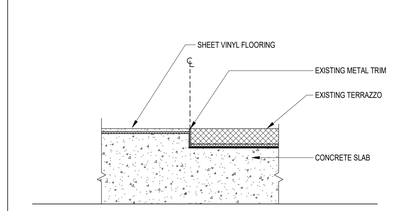
NOTE:
- REFER TO NTMA FOR ALL ADDITIONAL TERRAZZO GUIDELINE DETAILS AND TRANSITION RECOMMENDATIONS TO ADJACENT FLOORING MATERIALS.
- REUSE EXISTING METAL TRANSITIONS IN EXISTING TERRAZZO WHENEVER POSSIBLE.



FLOOR TRANSITION DETAIL EF to XTERR

- SCALE: NTS
- REFER TO PROJECT MANUAL FOR ADDITIONAL INFORMATION

NOTE:
- REFER TO NTMA FOR ALL ADDITIONAL TERRAZZO GUIDELINE DETAILS AND TRANSITION RECOMMENDATIONS TO ADJACENT FLOORING MATERIALS.
- REUSE EXISTING METAL TRANSITIONS IN EXISTING TERRAZZO WHENEVER POSSIBLE.



FLOOR TRANSITION DETAIL XTERR to SVF

- SCALE: NTS
- REFER TO PROJECT MANUAL FOR ADDITIONAL INFORMATION

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

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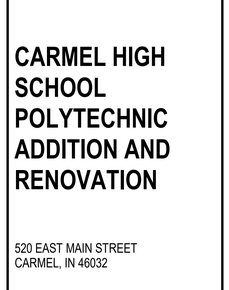
350 E. NEW YORK ST. SUITE 300, INDIANAPOLIS, IN 46204



KEY PLAN

100% CONSTRUCTION DOCUMENTS

PROJECT MANAGER: MK
DRAWN BY: MKH
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

FLOORING TRANSITIONS & DETAILS

A8.08

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LIST OF FINISHES

REFER TO A8 ARCH. DWG. SHEETS

FLOOR MATERIALS

CARPET TILE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION / SIZE
CART-1	SHAW - BOUNDLESS TILE 5T314	CALM 05580 (9" X 36")
CART-2	J+J - ADVANCE 7600	ROYAL PATH 3275 (18" X 36")
CART-3	SHAW - RESPOND TILE 5T310	DEEPEST SKIES 05486 (9" X 36")

- ALL SPECIFIED MANUFACTURER'S MUST HAVE A MINIMUM FACE WEIGHT OF 20 oz./yd.
- ALL CARPET BACKING TO HAVE A MOISTURE RESISTANT BARRIER.

ENTRY CARPET TILE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
ECT-1	INTERFACE - STEP REPEAT SR899	104931 GRANITE

EPOXY TERRAZZO FLOORING

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
ETF-1 (GRAY)	REFER TO SPECIFICATIONS	TO MATCH EXISTING, SIMILAR TO: 35% TEXAS BLUE #2, 35% TEXAS BLUE #1, 10% TEXAS BLUE #0, 5% MISSOURI BOTTICINO #2, 5% MISSOURI BOTTICINO #1, 5% MISSOURI BOTTICINO #0, 5% OXBLOOD #0, 10% POOL MIX MATRIX: GP 1705 GRAY
ETF-2 (BLUE)	REFER TO SPECIFICATIONS	TO MATCH EXISTING, SIMILAR TO: 40% NORTH CAROLINA BLUE #1, 40% NORTH CAROLINA BLUE #2, 5% MISSOURI BOTTICINO #0, 5% MISSOURI BOTTICINO #1, 5% GEORGIA WHITE #0, 5% OXBLOOD #0, 10% POOL MIX MATRIX: GP 4035358 BLUE
ETF-3 (WHITE)	REFER TO SPECIFICATIONS	TO MATCH EXISTING, SIMILAR TO: 33% GEORGIA WHITE #2, 33% GEORGIA WHITE #1, 33% GEORGIA WHITE #0, 10% POOL MIX MATRIX: GP - 654 WHITE
ETF-4 (RED)	REFER TO SPECIFICATIONS	TO MATCH EXISTING, SIMILAR TO: 25% GEORGIA WHITE #1, 25% GEORGIA WHITE #2, 20% MISSOURI BOTTICINO #1, 25% MISSOURI BOTTICINO #2, 5% MISSOURI BOTTICINO #0, 10% POOL MIX MATRIX: GP - 6580 RED

- REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- MANUFACTURER TO SUBMIT ACTUAL PRODUCT SAMPLES AFTER SELECTION OF ALL ETF COLORS FOR VERIFICATION AND APPROVAL.

EPOXY FLOORING

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
EF-1	REFER TO SPECIFICATIONS	CLEAR
EF-2	REFER TO SPECIFICATIONS	PIGMENTED COLOR TO BE DETERMINED

FLOOR SEALER

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
FS-1	REFER TO SPECIFICATIONS	CLEAR

LUXURY VINYL TILE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION / SIZE / THICKNESS
LVT-1	JJ FLOORING - MAKE YOUR MARK 5MM V5012	SHADOW 1063 / 9"X48" PLANK / 5MM THICK
LVT-2	JJ FLOORING - MAKE YOUR MARK 5MM V5012	COBALT 1067 / 9"X48" PLANK / 5MM THICK

SHEET VINYL FLOORING

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION / SIZE / THICKNESS
SVF-1	ALTRO - STRONGHOLD 30	MIDNIGHT

BASE MATERIALS

EPOXY TERRAZZO BASE

PRE-CAST STRAIGHT BASE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
ETB-1	REFER TO SPECIFICATIONS	MATCH ETF-1 / 6"H, UNLESS NOTED OTHERWISE

RESILIENT BASE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
RB-1	JOHNSONITE	63 BURNT UMBER
RB-2	JOHNSONITE MATCH EXISTING	SIMILAR TO NAVY BLUE 18
RB-3	JOHNSONITE	MATCH EXISTING LIGHT TAN COLOR

SHEET VINYL FLOORING

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION / SIZE / THICKNESS
SVF-1	ALTRO - STRONGHOLD 30	MIDNIGHT, 6"H

WALL FINISHES

VINYL WALLCOVERING

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
VWC-1	KOROSEAL - LINO	PLEBEIAN LN21-37

PAINT

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
P-1	BENJAMIN MOORE	CLOUD COVER BM855
P-2 (GWB CEILING)	SHERWIN WILLIAMS	PURE WHITE SW7005
P-3 (FRAMES)	SHERWIN WILLIAMS	IRON ORE SW 7069
P-4 (ACCENT)	BENJAMIN MOORE	CHICAGO BLUES BM804
P-5 (CORRIDOR - EXIST)	MATCH EXISTING	MATCH EXISTING CORRIDORS
P-6 (GREY ACCENT)	SHERWIN WILLIAMS	LIGHT FRENCH GRAY SW0055
P-7 (EXIST)	MATCH EXISTING	MATCH EXISTING ADJACENT SURFACE
P-8 (EXISTING FRAMES)	MATCH EXISTING	SIMILAR TO PPG 1019-4 SIMMERING SMOKE

PLASTIC SHEET PANEL

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
PSP-1	MARALITE - SYMMETRIX	SUBWAY WHITE W/ WHITE - SS100 G63R1

CEILING MATERIALS

ACOUSTICAL CEILING TILE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION / SIZE
ACT-1	ARMSTRONG / FINE FISSURED HIGH NRC 1754	WHITE / 2' X 2'
ACT-2 (RADIO FIELD)	ARMSTRONG / OPTIMA 3152	WHITE / 2' X 2'
ACT-3 (RADIO DIFFUSE)	G&S ACOUSTICS DIFFUSE WEDGE	WHITE / 2' X 2'
ACT-4	---NOT USED--	
ACT-5 (CULINARY)	ARMSTRONG / KITCHEN ZONE 673	WHITE / 2' X 2'
ACT-6 (PODCAST)	FRASCH / VIBE CLIF SOLID	INDIGO BLUE 21 / 4"H
	ARMSTRONG AXIOM CLASSIC TRIM	WHITE / 2"H

PAINT EXPOSED STRUCTURE

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
PES-1	BENJAMIN MOORE	CLOUD COVER BM855

ACOUSTICAL MATERIALS

ACOUSTICAL WALL TREATMENT

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	FABRIC SELECTION
AWT-A (PANEL)	REFER TO SPECIFICATIONS	CARNEGIE - XOREL - FRACTAL EMBOSS 6261 W768
AWT-A2 (PANEL)	REFER TO SPECIFICATIONS / MATCH EXISTING	MATCH EXISTING FABRIC FINISH
AWT-B (PET)	AUTEX ACOUSTICS - COMPOSITION	KOALA

STRETCHED - FABRIC WALL SYSTEMS

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	FABRIC SELECTION
SFWS-1 (HARDENED)	REFER TO SPECIFICATIONS	CARNEGIE - XOREL - FRACTAL EMBOSS 6261 W768
SFWS-2 (DIFFUSE)	REFER TO SPECIFICATIONS	CARNEGIE - XOREL - FRACTAL EMBOSS 6261 W768

MISCELLANEOUS FINISHES

INTERIOR WOOD DOORS/TRIM

- STAIN ALL WOOD DOORS TO MATCH EXISTING: VT INDUSTRIES - RIFT SAWN RED OAK SERGENTI

BRICK

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
BRK	REFER TO SPECIFICATIONS	MATCH EXISTING

GROUND FACE MASONRY UNITS

MATERIAL ABBREVIATION	MATERIAL/MANUFACTURER	COLOR SELECTION
GFCMU	PROVIDED BY OWNER	MATCH EXISTING

MATERIAL & FINISH GENERAL NOTES

GENERAL

A. REFER TO FINISH PLAN DRAWINGS AND DETAILS (A8 SERIES) FOR MATERIALS, PATTERNS AND COLORS.
B. REFER TO A7S.01 LIST OF FINISHES FOR ADDITIONAL FINISHES NOT NOTED ON THIS SHEET.

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. REFER TO FLOOR PLANS, RESTROOM ENLARGED PLANS, PLUMBING DRAWINGS, ETC. FOR FLOOR DRAIN LOCATIONS.
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.

CARPET TILE

A. CART-1 &3 TO BE INSTALLED IN BRICK PATTERN.
B. CART-2 TO HAVE ASHLAR INSTALLATION.
C. ECT-1 TO BE INSTALLED QUARTER TURN.

LUXURY VINYL TILE

A. LVT-1&2 TO BE INSTALLED IN 1/3 OVERLAP PATTERN PER MANUFACTURER'S GUIDELINES.

WALL BASE

A. DO NOT INSTALL ANY WALL BASE ON NEW OR EXISTING BRICK WALLS, UNLESS NOTED OTHERWISE.

PAINT & STAIN

A. PAINT ALL WALLS UNLESS OTHERWISE INDICATED ON FINISH PLANS.
B. PAINT ONE MOCK-UP CLASSROOM TO RECEIVE ARCHITECT'S APPROVAL PRIOR TO ORDERING PAINT FOR THE ENTIRE PROJECT.
C. DO NOT PAINT NEW OR EXISTING BRICK WALLS, UNLESS NOTED OTHERWISE.

PAINT TYPE GENERAL NOTES

A. UNDER SECTION 099123 - INTERIOR PAINTING, PAINT EXPOSED PIPES, DUCTWORK, BREACHING, CONDUIT, INSULATED PIPES, CONDUIT HANGERS, SUPPORTS, BRACING, ETC., WHICH OCCURS IN SPACES DESIGNATED TO BE PAINTED IN PART OR WHOLE.
B. ALL GYPSUM BOARD WALLS SHALL BE PAINTED WITH INTERIOR PAINT TYPE #9.23 (SEMI-GLOSS), UNLESS OTHERWISE INDICATED.
C. ALL GYPSUM BOARD WALLS FROM 10'-0"A.F.F. TO CEILING SHALL BE PAINTED WITH INTERIOR PAINT TYPE #9.23 (SEMI-GLOSS) UNLESS OTHERWISE INDICATED.
D. ALL GYPSUM BOARD CEILINGS AND SOFFITS SHALL BE PAINTED WITH PAINT TYPE #9.21 (FLAT) UNLESS OTHERWISE INDICATED.
E. PAINT ALL NON-INTEGRALLY COLORED CMU WALLS WITH INTERIOR PAINT TYPE #4.14 (SEMI-GLOSS), UNLESS OTHERWISE INDICATED.
F. ALL EXPOSED STEEL COLUMNS SHALL BE PAINTED WITH PAINT CODE #5.221 (EPOXY-GLOSS). REFER TO SECTION 099600 - HIGH PERFORMANCE COATINGS.
G. ALL FERROUS METAL (EXCLUDING STRUCTURE) SHALL BE PAINTED INTERIOR PAINT TYPE #5.223 (GLOSS).
H. ALL GALVANIZED METAL (EXCLUDING STRUCTURE) SHALL BE PAINTED INTERIOR PAINT TYPE #5.322 (SEMI-GLOSS).
I. ALL EXPOSED STEEL (FERROUS) STRUCTURE SHALL BE PAINTED INTERIOR PAINT TYPE #5.11.
J. ALL EXPOSED GALVANIZED METAL STRUCTURE SHALL BE PAINTED INTERIOR PAINT TYPE #5.311.
K. IN ALL ROOMS PAINT WITH PAINT CODE #4.14 (CMU WALLS, SEMI-GLOSS) OR #9.23 (GYPSUM BOARD WALLS, SEMI-GLOSS).
L. IN ROOMS: **C101, C106, C106A, C106B, C101J, C101D, C101F, C101H, C115A, C115B, C115C, C115, C101G, C107A, C107B, C116, C116A, C124, C124A** PAINT WITH PAINT CODE #4.223 (CMU SEMI-GLOSS), #4.122 (CLAY-MASONRY SEMI-GLOSS), #9.212 (GYPSUM BOARD AND PLASTER SEMI-GLOSS). REFER TO SECTION 099600 - HIGH PERFORMANCE COATINGS.

PAINT COLOR GENERAL NOTES

A. PAINT ALL GWB SOFFITS P-1 UNLESS OTHERWISE NOTED ON FINISH PLANS OR INTERIOR ELEVATIONS.
B. PAINT ALL SIDES (HORIZ. AND VERT.) OF SOFFIT INDICATED COLOR, UNLESS OTHERWISE NOTED.
C. ALL INTERIOR HOLLOW METAL FRAMES AND DOOR FRAMES TO BE PAINTED P-3 UNLESS OTHERWISE NOTED.
D. ALL METAL HANDRAILS AND STAIR STRINGERS TO BE PAINTED P-3 UNLESS OTHERWISE NOTED. DO NOT PAINT ANODIZED ALUMINUM RAILINGS.
E. PAINT ANY METAL COLUMNS THE COLOR OF ADJACENT WALL UNLESS OTHERWISE NOTED.
F. PAINT ALL GYPSUM WALL BOARD CEILINGS P-2, UNLESS OTHERWISE NOTED.

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CARMEL CLAY SCHOOLS

ARCHITECT

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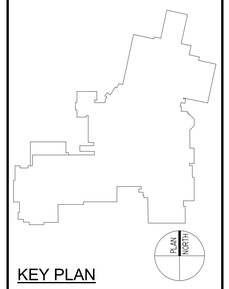
317-848-0966 WWW.FHAI.COM
350 E. NEW YORK ST. SUITE 300, INDIANAPOLIS, IN 46204



KEY PLAN

100% CONSTRUCTION DOCUMENTS

PAUL A. MILLER REGISTERED No. A 10300161 STATE OF INDIANA ARCHITECT

PROJECT MANAGER: MK
DRAWN BY: MKH
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

LIST OF FINISHES

A8S.01

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UNIT A - FIRST FLOOR REFLECTED CEILING PLAN

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

REFLECTED CEILING PLAN LEGEND

A. PROVIDE REVEAL DRYWALL TRIM AT ALL LOCATIONS WHERE GYPSUM WALL BOARD (GWB) ABUTS A DISSIMILAR MATERIAL. TYPICAL UNLESS NOTED OTHERWISE. REFER TO DETAIL ??-A9.1.

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

REFLECTED CEILING PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
1	PAINT EXPOSED STRUCTURE ABOVE. REFER TO FINISH PLANS AND/OR INTERIOR ELEVATIONS FOR DETAILS
2	PAINT ALL EXPOSED DUCT, PIPING AND CONDUIT.
3	STEEL BEAM FOR OVERHEAD CHAIN HOIST. SEE EQUIPMENT PLANS / SCHEDULE FOR ADDITIONAL INFORMATION.
4	METAL PANEL SOFFIT. SEE WALL SECTIONS FOR ADDITIONAL INFORMATION. ALIGN SOFFIT JOINTS WITH VERTICAL WALL JOINTS. SEE BUILDING ELEVATIONS.
5	OVERHEAD DOOR
6	PRE-ENGINEERED METAL WALKWAY COVERING SYSTEM WITH INTEGRAL DOWNSPOUTS
7	5/8" GYP. BOARD CEILING ON 3 5/8" METAL STUD FRAMING AT 16" O.C. W/ SOUND ATTENUATING BATT INSULATION BETWEEN FRAMING.
8	KITCHEN HOOD. SEE FOOD SERVICE DRAWINGS.
9	PAINT BOOTH EXHAUST, UP THROUGH ROOF. SEE EQUIPMENT PLANS AND SCHEDULE FOR ADDITIONAL INFORMATION. COORDINATE FINAL LOCATION, DIMENSIONS AND OPENINGS BETWEEN ALL TRADES.
10	SOUND DIFFUSING PANELS IN ACOUSTICAL GRID SYSTEM. ACT-3. SEE FINISH PLANS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
11	SOUND ABSORBING PANEL IN GRID SYSTEM AT 9'4" AFF TO BOTTOM OF GRID. ACT-6. SEE FINISH PLANS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
12	SOUND ABSORBENT PAD INSULATION LAID ABOVE CEILING.
13	1-HOUR FIRE RATED GYPSUM BOARD SHAFTWALL ASSEMBLY ABOVE ACOUSTIC CEILING, SURROUNDING WOOD DUST COLLECTION DUCT. SEE 5/A9.03.

REFLECTED CEILING PLAN LEGEND

- 10'-4" — INDICATES ELEVATION HEIGHT
- 9'-0" — INDICATES CEILING HEIGHT
- A 9'-0" — INDICATES ACOUSTIC PANEL CEILING TYPE AND HEIGHT. REFER TO PROJECT MANUAL FOR "TYPE"
- LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- LIGHT FIXTURE - REFER TO ELECTRICAL DRAWINGS
- CLOCK - REFER TO TECHNOLOGY DRAWINGS
- MECHANICAL DIFFUSER - REFER TO MECHANICAL DRAWINGS
- MECHANICAL RETURN AIR GRILLE - REFER TO MECHANICAL DRAWINGS
- CEILING MOUNTED MECHANICAL UNIT - REFER TO MECHANICAL DRAWINGS
- MECHANICAL UNIT HEATER - REFER TO MECHANICAL DRAWINGS
- RECESSED CEILING SPEAKER
- MOTION DETECTOR
- CEILING MOUNTED EXIT LIGHT
- CAM — CEILING MOUNTED CAMERA
- W — WIRELESS ACCESS POINT (WAP)
- CJ — CONTROL JOINT IN GYPSUM BOARD CEILING OR BULKHEAD
- S — SOUND REINFORCEMENT SPEAKER
- H — FIRE ALARM HEAT DETECTOR
- F — FIRE ALARM HORN STROBE
- S — FIRE ALARM SPEAKER STROBE
- V — FIRE ALARM STROBE
- P — FIRE ALARM SMOKE DETECTOR
- OCCUPANCY SENSOR
- ACOUSTICAL CEILING TILE (ACT)
- ACOUSTICAL CEILING TILE (ACT)
- GYPSUM WALL BOARD BULKHEAD / CEILING EXTERIOR FINISH SYSTEM (E.F.S.) EXTERIOR INSULATION FINISH SYSTEM (E.I.F.S.)
- INTERIOR FINISH SYSTEM (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.

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

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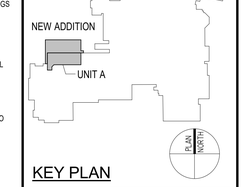
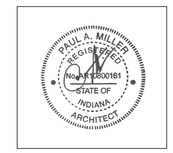


KEY PLAN

100% CONSTRUCTION DOCUMENTS



DRAWN BY: CLP
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

UNIT A - FIRST FLOOR REFLECTED CEILING PLAN

A9.01

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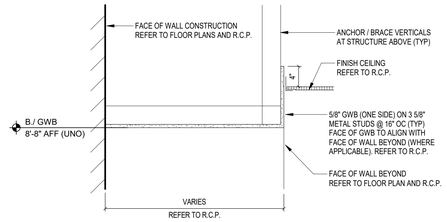

1 SECTION - BULKHEAD

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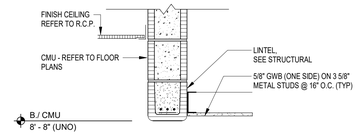

2 SECTION - BULKHEAD

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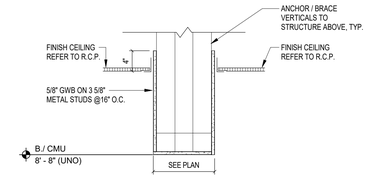

3 SECTION - BULKHEAD

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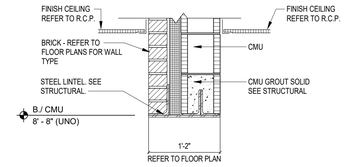

4 SECTION - BULKHEAD

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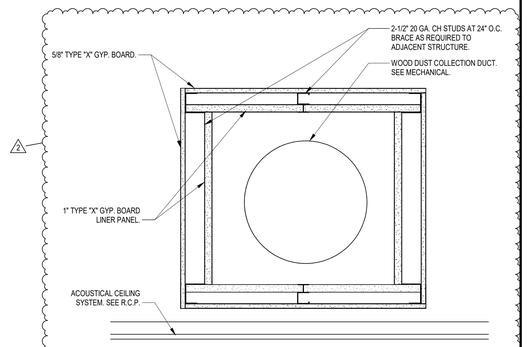

5 SECTION - RATED ENCLOSURE

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

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ARCHITECT

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PLAN NORTH

100% CONSTRUCTION DOCUMENTS

PAUL A. MILLER REGISTERED No. AR11500161 STATE OF INDIANA ARCHITECT

DRAWN BY: CLP

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

CEILING DETAILS

A9.03

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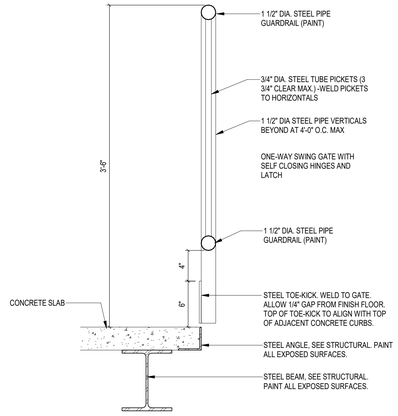
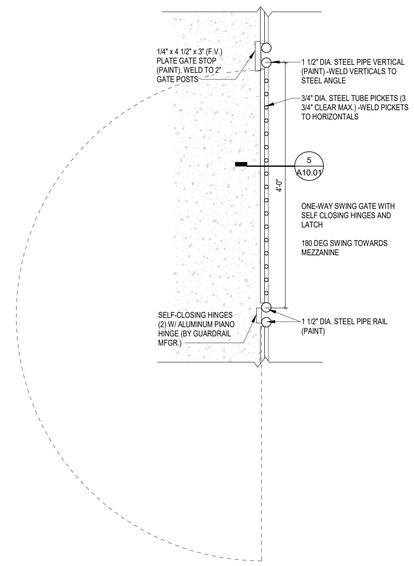


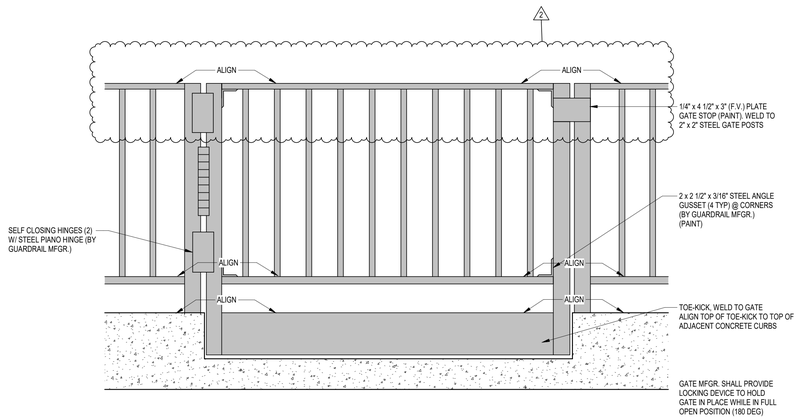
5 MEZZANINE GATE DETAIL

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



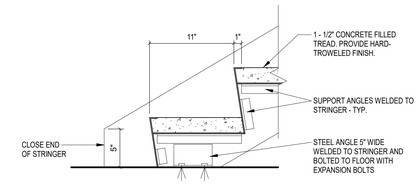
6 MEZZANINE GATE PLAN

SCALE: 1" = 1'-0"



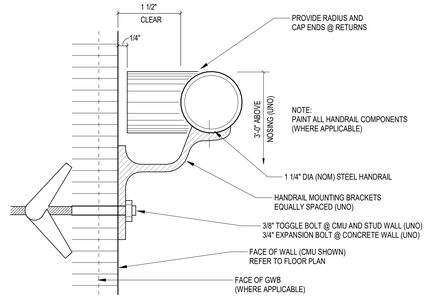
7 MEZZANINE GATE DETAIL

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



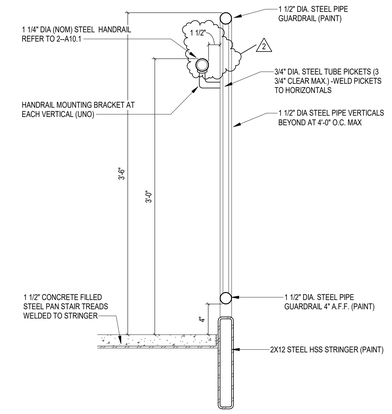
1 METAL PAN TREAD

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



2 STEEL RAILING - WALL MOUNT

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



3 RAILING DETAIL

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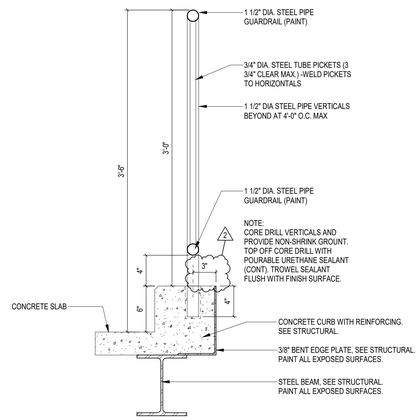

4 CORE DRILLED RAILING

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

CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

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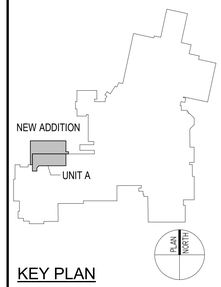

KEY PLAN

100% CONSTRUCTION DOCUMENTS

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

DRAWN BY: CLP

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

VERTICAL CIRCULATION

A10.01

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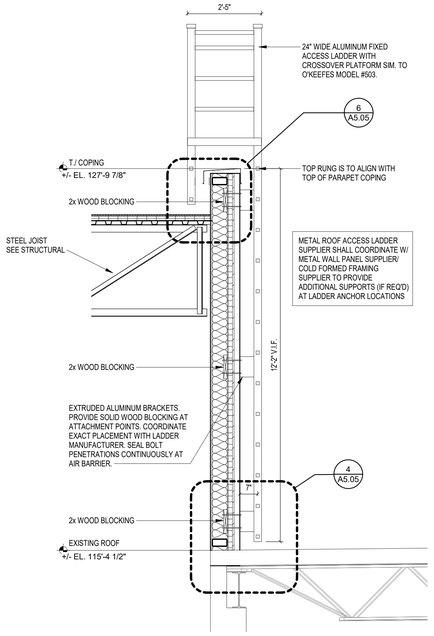
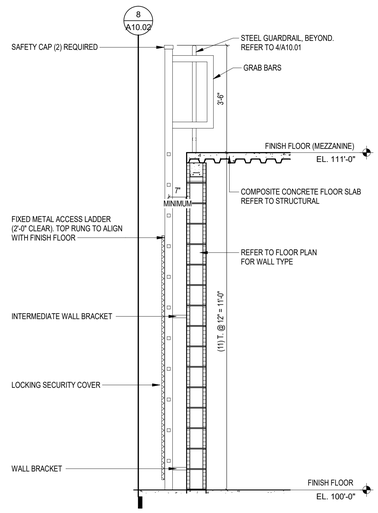


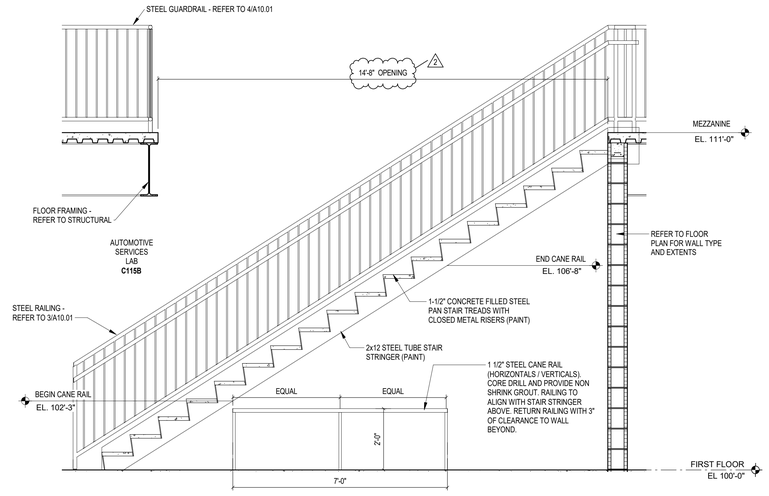
9 SECTION - ROOF LADDER

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



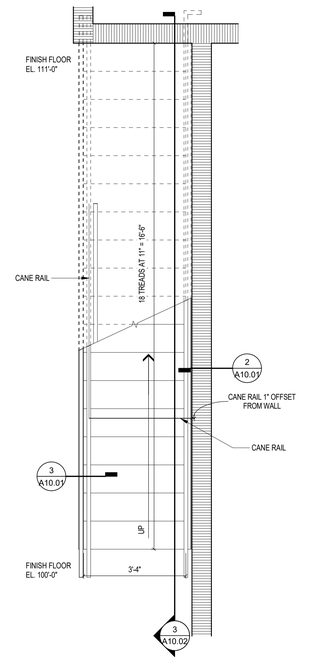
7 SECTION - MEZZANINE ACCESS

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



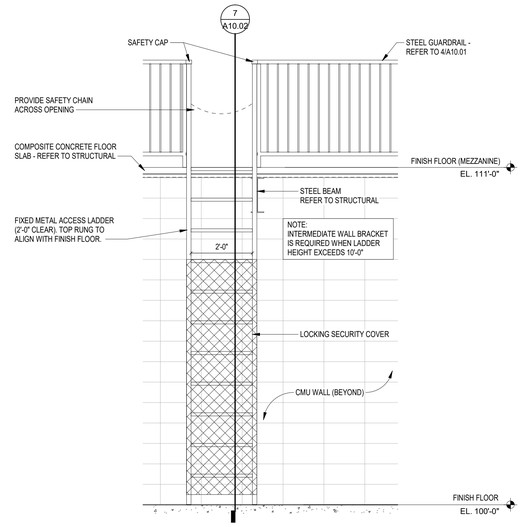
3 SECTION - MEZZANINE STAIR (C115B)

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



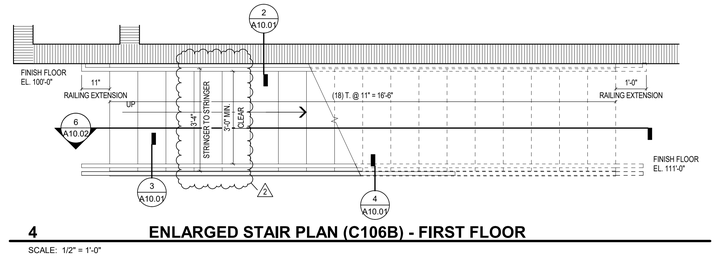
1 ENLARGED STAIR PLAN (C115B) - FIRST FLOOR

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



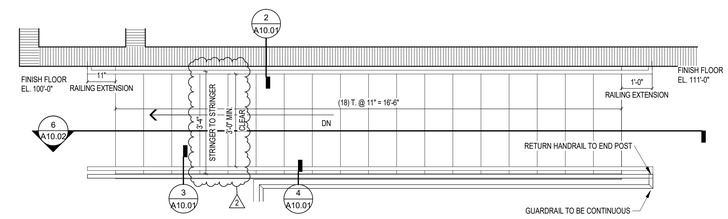
8 SECTION - MEZZANINE ACCESS

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



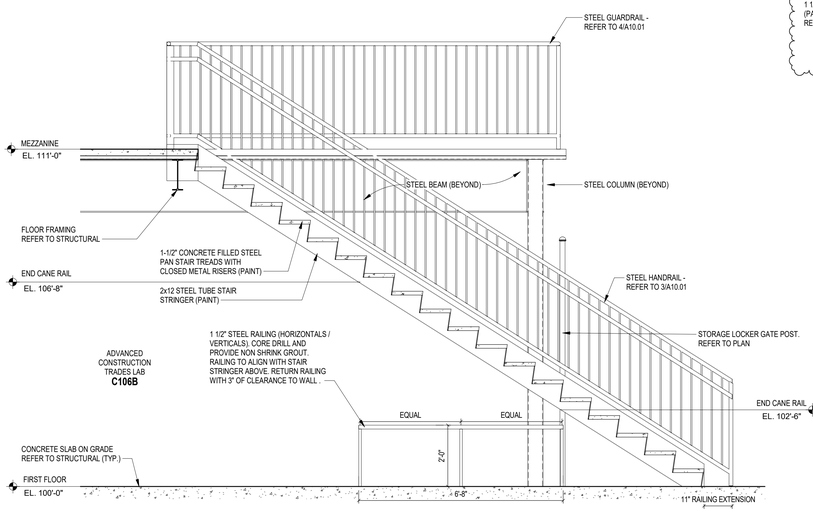
4 ENLARGED STAIR PLAN (C106B) - FIRST FLOOR

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



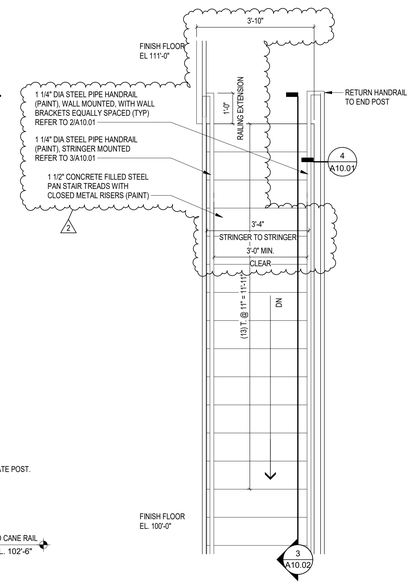
5 ENLARGED STAIR PLAN (C106B) - MEZZANINE

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



6 SECTION - MEZZANINE STAIR (C106B)

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



2 ENLARGED STAIR PLAN (C115B) - MEZZANINE

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

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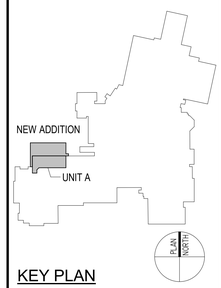
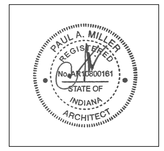


KEY PLAN

100% CONSTRUCTION DOCUMENTS



DRAWN BY: CLP
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

VERTICAL CIRCULATION

A10.02

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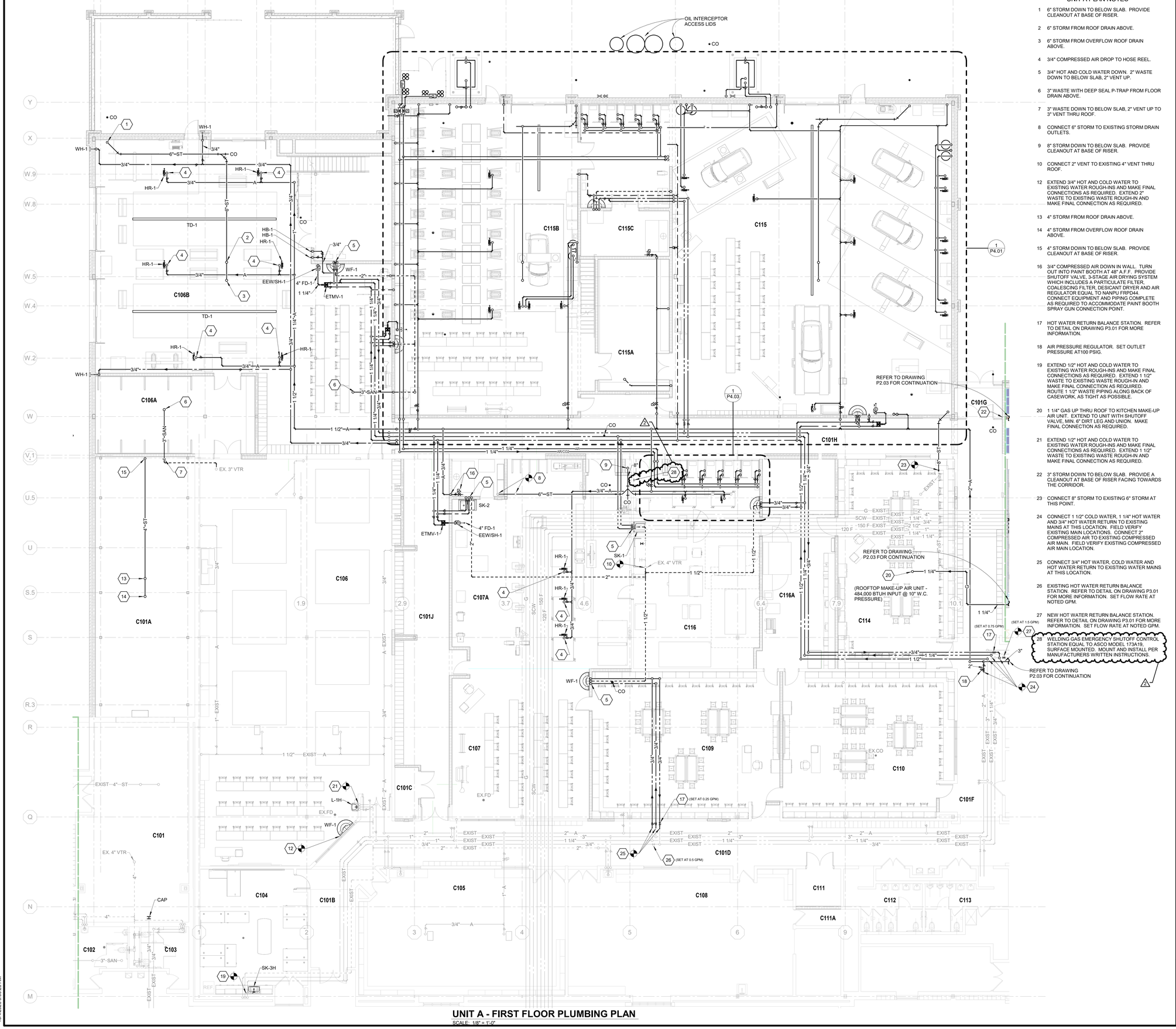

UNIT A - FIRST FLOOR PLUMBING PLAN

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

UNIT A PLAN NOTES

1. 6" STORM DOWN TO BELOW SLAB. PROVIDE CLEANOUT AT BASE OF RISER.
2. 6" STORM FROM ROOF DRAIN ABOVE.
3. 6" STORM FROM OVERFLOW ROOF DRAIN ABOVE.
4. 3/4" COMPRESSED AIR DROP TO HOSE REEL.
5. 3/4" HOT AND COLD WATER DOWN. 2" WASTE DOWN TO BELOW SLAB, 2" VENT UP.
6. 3" WASTE WITH DEEP SEAL P-TRAP FROM FLOOR DRAIN ABOVE.
7. 3" WASTE DOWN TO BELOW SLAB, 2" VENT UP TO 3" VENT THRU ROOF.
8. CONNECT 6" STORM TO EXISTING STORM DRAIN OUTLETS.
9. 8" STORM DOWN TO BELOW SLAB. PROVIDE CLEANOUT AT BASE OF RISER.
10. CONNECT 2" VENT TO EXISTING 4" VENT THRU ROOF.
12. EXTEND 3/4" HOT AND COLD WATER TO EXISTING WATER ROUGH-INS AND MAKE FINAL CONNECTIONS AS REQUIRED. EXTEND 2" WASTE TO EXISTING WASTE ROUGH-IN AND MAKE FINAL CONNECTION AS REQUIRED.
13. 4" STORM FROM ROOF DRAIN ABOVE.
14. 4" STORM FROM OVERFLOW ROOF DRAIN ABOVE.
15. 4" STORM DOWN TO BELOW SLAB. PROVIDE CLEANOUT AT BASE OF RISER.
16. 3/4" COMPRESSED AIR DOWN IN WALL. TURN OUT INTO PAINT BOOTH AT 48" A.F.F. PROVIDE SHUTOFF VALVE, 3-STAGE AIR DRYING SYSTEM WHICH INCLUDES A PARTICULATE FILTER, COALESCING FILTER, DESICANT DRYER AND AIR REGULATOR EQUAL TO NANPU FRPD44. CONNECT EQUIPMENT AND PIPING COMPLETE AS REQUIRED TO ACCOMMODATE PAINT BOOTH SPRAY GUN CONNECTION POINT.
17. HOT WATER RETURN BALANCE STATION. REFER TO DETAIL ON DRAWING P3.01 FOR MORE INFORMATION.
18. AIR PRESSURE REGULATOR. SET OUTLET PRESSURE AT100 PSIG.
19. EXTEND 1/2" HOT AND COLD WATER TO EXISTING WATER ROUGH-INS AND MAKE FINAL CONNECTIONS AS REQUIRED. EXTEND 1 1/2" WASTE TO EXISTING WASTE ROUGH-IN AND MAKE FINAL CONNECTION AS REQUIRED. ROUTE 1 1/2" WASTE PIPING ALONG BACK OF CASEWORK, AS TIGHT AS POSSIBLE.
20. 1 1/4" GAS UP THRU ROOF TO KITCHEN MAKE-UP AIR UNIT. EXTEND TO UNIT WITH SHUTOFF VALVE, MIN. 6" DIRT LEG AND UNION. MAKE FINAL CONNECTION AS REQUIRED.
21. EXTEND 1/2" HOT AND COLD WATER TO EXISTING WATER ROUGH-INS AND MAKE FINAL CONNECTIONS AS REQUIRED. EXTEND 1 1/2" WASTE TO EXISTING WASTE ROUGH-IN AND MAKE FINAL CONNECTION AS REQUIRED.
22. 3" STORM DOWN TO BELOW SLAB. PROVIDE A CLEANOUT AT BASE OF RISER FACING TOWARDS THE CORRIDOR.
23. CONNECT 8" STORM TO EXISTING 6" STORM AT THIS POINT.
24. CONNECT 1 1/2" COLD WATER, 1 1/4" HOT WATER AND 3/4" HOT WATER RETURN TO EXISTING MAINS AT THIS LOCATION. FIELD VERIFY EXISTING MAIN LOCATIONS. CONNECT 2" COMPRESSED AIR TO EXISTING COMPRESSED AIR MAIN. FIELD VERIFY EXISTING COMPRESSED AIR MAIN LOCATION.
25. CONNECT 3/4" HOT WATER, COLD WATER AND HOT WATER RETURN TO EXISTING WATER MAINS AT THIS LOCATION.
26. EXISTING HOT WATER RETURN BALANCE STATION. REFER TO DETAIL ON DRAWING P3.01 FOR MORE INFORMATION. SET FLOW RATE AT NOTED GPM.
27. NEW HOT WATER RETURN BALANCE STATION. REFER TO DETAIL ON DRAWING P3.01 FOR MORE INFORMATION. SET FLOW RATE AT NOTED GPM.
28. WELDING GAS EMERGENCY SHUTOFF CONTROL STATION EQUAL TO ASCO MODEL 173A19, SURFACE MOUNTED. MOUNT AND INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS.

ROOM LEGEND - FIRST FLOOR UNIT C

ROOM NO.	ROOM NAME	AREA (SF)
C100	LOADING / RECEIVING	1202 SF
C100A	BREAK ROOM	640 SF
C100B	ELECTRICAL	825 SF
C100C	LAUNDRY	157 SF
C100D	TOILET	52 SF
C100E	TOILET	52 SF
C100F	SECURE STORAGE	91 SF
C100G	OFFICE	132 SF
C100H	KITCHEN	177 SF
C101	STORAGE	1015 SF
C101A	STORAGE	1287 SF
C101B	CORRIDOR	174 SF
C101C	MEDIA DATA	61 SF
C101D	YEARBOOK CLASSROOM / LAB	Not Placed
C101D	CORRIDOR	1860 SF
C101E	CORRIDOR	177 SF
C101F	CORRIDOR	976 SF
C101G	JOURNALISM CLASSROOM	Not Placed
C101G	VESTIBULE	70 SF
C101H	OFFICE	156 SF
C101H	CORRIDOR	992 SF
C101J	CORRIDOR	832 SF
C102	MENS TOILET	124 SF
C103	WOMENS TOILET	119 SF
C104	OFFICE	638 SF
C105	ELECTRONICS / PHYSICS	1251 SF
C106	CONSTRUCTION TRADES LAB	3699 SF
C106A	STORAGE	622 SF
C106B	ADVANCED CONSTRUCTION TRADES LAB	3867 SF
C107	CLASSROOM	1015 SF
C107A	ADVANCED MFG. ARTISAN LAB	1695 SF
C107B	FINISHING ROOM	97 SF
C108	GRAPHIC COMMUNICATIONS	1385 SF
C109	CAD LAB	1347 SF
C110	CAD LAB	1217 SF
C111	MEDIA DATA	83 SF
C111A	STORAGE	101 SF
C112	GIRLS	188 SF
C113	BOYS	163 SF
C114	CAD LAB	1188 SF
C115	ADVANCED AUTOMOTIVE SERVICES LAB	4790 SF
C115A	STORAGE	468 SF
C115B	AUTOMOTIVE SERVICES LAB	2828 SF
C115C	FINISHING ROOM	201 SF
C116	ADVANCED MFG. INNOVATION LAB	1278 SF
C116A	ADVANCED MFG. CLEAN LAB	762 SF
C117	CERAMIC CLASSROOM / LAB	1387 SF
C117A	STORAGE	145 SF
C117B	STORAGE / MATERIALS	150 SF
C118	INDEPENDENT STUDY / COMMERICAL ART	1425 SF
C119	PHOTOGRAPHY	992 SF
C119A	DARKROOM	309 SF
C120	COMPUTER ART ROOM	442 SF
C122	TEACHERS WORKROOM	672 SF
C122A	DEPT. HEAD OFFICE	104 SF
C123	CERAMICS CLASSROOM / LAB	1205 SF
C123A	STORAGE	145 SF
C123B	STORAGE / MATERIALS	150 SF
C124	CULINARY ARTS	1299 SF
C124A	CLOSET	39 SF
C124B	DRY GOODS	154 SF
C124C	WALK-IN	129 SF
C125	DRAWING CLASSROOM / LAB	1173 SF
C126	DRAWING CLASSROOM / LAB	1182 SF
C127	DRAWING CLASSROOM / LAB	1182 SF
C128	JEWELRY CLASSROOM / LAB	953 SF
C129	PHOTOGRAPHY	1023 SF
C129A	DARKROOM	232 SF
C131	CORRIDOR	1363 SF
C131A	STORAGE	166 SF
C131B	MEDIA DATA	60 SF
C131C	CORRIDOR	476 SF
C132	STUDIO	244 SF
C133	PODCAST	144 SF
C134	PASSAGE	36 SF
C135	STUDIO	63 SF
C136	STORAGE	105 SF
C136A	COMPUTER LAB	201 SF
C137	STUDIO	91 SF
C138	STUDIO	93 SF
C138A	PASSAGE	127 SF
C138B	STUDIO	54 SF
C138C	STUDIO	52 SF
C138D	STUDIO	52 SF
C138E	STUDIO	52 SF
C139	CLASSROOM	984 SF
C141	TV CLASSROOM	819 SF
C141A	STUDIO B	165 SF
C141B	OFFICE	91 SF
C142	STUDIO B	196 SF
C142A	ENGINEERING	114 SF
C143	STUDIO A	1026 SF
C144	TV CONTROL	251 SF
C144A	EQUIPMENT ROOM	120 SF
C145	COMPUTER CLASSROOM	851 SF
C145A	SECURE CLOSET	17 SF
C146	COMPUTER SERVER STORAGE	303 SF
C147	JOURNALISM CLASSROOM	1468 SF
C147A	OFFICE	136 SF
C148	ELECTRICAL ROOM	143 SF
C149	YEARBOOK CLASSROOM / LAB	1350 SF
C149A	PODCAST	147 SF
C150	TV-CPU LAB	714 SF
C151	MECHANICAL	5687 SF
C152	-	927 SF

GENERAL CONSTRUCTION NOTE

CONTRACTOR SHALL BE RESPONSIBLE FOR CEILING REMOVAL AND REPLACEMENT AS REQUIRED THROUGHOUT EXISTING AREAS TO ACCOMMODATE NEW PIPING INSTALLATIONS. DAMAGED TILES SHALL BE REPLACED WITH NEW MATCHING EXISTING TILES WHERE REMOVED TILES ARE DAMAGED.

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.

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NEW ADDITION
UNIT A
PLAN NORTH

KEY PLAN

CONSTRUCTION DOCUMENTS

MARK Z. HOFF REGISTERED No. PE 12005001 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: JE

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

UNIT A - FIRST FLOOR PLUMBING PLAN

P2.01

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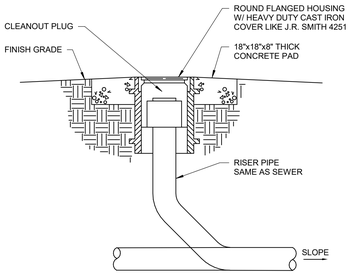
PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE ITEM	FIXTURE MFGR	FIXTURE MODEL	FIXTURE MATERIAL	FIXTURE TYPE	FIXTURE COLOR	TRIM ITEM	TRIM MFGR	TRIM MODEL	ACCESSORIES ITEM	ACCESSORIES MFGR	ACCESSORIES MODEL	CONNECTIONS CW	CONNECTIONS HW	CONNECTIONS W	CONNECTIONS V	COMMENTS
EEW/SH-1	EMERGENCY EYE WASH / SHOWER ASSEMBLY	GUARDIAN	GB1950	STAINLESS/POLYMER	FLOOR MOUNTED	-	-	-	-	EMERGENCY TMV	GUARDIAN	G6040	1 1/4"	1 1/4"	0"	0"	
FSSK	MOP SERVICE BASIN	FIAT	TSB-3000	TERAZZO	FLOOR MOUNTED	-	FAUCET	CHICAGO	897-CCP	-	-	-	3/4"	3/4"	3"	1 1/2"	PROVIDE CHECK VALVES IN WATER SUPPLIES
GI-1	GREASE INTERCEPTOR	SCHIER PRODUCTS	GB-500	POLYETHYLENE	BELOW GRADE										4"		4" INLET / OUTLET; 510 GAL. LIQUID CAPACITY; 1,859 LBS. GREASE CAPACITY AT 250 GPM; 128 GAL. SOLIDS; PROVIDE FCR2 RISER FOR ACCESS TO GRADE
HB-1	HOSE BIBB	CHICAGO	387-E27CP	ROUGH BRONZE	WALL MOUNTED	-	-	-	-	-	-	-	3/4"	0"			
IB-1	ICE MAKER SUPPLY BOX	GUY GRAY	MIB 1	STAINLESS	WALL MOUNTED	-	-	-	-	-	-	-	1/2"				
L-1H	LAVATORY - ADA	AMERICAN STANDARD	0355.012	VIT. CHINA	WALL MOUNTED	WHITE	FAUCET	CHICAGO	420-E2805ABCP	POINT-OF-USE TMV	POWERS	LFG480	1/2"	1/2"	1 1/2"	1 1/2"	SET POINT-OF-USE TMV OUTLET TEMP AT 105 DEG. F., SIZE TMV FOR 0.25 GPM
SI-1	SOLIDS INTERCEPTOR	SCHIER PRODUCTS	SI-500	POLYETHYLENE	BELOW GRADE										4"		4" INLET / OUTLET; 510 GAL. LIQUID CAPACITY; 457 GAL. SOLIDS/SEDIMENT CAPACITY; PROVIDE FCR2 RISER FOR ACCESS TO GRADE
SK-1	1-COMPARTMENT SERVICE SINK	ADVANCE TABCO	93-61-18	STAINLESS	FLOOR MOUNTED	-	FAUCET	T&S BRASS	S-0231	DRAIN	-	-	1/2"	1/2"	2"	2"	
SK-2	2-COMPARTMENT SERVICE SINK	ADVANCE TABCO	93-62-36	STAINLESS	FLOOR MOUNTED	-	FAUCET	T&S BRASS	S-0231	DRAIN	-	-	1/2"	1/2"	2"	2"	
SK-3H	SINGLE COMP. SINK - ADA	ELKAY	LRAD1918-5.5	STAINLESS	COUNTERTOP	-	FAUCET	CHICAGO	201-AGN8AE2805FAB	-	-	-	1/2"	1/2"	2"	1 1/2"	PROVIDE CENTERED REAR DRAIN TO ACCOMMODATE ADA APPROACH
WF-1	54" SEMI-CIRCULAR WASHFOUNTAIN	BRADLEY	WF2704	STAINLESS	WALL MOUNTED	-	-	-	-	POINT-OF-USE TMV	POWERS	LFG480	3/4"	3/4"	2"	2"	LESS SOAP AND TOWEL DISPENSER; SET POINT-OF-USE TMV OUTLET TEMP AT 105 DEG. F.; SIZE TMV FOR 0.25 GPM
WH-1	NON-FREEZE WALL HYDRANT	J.R. SMITH	5509QT	ROUGH BRONZE	WALL MOUNTED	-	-	-	-	-	-	-	3/4"				MOUNT AT 18" A.F.G.

PLUMBING EQUIPMENT SCHEDULE

MARK	DESCRIPTION	LOCATION	MANUFACTURER/MODEL NUMBER	CAPACITY	REMARKS	ELECTRICAL DATA HP	KW	V	AMP	PH	COMMENTS
AC-1	AIR COMPRESSOR	MECHANICAL ROOM C151	KAESER - SK20 AIR CENTER	217 PSIG OPERATING PRESS.; 62.5 CFM CAPACITY AT OPERATING PRESS.	ROUTE RELIEF/DISCHARGE PIPING TO NEAREST FLOOR DRAIN WITH AIR GAP	20		460		3	ROTARY SCREW TYPE AIR COMPRESSOR - PRE-PACKAGED UNIT; PROVIDE KAESER OIL/WATER SEPARATOR FOR CONDENSATE DISCHARGE, KAESER MODEL KCF 50.
AC-2	AIR COMPRESSOR	MECHANICAL ROOM C151	KAESER - SK20 AIR CENTER	217 PSIG OPERATING PRESS.; 62.5 CFM CAPACITY AT OPERATING PRESS.	ROUTE RELIEF/DISCHARGE PIPING TO NEAREST FLOOR DRAIN WITH AIR GAP	20		460		3	ROTARY SCREW TYPE AIR COMPRESSOR - PRE-PACKAGED UNIT; PROVIDE KAESER OIL/WATER SEPARATOR FOR CONDENSATE DISCHARGE, KAESER MODEL KCF 50.
ADP-1	ANTI-FREEZE/COOLANT DRUM PUMP	AUTOMOTIVE LABS	MACNAUGHT R-SERIES R300S-01		AIR OPERATED ANTI-FREEZE PUMP; MOUNT TO ANTI-FREEZE DRUM						UNIT SUPPLIED WITH IN-LINE AIR LUBRICATOR; PROVIDE 5 MICRON AIR FILTER FOR AIR INLET TO PUMP
AR-1	ARGON STATION DROP	WELDING BOOTH	REXARC - MODEL 2-04-1604A								
AR/CO2-1	ARGON/CO2 MIX STATION DROP	WELDING BOOTH	REXARC - MODEL 2-04-1604AC								
DWH-1	INSTANTANEOUS DOMESTIC WATER HEATER	CULINARY CLOSET C124A	NAVIEN NPE-240	5.8 GPM @ 67 DEG. T.R.			.35 MAX	120		1	3" INTAKE - 3" EXHAUST FLUE
ETMV-1	EMERGENCY THERMOSTATIC MIXING VALVE	VARIOUS LOCATIONS	GUARDIAN G6040	20 GPM @ 7 PSI PRESSURE DROP	1" INLETS / 1-1/4" OUTLETS	-	-	-	-	-	
EXT-1	DOMESTIC HOT WATER EXPANSION TANK	CULINARY CLOSET C124A	AMTROL MODEL NO. ST-12-C	3.2 GAL. MAX ACCEPT VOLUME 6.4 GAL. TOTAL VOLUME	A.S.M.E. RATED - SECTION VIII	-	-	-	-	-	
FOST-1	FUEL OIL STORAGE TANK MODEL HT-1069	EXTERIOR - ADJACENT TO EXISTING NATURAL GAS ENCLOSURE	HIGHLAND TANK	750 GALLONS							ABOVE GROUND, U.L. 142 LISTED, DOUBLE-WALL FUEL OIL STORAGE TANK
HR-1	CEILING - STRUCTURE MOUNTED COMPRESSED AIR HOSE REEL	AUTOMOTIVE AND ADVANCED AUTOMOTIVE LABS	MACNAUGHT M3D-SSAW-5050								PROVIDE 50' OF FLEXIBLE SUPPLY HOSE WITH QUICK-DISCONNECT FITTING
HR-2	CEILING - STRUCTURE MOUNTED ENGINE OIL / ANTI-FREEZE DISTRIBUTION HOSE REEL	AUTOMOTIVE AND ADVANCED AUTOMOTIVE LABS	MACNAUGHT M3D-SSCO-5050								PROVIDE 50' OF FLEXIBLE SUPPLY HOSE; PROVIDE OIL GUN
HWCP-1	HOT WATER RETURN PUMP	CULINARY CLOSET C124A	BELL AND GOSSETT MODEL NO. PL-30B	2 GPM @ 24' T.D.H.	ALL BRONZE CONSTRUCTION	1/12	-	120	-	1	
ODP-1	ENGINE OIL DRUM PUMP	AUTOMOTIVE LABS	MACNAUGHT R-SERIES R300S-01		AIR OPERATED OIL PUMP; MOUNT TO OIL DRUM						UNIT SUPPLIED WITH IN-LINE AIR LUBRICATOR; PROVIDE 5 MICRON AIR FILTER FOR AIR INLET TO PUMP
OWS-1	UNDERGROUND OIL-WATER SEPARATOR	EXTERIOR OF AUTOMOTIVE LAB	HIGHLAND TANK - MODEL UL-HTC-H-1000-HG-SW	1000 GALLON - 100 GPM FLOW RATE	PROVIDE SUBMERSIBLE OIL PUMP AND SENSOR EQUIPMENT - PROVIDE WITH HIGH-LINK LEVEL SHEILD - HT-6117 'P' SERIES, WIRELESS	-	-	208	-	3	PROVIDE AND MOUNT PUMP CONTROLLER ON EXTERIOR WALL. PROVIDE NECESSARY CONDUIT FOR WIRING TO/FROM THE OWS
SOM-AR	ARGON SWITCHOVER MANIFOLD	EXTERIOR CYLINDER STORAGE AREA	REXARC - MODEL 4-04-0136SHPA-8	200 PSIG DELIVERY PRESSURE; 550 SCFH							
SOM-AR/CO2	ARGON/CO2 MIX SWITCHOVER MANIFOLD	EXTERIOR CYLINDER STORAGE AREA	REXARC - MODEL 4-04-013SHPAC-8	200 PSIG DELIVERY PRESSURE; 550 SCFH							
SP-1	WASTE WATER SAMPLING PORT	EXTERIOR NORTH SIDE OF CULINARY LAB	SCHIER - MODEL SV10		PROVIDE SCHIER FIELD CUT RISER FCR10						4" INLET / OUTLET SIZE
WOCT-1	WASTE OIL / ANTI-FREEZE CONTAINMENT TANK	EXTERIOR OF AUTOMOTIVE LABS	HIGHLAND TANK - 500 GALLON, 48" DIA. AG DW HORIZONTAL SPLIT-TANK	250 GALLON FOR EACH SIDE - TOTAL 500 GALLON STORAGE	DOUBLE-WALL, ABOVEGROUND, UL 142 LISTED - SET IN DEPRESSED CONCRETE CONTAINMENT PIT						PROVIDE WITH HIGH-LINK LEVEL SHEILD - HT-6117 'P' SERIES, WIRELESS



1 EXTERIOR CLEANOUT DETAIL
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2 HWR BALANCING STATION DETAIL
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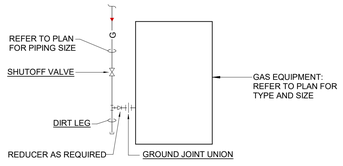

4 GAS DIRT LEG PIPING DETAIL
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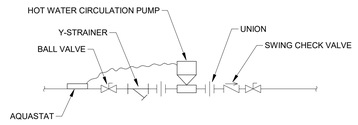

3 HWR PUMP PIPING DIAGRAM
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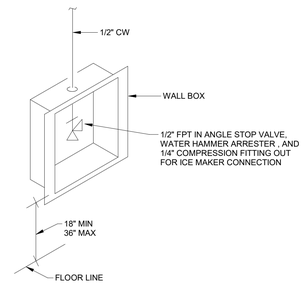

5 ICE MAKER BOX DETAIL
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ENGINE OIL AND ANTI-FREEZE PIPING SPECIFICATION:

ENGINE OIL AND ANTI-FREEZE (ETHYLENE GLYCOL) DISTRIBUTION PIPING

A. Hard Copper Tube: ASTM B88, Type K or L water tube, drawn temper
   1. Cast-Copper Solder-Joint Fittings: ASME B16.22, pressure fittings.
   2. Wrought-Copper Solder-Joint Fittings: ASME B16.22, wrought-copper pressure fittings.
   3. Copper Unions: MSS SP-125, cast-copper-alloy, hexagonal stock body, with ball and socket, metal-to-metal seating surfaces, and solder-joint or threaded ends.

B. Two-Piece, Full-Port, Bronze Ball Valves with Bronze Trim: MSS SP-110.
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. BrassCraft Manufacturing Company; a Masco company.
      b. Conbraco Industries, Inc.; Apollo Div.
      c. McDonald, A. Y. Mfg. Co.
   2. Body: Bronze, complying with ASTM B 584.
   3. Ball: Chrome-plated bronze.
   4. Stem: Bronze; blowout proof.
   5. Seats: Reinforced TFE; blowout proof.
   6. Packing: Threaded-body packnut design with adjustable-stem packing.
   7. Ends: Threaded, flared, or socket
   8. CWP Rating: 600 psig.
   9. Listing: Valves 1 inch and smaller shall be listed and labeled by an NRTL acceptable to authorities having jurisdiction.
      Service: Suitable for engine oil and ethylene glycol.

WASTE (USED) ENGINE OIL AND ANTI-FREEZE PIPING, FITTINGS AND VALVE SPECIFICATION

WASTE ENGINE OIL AND ANTI-FREEZE (ETHYLENE GLYCOL) REMOVAL PIPING AND VALVES

A. Steel Pipe: ASTM A53/A53M, black steel, Schedule 40, Type E or S, Grade B.
   1. Malleable-Iron Threaded Fittings: ASME B16.3, Class 150, standard pattern.
   2. Wrought-Steel Welding Fittings: ASTM A234/A234M, for butt and socket welding.
   3. Unions: ASME B16.39, Class 150, malleable iron with brass-to-iron seat, ground joint, and threaded ends.
   4. Forged-Steel Flanges and Flanged Fittings: ASME B16.5, minimum Class 150, including bolts, nuts, and gaskets of the following material group, end connections, and facings:
   a. Material Group: 1.1.
   b. End Connections: Threaded or butt welding to match pipe.
   c. Lapped Face: Not permitted underground.
   d. Gasket Materials: Asbestos free, ASME B16.20 metallic, or ASME B16.21 nonmetallic; gaskets compatible with fuel oil.
   e. Bolts and Nuts: ASME B18.2.1, zinc alloy-plated steel.

B. Two-Piece, Full-Port, Bronze Ball Valves with Bronze Trim: MSS SP-110.
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. BrassCraft Manufacturing Company; a Masco company.
   b. Conbraco Industries, Inc.; Apollo Div.
   c. McDonald, A. Y. Mfg. Co.
   2. Body: Bronze, complying with ASTM B 584.
   3. Ball: Chrome-plated bronze.
   4. Stem: Bronze; blowout proof.
   5. Seats: Reinforced TFE; blowout proof.
   6. Packing: Threaded-body packnut design with adjustable-stem packing.
   7. Ends: Threaded, flared, or socket
   8. CWP Rating: 600 psig.
   9. Listing: Valves 1 inch and smaller shall be listed and labeled by an NRTL acceptable to authorities having jurisdiction.
      Service: Suitable for engine oil and ethylene glycol.

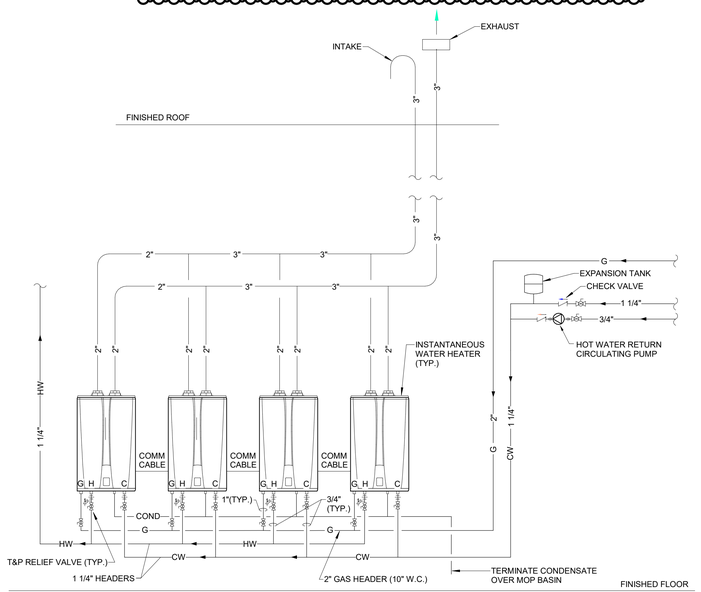
WELDING GAS PIPING SPECIFICATION:

WELDING GAS PIPING - ARGON AND CARBON DIOXIDE

A. Hard Copper Tube: ASTM B88, Type K or L water tube, drawn temper
   1. Cast-Copper Solder-Joint Fittings: ASME B16.22, pressure fittings.
   2. Wrought-Copper Solder-Joint Fittings: ASME B16.22, wrought-copper pressure fittings.
   3. Copper Unions: MSS SP-125, cast-copper-alloy, hexagonal stock body, with ball and socket, metal-to-metal seating surfaces, and solder-joint or threaded ends.

△2

B. Two-Piece, Full-Port, Bronze Ball Valves with Bronze Trim: MSS SP-110.
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. BrassCraft Manufacturing Company; a Masco company.
      b. Conbraco Industries, Inc.; Apollo Div.
      c. McDonald, A. Y. Mfg. Co.
   2. Body: Bronze, complying with ASTM B 584.
   3. Ball: Chrome-plated bronze.
   4. Stem: Bronze; blowout proof.
   5. Seats: Reinforced TFE; blowout proof.
   6. Packing: Threaded-body packnut design with adjustable-stem packing.
   7. Ends: Threaded, flared, or socket
   8. CWP Rating: 600 psig.
   9. Listing: Valves 1 inch and smaller shall be listed and labeled by an NRTL acceptable to authorities having jurisdiction.
      Service: Suitable for argon and carbon dioxide.



6 WATER HEATER PIPING DETAIL(INSTANTANEOUS GAS-FIRED)
N.T.S.

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

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PLAN NORTH

CONSTRUCTION DOCUMENTS

MARK Z. HOPF REGISTERED No. PE 12005001 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: JE

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

PLUMBING SCHEDULES AND DETAILS

P3.01

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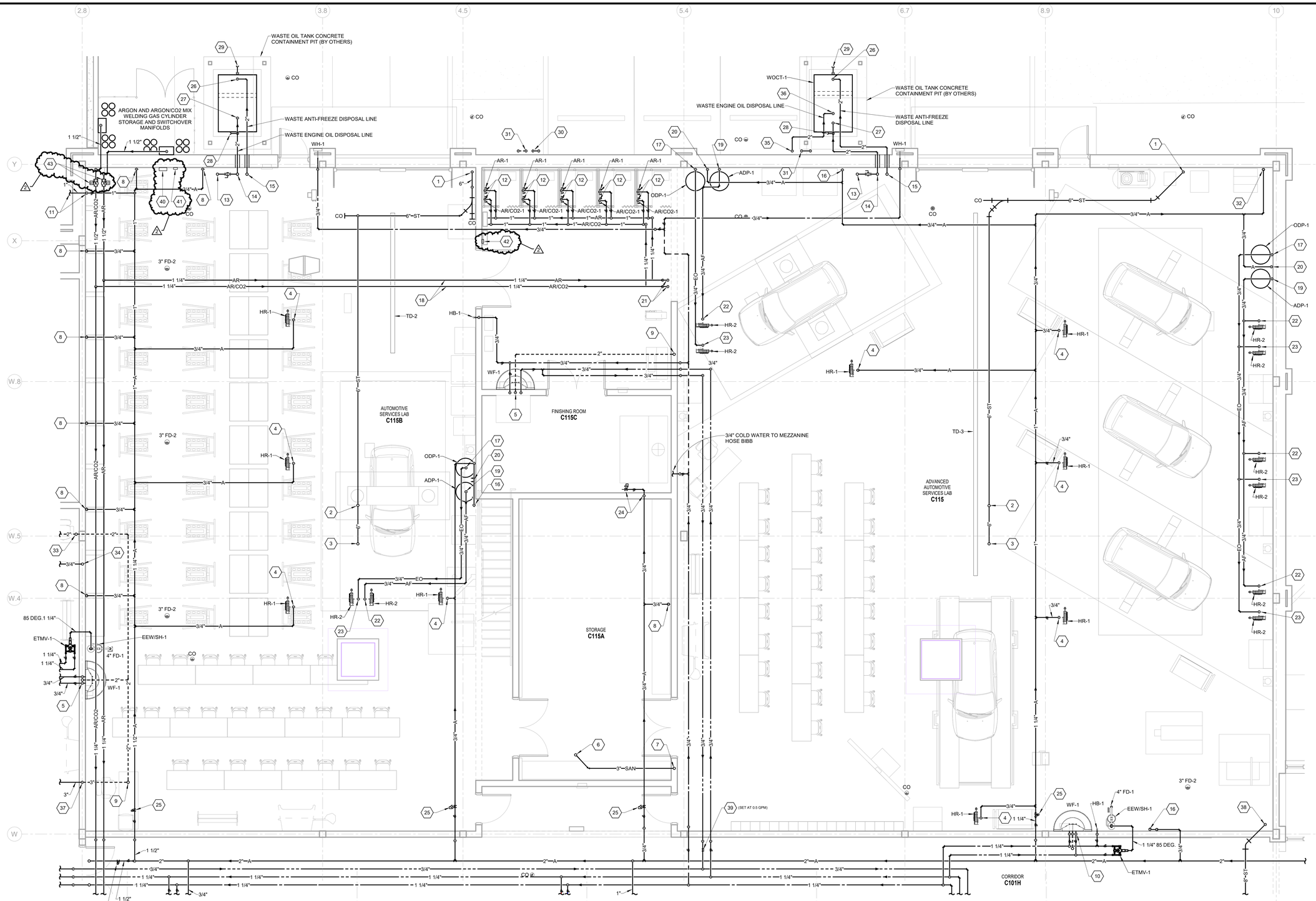

1 UNIT A - ENLARGED AUTOMOTIVE LABS PLUMBING PLAN

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

ENLARGED AUTO LABS PLAN NOTES

1. 6" STORM DOWN TO BELOW SLAB. PROVIDE CLEANOUT AT BASE OF RISER.
2. 6" STORM FROM ROOF DRAIN ABOVE.
3. 6" STORM FROM OVERFLOW ROOF DRAIN ABOVE.
4. 3/4" COMPRESSED AIR DROP TO HOSE REEL. PROVIDE SHUTOFF VALVE PRIOR TO CONNECTION TO HOSE REEL.
5. 3/4" HOT AND COLD WATER DOWN. 2" WASTE DOWN TO BELOW SLAB, 2" VENT UP.
6. 3" WASTE WITH DEEP SEAL P-TRAP FROM FLOOR DRAIN ABOVE.
7. 3" WASTE DOWN TO BELOW SLAB, 2" VENT UP TO 3" VENT THRU ROOF.
8. 3/4" COMPRESSED AIR DOWN ALONG FACE OF WALL TO SHUTOFF VALVE AND QUICK DISCONNECT AIR HOSE FITTING.
9. 2" VENT UP TO 3" VENT THRU ROOF.
10. 3/4" HOT AND COLD WATER DOWN. 2" WASTE DOWN TO BELOW SLAB, 2" VENT UP TO 3" VENT THRU ROOF.
11. 1" COMPRESSED AIR DROP ALONG WALL. ROUTE THRU EXTERIOR WALL AND EXTEND TO WELDING UNIT. PROVIDE SHUTOFF VALVE, UNION AND MAKE FINAL CONNECTION AS REQUIRED. SEAL WALL PENETRATION WEATHERTIGHT.
12. 3/4" ARGON AND ARGON/CO2 MIX SUPPLY PIPING DOWN TO WELDING BOOTH GAS OUTLETS. COORDINATE FINAL LOCATION AND ARRANGEMENT WITH OWNER.
13. 12" DIA. OIL FILTER DRAIN FUNNEL WITH MESH SCREEN AND CLOSING TOP. 2" DRAIN.
14. 6" DIA. OPEN FUNNEL FOR WASTE OIL DISPOSAL. 2" DRAIN DOWN AND OUT TO USED OIL CONTAINMENT TANK. SEAL WALL PENETRATION WEATHERTIGHT.
15. 6" DIA. OPEN FUNNEL FOR WASTE ANTI-FREEZE DISPOSAL. 2" DRAIN DOWN AND OUT TO USED ANTI-FREEZE CONTAINMENT TANK. SEAL WALL PENETRATION WEATHERTIGHT.
16. 3/4" COMPRESSED AIR DOWN INTO 3" CONDUIT TO BELOW SLAB. 3" CONDUIT DOWN TO BELOW SLAB. SEAL CONDUIT OPENING AS REQUIRED. PROVIDE SHUTOFF VALVE AND AIR PRESSURE REGULATOR AT 4'-0" A.F.F.
17. CONNECT 3/4" FLEXIBLE HOSE TO DRUM PUMP OUTLET. EXTEND FLEXIBLE HOSE TO ENGINE OIL DISTRIBUTION PIPE CONNECTION AT WALL. 3/4" ENGINE OIL UP.
18. ROUTE WELDING GAS PIPING UP AND OVER MEZZANINE. KEEP PIPING AS HIGH AS POSSIBLE.
19. CONNECT 3/4" FLEXIBLE HOSE TO DRUM PUMP OUTLET. EXTEND FLEXIBLE HOSE TO ANTI-FREEZE DISTRIBUTION PIPE CONNECTION AT WALL. 3/4" ANTI-FREEZE UP.
20. 3/4" COMPRESSED AIR DOWN ALONG WALL. TERMINATE WITH AIR PRESSURE REGULATOR AND SHUTOFF VALVE. EXTEND 1/2" COMPRESSED AIR TO ENGINE OIL AND ANTI-FREEZE DRUM PUMPS. PROVIDE 'STOP' VALVE COMPRESSED AIR COCK PRIOR TO AIR CONNECTION. REFER TO DRUM PUMP MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR MORE INFORMATION.
21. 1 1/4" WELDING GAS DOWN THRU MEZZANINE FLOOR. ROUTE PIPING TO WELDING BOOTHS. KEEP PIPING AS HIGH AS POSSIBLE TO UNDERSIDE OF MEZZANINE.
22. 3/4" ANTI-FREEZE DOWN TO HOSE REEL.
23. 3/4" ENGINE OIL DOWN TO HOSE REEL.
24. 3/4" COMPRESSED AIR DOWN IN WALL. TURN OUT INTO PAINT BOOTH AT 48" A.F.F. PROVIDE SHUTOFF VALVE, 3-STAGE AIR DRYING SYSTEM WHICH INCLUDES A PARTICULATE FILTER, COALESCING FILTER, DESICANT DRYER AND AIR REGULATOR EQUAL TO NANPU FRPD44. CONNECT EQUIPMENT AND PIPING COMPLETE AS REQUIRED TO ACCOMMODATE PAINT BOOTH SPRAY GUN CONNECTION POINT.
25. AIR PRESSURE REGULATOR. SET OUTLET PRESSURE AT100 PSIG.
26. 2" WASTE ANTI-FREEZE DOWN INTO CONTAINMENT TANK. MAKE FINAL CONNECTION AS REQUIRED.
27. 2" WASTE ENGINE OIL DOWN INTO CONTAINMENT TANK. MAKE FINAL CONNECTION AS REQUIRED.
28. 2" WASTE ENGINE OIL PUMP OUT PORT. COORDINATE PUMP OUT PORT CONNECTION COUPLING WITH OWNERS PUMP-OUT CONTRACTOR.
29. 2" WASTE ANTI-FREEZE PUMP OUT PORT. COORDINATE PUMP OUT PORT CONNECTION COUPLING WITH OWNERS PUMP-OUT CONTRACTOR.
30. 2" VENT UP FROM BELOW GRADE. TERMINATE VENT WITH (2) 90 DEG. ELBOWS, TURNED DOWN WITH BUG SCREEN. TERMINATE AT +36" A.F.G. PROVIDE PIPE SUPPORT ATTACHED TO EXTERIOR WALL.
31. 3" VENT UP FROM BELOW GRADE. TERMINATE VENT WITH (2) 90 DEG. ELBOWS, TURNED DOWN WITH BUG SCREEN. TERMINATE AT +36" A.F.G. PROVIDE PIPE SUPPORT ATTACHED TO EXTERIOR WALL.
32. 3/4" COMPRESSED AIR DOWN ALONG FACE OF WALL TO SHUTOFF VALVE AND QUICK DISCONNECT AIR HOSE FITTING. PROVIDE POINT-OF-USE AIR PRESSURE REGULATOR.
33. 2" VENT UP.
34. 3/4" COLD WATER UP.
35. 2" PUMPED WASTE OIL UP FROM BELOW GRADE.
36. 2" PUMPED WASTE OIL DOWN IN TO CONTAINMENT TANK. MAKE FINAL CONNECTION AS REQUIRED.
37. 3" WASTE DOWN, 3" VENT UP.
38. 8" STORM DOWN TO BELOW SLAB. PROVIDE CLEANOUT AT BASE OF RISER.
39. HOT WATER RETURN BALANCE STATION. REFER TO DETAIL ON DRAWING P3.01 FOR MORE INFORMATION.
40. WELDING GAS EMEGENCY SHUTOFF RELAY PANEL EQUAL TO ASCO MODEL 108D10C, SURFACE MOUNTED, 120V/60HZ POWER INPUT, 80 VOLTS OUTPUT. MOUNT AND INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
41. WELDING GAS MASTER CONTROL STATION EQUAL TO ASCO MODEL 216C89, SURFACE MOUNTED. MOUNT AND INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS.
42. WELDING GAS EMERGENCY SHUTOFF CONTROL STATION EQUAL TO ASCO MODEL 173A19, SURFACE MOUNTED. MOUNT AND INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS.
43. WELDING GAS EMERGENCY SHUTOFF SOLENOID VALVE EQUAL TO ASCO MODEL EF8215B70, 1 1/2" SIZE. INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS.

VERIFICATION NOTE

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

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

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

CONSULTANT

NEW ADDITION
UNIT A
PLAN NORTH

KEY PLAN

CONSTRUCTION DOCUMENTS

MARK Z. HOOF REGISTERED No. PE 12005901 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: JE

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

ENLARGED AUTOMOTIVE LABS PLUMBING PLAN

P4.01

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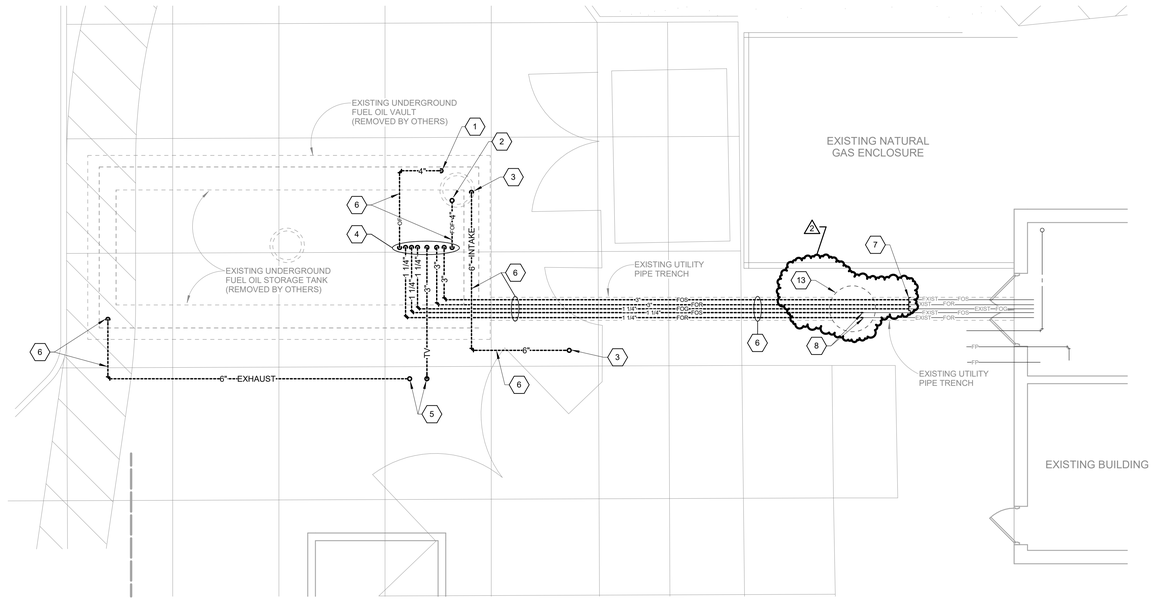
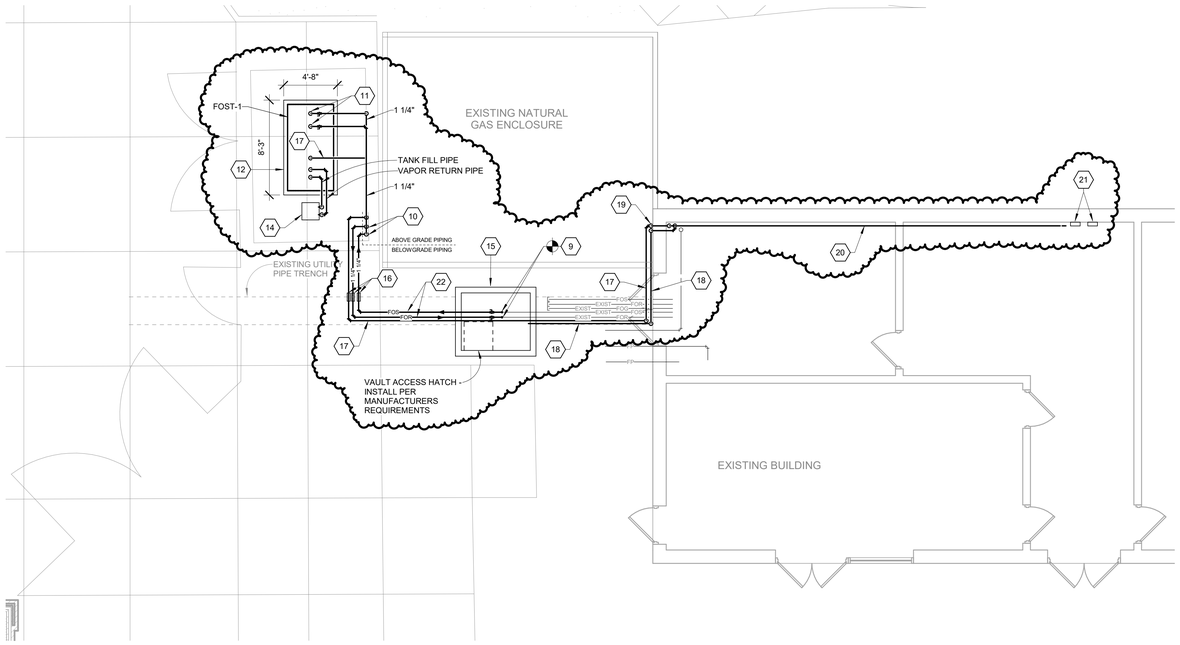


NORTHEAST MECHANICAL YARD PLUMBING DEMOLITION PLAN

SCALE: 3/16" = 1'-0"



NORTHEAST MECHANICAL YARD PLUMBING PLAN

SCALE: 3/16" = 1'-0"

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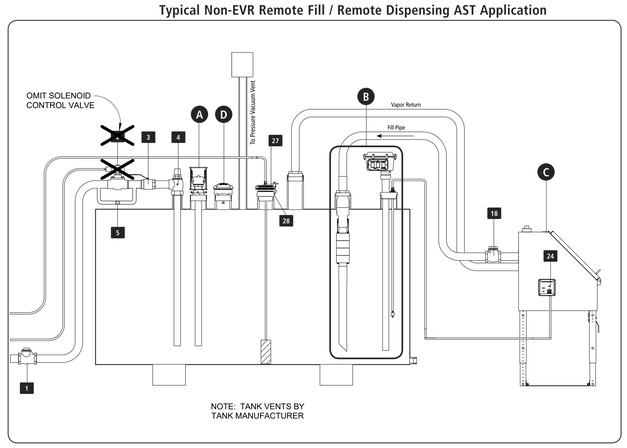
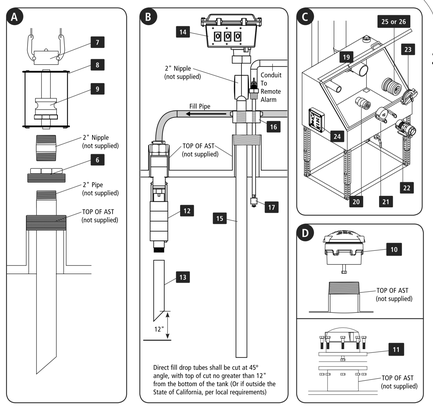
Above Ground Storage Tank - Remote Fill - Remote Dispensing

Typical Non-EVR Remote Fill / Remote Dispensing AST Application



NOTE: TANK VENTS BY
TANK MANUFACTURER

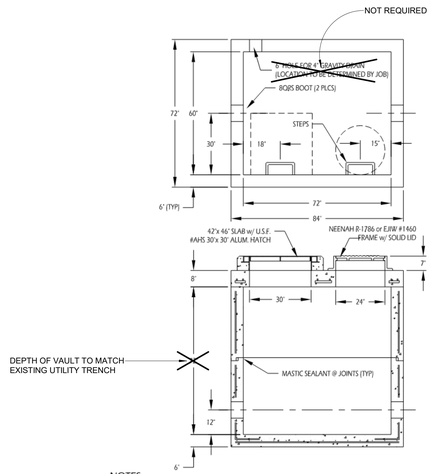


NOTE: The OPW 200TG and 144TA/444TA are not required for EVR compliance, but if a tank gauge or tank alarm is used on your tank that these two OPW products are the only CARB AST EVR certified tank gauge and alarm.

PRODUCT KEY		
KEY	OPW PART / DESCRIPTION	PAGE
1	1785 Series Emergency Valve	233
2	[illegible]	[illegible]
3	21BV Series Ball Valve	232
4	199ASV Series Anti-Siphon Valve	230
5	82RV Series Pressure Relief Valve	231 -
6	53-0XXX Series Double-Tapped Bushing	128
7	634B-0150 or 634BK-0090 Cap	220-221
8	204247 Fill Prevention Cage	220
9	633AST-2190 Adaptor	220
10	301 Series Emergency Vent - Threaded Mount (See Vent Size Configuration Guide on page 214)	224
11	301 Series Emergency Vent - Flanged Mount (See Vent Size Configuration Guide on page 214)	224
12	61FSTOP-XXXX Series Overfill Prevention Valve	218-219
13	61FT Series Drop Tube	219
14	200TG-ENG Series Tank Gauge (optional / see **Note** below)	222
15	61T Series Drop Tube	222
16	TGTA-0400 4" Gauge/Alarm Combo Fitting (optional)	223
17	44TA-LLFS Liquid Level Float Switch	223
18	175 Series Swing Check Valve	234
19	62118 Series Remote Spill Container	217
20	1611AN-0200 or 1612AN-0200 - 2" Remote Fill or 1811AN-0300 or 1612AN-0300 - 3" Remote Fill Kamvalok Adaptor	221
21	A) 634B-0140 Dust Cap fits 633AST-0150 Adaptor B) 634B-0150 Dust Cap fits 633AST-2061 or 633AST-0200 Adaptor C) 634B-0160 Dust Cap fits 1611AN-0200 or 633ST-0250 or 1611AN-2040 or 1612AN-2040 Adaptors D) 634B-0170 Dust Cap fits 1611AN-3060 or 1612AN-3060 Adaptors	220
22	1711D / 1712D Series Kamvalok Coupler	221
23	1711T-7085-EVR Cap or 1711UPC-0300 Low Profile Cap	97
24	144TA/444TA Series Tank Alarm (optional / see **Note** below)	223
25	1611AV Vapor Recovery Adaptor	96
26	61VSA Series Vapor Recovery Adaptor	95
27	62M Series Monitoring Probe Cap & Adaptor	98
28	FSA-400 Face Seal Adaptor	57

205

FUEL OIL STORAGE TANK PIPING DIAGRAM



NOTES:

1. Concrete 4,000 PSI at 28 days, minimum.
2. Steps are M.A. Industries #PS1-PF on 16" centers.
3. Grade adjustment rings available if required.
4. Sump Pits available where required (in place of gravity drain).

CONCRETE VALVE ACCESS VAULT

NOTE: CONCRETE VAULT BY E.C. BABBERT INC.
7415 DILEY ROAD, CANAL WINCHESTER, OH 43110

NORTHEAST UTILITY YARD PLAN NOTES

1 REMOVE 4" OVERFILL LINE COMPLETE INCLUDING SMALL PORTABLE SUMP PUMP.

2 REMOVE 4" FUEL OIL FILL LINE COMPLETE.

3 REMOVE 6" TANK VAULT AIR INTAKE PIPE COMPLETE.

4 REMOVE ALL TANK PIPING CONNECTIONS COMPLETE FOR TANK REMOVAL. TANK REMOVAL BY OTHERS.

5 REMOVE 6" TANK VAULT EXHAUST PIPE AND 3" FUEL OIL TANK VENT COMPLETE.

6 REMOVE PIPING COMPLETE.

7 REMOVE 3" FUEL OIL SUPPLY, FUEL OIL RETURN AND FUEL OIL GUAGE LINES BACK TO THIS POINT WITHIN THE FUEL OIL MANHOLE AND CAP.

8 REMOVE 1 1/4" FUEL OIL SUPPLY AND FUEL OIL RETURN LINES BACK TO THIS POINT WITHIN FUEL OIL MANHOLE AND PREPARE REMAINING PIPING FOR CONNECTION.

9 CONNECT 1 1/4" FUEL OIL SUPPLY AND 1 1/4" FUEL OIL RETURN LINES TO EXISTING FUEL OIL LINES AT THIS POINT. PROVIDE ACCESSIBLE SHUTOFF VALVES WITHIN CONCRETE ACCESS VAULT.

10 1 1/4" FUEL OIL SUPPLY AND 1 1/4" FUEL OIL RETURN LINES UP TO ABOVE SLAB.

11 1 1/4" FUEL OIL SUPPLY AND 1 1/4" FUEL OIL RETURN LINES DOWN TO FUEL OIL STORAGE TANK. MAKE FINAL CONNECTIONS AS REQUIRED.

12 8" HIGH CONCRETE EQUIPMENT PAD. INSTALL PAD, ANCHORAGE AND CRADLE SUPPORTS PER MANUFACTURERS REQUIREMENTS. PROVIDE AN ENGINEERED DELEGATED DESIGN TO ENSURE SUB-STRUCTURE IS ADEQUATE TO SUPPORT FULL LOAD OF FUEL OIL STORAGE TANK INCLUDING FUEL OIL.

13 REMOVE FUEL OIL MANHOLE AND ASSOCIATED PARTS COMPLETE.

14 REMOTE SPILL CONTAINMENT ASSEMBLY. REFER TO DIAGRAM ON THIS SHEET.

15 7'-0" X 6'-0" X 7'-0" DEEP CONCRETE VAULT. REFER TO DEAIL ON THIS SHEET FOR MORE INFORMATION. PROVIDE PIPE LEAK DETECTION SENSORS ON SECONDARY CONTAINMENT PIPING. INSTALL LEAK DETECTION SENSORS ALONG ENTIRE LENGTH OF NEW FUEL OIL PIPING PER MANUFACTURERS REQUIREMENTS.

16 PROVIDE LINK SEAL AT EXISTING UTILITY TRENCH PIPE PENETRATION LOCATION. ENSURE SEAL IS WATER TIGHT. PROVIDE SIZE OF PENETRATION TO ACCOMMODATE 1" SIGNAL CONDUIT.

17 1" TANK MONITORING SIGNAL CONDUIT. ROUTE PARALLEL TO FUEL OIL PIPING. REFER TO ELECTRICAL DRAWINGS FOR CONDUIT INFORMATION.

18 1" LEAK DETECTION SIGNAL CONDUIT. ROUTE PARALLEL TO FUEL OIL PIPING. REFER TO ELECTRICAL DRAWINGS FOR CONDUIT INFORMATION.

19 1" TANK MONITORING SIGNAL CONDUIT AND 1" LEAK DETECTION SIGNAL WIRING CONDUIT UP FROM BELOW GRADE. PENETRATE THRU EXISTING EXTERIOR BUILDING WALL TO INTERIOR. SEAL WALL PENETRATION WEATHERTIGHT. REFER TO ELECTRICAL DRAWINGS FOR CONDUIT INFORMATION.

20 1" TANK MONITORING SIGNAL CONDUIT AND 1" LEAK DETECTION SIGNAL WIRING CONDUIT MOUNTED VERTICALLY ON WALL AND ROUTED TO LEAK DETECTION AND TANK MONITORING CONTROL PANELS. REFER TO ELECTRICAL DRAWINGS FOR CONDUIT INFORMATION.

21 TANK MONITOR AND PIPE LEAK DETECTION CONTROL PANELS EQUAL TO OPW DOVER PROGAUGE MAGLINK LX PLUS. CONNECT AND MOUNT PER MANUFACTURERS REQUIREMENTS. REFER TO ELECTRICAL DRAWINGS FOR POWER REQUIREMENTS. PROVIDE FLOAT SWITCH SYSTEM AT FUEL OIL STORAGE TANK.

22 PROVIDE COMPATABLE PIPE SUPPORTS IN EXISTING UTILITY TUNNEL PER MANUFACTURER'S REQUIREMENTS.

VERIFICATION NOTE

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

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
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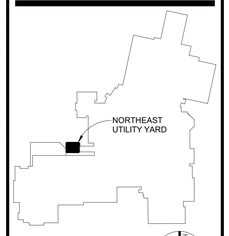


KEY PLAN

CONSTRUCTION DOCUMENTS

DRAWN BY: JE

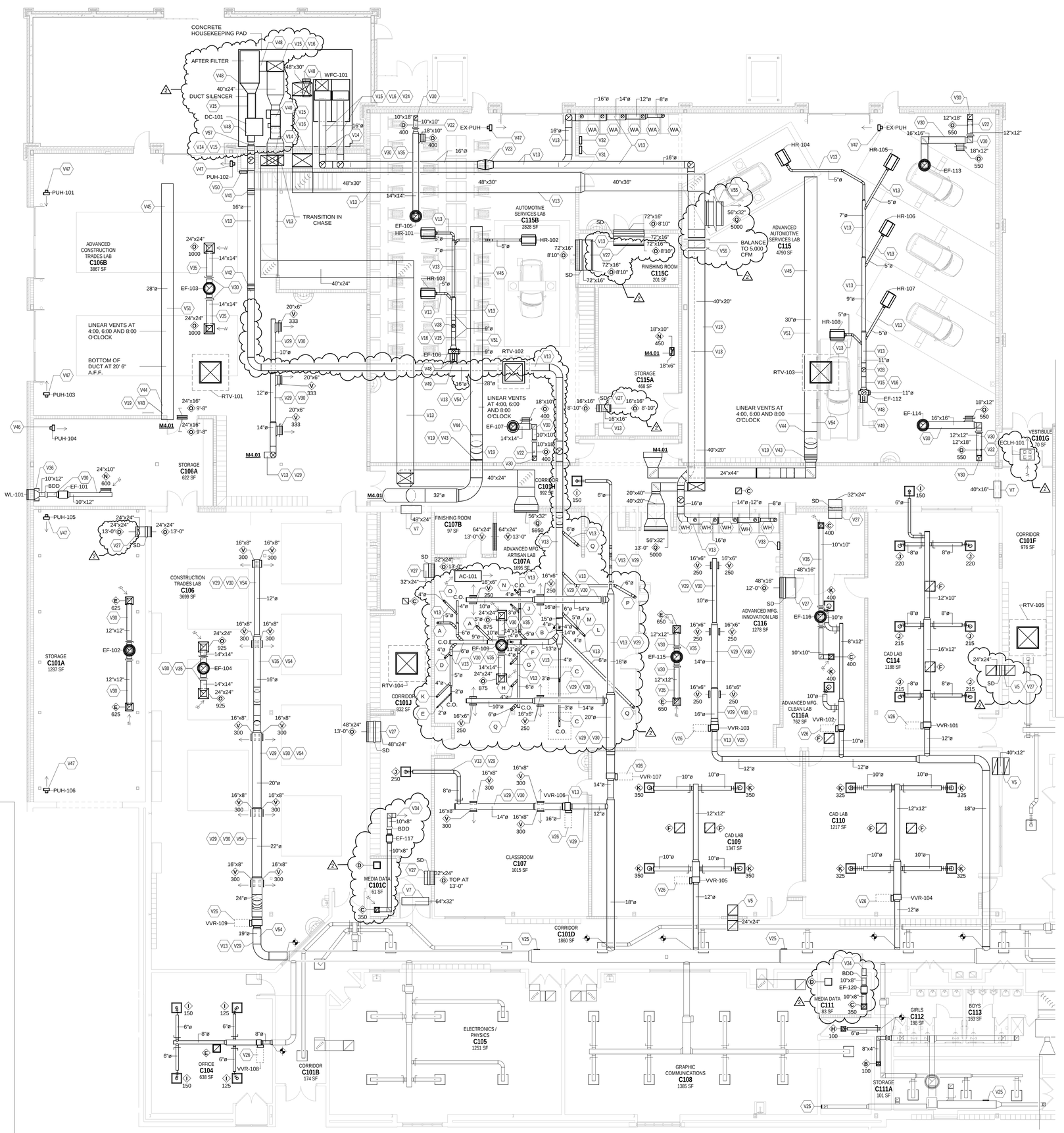
PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

ENLARGED NORTHEAST UTILITY YARD PLUMBING PLANS

P4.02



UNIT A - FIRST FLOOR VENTILATION PLAN

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

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VENTILATION PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
V5	ACOUSTICALLY LINED AIR TRANSFER SOUND TRAP. EXTEND DUCTWORK UP TO PROVIDE NO LINE OF SIGHT FROM OPENING TO OPENING.
V7	AIR TRANSFER WALL OPENING LOCATED ABOVE CEILING. COORDINATE EXACT LOCATION WITH ALL TRADES.
V13	EXPOSED DUCTWORK TO BE PAINTED. COORDINATE COLOR WITH ARCHITECT/ENGINEER. CLEAN AND PREPARE DUCTWORK TO ENSURE PAINT ADHERES TO DUCTWORK.
V14	ROUTE DUCTWORK THROUGH EXTERIOR WALL WITH APPROVED SLEEVE. SEAL ALL PENETRATIONS WATER-TIGHT.
V15	DUCTWORK SHALL BE INSULATED, WRAPPED WITH WATERPROOF MEMBRANE, AND THEN PAINTED. COORDINATE EXACT COLOR WITH ARCHITECT/ENGINEER. REFER TO SPECIFICATIONS.
V16	DUCTWORK SHALL BE PROPERLY SUPPORTED.
V19	DUCTWORK PROVIDED WITH INTERNAL LINED INSULATION.
V22	MOUNT BOTTOM OF GRILLE AT 1'-4" AFF.
V23	WELDING SPARK ARRESTOR. REFER TO SPECIFICATIONS.
V24	APPROXIMATE LOCATION OF BLAST GATES FOR WELDING EXHAUST SYSTEMS. COORDINATE LOCATION WITH ALL TRADES. REFER TO SPECIFICATIONS.
V25	CAP EXISTING DUCT AT APPROXIMATE LOCATION.
V26	DASHED LINE INDICATES APPROXIMATE CLEARANCE REQUIRED IN FRONT OF UNIT CONTROL PANEL. COORDINATE LOCATION WITH ALL TRADES.
V27	INSTALL DUCTWORK SLEEVE AS REQUIRED FOR INSTALLATION OF DUCT MOUNTED SMOKE DETECTOR AND SMOKE DAMPER. SMOKE DETECTOR PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE EXACT SIZE AND LOCATION WITH ALL TRADES.
V28	DUCTWORK SHALL PENETRATE THE ROOF. SEAL PENETRATION WATER-TIGHT. COORDINATE EXACT LOCATION WITH ALL TRADES.
V29	PROVIDE DOUBLE WALL INSULATED DUCTWORK.
V30	PAINT EXPOSED DUCTWORK AND ASSOCIATED AIR DEVICES TO COLOR SELECTED BY ARCHITECT/ENGINEER.
V31	WELDING EXHAUST SYSTEM MAIN CONTROLLER. COORDINATE EXACT LOCATION WITH ALL TRADES.
V32	WELDING EXHAUST SYSTEM ON/OFF CONTROL PANEL FOR ZONE 1 CONTROL. COORDINATE EXACT LOCATION WITH ALL TRADES.
V33	WELDING EXHAUST SYSTEM ON/OFF CONTROL PANEL FOR ZONE 2 CONTROL. COORDINATE EXACT LOCATION WITH ALL TRADES.
V34	END OF DUCT OPEN TO THE PLENUM SPACE ABOVE THE CEILING. OPENING TO BE PROTECTED WITH BIRD SCREEN.
V35	ROUTE DUCTWORK BETWEEN/THROUGH STRUCTURAL STEEL. COORDINATE WITH ALL TRADES.
V36	PROVIDE DRIP PAN UNDER WALL LOUVER. DRIP PAN SHALL EXTEND A MINIMUM OF 6" BEYOND DUCTWORK.
V40	HEAVY DUTY WELDED AND BOLTED FAST ACTING ABORT GATE WITH WEATHER HOOD. REFER TO SPECIFICATION SECTION 238054. SUPPORT AND TRANSITION DUCTWORK AS REQUIRED.
V41	DUST COLLECTION FIRE PROTECTION SYSTEM EXTINGUISHING SYSTEM COMPLETE WITH SOLENOID VALVE, DIRECTIONAL SIDEWALL NOZZLE(S), STRAINER, SHUT-OFF VALVE WITH LOCK STRAP AND STAINLESS STEEL MOUNTING ATTACHMENT. COORDINATE EXACT LOCATION WITH MANUFACTURERS INSTALLATION REQUIREMENTS AND WITH ALL TRADES.
V42	DUST COLLECTION SYSTEM FIRE PROTECTION SYSTEM SPARK DETECTOR(S) COMPLETE WITH MOUNTING HARDWARE. COORDINATE QUANTITIES AND EXACT LOCATION WITH MANUFACTURERS INSTALLATION REQUIREMENTS AND WITH ALL TRADES.
V43	PAINT EXPOSED SHEET METAL DUCTWORK TO MATCH FABRIC DUCT COLOR.
V44	TRANSITION SHEET METAL TO FABRIC DUCT. REFER TO DETAIL ON SHEET M5.04.
V45	INSTALL FABRIC DUCTWORK WITH 1-ROW SUSPENSION SYSTEM WITH INTERNAL HOOPS. REFER TO DETAIL AN SHEET M5.04.
V46	SUPPORT UNIT HEATER FROM STRUCTURE ABOVE WITH SUPPLEMENTAL STEEL AND THREADED RODS AS REQUIRED. MOUNT BOTTOM OF UNIT AT 8'-0" AFF.
V47	SUPPORT UNIT HEATER FROM STRUCTURE ABOVE WITH SUPPLEMENTAL STEEL AND THREADED RODS AS REQUIRED. MOUNT BOTTOM OF UNIT AT 9'-0" AFF.
V48	TRANSITION DUCTWORK AS REQUIRED TO MAKE FINAL CONNECTION TO EXHAUST FAN.
V49	PROVIDE DUCTWORK FROM FAN OUTLET AND EXTEND VERTICALLY APPROXIMATELY 5'-0". TERMINATE WITH STACK HEAD VERTICAL DISCHARGE. PROVIDE GUY WIRE BRACING. REFER TO DETAIL ON DRAWING M5.04. PAINT DUCTWORK TO COLOR SELECTED BY ARCHITECT/ENGINEER.
V50	DUST COLLECTION SYSTEM FIRE PROTECTION SYSTEM CONTROL PANEL. SINGLE ZONE WITH ALARM, EMERGENCY BATTERY BACKUP, MAIN FIRE RELAY, MAIN FIRE FAULT RELAY AND DELAYED EQUIPMENT SHUT DOWN CAPABILITY. CONTROL PANEL SHALL BE WALL MOUNTED. COORDINATE EXACT LOCATION WITH ALL TRADES.
V51	ADJUSTABLE AIRFLOW DEVICE BY THE FABRIC DUCT MANUFACTURER. REFER TO DETAIL ON SHEET M5.04.
V54	DUCTWORK TO BE ROUTED AS HIGH AS POSSIBLE.
V55	WELDING EXHAUST SYSTEM ZONE 1 CONTROL DAMPER AND TWO-POSITION OPERATOR TO BE PROVIDED BY THE TEMPERATURE CONTROL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. TEMPERATURE CONTROL CONTRACTOR TO PROVIDE INTER-CONNECTING CONTROL WIRING FROM CONTROL DAMPER TO WELDING EXHAUST SYSTEM CONTROL PANEL. CONTROL DAMPER TO OPEN AND CLOSE WITH ZONE 1 WELDING EXHAUST SYSTEM OPERATION.
V56	WELDING EXHAUST SYSTEM ZONE 2 CONTROL DAMPER AND TWO-POSITION OPERATOR TO BE PROVIDED BY THE TEMPERATURE CONTROL CONTRACTOR AND INSTALLED BY THR MECHANICAL CONTRACTOR. TEMPERATURE CONTROL CONTRACTOR TO PROVIDE INTER-CONNECTING CONTROL WIRING FROM CONTROL DAMPER TO WELDING EXHAUST SYSTEM CONTROL PANEL. CONTROL DAMPER TO OPEN AND CLOSE WITH ZONE 2 WELDING EXHAUST SYSTEM OPERATION.
V57	VIGIFLAP EXPLOSION INLET ISOLATION VALVE PROVIDED BY WOOD DUST COLLECTION SYSTEM UNIT MANUFACTURER AND INSTALLED BY THE MECHANICAL CONTRACTOR.

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 HUMIDISTATS, TEMPERATURE SENSORS, HUMIDISTATS, ETC. 44" ABOVE THE FINISH FLOOR IN ACCORDANCE WITH ADA REQUIREMENTS. COORDINATE ALL REQUIRED WALL, ROOF AND FLOOR OPENINGS (BOTH DIMENSIONS AND LOCATIONS) WITH ALL OTHER TRADES.
I. COORDINATE MECHANICAL SYSTEM INSTALLATION WITH STRUCTURE, PLUMBING, FIRE PROTECTION , TECHNOLOGY SYSTEMS, ELECTRIAL SYSTEMS, AND LIGHTING LAYOUT.
J. PROVIDE ALL NECESSARY TRANSITIONS TO EQUIPMENT FROM SIZES SHOWN ON PLAN.
K. COORDINATE DIFFUSER AND GRILLE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND EQUIPMENT PLANS. DIFFUSER/GRILLES TO BE CENTERED IN CEILING PADS.
L. MAIN SUPPLY AIR DUCTWORK TO BE MEDIUM PRESSURE RATED PER SMACNA REQUIREMENTS FROM AIR HANDLING UNITS TO TERMINAL UNITS. DUCTWORK BRANCES FROM TERMINAL UNITS TO AIR DEVICES SHALL BE LOW PRESSURE RATED PER SMACNA REQUIREMENTS.
M. VAV BOXES SHALL BE INSTALLED SUCH THAT NO PIPING, DUCTWORK, HANGERS, FIRE PROTECTION, ETC, SHALL BE INSULATED WITHIN 36" OF THE CONTROL PANEL. THE UNIT SHALL NOT BE INSTALLED DIRECTLY ABOVE LIGHT FIXTURE OR CEILING TILE WITH SPEAKER, OCCUPANCY SENSOR, FIRE SPRINKLER, ETC.
N. ALL VVR TERMINAL UNITS, MSCU, BCU, FIRE DAMPERS, SMOKE DAMPER, AND INLINE EXHAUST FANS SHALL BE INSTALLED WITHIN TWO FEET OF THE CEILING FOR MAINTENANCE ACCESS.
O. COORDINATE WALL MOUNTED DIFFUSER LOCATION WITH ARCHITECTURAL INTERIOR ELEVATIONS.
P. COORDINATE WALL LOUVER LOCATIONS WITH ARCHITECTURAL EXTERIOR ELEVATIONS.

VERIFICATION NOTE

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

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
CARMEL, IN 46032

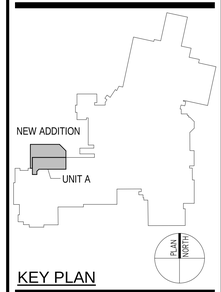
CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

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

CONSULTANT



KEY PLAN

CONSTRUCTION DOCUMENTS

DRAWN BY: DRV

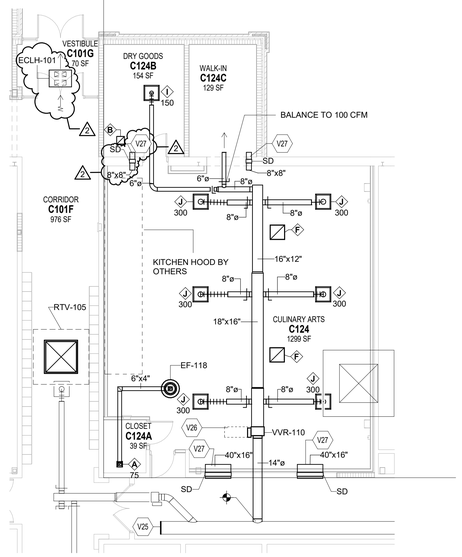
PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 8/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

FIRST FLOOR VENTILATION PLAN - UNIT A

M2.01



UNIT B - FIRST FLOOR VENTILATION PLAN

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

UNIT C - FIRST FLOOR VENTILATION PLAN

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

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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, PLUMBING, FIRE PROTECTION , TECHNOLOGY SYSTEMS, ELECTRIAL SYSTEMS, AND LIGHTING LAYOUT.
K. PROVIDE ALL NECESSARY TRANSITIONS TO EQUIPMENT FROM SIZES SHOWN ON PLAN.
L. COORDINATE DIFFUSER AND GRILLE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND EQUIPMENT PLANS. DIFFUSER/GRILLES TO BE CENTERED IN CEILING PADS.
M. MAIN SUPPLY AIR DUCTWORK TO BE MEDIUM PRESSURE RATED PER SMACNA REQUIREMENTS FROM AIR HANDLING UNITS TO TERMINAL UNITS. DUCTWORK BRANCES FROM TERMINAL UNITS TO AIR DEVICES SHALL BE LOW PRESSURE RATED PER SMACNA REQUIREMENTS.
N. VAV BOXES SHALL BE INSTALLED SUCH THAT NO PIPING, DUCTWORK, HANGERS, FIRE PROTECTION, ETC, SHALL BE INSULATED WITHIN 36" OF THE CONTROL PANEL. THE UNIT SHALL NOT BE INSTALLED DIRECTLY ABOVE LIGHT FIXTURE OR CEILING TILE WITH SPEAKER, OCCUPANCY SENSOR, FIRE SPRINKLER, ETC.
O. ALL VVR TERMINAL UNITS, MSCU, BCU, FIRE DAMPERS, SMOKE DAMPER, AND INLINE EXHAUST FANS SHALL BE INSTALLED WITHIN TWO FEET OF THE CEILING FOR MAINTENANCE ACCESS.
P. COORDINATE WALL MOUNTED DIFFUSER LOCATION WITH ARCHITECTURAL INTERIOR ELEVATIONS.
Q. COORDINATE WALL LOUVER LOCATIONS WITH ARCHITECTURAL EXTERIOR ELEVATIONS.

VENTILATION PLAN NOTES

(X)

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
V5	ACOUSTICALLY LINED AIR TRANSFER SOUND TRAP. EXTEND DUCTWORK UP TO PROVIDE NO LINE OF SIGHT FROM OPENING TO OPENING.
V19	DUCTWORK PROVIDED WITH INTERNAL LINED INSULATION.
V25	CAP EXISTING DUCT AT APPROXIMATE LOCATION.
V26	DASHED LINE INDICATES APPROXIMATE CLEARANCE REQUIRED IN FRONT OF UNIT CONTROL PANEL. COORDINATE LOCATION WITH ALL TRADES.
V27	INSTALL DUCTWORK SLEEVE AS REQUIRED FOR INSTALLATION OF DUCT MOUNTED SMOKE DETECTOR AND SMOKE DAMPER. SMOKE DETECTOR PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE EXACT SIZE AND LOCATION WITH ALL TRADES.
V34	END OF DUCT OPEN TO THE PLENUM SPACE ABOVE THE CEILING. OPENING TO BE PROTECTED WITH BIRD SCREEN.
V39	EXTEND DUCTWORK UP APPROXIMATELY 24", COORDINATE EXACT LOCATION WITH EXISTING CONDITIONS AND WITH ALL TRADES.
V52	BALANCE EXISTING EXHAUST FAN TO 500 CFM.
V53	REBALANCE EXISTING MECHANICAL UNIT TO NOTED AIRFLOWS.

VERIFICATION NOTE

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

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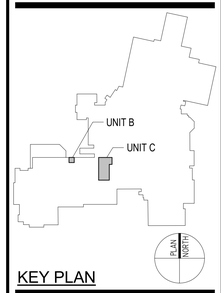


KEY PLAN

CONSTRUCTION DOCUMENTS

DRAWN BY: DRV

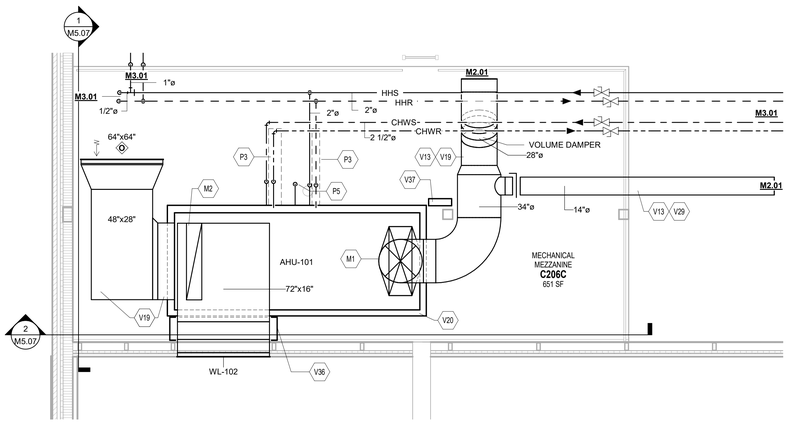
PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 8/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

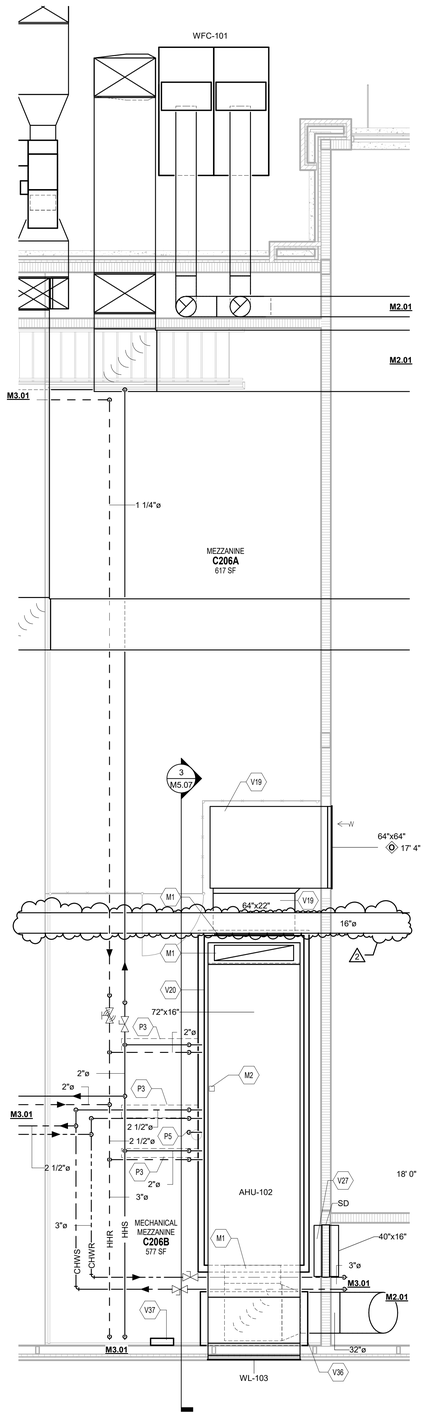
FIRST FLOOR VENTILATION PLAN - UNIT B & C

M2.02



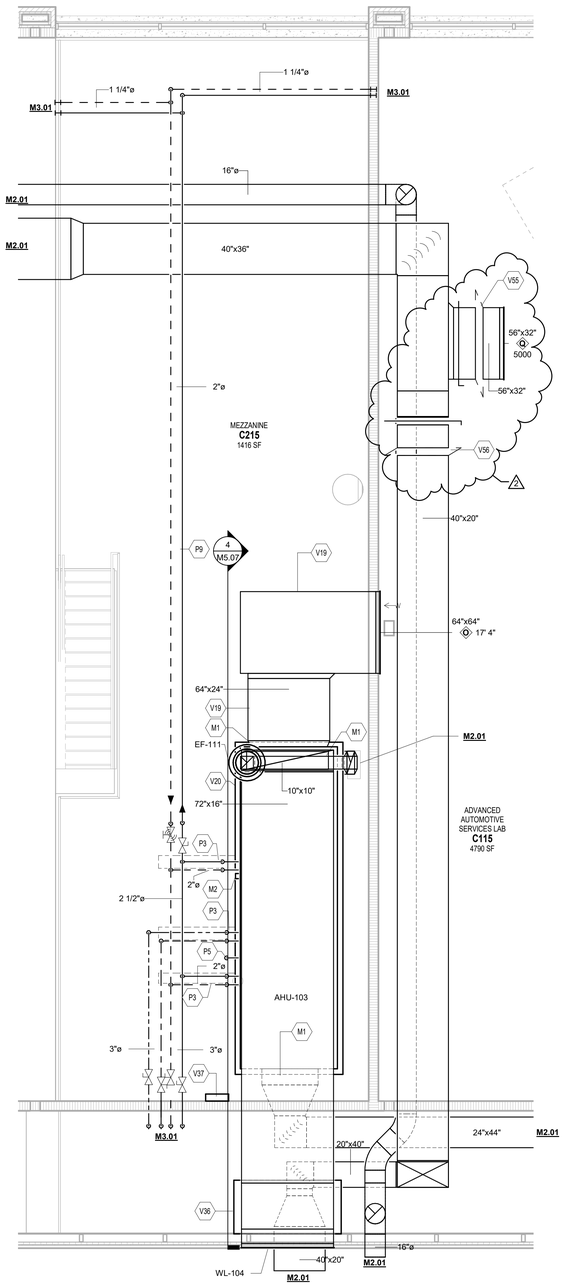
AHU-101 MEZZANINE PLAN

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



AHU-102 MEZZANINE PLAN

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



AHU-103 MEZZANINE PLAN

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

MECHANICAL ROOM 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 AND LIGHTING LAYOUT.
K. PROVIDE ALL NECESSARY TRANSITIONS TO EQUIPMENT FROM SIZES SHOWN ON PLAN.
L. ALL RETURN/EXHAUST AIR DUCT ABOVE LOCKERS/SHOWER AREAS SHALL BE MADE OF ALUMINUM IN ACCORDANCE WITH SMACNA REQUIREMENTS.
M. HYDRONIC SUPPLY AND RETURN PIPING SHALL BE THE SAME SIZE UNLESS OTHERWISE NOTED.

MECHANICAL ROOM PLAN NOTES

(ALL NOTES MAY NOT BE INDICATED ON THIS SHEET)

NO.	DESCRIPTION
M1	TRANSITION DUCTWORK AS REQUIRED TO MAKE FINAL CONNECTION TO AIR HANDLING UNIT.
M2	ELECTRONIC AIRFLOW MEASURING STATION MOUNTED IN DUCTWORK. STATION PROVIDED BY THE TEMPERATURE CONTROL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. COORDINATE EXACT SIZE AND LOCATION WITH UNIT MANUFACTURER.
P3	CLEARENCE REQUIRED FOR AIR HANDLING UNIT COIL PULL. COORDINATE LOCATIONS WITH ALL TRADES.
P5	INSULATED COPPER CONDENSATE DRAIN PIPING WITH WATER-SEAL TRAP FROM UNIT TO FLOOR DRAIN. CUT END OF PIPE AT A 45 DEGREE ANGLE. CONDENSATE DRAIN PIPING AND TRAP SIZED PER MANUFACTURERS REQUIREMENTS. COORDINATE FLOOR DRAIN LOCATION WITH ALL TRADES. REFER TO CONDENSATE TRAP DETAIL ON SHEET M5.04.
P9	ROUTE HEATING WATER PIPING THROUGH/BETWEEN STRUCTURAL STEEL. COORDINATE EXACT LOCATION WITH ALL TRADES.
V13	EXPOSED DUCTWORK TO BE PAINTED. COORDINATE COLOR WITH ARCHITECT/ENGINEER. CLEAN AND PREPARE DUCTWORK TO ENSURE PAINT ADHERES TO DUCTWORK.
V19	DUCTWORK PROVIDED WITH INTERNAL LINED INSULATION.
V20	INSTALL EQUIPMENT ON 5 1/2" HIGH CONCRETE HOUSEKEEPING PAD.
V27	INSTALL DUCTWORK SLEEVE AS REQUIRED FOR INSTALLATION OF DUCT MOUNTED SMOKE DETECTOR AND SMOKE DAMPER. SMOKE DETECTOR PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. COORDINATE EXACT SIZE AND LOCATION WITH ALL TRADES.
V29	PROVIDE DOUBLE WALL INSULATED DUCTWORK.
V36	PROVIDE DRIP PAN UNDER WALL LOUVER. DRIP PAN SHALL EXTEND A MINIMUM OF 6" BEYOND DUCTWORK.
V37	APPROXIMATE LOCATION OF NEW TEMPERATURE CONTROL PANEL(S). COORDINATE EXACT LOCATION WITH ALL TRADES.
V55	WELDING EXHAUST SYSTEM ZONE 1 CONTROL DAMPER AND TWO-POSITION OPERATOR TO BE PROVIDED BY THE TEMPERATURE CONTROL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. TEMPERATURE CONTROL CONTRACTOR TO PROVIDE INTER-CONNECTING CONTROL WIRING FROM CONTROL DAMPER TO WELDING EXHAUST SYSTEM CONTROL PANEL. CONTROL DAMPER TO OPEN AND CLOSE WITH ZONE 1 WELDING EXHAUST SYSTEM OPERATION.
V56	WELDING EXHAUST SYSTEM ZONE 2 CONTROL DAMPER AND TWO-POSITION OPERATOR TO BE PROVIDED BY THE TEMPERATURE CONTROL CONTRACTOR AND INSTALLED BY THR MECHANICAL CONTRACTOR. TEMPERATURE CONTROL CONTRACTOR TO PROVIDE INTER-CONNECTING CONTROL WIRING FROM CONTROL DAMPER TO WELDING EXHAUST SYSTEM CONTROL PANEL. CONTROL DAMPER TO OPEN AND CLOSE WITH ZONE 2 WELDING EXHAUST SYSTEM OPERATION.

VERIFICATION NOTE

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

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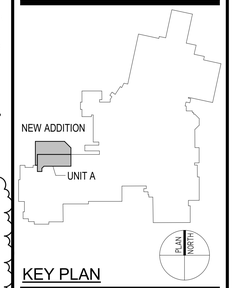

KEY PLAN

CONSTRUCTION DOCUMENTS

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

DRAWN BY: DRV

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 8/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

MECHANICAL MEZZANINES

M4.01

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AIR HANDLING UNIT SCHEDULE

MARK	FANS								COILS																				MODEL NO.	NOTES
	SUPPLY								COOLING COIL (CHILLED WATER)								PRE HEATING COIL								REHEAT HEATING COIL							
	CFM	MIN. O.A. CFM	EXT. S.P.	TOTAL S.P.	BHP	HP	TYPE	RPM	ELEC.	EAT	LAT	COOLING LOAD SENS.	COOLING LOAD TOTAL	GPM	EWT / LWT	APD	WPD	EAT	LAT	MBH	GPM	EWT / LWT	APD	WPD	EAT	LAT	MBH	GPM	EWT / LWT	APD	WPD		
AHU-101	7,000	1,750	1.25	3.95	6.5	(2)3.8	ECM FAN ARRAY EC450 1X2:2	2,109	460/3	78.8 / 65.3	54.2 / 53.5	188.26	248.58	41.3	42.0 / 54.0	0.85	4.2	-	-	-	-	- / -	-	-	51.0	95.9	343.53	22.5	180.0 / 149.4	0.20	8.5	CAH016GDCM	1,2,3,4,5,6,7,8,9,10,11
AHU-102	6,000	2,100-6,000	1.25	3.34	4.8	(2)3.8	ECM FAN ARRAY EC450 1X2:2	1,906	460/3	90.0 / 74.0	53.5 / 53.0	239.64	418.34	68.3	42.0 / 54.2	0.23	10.7	0.0	47.2	305.60	19.8	180.0 / 148.9	0.20	7.16	45.0	95.7	332.43	21.9	180.0 / 149.6	0.12	7.4	CAH017GDCM	1,2,3,4,5,6,7,8,9,10,11
AHU-103	7,000	2,450-7,000	1.25	3.63	6.0	(2)3.8	ECM FAN ARRAY EC450 1X2:2	2,044	460/3	90.0 / 74.0	53.6 / 53.2	278.97	483.56	79.7	42.0 / 54.1	0.31	6.9	0.0	47.3	356.80	23.1	180.0 / 148.9	0.32	9.33	45.0	97.8	404.31	25.5	180.0 / 148.3	0.13	2.2	CAH018GDCM	1,2,3,4,5,6,7,8,9,10,11

NOTES

1. UNITS SCHEDULED ARE AS MANUFACTURED BY DAIKIN.
2. REFER TO PROJECT MANUAL SECTION 237313.
3. REFER TO SHEET M5.06 FOR AIR HANDLING UNIT DETAILS.
4. SUPPLY FAN MOTOR(S) - INTEGRATED DRIVE WITH MOTOR STARTER/DISCONNECT.
5. INCLUDE FACTORY MOUNTED CONTROL AIR DAMPER(S).
6. MAXIMUM FILTER FACE VELOCITY SHALL BE 500 FPM.
7. TOTAL UNIT STATIC PRESSURE REFLECTS AVERAGE DIRTY FILTERS.
8. MAXIMUM COIL FACE VELOCITY SHALL BE 500 FPM.
9. COOLING COIL SHALL BE SELECTED WITH 100% H20.
10. HEATING COIL SHALL BE SELECTED WITH 100% WATER.
11. PROVIDE FACTORY MOUNTED CONVENIENCE OUTLET AND INTERNAL LIGHTS.

SUMMER:
INDOOR: 75° db/60% RH
OUTDOOR: 90.0° db/74.0° wb
WINTER:
INDOOR: 70° db
OUTDOOR: 0° db

ROOFTOP VENTILATOR/INTAKE HOOD SCHEDULE

MARK	THROAT LENGTH	THROAT WIDTH	BACKDRAFT DAMPER	RELIEF CONTROL DAMPER	CFM	DRIP PAN	MODEL
RTV-101	48"	48"	BAROMETRIC	YES	7,000	YES	FABRA HOOD - FGR
RTV-102	42"	42"	BAROMETRIC	YES	6,000	YES	FABRA HOOD - FGR
RTV-103	48"	48"	BAROMETRIC	YES	7,000	YES	FABRA HOOD - FGR
RTV-104	48"	48"	BAROMETRIC	YES	6,600	YES	FABRA HOOD - FGR
RTV-105	48"	48"	BAROMETRIC	YES	6,600	YES	FABRA HOOD - FGR

GENERAL NOTES

1. REFER TO SPECIFICATION SECTION 233723.
2. HOODS SCHEDULED ARE AS MANUFACTURED BY GREENHECK.
3. HOODS TO BE MOUNTED ON MINIMUM 12" HIGH ROOF CURB.
4. COLOR(S) TO BE SELECTED BY THE ARCHITECT/ENGINEER.
5. TEMPERATURE CONTROL CONTRACTOR TO PROVIDE RELIEF CONTROL DAMPER FOR ALL ROOFTOP VENTILATORS UNLESS NOTED OTHERWISE.

DIFFUSER, REGISTER, AND GRILLE SCHEDULE

MARK	TYPE	EXAMPLE MANUFACTUER MODEL NO.	NECK SIZE	OVERALL SIZE L"xW"	MAX CORE/ NECK VEL.(FPM)	MAX. CFM	MAX. NOISE CRITERIA	FRAME/ MOUNTING	REMARKS
A	RETURN/AIR TRANSFER GRILLE	TITUS 355-FL	6"x6"	8"x8"	500	100	20	REFER TO REFLECTED CEILING PLAN	PROVIDE ALUMINUM SURFACE MOUNT BORDER FOR DUCTED INSTALLATIONS.
B	RETURN/AIR TRANSFER GRILLE	TITUS 355-FL	10"x10"	12"x12"	500	300	20	REFER TO REFLECTED CEILING PLAN	PROVIDE ALUMINUM SURFACE MOUNT BORDER FOR DUCTED INSTALLATIONS.
C	RETURN/AIR TRANSFER GRILLE	TITUS 355-FL	12"x12"	14"x14"	500	425	20	REFER TO REFLECTED CEILING PLAN	PROVIDE ALUMINUM SURFACE MOUNT BORDER FOR DUCTED INSTALLATIONS.
D	RETURN/AIR TRANSFER GRILLE	TITUS 355-FL	14"x14"	16"x16"	500	600	20	REFER TO REFLECTED CEILING PLAN	PROVIDE ALUMINUM SURFACE MOUNT BORDER FOR DUCTED INSTALLATIONS.
E	RETURN/AIR TRANSFER GRILLE	TITUS 355-FL	16"x16"	18"x18"	500	800	20	REFER TO REFLECTED CEILING PLAN	PROVIDE ALUMINUM SURFACE MOUNT BORDER FOR DUCTED INSTALLATIONS.
F	RETURN/AIR TRANSFER GRILLE	TITUS 355-FL	22"x22"	24"x24"	500	1250	20	REFER TO REFLECTED CEILING PLAN	PROVIDE ALUMINUM SURFACE MOUNT BORDER FOR DUCTED INSTALLATIONS.
G	SQUARE PLAQUE CEILING DIFFUSER	TITUS OMNI	5"	12"x12"	800	100	18	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
H	SQUARE PLAQUE CEILING DIFFUSER	TITUS OMNI	6"	12"x12"	800	150	21	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
I	SQUARE PLAQUE CEILING DIFFUSER	TITUS OMNI	6"	24"x24"	900	175	17	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
J	SQUARE PLAQUE CEILING DIFFUSER	TITUS OMNI	8"	24"x24"	900	300	20	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
K	SQUARE PLAQUE CEILING DIFFUSER	TITUS OMNI	10"	24"x24"	800	425	20	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
L	SQUARE PLAQUE CEILING DIFFUSER	TITUS OMNI	12"	24"x24"	800	625	23	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
M	SQUARE PLAQUE CEILING DIFFUSER	TITUS OMNI	14"	24"x24"	700	750	20	REFER TO REFLECTED CEILING PLAN	4-WAY BLOW DIFFUSERS, UNLESS INDICATED OTHERWISE ON DRAWINGS.
N	RETURN/AIR TRANSFER GRILLE	TITUS 355-FL	SEE FLOOR PLANS FOR SIZE	-	500	PER PLANS	20	DUCT OR SIDEWALL OR CEILING	FIXED 35(DEGREE), 1/2" SPACING DEFLECTION BLADES
O	HEAVY DUTY RETURN GRILLE	TITUS 33-RL	SEE FLOOR PLANS FOR SIZE	-	————	PER PLANS	20	DUCT OR SIDEWALL	FIXED 38(DEGREE), 1/2" SPACING DEFLECTION BLADES
P	SIDEWALL SUPPLY DIFFUSER	TITUS 300-FL	SEE FLOOR PLANS FOR SIZE	-	300	PER PLANS	20	DUCT OR SIDEWALL	DOUBLE DEFLECTION, ADJUSTABLE BLADES 1/2" FRONT SPACING, 3/4" REAR SPACING
Q	HEAVY DUTY SUPPLY DIFFUSER	TITUS 300RL-HD	SEE FLOOR PLANS FOR SIZE	-	400	PER PLANS	20	DUCT OR SIDEWALL	DOUBLE DEFLECTION, ADJUSTABLE BLADES 1/2" FRONT SPACING, 3/4" REAR SPACING
R	LINEAR SLOT DIFFUSER	TITUS FL-20-HT	SEE FLOOR PLANS FOR SIZE	2-SLOT X 48"L	————	PER PLANS	20	REFER TO REFLECTED CEILING PLAN	HIGH THROW WITH INSULATED PLENUM 2-2" SLOT WITH DIA." INLET
S	LINEAR SLOT DIFFUSER	TITUS FL-10-JT	SEE FLOOR PLANS FOR SIZE	1-SLOT X 48"L	————	PER PLANS	20	REFER TO REFLECTED CEILING PLAN	JET THROW WITH INSULATED PLENUM 1-1" SLOT WITH DIA." INLET
T	SUPPLY DIFFUSER	TITUS 300-FS	SEE FLOOR PLANS FOR SIZE	-	450	PER PLANS	25	DUCT OR SIDEWALL	DOUBLE DEFLECTION, ADJUSTABLE BLADES 1/2" FRONT SPACING, 3/4" REAR SPACING
U	LINEAR SLOT DIFFUSER	TITUS FL-15-JT	SEE FLOOR PLANS FOR SIZE	1-SLOT X 48"L	————	PER PLANS	20	REFER TO REFLECTED CEILING PLAN	JET THROW WITH INSULATED PLENUM 1-1.5" SLOT WITH DIA." INLET
V	SPIRAL SUPPLY DUCT GRILLE	TITUS S300-FL	SEE FLOOR PLANS FOR SIZE	-	450	PER PLANS	20	DUCT	DOUBLE DEFLECTION, ADJUSTABLE BLADES 3/4" SPACING, AIR SCOOP DEVICE
W	ROUND SUPPLY DIFFUSER	AIR CONCEPTS RDDW & RDDW-RD	SEE FLOOR PLANS FOR SIZE	-	550	PER PLANS	15	CEILING AND DUCT	ADJUSTABLE DOUBLE DEFLECTION VERTICAL AND HORIZONTAL
X	LINEAR SLOT DIFFUSER	TITUS FL-10-HT	SEE FLOOR PLANS FOR SIZE	1-SLOT X 48"L	————	PER PLANS	20	REFER TO REFLECTED CEILING PLAN	HIGH THROW WITH INSULATED PLENUM 1-1.0" SLOT WITH DIA." INLET

CABINET/PROPELLER UNIT HEATER SCHEDULE

MARK	CFM	FAN SPEED (RPM)	HP	HEATING 180° EWT							ELEC SERV	MODEL NO.	NOTES
				MBH	EAT	LAT	GPM	WPD	LWT	COIL			
PUH-101	1,240	LOW	1/8	56.9	60	101.4	5.7	0.4	160.0	-	120/60/1	RH-108	6,7,8,9,13
PUH-102	1,240	LOW	1/8	56.9	60	101.4	5.7	0.4	160.0	-	120/60/1	RH-108	6,7,8,9,13
PUH-103	1,240	LOW	1/8	56.9	60	101.4	5.7	0.4	160.0	-	120/60/1	RH-108	6,7,8,9,13
PUH-104	310	LOW	1/30	9.1	60	86.6	0.9	0.2	160.0	-	120/60/1	RH-18	6,7,8,9,13
PUH-105	310	LOW	1/30	9.1	60	86.6	0.9	0.2	160.0	-	120/60/1	RH-18	6,7,8,9,13
PUH-106	310	LOW	1/30	9.1	60	86.6	0.9	0.2	160.0	-	120/60/1	RH-18	6,7,8,9,13

NOTES

1. COLOR TO BE SELECTED BY ARCHITECT.
2. INCLUDE FACTORY MOUNTED DISCONNECT.
3. HORIZONTAL CEILING RECESSED UNIT.
4. HORIZONTAL PARTIALLY CEILING RECESSED UNIT.
5. UNIT SCHEDULED WITH BOTTOM SUPPLY AND BOTTOM RETURN.
6. SUPPORT HEATER FROM STRUCTURE ABOVE WITH MINIMUM OF TWO (2), 3/8" DIAMETER THREADED RODS.
7. UNIT FURNISHED WITH ADJUSTABLE LOUVER FIN DIFFUSERS TO PROVIDE FOUR-DIRECTION AIR FLOW CONTROL.
8. UNITS SCHEDULED ARE AS MANUFACTURED BY RITTLING.
9. REFER TO SPECIFICATION SECTION 238239.
10. UNIT SCHEDULED WITH BOTTOM SUPPLY AND BACK RETURN.
11. UNIT SCEDULED WITH DUCTED SUPPLY AND BOTTOM RETURN. SUPPLY FAN MOTOR E.S.P AT 0.15".
12. UNIT SHALL BE PROVIDED WITH A CEILING TRIM KIT.
13. DISCONNECT BY THE ELECTRICAL CONTRACTOR.

COIL CIRCULATOR SCHEDULE

MARK	MEDIUM	GPM	TDH	HP	SERVICE	NOTES
AHU-101	CHILLED WATER	15.0	3.0	1/4	115/1	1,2,3,4
AHU-102	CHILLED WATER	25.0	5.0	1/4	115/1	1,2,3,4
AHU-103	CHILLED WATER	30.0	4.0	1/4	115/1	1,2,3,4

NOTES:

1. SEE COIL PIPING DIAGRAMS FOR INSTALLATION DETAIL.
2. CONTROL OF PUMPS BY TEMPERATURE CONTROL CONTRACTOR, REFER TO SPECIFICATIONS.
3. REFER TO SPECIFICATION SECTION 232123.
4. PUMP SELECTED WITH 100% H2O.

ELECTRIC CEILING MOUNTED UNIT HEATER SCHEDULE

MARK	CFM	ELECTRIC HEATING				ELEC SERV	MODEL NO.	NOTES
		BTUH	EAT	LAT	KW			
ECLH-101	600	17,000	60	75	5.0	460/3	RCH 3480 SERIES	1,2,3,4,5,6

NOTES

1. UNITS SCHEDULED ARE AS MANUFACTURED BY RAYWALL.
2. RECESSED CEILING MOUNTED.
3. REFER TO SPECIFICATION SECTION 238239.
4. LOW VOLTAGE WALL MOUNTED TEMPERATURE SENSOR BY THE TCC.
5. FACTORY DISCONNECT SWITCH.
6. WHITE POWDER COATED GRILLE.

VEHICLE EXHAUST HOSE REEL SCHEDULE

MARK	HOSE LENGTH	HOSE DIAMETER	APD	NOTES:
HR-101	30'-0"	5"	2.80	1,2,3
HR-102	30'-0"	5"	2.80	1,2,3
HR-103	30'-0"	5"	2.80	1,2,3
HR-104	30'-0"	5"	2.80	1,2,3
HR-105	30'-0"	5"	2.80	1,2,3
HR-106	30'-0"	5"	2.80	1,2,3
HR-107	30'-0"	5"	2.80	1,2,3
HR-108	30'-0"	5"	2.80	1,2,3

NOTES:

1. REFER TO SPECIFICATION SECTION 238056.
2. PROVIDE TAILPIPE ADAPTOR WITH VISE GRIP.
3. MOUNT HOSE REEL PER MANUFACTURERS REQUIREMENTS.

MAXIMUM ALLOWABLE SOUND LEVELS

MARK	UNIT SOUND	63Hz	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz	8KHz
AHU-101	UNIT SUPPLY DISCHARGE	80	85	87	82	87	80	74	71
AHU-102	UNIT SUPPLY DISCHARGE	78	82	81	79	86	76	71	68
AHU-103	UNIT SUPPLY DISCHARGE	79	84	83	80	87	77	72	69

EXHAUST FAN SCHEDULE

MARK	TYPE	CFM	FRPM	EXT. S.P.	MAX. SONES	ELEC HP	ELEC SERV	CONTROL	MODEL	DRIVE	NOTES
EF-101	IN-LINE	600	1,053	0.33	4.8	1/4	115/1	A	SQ-100-VG	DIRECT	1,2,3,4,6,7
EF-102	ROOF	1,250	1,206	0.33	9.2	1/2	115/1	A	G-120-VG	DIRECT	1,2,4,5,6,7,8
EF-103	ROOF	2,000	1,216	0.33	11.5	3/4	115/1	B.1	G-140-VG	DIRECT	1,2,4,5,6,7,8
EF-104	ROOF	1,850	1,134	0.30	10.2	1/2	115/1	B.1	G-140-VG	DIRECT	1,2,4,5,6,7,8
EF-105	ROOF	800	1,223	0.38	6.3	1/4	115/1	G	G-100-VG	DIRECT	1,2,4,5,6,7,8,17
EF-106	CENTRIFUGAL	900	3,116	5.0	30.0	1-1/2	208/3	E	USF-12	DIRECT	1,2,6,8,12,13,14,15,16
EF-107	ROOF	800	1,223	0.38	6.3	1/4	115/1	G	G-100-VG	DIRECT	1,2,4,5,6,7,8,17
EF-108	NOT USED										
EF-109	ROOF	1,750	1,098	0.33	9.6	1/2	115/1	B.1	G-140-VG	DIRECT	1,2,4,5,6,7,8
EF-110	NOT USED										
EF-111	ROOF	450	1,397	0.38	6.2	1/10	115/1	A	G-090-VG	DIRECT	1,2,4,5,6,7,8
EF-112	CENTRIFUGAL	1,500	3,103	5.0	30.0	2.0	208/3	E	USF-12	DIRECT	1,2,6,8,12,13,14,15,16
EF-113	ROOF	1,100	1,536	0.43	9.3	1/4	115/1	G	G-100-VG	DIRECT	1,2,4,5,6,7,8,18
EF-114	ROOF	1,100	1,536	0.43	9.3	1/4	115/1	G	G-100-VG	DIRECT	1,2,4,5,6,7,8,18
EF-115	ROOF	1,300	1,240	0.33	9.8	1/2	115/1	B.1	G-120-VG	DIRECT	1,2,4,5,6,7,8
EF-116	ROOF	800	1,223	0.38	6.3	1/4	115/1	B.1	G-100-VG	DIRECT	1,2,4,5,6,7,8
EF-117	IN-LINE	350	1,344	0.33	5.8	1/10	115/1	C	SQ-090-VG	DIRECT	1,2,3,4,6,7
EF-118	ROOF	75	1,539	0.33	3.5	1/15	115/1	A	G-060-VG	DIRECT	1,2,4,5,6,7,8
EF-119	IN-LINE	500	1,373	0.33	6.8	1/4	115/1	C	SQ-95-VG	DIRECT	1,2,3,4,6,7
EF-120	IN-LINE	350	1,344	0.33	5.8	1/10	115/1	C	SQ-090-VG	DIRECT	1,2,3,4,6,7

NOTES

1. INCLUDE DISCONNECT SWITCH.
2. INCLUDE BACKDRAFT DAMPER.
3. SUPPORT FROM STRUCTURE ABOVE WITH THREADED ROD AND VIBRATION ISOLATORS.
4. REFER TO SPECIFICATION SECTION 233423 FOR ADDITIONAL REQUIREMENTS.
5. MOUNT ON 12" HIGH ROOF CURB.
6. ALL FAN MODELS SPECIFIED AS MANUFACTURED BY GREENHECK.
7. INCLUDE FIELD MOUNTED AND WIRED SPEED CONTROL.
8. COLOR(S) TO BE SELECTED BY ARCHITECT/ENGINEER.
9. INSTALL DRIP PAN UNDER UNIT.
10. ALUMINUM WHITE ENAMEL GRILLE, ISOLATION KIT AND HOODED WALL CAP.
11. HI-PRO POLYESTER FINISH FOR HOUSING, FAN WHEEL, BACK DRAFT DAMPER AND ACCESSORIES.
12. INCLUDE FACTORY MOUNTED AND WIRED VFC FOR UNIT SOFT START AND BALANCING AID.
13. REFER TO SPECIFICATION SECTION 238056 FOR ADDITIONAL REQUIREMENTS.
14. FAN SHALL BE ROOF MOUNTED ON EQUIPMENT SUPPORT RAILS AND VIBRATION ISOLATORS.
15. PROVIDE WEATHER HOOD TO PROTECT FAN AND MOTOR ASSEMBLY.
16. FAN SHALL BE CONFIGURED WITH A VERTICAL DISCHARGE.
17. EF-105 AND EF-107 SHALL BE INTERLOCKED SO BOTH FANS ARE COMMANDED ON AT THE SAME TIME FOR SIMULTANEOUS OPERATION.
18. EF-113 AND EF-114 SHALL BE INTERLOCKED SO BOTH FANS ARE COMMANDED ON AT THE SAME TIME FOR SIMULTANEOUS OPERATION.

CONTROL KEY:
A. AUTOMATIC OCCUPIED OPERATION BY LOCAL TEMPERATURE CONTROL ZONE.
B. MANUAL CONTROLS BY DIVISION 26.
.1 WITH TIMER SWITCH.
.2 WITH ON/OFF SWITCH.
.3 WITH ROOM LIGHT SWITCH.
C. AUTOMATIC OPERATION BY REVERSE-ACTING THERMOSTAT.
D. 24 HOUR CONTINUOUS OPERATION.
E. PUSH BUTTON PROVIDED BY DIVISION 26.
F. PRESURE SENSING SWITCH PROVIDED BY EXAHUST FAN MANUFACTURER.
G. TIMER SWITCH CONTROL BY DIVISION 26 AND AUTOMATIC OPERATION BY CARBON MONOXIDE DETECTOR BY THE TEMPERATURE CONTROL CONTRACTOR.

AIR CLEANING UNIT SCHEDULE

MARK	AIRFLOW	MOTOR INFO			MODEL	NOTES
		HP	ELEC INFO	DRIVE		
AC-101	2,200	3/4	115/1	DIERCT	UAS - DA	1,2,3,4,5,6,7

GENERAL NOTES

1. REFER TO SPECIFICATION SECTION 234100 FOR ADDITIONAL REQUIREMENTS.
2. INCLUDE 4 INCH PLEATED PRE-FILTER, 95% EFFICIENT BAG FILTER AND FILTER CONDITION INDICATOR.
3. INCLUDE DIRECTIONAL OUTLET VANES.
4. PROVIDE HINGED ACCESS DOORS ON THE BOTTOM OF THE UNIT.
5. PROVIDE SUPPLEMENTAL STEEL, VIBRATION ISOLATORS AND THREADED ROD HANGERS ON ALL FOUR CORNERS OF THE UNIT.
6. BOTTOM OF UNIT TO BE MOUNTED AT 10'-0" AFF. COORDINATE FINAL LOCATION OF UNIT WITH ALL TRADES.
7. TOGGLE SWITCH ON/OFF CONTROL PROVIDED BY DIVISION 26.

VAV REHEAT TERMINAL SCHEDULE

MARK	PRIMARY CFM	MIN PRIMARY CFM	MBH	GPM	INLET DIA	AVAIL. INLET SP	RAD. N.C.	DIS. N.C.	LWT	LAT	# ROWS
VVR-101	1,450	725	64.12	4.2	12	1.42	18	-	148.6	95.8	2
VVR-102	800	400	33.62	1.9	10	1.32	-	-	143.0	93.7	2
VVR-103	1,500	750	64.10	4.0	12	1.58	20	16	146.8	94.4	2
VVR-104	1,300	650	58.05	3.4	12	1.93	24	20	145.3	96.2	2
VVR-105	1,400	700	62.63	4.0	12	1.81	24	20	148.3	96.2	2
VVR-106	1,450	725	64.12	4.2	12	1.49	18	15	148.6	95.8	2
VVR-107	2,150	1,075	91.32	4.7	14	1.87	22	20	139.7	94.2	2
VVR-108	550	275	23.22	1.4	8	2.18	22	20	145.9	93.9	4
VVR-109	3,000	1,500	135.2	6.5	19	2.21	38	32	137.3	96.6	2
VVR-110	2,050	1,025	94.80	5.8	14	1.58	20	18	146.2	97.6	2

GENERAL NOTES:

1. COILS SHALL BE SELECTED WITH 1" WPD MAXIMUM.
2. HEATING COIL DESIGN BASED ON HIGH-EFFICIENCY, HOT WATER COIL.
3. HEATING COIL LOADS CALCULATED WITH 180° EWT, 55° EAT AT TOTAL PRIMARY AIR FLOW.
4. UNIT MANUFACTURER SHALL PROVIDE REQUIRED HANGING BRACKETS TO PROPERLY SUPPORT UNIT. REFER TO DETAILS.
5. UNITS SCHEDULED ARE AS MANUFACTURED BY ETI.
6. UNIT SELECTION MUST ALLOW FOR A MINUMUM 0.50" DOWNSTREAM STATIC PRESSURE.
7. 277/1 VOLT ELECTRICAL SERVICE WILL BE SUPPLIED TO EACH UNIT BY THE ELECTRICAL CONTRACTOR.
8. REFER TO SPECIFICATION SECTION 233600.

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

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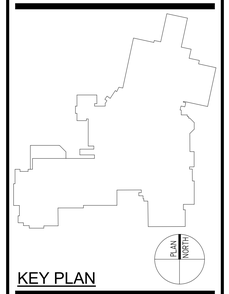


KEY PLAN

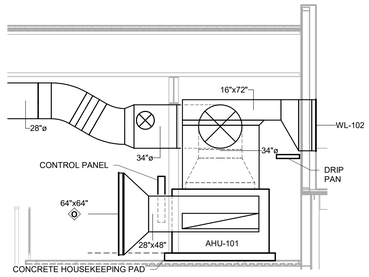
CONSTRUCTION DOCUMENTS

DRAWN BY: DRV
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 8/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

MECHANICAL SCHEDULES

M5.01



C206C - MECHANICAL MEZZANINE SECTION 1

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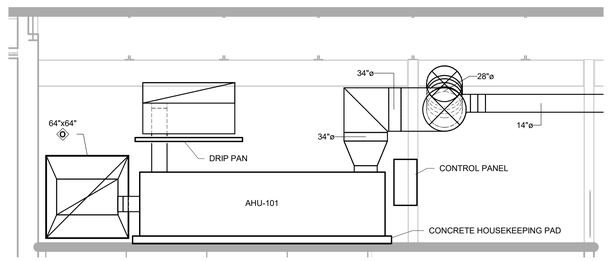

C206C - MECHANICAL MEZZANINE SECTION 2

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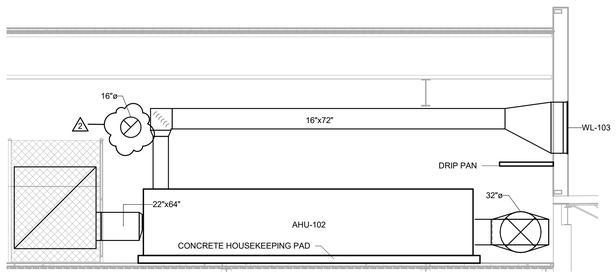

C206A MECHANICAL MEZZANINE SECTION

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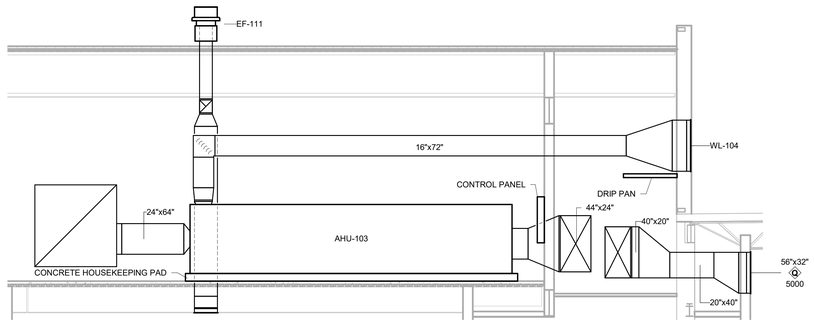

C215 MECHANICAL MEZZANINE SECTION

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

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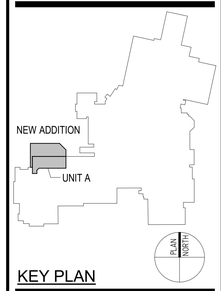

KEY PLAN

CONSTRUCTION DOCUMENTS

DRAWN BY: JJS

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 8/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/05/2023

MECHANICAL SECTIONS

M5.07

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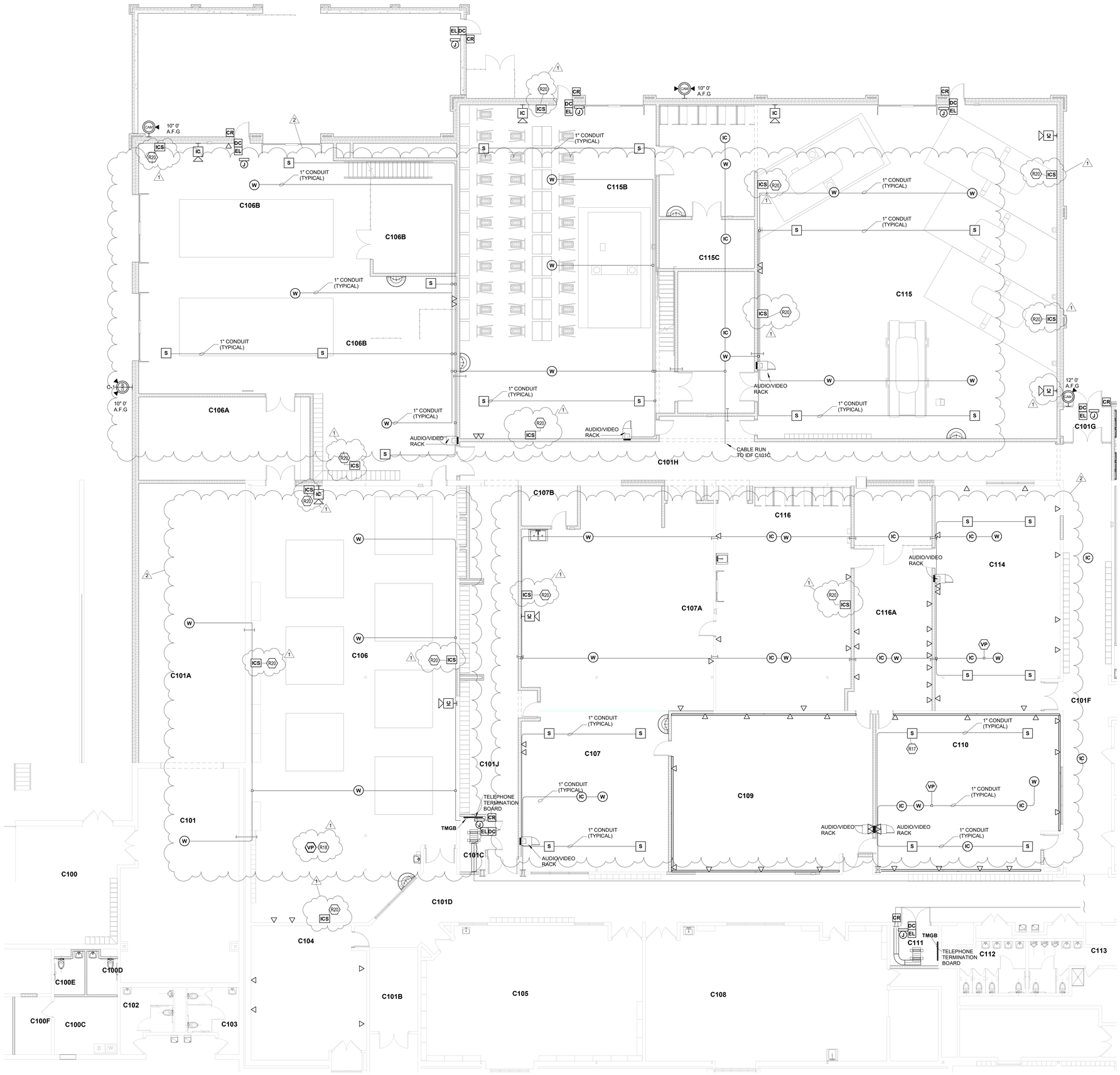

ROOM LEGEND - FIRST FLOOR UNIT C		
ROOM NO.	ROOM NAME	AREA (SF)
C100	LOADING / RECEIVING	1202 SF
C100A	BREAK ROOM	640 SF
C100B	ELECTRICAL	825 SF
C100C	LAUNDRY	157 SF
C100D	TOILET	52 SF
C100E	TOILET	52 SF
C100F	SECURE STORAGE	91 SF
C100G	OFFICE	132 SF
C100H	KITCHEN	177 SF
C101	STORAGE	1015 SF
C101A	STORAGE	1287 SF
C101B	CORRIDOR	174 SF
C101C	MEDIA DATA	61 SF
C101D	YEARBOOK CLASSROOM / LAB	Not Placed
C101D	CORRIDOR	1860 SF
C101E	CORRIDOR	177 SF
C101F	CORRIDOR	976 SF
C101G	JOURNALISM CLASSROOM	Not Placed
C101G	VESTIBULE	70 SF
C101H	OFFICE	156 SF
C101H	CORRIDOR	992 SF
C101J	CORRIDOR	832 SF
C102	MENS TOILET	124 SF
C103	WOMENS TOILET	119 SF
C104	OFFICE	638 SF
C105	ELECTRONICS / PHYSICS	1251 SF
C106	CONSTRUCTION TRADES LAB	3699 SF
C106A	STORAGE	622 SF
C106B	ADVANCED CONSTRUCTION TRADES LAB	3867 SF
C107	CLASSROOM	1015 SF
C107A	ADVANCED MFG. ARTISAN LAB	1695 SF
C107B	FINISHING ROOM	97 SF
C108	GRAPHIC COMMUNICATIONS	1385 SF
C109	CAD LAB	1347 SF
C110	CAD LAB	1217 SF
C111	MEDIA DATA	83 SF
C111A	STORAGE	101 SF
C112	GIRLS	188 SF
C113	BOYS	163 SF
C114	CAD LAB	1188 SF
C115	ADVANCED AUTOMOTIVE SERVICES LAB	4790 SF
C115A	STORAGE	468 SF
C115B	AUTOMOTIVE SERVICES LAB	2828 SF
C115C	FINISHING ROOM	201 SF
C116	ADVANCED MFG. INNOVATION LAB	1278 SF
C116A	ADVANCED MFG. CLEAN LAB	762 SF
C117	CERAMIC CLASSROOM / LAB	1387 SF
C117A	STORAGE	145 SF
C117B	STORAGE / MATERIALS	150 SF
C118	INDEPENDENT STUDY / COMMERICAL ART	1425 SF
C119	PHOTOGRAPHY	992 SF
C119A	DARKROOM	309 SF
C120	COMPUTER ART ROOM	442 SF
C122	TEACHERS WORKROOM	672 SF
C122A	DEPT. HEAD OFFICE	104 SF
C123	CERAMICS CLASSROOM / LAB	1205 SF
C123A	STORAGE	145 SF
C123B	STORAGE / MATERIALS	150 SF
C124	CULINARY ARTS	1299 SF
C124A	CLOSET	39 SF
C124B	DRY GOODS	154 SF
C124C	WALK-IN	129 SF
C125	DRAWING CLASSROOM / LAB	1173 SF
C126	DRAWING CLASSROOM / LAB	1182 SF
C127	DRAWING CLASSROOM / LAB	1182 SF
C128	JEWELRY CLASSROOM / LAB	953 SF
C129	PHOTOGRAPHY	1023 SF
C129A	DARKROOM	232 SF
C131	CORRIDOR	1363 SF
C131A	STORAGE	166 SF
C131B	MEDIA DATA	60 SF
C131C	CORRIDOR	476 SF
C132	STUDIO	244 SF
C133	PODCAST	144 SF
C134	PASSAGE	36 SF
C135	STUDIO	63 SF
C136	STORAGE	105 SF
C136A	COMPUTER LAB	201 SF
C137	STUDIO	91 SF
C138	STUDIO	93 SF
C138A	PASSAGE	127 SF
C138B	STUDIO	54 SF
C138C	STUDIO	52 SF
C138D	STUDIO	52 SF
C138E	STUDIO	52 SF
C139	CLASSROOM	984 SF
C141	TV CLASSROOM	819 SF
C141A	STUDIO B	165 SF
C141B	OFFICE	91 SF
C142	STUDIO B	196 SF
C142A	ENGINEERING	114 SF
C143	STUDIO A	1026 SF
C144	TV CONTROL	251 SF
C144A	EQUIPMENT ROOM	120 SF
C145	COMPUTER CLASSROOM	851 SF
C145A	SECURE CLOSET	17 SF
C146	COMPUTER SERVER STORAGE	303 SF
C147	JOURNALISM CLASSROOM	1468 SF
C147A	OFFICE	136 SF
C148	ELECTRICAL ROOM	143 SF
C149	YEARBOOK CLASSROOM / LAB	1350 SF
C149A	PODCAST	147 SF
C150	TV-CPU LAB	714 SF
C151	MECHANICAL	5687 SF
C152	-	927 SF

TECHNOLOGY PLAN NOTES

R17 PROVIDE JUNCTION BOX FOR SPEAKER LOCATED UP IN BAR JOIST AREA (BELOW ROOF DECK AS REQUIRED BY CODE) SO THAT BOTTOM OF SUSPENDED SPEAKER IS LOCATED ABOVE THE BOTTOM OF BAR JOIST. PROVIDE CONDUITS BETWEEN JUNCTION BOXES AS REQUIRED, SEE DETAILS FOR SPEAKER CONNECTIONS.

R18 PROJECTOR TO BE REMOVED/RE-INSTALLED

R20 INTERCOM PAGING STROBE

GENERAL NOTE:
ELECTRICAL RECEPTACLES SHOWN ON THE TECHNOLOGY ROUGH-IN DRAWINGS ARE FOR COORDINATION PURPOSES ONLY. REFER TO ELECTRICAL POWER DRAWINGS FOR RECEPTACLE ROUGH-IN REQUIREMENTS.

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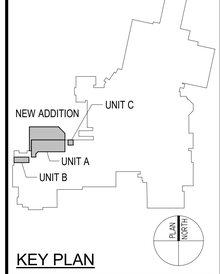

KEY PLAN

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE19800 STATE OF PROFESSIONAL ENGINEER

DRAWN BY: JJR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	9/21/2023
2	ADDENDUM #2	10/04/2023

UNIT A - FIRST FLOOR TECHNOLOGY ROUGH-IN PLAN

E3.01

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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"	-
◁W	WALL MOUNTED COMMUNICATIONS OUTLET. 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"	-
	MULTI CAPACITY FLOOR BOX WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING AND ONE (1) 1" CONDUIT TO NEAREST TELECOMMUNICATIONS ROOM. PROVIDE PLASTIC BUSHINGS AND PULL STRINGS.	F	-
◁SR	SOUND REINFORCEMENT LOCATION. 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. COORDINATE WITH TECHNOLOGY AND ARCHITECTURAL DRAWINGS.	5'-4"	-
(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	-
	18" CABLE TRAY, UNLESS OTHERWISE NOTED	-	-
	2" CONDUIT SLEEVES BETWEEN WALLS, UNLESS OTHERWISE NOTED	-	-
○ ○	2 (TWO) 4" CONDUIT SLEEVES BETWEEN FLOORS	-	-
	4' x 8' x 3/4" FIRE RATED PLYWOOD	-	-
▽	POKE-THRU FLOOR BOX WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING AND ONE (1) 1" CONDUIT TO NEAREST TELECOMMUNICATIONS ROOM. PROVIDE PLASTIC BUSHINGS AND PULL STRINGS.	F	-

PUBLIC ADDRESS AND MASS NOTIFICATION SYSTEMS ROUGH-IN SYMBOLS

SYMBOL	DESCRIPTION	MH UNO	ROUGH-IN DETAIL #
	SOUND SYSTEM ANTENNA. 1 GANG, 3.5" DEEP BOX WITH 1" CONDUIT TO SOUND SYSTEM JUNCTION BOX	BETWEEN JOISTS	
S	CEILING MOUNTED SOUND SYSTEM SPEAKER, 1 GANG BOX WITH 1" CONDUIT TO SOUND SYSTEM JUNCTION BOX	-	
S	WALL MOUNTED SOUND REINFORCEMENT SPEAKER BOX, 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.	-	
M	MICROPHONE INPUT. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT TO SOUND SYSTEM JUNCTION BOX WITH PULL STRING.	16"	
A	AUXILIARY INPUT. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT TO SOUND SYSTEM JUNCTION BOX WITH PULL STRING.	16"	
MA	WALL MOUNTED MICROPHONE/AUXILIARY INPUT. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT TO SOUND SYSTEM JUNCTION BOX WITH PULL STRING.	16"	
S	WALL MOUNTED SOUND SYSTEM SPEAKER OUTLET. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT TO SOUND SYSTEM JUNCTION BOX WITH PULL STRING.	NOTED ON DRAWINGS	
S A	LINE ARRAY COLUMN SPEAKERS - WALL MOUNTED. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT TO SOUND SYSTEM JUNCTION BOX WITH PULL STRING.	NOTED ON DRAWINGS	
	RECESSED JUNCTION BOX FOR SOUND SYSTEM. REFER TO DETAILS AND FLOORPLANS FOR SIZE.	16"	
	PRODUCTION INTERCOM, 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1 (ONE) 1" CONDUIT TO SOUND SYSTEM JUNCTION BOX WITH PULL STRING.	-	

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"	-
	SOUND SYSTEM MASTER STATION. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING, 2 (TWO) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	-	-
	ROOF MOUNTED AM/FM ANTENNA	ROOF	-
WR	REMOTE DESK INTERCOM CABINET ROUGH-IN. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING, 2 (TWO) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING. COORDINATE WITH CASEWORK.	-	-
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"	-
IC S	SURFACE MOUNTED CEILING SPEAKER. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING WITH 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING OR RUN TO NEXT SPEAKER LOCATION. PROVIDE PLASTIC BUSHING AND PULL STRING.	-	-
ICS	INTERCOMM STROBE LAMP.	C	-

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.	-
KB	KEY BOX. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING, 1 (ONE) 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	60"	-
	PUSH TO RELEASE BUTTON. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	44"	-
ADO	AUTOMATIC DOOR OPERATOR, 1" CONDUIT TO JUNCTION BOX ABOVE DOOR	-	-
REX	REQUEST TO EXIT SWITCH, 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING, 1 (ONE) 1" CONDUIT TO JUNCTION BOX ABOVE DOOR(LOCATED IN EXIT DOOR HARDWARE)	-	-

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	-	-
K	KEYPAD. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PLASTIC BUSHING AND PULL STRING.	44"	-
MD	WALL MOUNTED MOTION DETECTOR. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PULL STRING	NOTED ON DWGS	-
MD	CEILING MOUNTED MOTION DETECTOR. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PULL STRING	NOTED ON DWGS	-

AUDIO/VISUAL ACCESS CONTROL ROUGH-IN SYMBOLS

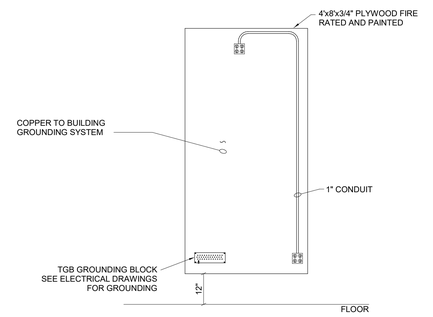
SYMBOL	DESCRIPTION	MH UNO	ROUGH-IN DETAIL #
MI	MASTER INTERCOM. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING, 1 (ONE) 1" CONDUIT TO JUNCTION BOX ABOVE DOOR	-	
IC	INTERCOM BOX. 2 GANG, 3.5" DEEP BOX WITH 2 GANG MUD RING, 1 (ONE) 1" CONDUIT TO JUNCTION BOX ABOVE DOOR	60"	

VIDEO SURVEILLANCE CAMERA ROUGH-IN SYMBOL

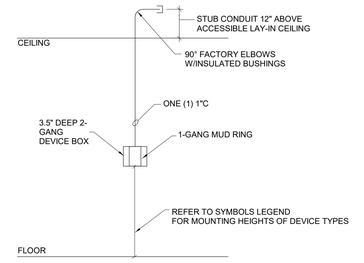
SYMBOL	DESCRIPTION	MH UNO	ROUGH-IN DETAIL #
CAM	WALL MOUNTED VIDEO SURVEILLANCE CAMERA2 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PULL BOX. (MOUNT WITHIN 12" OF CORNER WHEN APPLICABLE)	+120"	1/E3.05
CAM	WALL MOUNTED VIDEO SURVEILLANCE CAMERAS 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PULL BOX. (MOUNT WITHIN 12" OF CORNER WHEN APPLICABLE)	+120"	1/E3.05
CAM	WALL MOUNTED VIDEO SURVEILLANCE CAMERAS 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PULL BOX. (MOUNT WITHIN 12" OF CORNER WHEN APPLICABLE)	+120"	1/E3.05
CAM W	WALL MOUNTED VIDEO SURVEILLANCE CAMERA 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PULL BOX. (MOUNT WITHIN 12" OF CORNER WHEN APPLICABLE)	+120"	1/E3.05
WP CAM	WALL MOUNTED WEATHERPROOF VIDEO SURVEILLANCE CAMERA, 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING WITH PULL BOX. (MOUNT WITHIN 12"-16" OF CORNER WHEN APPLICABLE)	+120"	1/E3.05

CLOCK ROUGH-IN SYMBOLS

SYMBOL	DESCRIPTION	MH UNO	ROUGH-IN DETAIL #
DIG	WALL MOUNTED SINGLE-FACED DIGITAL CLOCK, 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE LAY-IN CEILING (IF CLOCKS ARE 120 VOLT OR 24 VOLT)	8'-6"	-
DIG DF	WALL MOUNTED DUAL-FACED DIGITAL CLOCK. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE LAY-IN CEILING (IF CLOCKS ARE 120 VOLT OR 24 VOLT)	8'-6"	-
	WALL MOUNTED CLOCK. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE LAY-IN CEILING (IF CLOCKS ARE 120 VOLT OR 24 VOLT)	8'-6"	-
DF	WALL MOUNTED DUAL-FACED CLOCK. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE LAY-IN CEILING (IF CLOCKS ARE 120 VOLT OR 24 VOLT)	8'-6"	-
WG	WALL MOUNTED CLOCK WITH WIRE GUARD. 2 GANG, 3.5" DEEP BOX WITH 1 GANG MUD RING. WITH 1" CONDUIT STUBBED ABOVE ACCESSIBLE LAY-IN CEILING (IF CLOCKS ARE 120 VOLT OR 24 VOLT)	8'-6"	-



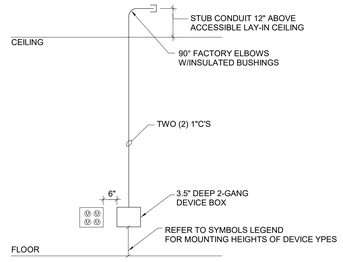
1 TR TELEPHONE TERMINATION BOARD



GENERAL NOTES:

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

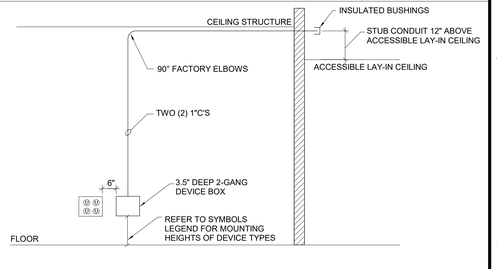
2 TECHNOLOGY ROUGH-IN REQUIREMENTS 1-GANG WALL BOX - ACCESSIBLE LAY-IN CEILINGS



GENERAL NOTES:

1. MOUNTING HEIGHTS AS LISTED ON THIS SHEET UNLESS NOTED OTHERWISE.
2. PROVIDE BLANK COVERPLATES FOR ALL UNUSED BOXES.
3. RECEPTACLES ARE SHOWN FOR COORDINATION ONLY. REFER TO ELECTRICAL DRAWINGS FOR QUANTITY, CIRCUITING, MOUNTING, AND ADDITIONAL REQUIREMENTS.
4. PROVIDE PULL STRINGS IN CONDUIT RUNS GREATER THAN 10' IN LENGTH.

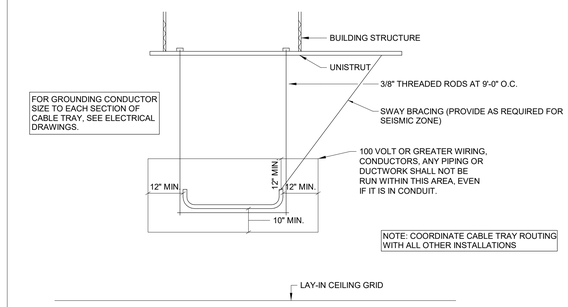
4 TECHNOLOGY ROUGH-IN REQUIREMENTS 2-GANG WALL BOX - ACCESSIBLE LAY-IN CEILINGS



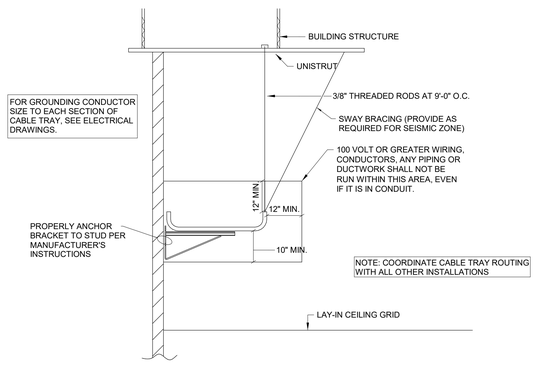
GENERAL NOTES:

1. MOUNTING HEIGHTS AS LISTED ON THIS SHEET UNLESS NOTED OTHERWISE.
2. PROVIDE BLANK COVERPLATES FOR ALL UNUSED BOXES.
3. RECEPTACLES ARE SHOWN FOR COORDINATION ONLY. REFER TO ELECTRICAL DRAWINGS FOR QUANTITY, CIRCUITING, MOUNTING, AND ADDITIONAL REQUIREMENTS.
4. PROVIDE PULL STRINGS IN CONDUIT RUNS GREATER THAN 10' IN LENGTH.

5 TECHNOLOGY ROUGH-IN REQUIREMENTS 2-GANG WALL BOX - EXPOSED CEILINGS TO NEAREST ACCESSIBLE LAY-IN CEILING



3 CABLE TRAY ELEVATION DETAIL SUSPENDED



6 CABLE TRAY ELEVATION DETAIL WALL BRACKET

	CONTRACTOR FURNISH	CONTRACTOR INSTALL	OWNER FURNISH	OWNER INSTALL
ACCESS CONTROL CARD READERS	YES	YES	NO	NO
AV PROJECTOR AND MOUNTS	NO	YES	YES	NO
AV PROJECTOR MISC. CABLING (IN WALL)	YES	YES	NO	NO
AV MANUAL SCREENS	N/A	N/A	N/A	N/A
AV MOTORIZED SCREENS	N/A	N/A	N/A	N/A
AV MONITORS AND MOUNTS	NO	YES	YES	NO
AV MONITORS MISC. CABLING (IN WALL)	YES	YES	NO	NO
AV MONITOR PATCH CABLES	NO	YES	YES	NO
WIRELESS CLOCKS	N/A	N/A	N/A	N/A
FIBER BACKBONE	YES	YES	NO	NO
FIBER TERM AND TEST	YES	YES	NO	NO
FIBER ENCLOSER WITH LC COUPLER PANEL	YES	YES	NO	NO
NETWORK EQUIPMENT	NO	NO	YES	YES
NETWORK SFP	NO	NO	YES	YES
IDF RACKS	YES	YES	NO	NO
SOUND REINFORCEMENT	YES	YES	NO	NO
SURVEILLANCE CAMERAS	YES	YES	NO	NO
SURVEILLANCE CAMERAS CAT6A CABLING	YES	YES	NO	NO
WIRELESS ACCESS POINTS	NO	YES	YES	NO
WIRELESS ACCESS POINTS CAT6A CABLING	YES	YES	NO	NO

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

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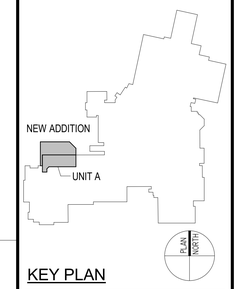

KEY PLAN

CONSTRUCTION DOCUMENTS

DRAWN BY: JJR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/04/2023

TECHNOLOGY ROUGH-IN DETAILS

E3.04

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GENERAL NOTES - POWER

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. 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.
3. LABEL EACH RECEPTACLE WITH THE PANEL NAME AND CIRCUIT NUMBER ON THE FACE OF EACH COVER PLATE WITH A TYPED LAMINATED LABEL.
4. PROVIDE "GFCI PROTECTED" LABEL ON COVER PLATE FOR ANY GFCI PROTECTED DEVICE.
5. 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.
6. REFER TO MECHANICAL PLANS FOR LOCATION OF MECHANICAL EQUIPMENT. LOCATE DISCONNECT SWITCHES PER NEC.
7. REFER TO "CONTROL SCHEMATICS" MECHANICAL DRAWINGS FOR ADDITIONAL CONTROL WIRING AND CONTROL CONNECTIONS.
8. 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.
9. FOR EXISTING RECEPTACLES TO BE REMOVED, REMOVE CONDUIT, BOX, AND WIREING COMPLETELY. REPAIR WALL PRIOR TO PAINTING. CONDUITS AND BOXES CAN REMAIN BEHIND FURRED PORTIONS OF WALLS. NO BLANK PLATES ARE TO BE VISIBLE UPON PROJECT COMPLETION.
10. REPLACE ALL EXISTING RECEPTACLES SHOWN TO REMAIN WITH NEW DEVICES AND FACEPLATES.
11. CIRCUIT NUMBERS SHOWN FOR EXISTING PANELBOARDS ARE NUMBERED SPARE/SPACE CIRCUITS. EXISTING CIRCUITS TO REMAIN ARE NOT TO BE AFFECTED BY THIS NUMBERING.

KEYNOTES

P1	PROVIDE NEW GFCI RECEPTACLE AT THIS LOCATION. CONNECT TO EXISTING CIRCUIT TIED BACK DURING DEMOLITION.
P6	HYDRAULIC TRASH COMPACTOR MOTOR AND CONTROLS - RE-ROUTE POWER WIRING, CONDUIT AND POWER. DISCONNECT TO NEW LOCATION. MATCH EXISTING WIRE SIZE. ASSUME #8 CONDUCTORS FOR BIDDING PURPOSES.
P7	HYDRAULIC TRASH COMPACTOR CONTROLS EXISTING TO REMAIN AND BE RECONNECTED AS NECESSARY TO RELOCATED MOTOR.
P8	CONNECT DATA ROOM RECEPTACLES TO CIRCUITS TIED BACK DURING DEMOLITION. PROVIDE MATCHING RECEPTACLES LOCATED BEHIND THE NEW RACK LOCATION(S).
P9	CONNECT RECEPTACLE TO NEAREST RECEPTACLE CIRCUIT WITH 2#12, #12G IN 3/4"C.
P10	PROVIDE A NEW 20A CIRCUIT BREAKER IN AVAILABLE SPACE IN PANEL SPL1 FOR THIS CORD REEL. CONNECT WITH 2#12, #12G IN 3/4"C.
P11	PROVIDE A NEW 30A CIRCUIT BREAKER IN AVAILABLE SPACE IN PANEL 1WL3 FOR THIS NEMA 5-30R RECEPTACLE. CONNECT WITH 2#10, #12G IN 3/4"C.
P12	CONNECT TO NEAREST RECEPTACLE CIRCUIT WITH 2#12, #12G IN 3/4"C.
P13	CONNECT ALL SMOKE DAMPERS IN UNITS A AND B OF THIS PROJECT TO AN AVAILABLE DEDICATED SPARE 20A CIRCUIT IN EXISTING PANEL 1WL3. PROVIDE A 20A BREAKER IF NECESSARY AND CONNECT WITH 2#12, #12G IN 3/4"C.
P14	CONNECT EMERGENCY STOP PUSHBUTTON TO SHUNT TRIP MAIN BREAKER IN PANELBOARD FOR THIS SPACE.
P15	NEW COUNTERTOPS IN THIS ROOM HAVE A 3-3/8" OPENING IN THE CORNER OF THE MOUNTING BRACKET. MOUNT HORIZONTAL WIREWAY FOR NEW SURFACE MOUNTED RECEPTACLES THROUGH THESE OPENINGS IN THIS ROOM. MOUNT NEW RECEPTACLES UNDER THE COUNTER AS CLOSE TO THE COUNTERTOP AS POSSIBLE.
P16	PROVIDE BUSWAY PLUGS AS FUSED DISCONNECTS. PROVIDE 20A FUSES IN DISCONNECTS UNLESS NOTED OTHERWISE. SUPPORT SOO FEEDERS TO EQUIPMENT FROM STRUCTURE AND DROP DOWN VERTICALLY TO EQUIPMENT. PROVIDE FEEDER SIZE PER A7 DRAWING REQUIREMENTS. PROVIDE MOUNTING HARDWARE TO SUPPORT BUSWAY AT ELEVATION SHOWN.
P17	REFER TO A7 SERIES DRAWINGS FOR ADDITIONAL REQUIRMENTS AND PLUG CONFIGURATIONS FOR EQUIPMENT IN THIS SPACE.
P24	PROVIDE 400A CONTACTOR FOR BOTH BUSWAYS IN C107A AND C116. CONNECT CONTACTOR TO THE EMERGENCY STOP PUSHBUTTONS IN BOTH SPACES, SUCH THAT THE ACTUATION OF ANY SWITCH OPENS THE CIRCUIT FOR THE BUSWAYS.
P28	INSTALL BUSWAY REMOVED FROM OTHER SPACES DURING DEMOLITION IN THIS SPACE PRIOR TO WORK IN ROOM C107A. CONNECT BUSWAY TEMPORARILY TO THE 200A FEEDER FOR PANEL SPL8. THIS BUSWAY IS TO SERVE EQUIPMENT FROM THE EXISTING SPACES WHILE THEY ARE BEING RENOVATED. INSTALL EXISTING DISCONNECTS AND CORD DROPS TO EQUIPMENT AS NEEDED BY OWNER. DISCONNECT AND REMOVE THE BUSWAY ONCE THE EQUIPMENT HAS BEEN MOVED.
P29	PROVIDE ALL EQUIPMENT AND WIRING TO CONNECT THIS ON/OFF PUSH BUTTON TO THE DUST COLLECTOR DC-101 LOCATED OUTSIDE OF ROOM C106B.
P35	CONNECT VVR TO LIGHTING CIRCUIT IN THIS SPACE. CONNECT AHEAD OF ALL LIGHTING CONTROLS. CONNECT WITH 2#12, #12G IN 3/4"C.
P36	WELDING GAS EMERGENCY SHUTOFF EQUIPMENT PROVIDED BY DIV 22. PROVIDE ALL CONDUIT, WIRE, AND CONNECTIONS FOR WELDING GAS EQUIPMENT AS REQUIRED BY MANUFACTURER.
P37	CONNECT WELDING GAS EMERGENCY CONTROL STATION TO THE WELDING GAS EMERGENCY RELAY PANEL AS REQUIRED BY MANUFACTURER.

UNIT A - POWER PLAN

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

CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

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

CONSULTANT

NEW ADDITION
UNIT A
PLAN NORTH

KEY PLAN

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE10800035 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: AMN

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

UNIT A - POWER PLAN

E5.01

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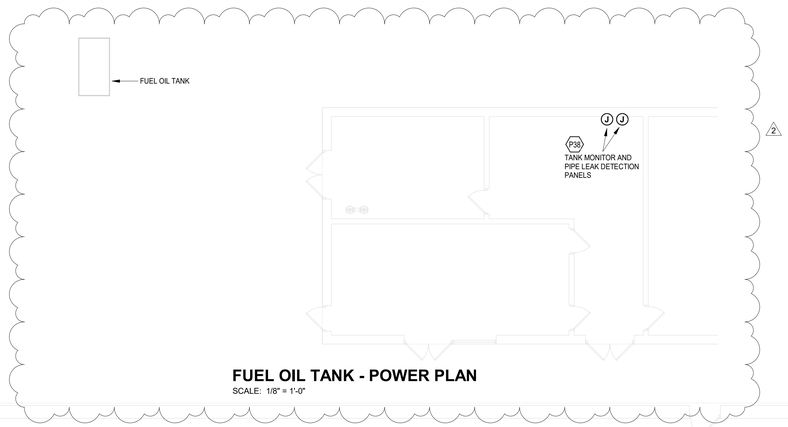


FUEL OIL TANK - POWER PLAN

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

Foodservice Equipment Electrical Schedule

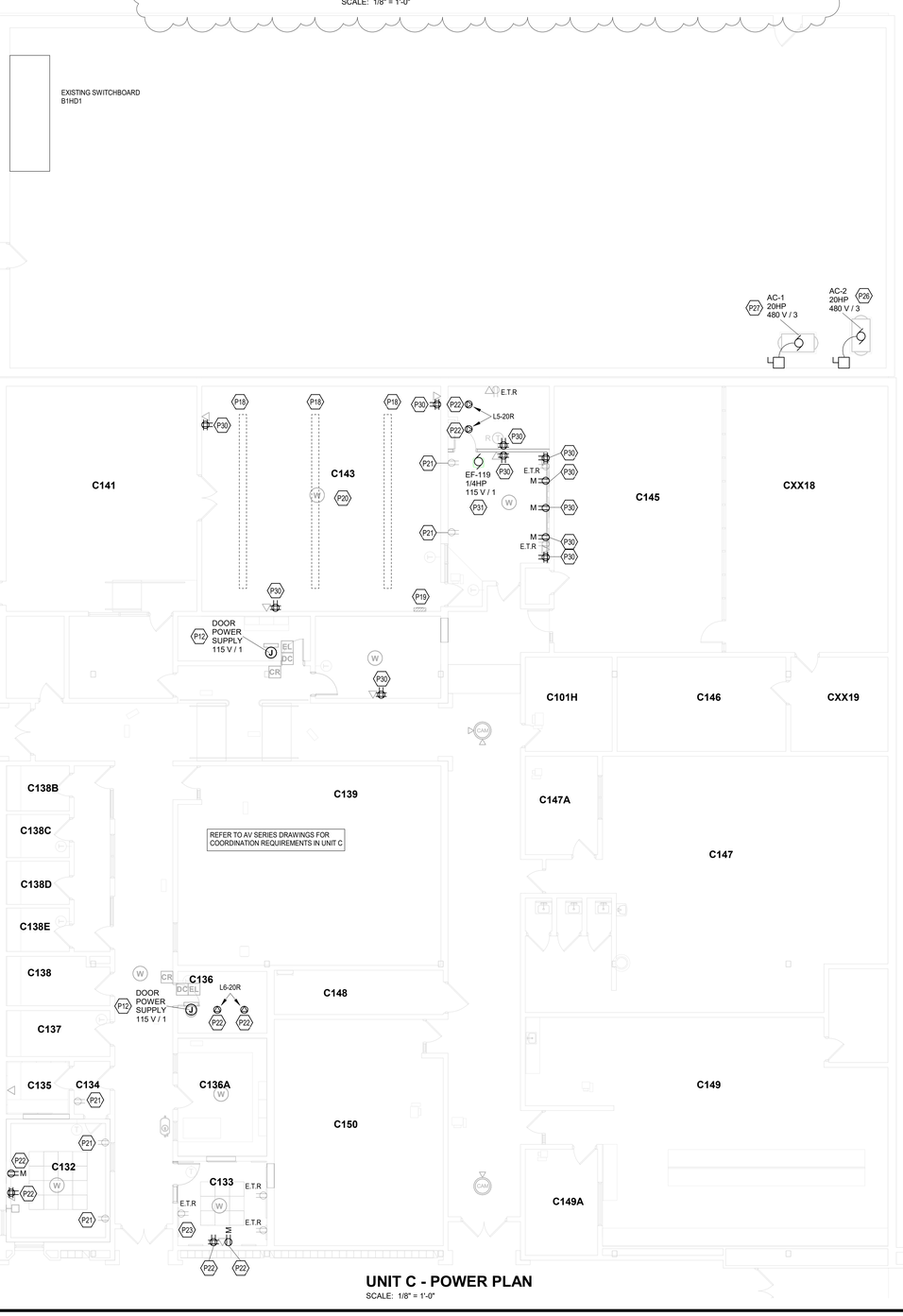
ITEM	DESCRIPTION	MARK	VOLTAGE	PHS	KW	AMPS	HP	CONN	NEMA	AFF	ELECTRICAL REMARKS
DR1	Duplex Convenience Receptacle	DR1	120	1		16.00		Plug		16	
DR2	Duplex Convenience Receptacle	DR2	120	1		16.00		Plug		48	Furnish horizontal receptacle when mounted above countertop
DR3	Retractable Drop-Cord Convenience Receptacle	DR3	120	1		16.00		Plug		DFA	Drop service from directly above equipment to a point 72" aff
3	Walk-In Cooler/Freezer (Lights)	E3	120	1		16.00		Direct		DFA	Extend to KEC furnished light fixtures thru junction box on top of walk-in compartment
3.1	Walk-In Cooler/Freezer (Cooler Coil)	E3.1	120	1		0.80		Direct		DFA	Extend to junction box on cooler evaporator coil thru KEC furnished disconnect switch
3.2	Walk-In Cooler/Freezer (Cooler Condenser)	E3.2	208	1		5.70	0.50	Direct		Rooftop	Extend to equipment thru KEC furnished electrical disconnect mounted on equipment
3.3	Walk-In Cooler/Freezer (Freezer Coil Fans)	E3.3A	208	1		0.50		Direct		DFA	Extend from #E10.4 - See Walk-In Freezer Wiring Detail on FS3.0
3.3	Walk-In Cooler/Freezer (Freezer Coil Defrost)	E3.3B	208	1		4.90		Direct		DFA	Extend from #E10.4 - See Walk-In Freezer Wiring Detail on FS3.0
3.3	Walk-In Cooler/Freezer (Freezer Coil Drain Tape)	E3.3C	120	1		16.00		Direct		96"	Extend to receptacle mounted high on wall behind freezer evaporator coil
3.4	Walk-In Cooler/Freezer (Freezer Condenser)	E3.4	208	3		24.00		Direct		Rooftop	Extend to equipment thru KEC furnished electrical disconnect mounted on equipment
9	Countertop Food Processor	E9	120	1		7.00		Plug	5-15P	Conv	Service from convenience receptacle located in foodservice area
12	Garbage Disposal System	E12	480	3		2.20	2.00	Direct		16	Extend to equipment thru KEC furnished control panel
13	Ventless Door-Type Dishmachine	E13	480	3		21.40		Direct		16	Extend to equipment thru electrical disconnect
20	Nugget Ice Maker w/ Bin	E20	120	1		12.00		Plug	5-15P	48	Furnish horizontal receptacle when mounted above countertop
21	Countertop Mixer w/ Stand	E21	120	1		6.00		Plug	5-15P	48	Furnish horizontal receptacle when mounted above countertop
24	Countertop Microwave Oven	E24	120	1	2.00	20.00		Plug	5-20P	48	Furnish horizontal receptacle when mounted above countertop
25	Countertop Food Slicer	E25	120	1		3.00	0.33	Plug	5-15P	48	Furnish horizontal receptacle when mounted above countertop
34	Kitchen Ventilation System (Lights)	E34	120	1		1.50		Direct		DFA	Extend to junction box on top of exhaust ventilation hood
34.1	Kitchen Ventilation System (Exhaust Fan)	E34.1								Rooftop	Service for exhaust fan combined with service for make-up air fan
34.2	Kitchen Ventilation System (Make-Up Air Fan)	E34.2	480	3		14.30		Direct		Rooftop	Extend to equipment thru KEC furnished electrical disconnect mounted on equipment
34.3	Kitchen Ventilation System (Fire Suppression System)	E34.3	120	1		1.50		Direct		DFA	Extend to junction box on top of exhaust ventilation hood
35	6-Pan Combi Oven/Steamer (Upper)	E35A	480	3	9.00	11.00		Direct		48	Extend to equipment thru shunt trip circuit breaker
	6-Pan Combi Oven/Steamer (Lower)	E35B	480	3	9.00	11.00		Direct		48	Extend to equipment thru shunt trip circuit breaker
41	12-Gallon Kettle With Stand	E41	480	3	12.00	14.50		Direct		48	Extend to equipment thru shunt trip circuit breaker
42	Fryer Battery w/ Filtration	E42	120	1		6.80		Plug	5-15P	48	Extend to equipment thru shunt trip circuit breaker
43	Single Door Reach-In Freezer	E43	120	1		4.50	0.50	Plug	5-15P	48	Extend to equipment thru shunt trip circuit breaker
53	Countertop Induction Range	E53	120	1	1.80	15.00		Plug	5-15P	Conv	Service from convenience receptacle located in foodservice area
54	Countertop Digital Scale	E54	120	1		1.50		Plug	5-15P	Conv	Service from convenience receptacle located in foodservice area
55	8-Quart Countertop Mixer	E55	120	1		5.00	0.25	Plug	5-15P	Conv	Service from convenience receptacle located in foodservice area

GENERAL NOTES - POWER

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. 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.
3. LABEL EACH RECEPTACLE WITH THE PANEL NAME AND CIRCUIT NUMBER ON THE FACE OF EACH COVER PLATE WITH A TYPED LAMINATED LABEL.
4. PROVIDE "GFCI PROTECTED" LABEL ON COVER PLATE FOR ANY GFCI PROTECTED DEVICE.
5. 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.
6. REFER TO MECHANICAL PLANS FOR LOCATION OF MECHANICAL EQUIPMENT. LOCATE DISCONNECT SWITCHES PER NEC.
7. REFER TO "CONTROL SCHEMATICS" MECHANICAL DRAWINGS FOR ADDITIONAL CONTROL WIRING AND CONTROL CONNECTIONS.
8. 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.
9. FOR EXISTING RECEPTACLES TO BE REMOVED, REMOVE CONDUIT, BOX, AND WIREING COMPLETELY. REPAIR WALL PRIOR TO PAINTING. CONDUITS AND BOXES CAN REMAIN BEHIND FURRED PORTIONS OF WALLS. NO BLANK PLATES ARE TO BE VISIBLE UPON PROJECT COMPLETION.
10. REPLACE ALL EXISTING RECEPTACLES SHOWN TO REMAIN WITH NEW DEVICES AND FACEPLATES.
11. CIRCUIT NUMBERS SHOWN FOR EXISTING PANELBOARDS ARE NUMBERED SPARE/SPACE CIRCUITS. EXISTING CIRCUITS TO REMAIN ARE NOT TO BE AFFECTED BY THIS NUMBERING.

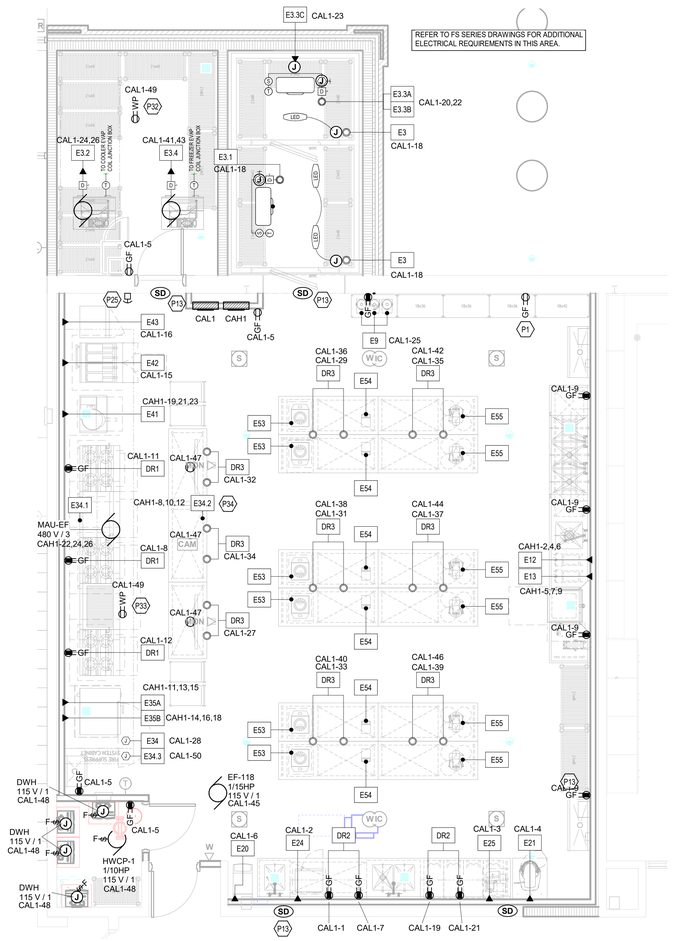
KEYNOTES

P1	PROVIDE NEW GFCI RECEPTACLE AT THIS LOCATION. CONNECT TO EXISTING CIRCUIT TIED BACK DURING DEMOLITION.
P12	CONNECT TO NEAREST RECEPTACLE CIRCUIT WITH 2#12, #12G IN 3/4"C.
P13	CONNECT ALL SMOKE DAMPERS IN UNITS A AND B OF THIS PROJECT TO AN AVAILABLE DEDICATED SPARE 20A CIRCUIT IN EXISTING PANEL 1WL3. PROVIDE A 20A BREAKER IF NECESSARY AND CONNECT WITH 2#12, #12G IN 3/4"C.
P18	PROVIDE NEW CEILING MOUNTED RACEWAY WITH 6 RECEPTACLES THE SAME DIMENSIONS AND AT THE SAME LOCATION AS THE PREVIOUS RACEWAY THAT WAS REMOVED. PROVIDE 3 CIRCUITS TO THE NEW PANEL C2, CONNECTING 2 RECEPTACLES TO EACH CIRCUIT. CONNECT WITH 2#12, #12G IN 3/4"C. UTILIZE EXISTING CONDUIT IF IT IS IN GOOD CONDITION.
P19	PROVIDE A NEW PANEL C2 AT THIS LOCATION, MATCHING THE DIMENSIONS AND PROPERTIES OF THE EXISTING PANEL THAT WAS REMOVED. PROVIDE A SURGE PROTECTIVE DEVICE IN THE PANEL IN AVAILABLE SPACE. LEAVE BREAKERS NO LONGER UTILIZED FOR CIRCUITS IN THE CEILING MOUNTED RACEWAYS AS SPARE.
P20	REPLACE EXISTING RECEPTACLES IN THIS SPACE WITH NEW DEVICES AND FACEPLATES.
P21	PROVIDE EXTENSION RINGS ON EXISTING RECEPTACLE BOXES TO EXTEND TO NEW WALL FACE. PROVIDE NEW DEVICE AND FACEPLATE.
P22	CONNECT NEW RECEPTACLE TO AVAILABLE SPARE 20A CIRCUIT IN PANELS IN ROOM C148. CONNECT WITH 2#12, #12G IN 3/4"C.
P23	PROVIDE NEW STAINLESS STEEL BLANK PLATE ON EMPTY BOX ON CMU WALL AT THIS LOCATION.
P25	CONNECT EMERGENCY STOP PUSHBUTTON TO SHUNT TRIP MAIN BREAKERS IN PANELBOARDS CAL1 AND CAH1.
P26	CONNECT NEW AIR COMPRESSOR AND NEW 60A DISCONNECT TO THE AIR COMPRESSOR CIRCUIT TIED BACK DURING DEMOLITION. EXTEND CIRCUIT AS NEEDED MATCHING EXISTING CONDUIT AND WIRE SIZES.
P27	CONNECT NEW AIR COMPRESSOR AND NEW 60A DISCONNECT TO AVAILABLE SPARE 60A SWITCH IN SWITCHBOARD B1HD1. CONNECT CIRCUIT WITH 3#6, #10G IN 1"C. PROVIDE 60A FUSES IN SWITCH AS REQUIRED.
P30	CONNECT NEW RECEPTACLE TO AVAILABLE SPARE 20A CIRCUIT IN PANEL C2 IN ROOM C143. CONNECT WITH 2#12, #12G IN 3/4"C.
P31	CONNECT NEW EXHAUST FAN TO AVAILABLE SPARE 20A CIRCUIT IN PANEL C2 IN ROOM C143. CONNECT WITH 2#12, #12G IN 3/4"C.
P32	PROVIDE RECEPTACLE ON ROOF, MOUNTED NEAR COOLER AND FREEZER CONDENSING UNITS.
P33	PROVIDE RECEPTACLE ON ROOF, MOUNTED NEAR MAU.
P34	CONNECT MAU-120V CONTROLS TO THE HOOD POWER CIRCUIT SHOWN CONNECTED TO ITEM E34. CONNECT WITH 2#12, #12G IN 3/4"C.
P38	FUEL OIL TANK LEAK DETECTION EQUIPMENT PROVIDED BY DIV 22. PROVIDE CONDUIT, WIRING, AND CONNECTIONS TO ALL EQUIPMENT AND THE TANK AS REQUIRED BY MANUFACTURER AND SHEET P4.02. PROVIDE POWER FROM AN AVAILABLE SPARE 20A BREAKER IN NEAREST 208/120V PANELBOARD. CONNECT WITH 2#12, #12G IN 3/4"C.



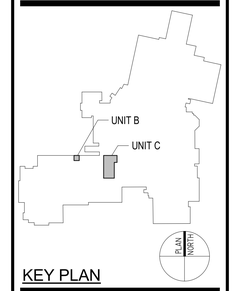
UNIT C - POWER PLAN

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



UNIT B - POWER PLAN

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



KEY PLAN

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE10000 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: AMN

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

UNIT B & C- POWER PLANS

E5.02

CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

317-848-0966 WWW.FHAI.COM

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

CONSULTANT

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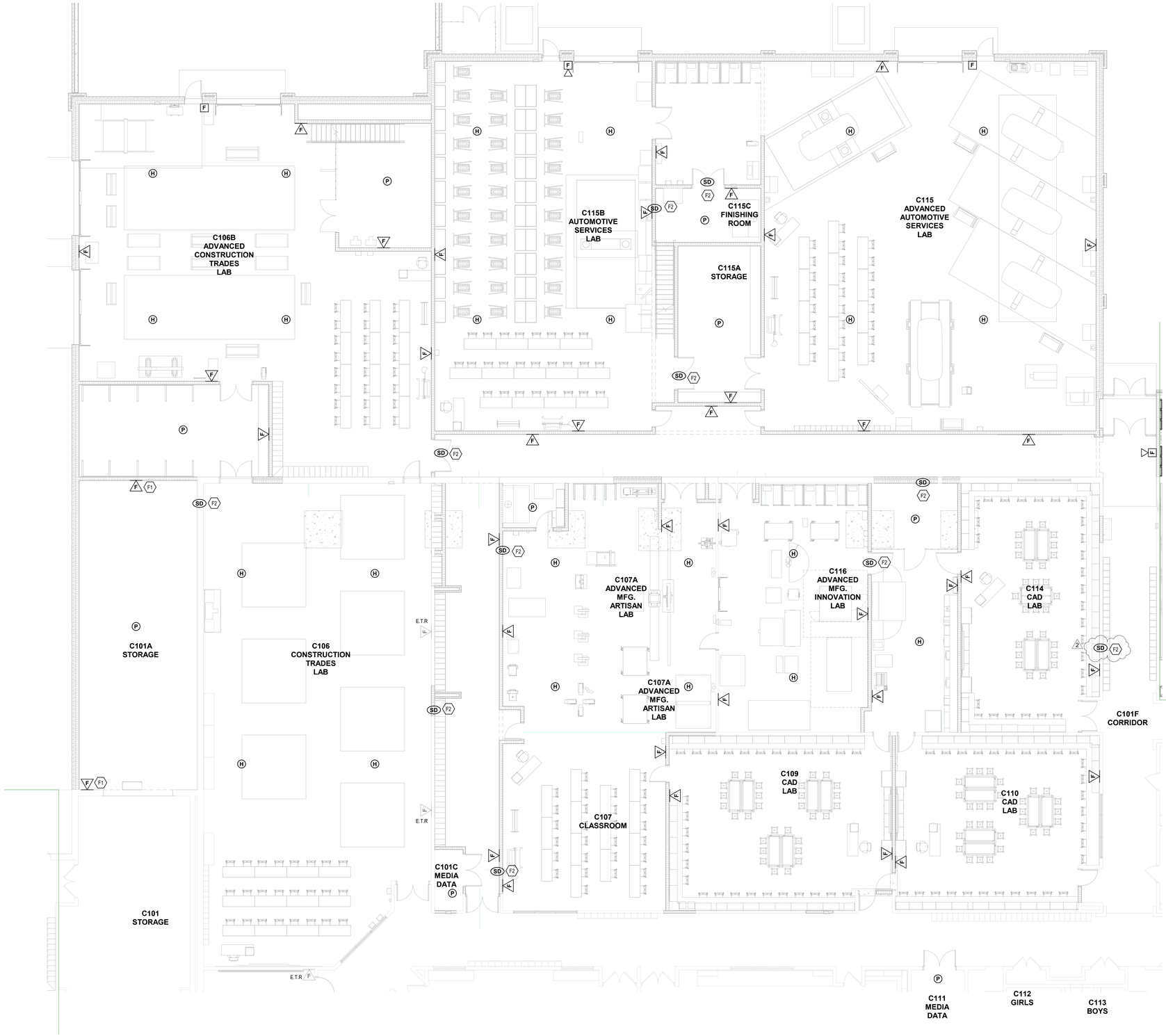
GENERAL NOTES - FIRE ALARM

1. QUANTITY AND LOCATION OF TAMPER AND FLOW SWITCHES IS FOR BIDDING PURPOSES ONLY. VERIFY EXACT QUANTITY AND LOCATIONS WITH SPRINKLER CONTRACTOR PRIOR TO FIRE ALARM SHOP DRAWING SUBMITTAL.

KEYNOTES	
F1	PROVIDE NEW NOTIFICATION DEVICE. CONNECT TO EXISTING NOTIFICATION CIRCUIT SERVING AREA.
F2	REFER TO SMOKE DAMPER DETAIL ON SHEET E1.01 FOR ALL SMOKE DAMPER INSTALLATION REQUIREMENTS.



UNIT A - FIRE ALARM PLAN

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

CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
CARMEL, IN 46032

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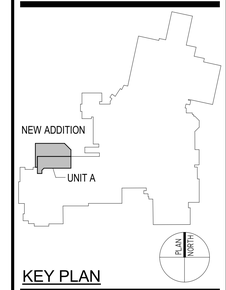
CONSULTANT



KEY PLAN

CONSTRUCTION DOCUMENTS

DRAWN BY: AMN

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	09/21/2023
2	ADDENDUM #2	10/05/2023

UNIT A - FIRE ALARM PLAN

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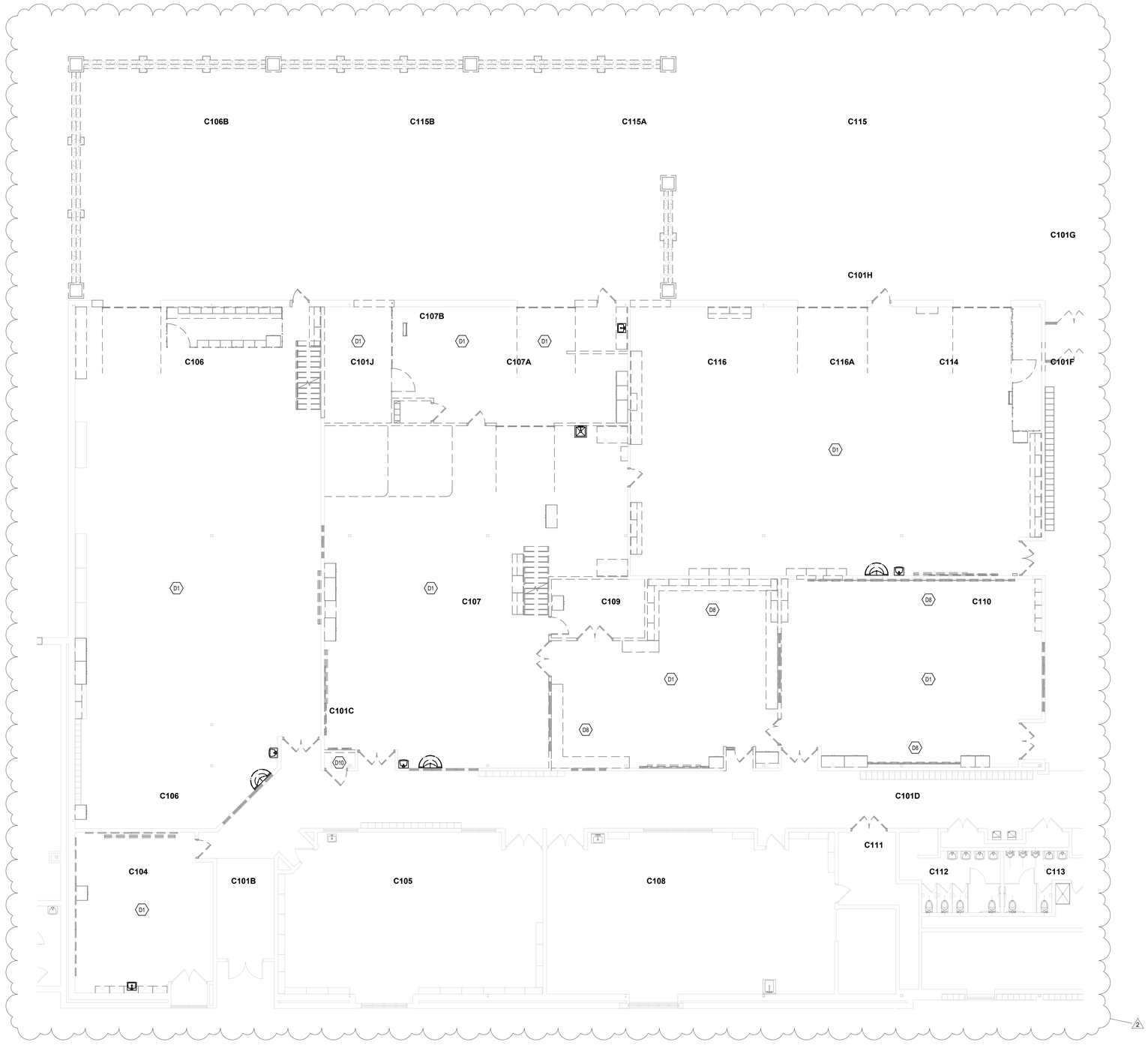
TECHNOLOGY PLAN NOTES

D1 REMOVE EXISTING WIRELESS ACCESS POINTS, DATA OUTLETS, TIE BACK AND PROTECT CABLING.

D8 DISCONNECT AND REMOVE RACEWAYS IN THIS SPACE. TIE BACK AND PROTECT CABLING FOR REUSE.

D10 DISCONNECT AND REMOVE DATA RACK RECEPTACLES IN THIS SPACE. TIE BACK AND PROTECT CABLING FOR REUSE. THIS ROOM AND NEW DATA ROOM. COORDINATE MOVEMENT TO NEW IDF C111 WITH OWNER



ROOM LEGEND - FIRST FLOOR UNIT C

ROOM NO.	ROOM NAME	AREA (SF)
C100	LOADING / RECEIVING	1202 SF
C100A	BREAK ROOM	640 SF
C100B	ELECTRICAL	825 SF
C100C	LAUNDRY	157 SF
C100D	TOILET	52 SF
C100E	TOILET	52 SF
C100F	SECURE STORAGE	91 SF
C100G	OFFICE	132 SF
C100H	KITCHEN	177 SF
C101	STORAGE	1015 SF
C101A	STORAGE	1287 SF
C101B	CORRIDOR	174 SF
C101C	MEDIA DATA	61 SF
C101D	YEARBOOK CLASSROOM / LAB	Not Placed
C101D	CORRIDOR	1860 SF
C101E	CORRIDOR	177 SF
C101F	CORRIDOR	976 SF
C101G	JOURNALISM CLASSROOM	Not Placed
C101G	VESTIBULE	70 SF
C101H	OFFICE	156 SF
C101H	CORRIDOR	992 SF
C101J	CORRIDOR	832 SF
C102	MENS TOILET	124 SF
C103	WOMENS TOILET	119 SF
C104	OFFICE	638 SF
C105	ELECTRONICS / PHYSICS	1251 SF
C106	CONSTRUCTION TRADES LAB	3699 SF
C106A	STORAGE	622 SF
C106B	ADVANCED CONSTRUCTION TRADES LAB	3867 SF
C107	CLASSROOM	1015 SF
C107A	ADVANCED MFG. ARTISAN LAB	1695 SF
C107B	FINISHING ROOM	97 SF
C108	GRAPHIC COMMUNICATIONS	1385 SF
C109	CAD LAB	1347 SF
C110	CAD LAB	1217 SF
C111	MEDIA DATA	83 SF
C111A	STORAGE	101 SF
C112	GIRLS	188 SF
C113	BOYS	163 SF
C114	CAD LAB	1188 SF
C115	ADVANCED AUTOMOTIVE SERVICES LAB	4790 SF
C115A	STORAGE	468 SF
C115B	AUTOMOTIVE SERVICES LAB	2828 SF
C115C	FINISHING ROOM	201 SF
C116	ADVANCED MFG. INNOVATION LAB	1278 SF
C116A	ADVANCED MFG. CLEAN LAB	762 SF
C117	CERAMIC CLASSROOM / LAB	1387 SF
C117A	STORAGE	145 SF
C117B	STORAGE / MATERIALS	150 SF
C118	INDEPENDENT STUDY / COMMERICAL ART	1425 SF
C119	PHOTOGRAPHY	992 SF
C119A	DARKROOM	309 SF
C120	COMPUTER ART ROOM	442 SF
C122	TEACHERS WORKROOM	672 SF
C122A	DEPT. HEAD OFFICE	104 SF
C123	CERAMICS CLASSROOM / LAB	1205 SF
C123A	STORAGE	145 SF
C123B	STORAGE / MATERIALS	150 SF
C124	CULINARY ARTS	1299 SF
C124A	CLOSET	39 SF
C124B	DRY GOODS	154 SF
C124C	WALK-IN	129 SF
C125	DRAWING CLASSROOM / LAB	1173 SF
C126	DRAWING CLASSROOM / LAB	1182 SF
C127	DRAWING CLASSROOM / LAB	1182 SF
C128	JEWELRY CLASSROOM / LAB	953 SF
C129	PHOTOGRAPHY	1023 SF
C129A	DARKROOM	232 SF
C131	CORRIDOR	1363 SF
C131A	STORAGE	166 SF
C131B	MEDIA DATA	60 SF
C131C	CORRIDOR	476 SF
C132	STUDIO	244 SF
C133	PODCAST	144 SF
C134	PASSAGE	36 SF
C135	STUDIO	63 SF
C136	STORAGE	105 SF
C136A	COMPUTER LAB	201 SF
C137	STUDIO	91 SF
C138	STUDIO	93 SF
C138A	PASSAGE	127 SF
C138B	STUDIO	54 SF
C138C	STUDIO	52 SF
C138D	STUDIO	52 SF
C138E	STUDIO	52 SF
C139	CLASSROOM	984 SF
C141	TV CLASSROOM	819 SF
C141A	STUDIO B	165 SF
C141B	OFFICE	91 SF
C142	STUDIO B	196 SF
C142A	ENGINEERING	114 SF
C143	STUDIO A	1026 SF
C144	TV CONTROL	251 SF
C144A	EQUIPMENT ROOM	120 SF
C145	COMPUTER CLASSROOM	851 SF
C145A	SECURE CLOSET	17 SF
C146	COMPUTER SERVER STORAGE	303 SF
C147	JOURNALISM CLASSROOM	1468 SF
C147A	OFFICE	136 SF
C148	ELECTRICAL ROOM	143 SF
C149	YEARBOOK CLASSROOM / LAB	1350 SF
C149A	PODCAST	147 SF
C150	TV-CPU LAB	714 SF
C151	MECHANICAL	5687 SF
C152	-	927 SF

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CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

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

PLAN NORTH

KEY PLAN

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE10000265 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: JJR
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/04/2023

UNIT A - FIRST FLOOR TECHNOLOGY DEMOLITION PLAN

TD.01

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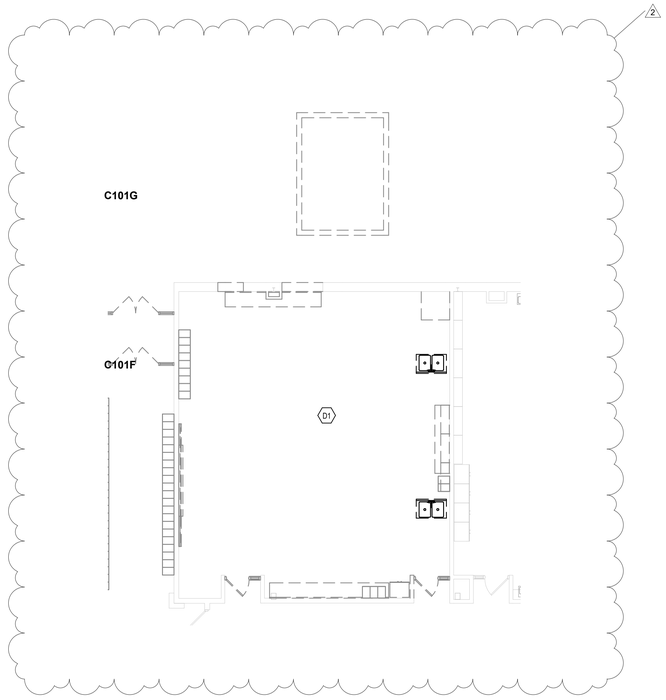

ROOM LEGEND - FIRST FLOOR UNIT C

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C124B	DRY GOODS	154 SF
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C131C	CORRIDOR	476 SF
C132	STUDIO	244 SF
C133	PODCAST	144 SF
C134	PASSAGE	36 SF
C135	STUDIO	63 SF
C136	STORAGE	105 SF
C136A	COMPUTER LAB	201 SF
C137	STUDIO	91 SF
C138	STUDIO	93 SF
C138A	PASSAGE	127 SF
C138B	STUDIO	54 SF
C138C	STUDIO	52 SF
C138D	STUDIO	52 SF
C138E	STUDIO	52 SF
C139	CLASSROOM	984 SF
C141	TV CLASSROOM	819 SF
C141A	STUDIO B	165 SF
C141B	OFFICE	91 SF
C142	STUDIO B	196 SF
C142A	ENGINEERING	114 SF
C143	STUDIO A	1026 SF
C144	TV CONTROL	251 SF
C144A	EQUIPMENT ROOM	120 SF
C145	COMPUTER CLASSROOM	851 SF
C145A	SECURE CLOSET	17 SF
C146	COMPUTER SERVER STORAGE	303 SF
C147	JOURNALISM CLASSROOM	1468 SF
C147A	OFFICE	136 SF
C148	ELECTRICAL ROOM	143 SF
C149	YEARBOOK CLASSROOM / LAB	1350 SF
C149A	PODCAST	147 SF
C150	TV-CPU LAB	714 SF
C151	MECHANICAL	5687 SF
C152	-	927 SF

TECHNOLOGY PLAN NOTES

D1 REMOVE EXISTING WIRELESS ACCESS POINTS, DATA OUTLETS, TIE BACK AND PROTECT CABLING.

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

520 EAST MAIN STREET
CARMEL, IN 46032

CARMEL CLAY SCHOOLS

ARCHITECT

FANNING HOWEY

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

PLAN NORTH

KEY PLAN

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER REGISTERED No. PE19930000 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWN BY: JJR
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/04/2023

UNIT B - FIRST FLOOR TECHNOLOGY DEMOLITION PLAN

TD.02

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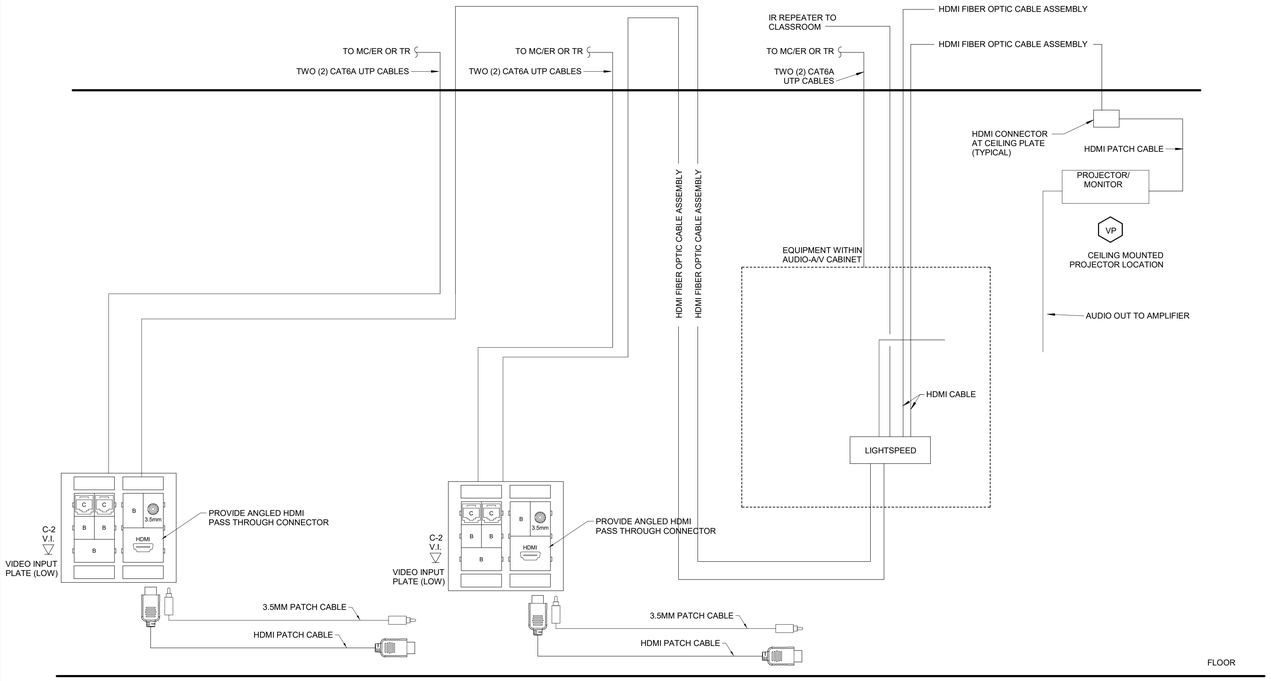
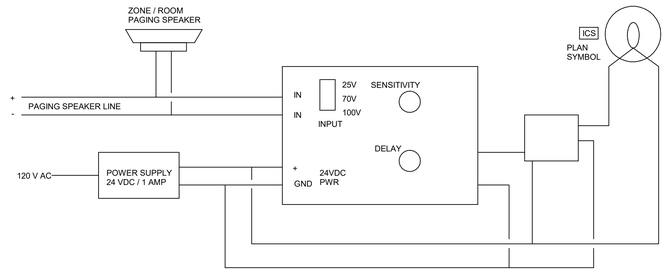


AV WIRING -SINGLE OR DUAL VIDEO INPUT TO SINGLE VIDEO PROJECTOR

1



PAGING SIGNAL TRIGGERS ROOM VISUAL PAGING STROBES.

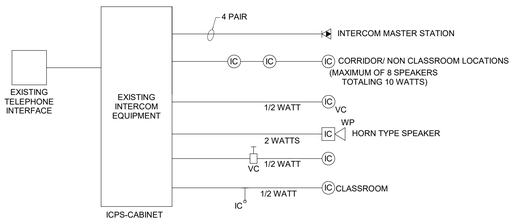
SET TO PROPER INPUT FOR PAGING SPEAKER SYSTEM (25V, 70V).
SET THRESHOLD LEVEL FOR MINIMUM PROGRAM AUDIO DETECTION TO TRIGGER.
SET DELAY CONTROL TO 10 SECONDS TO KEEP STROBES ACTIVE FOR 10 SECONDS UPON EACH ACTIVATION OF PAGING PROGRAM AUDIO.

EXISTING SYSTEM CONSISTS OF THE FOLLOWING:

PAGING TRIGGERED RELAY - RADIO DESIGN LABS TX-PCR1
INTERVAL ON RELAY - DAYTON 24EN69 SINGLE FUNCTION TIMING RELAY IN DAYTON RELAY SOCKET (5X852)
STROBE LIGHTS - POTTER SL-5A

2

VISUAL PAGING STROBE DETAIL



INTERCOMMUNICATIONS AND PROGRAM SYSTEM RISER

3

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CARMEL HIGH SCHOOL POLYTECHNIC ADDITION AND RENOVATION

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ARCHITECT

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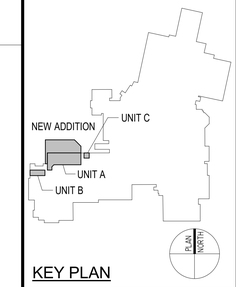

KEY PLAN

CONSTRUCTION DOCUMENTS

BRIAN W. BUTLER
REGISTERED
No.
PE19800
STATE OF
INDIANA
PROFESSIONAL ENGINEER

DRAWN BY: JJR
PROJECT NUMBER: 221165.01
PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
2	ADDENDUM #2	10/04/2023

TECHNOLOGY DETAILS

T1.03

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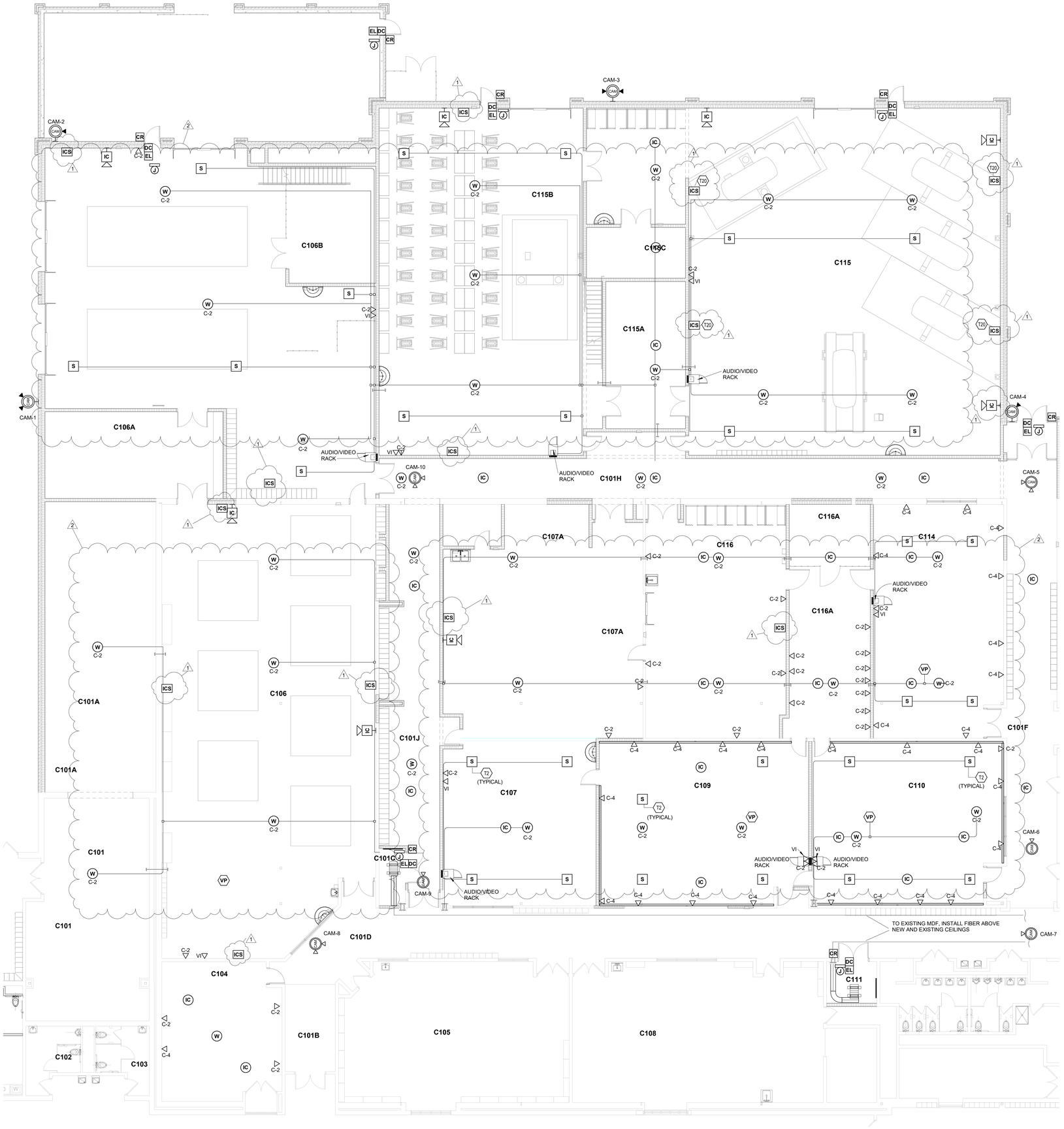

ROOM LEGEND - FIRST FLOOR UNIT C

ROOM NO.	ROOM NAME	AREA (SF)
C100	LOADING / RECEIVING	1202 SF
C100A	BREAK ROOM	640 SF
C100B	ELECTRICAL	825 SF
C100C	LAUNDRY	157 SF
C100D	TOILET	52 SF
C100E	TOILET	52 SF
C100F	SECURE STORAGE	91 SF
C100G	OFFICE	132 SF
C100H	KITCHEN	177 SF
C101	STORAGE	1015 SF
C101A	STORAGE	1287 SF
C101B	CORRIDOR	174 SF
C101C	MEDIA DATA	61 SF
C101D	YEARBOOK CLASSROOM / LAB	Not Placed
C101D	CORRIDOR	1860 SF
C101E	CORRIDOR	177 SF
C101F	CORRIDOR	976 SF
C101G	JOURNALISM CLASSROOM	Not Placed
C101G	VESTIBULE	70 SF
C101H	OFFICE	156 SF
C101H	CORRIDOR	992 SF
C101J	CORRIDOR	832 SF
C102	MENS TOILET	124 SF
C103	WOMENS TOILET	119 SF
C104	OFFICE	638 SF
C105	ELECTRONICS / PHYSICS	1251 SF
C106	CONSTRUCTION TRADES LAB	3699 SF
C106A	STORAGE	622 SF
C106B	ADVANCED CONSTRUCTION TRADES LAB	3867 SF
C107	CLASSROOM	1015 SF
C107A	ADVANCED MFG. ARTISAN LAB	1695 SF
C107B	FINISHING ROOM	97 SF
C108	GRAPHIC COMMUNICATIONS	1385 SF
C109	CAD LAB	1347 SF
C110	CAD LAB	1217 SF
C111	MEDIA DATA	83 SF
C111A	STORAGE	101 SF
C112	GIRLS	188 SF
C113	BOYS	163 SF
C114	CAD LAB	1188 SF
C115	ADVANCED AUTOMOTIVE SERVICES LAB	4790 SF
C115A	STORAGE	468 SF
C115B	AUTOMOTIVE SERVICES LAB	2828 SF
C115C	FINISHING ROOM	201 SF
C116	ADVANCED MFG. INNOVATION LAB	1278 SF
C116A	ADVANCED MFG. CLEAN LAB	762 SF
C117	CERAMIC CLASSROOM / LAB	1387 SF
C117A	STORAGE	145 SF
C117B	STORAGE / MATERIALS	150 SF
C118	INDEPENDENT STUDY / COMMERICAL ART	1425 SF
C119	PHOTOGRAPHY	992 SF
C119A	DARKROOM	309 SF
C120	COMPUTER ART ROOM	442 SF
C122	TEACHERS WORKROOM	672 SF
C122A	DEPT. HEAD OFFICE	104 SF
C123	CERAMICS CLASSROOM / LAB	1205 SF
C123A	STORAGE	145 SF
C123B	STORAGE / MATERIALS	150 SF
C124	CULINARY ARTS	1299 SF
C124A	CLOSET	39 SF
C124B	DRY GOODS	154 SF
C124C	WALK-IN	129 SF
C125	DRAWING CLASSROOM / LAB	1173 SF
C126	DRAWING CLASSROOM / LAB	1182 SF
C127	DRAWING CLASSROOM / LAB	1182 SF
C128	JEWELRY CLASSROOM / LAB	953 SF
C129	PHOTOGRAPHY	1023 SF
C129A	DARKROOM	232 SF
C131	CORRIDOR	1363 SF
C131A	STORAGE	166 SF
C131B	MEDIA DATA	60 SF
C131C	CORRIDOR	476 SF
C132	STUDIO	244 SF
C133	PODCAST	144 SF
C134	PASSAGE	36 SF
C135	STUDIO	63 SF
C136	STORAGE	105 SF
C136A	COMPUTER LAB	201 SF
C137	STUDIO	91 SF
C138	STUDIO	93 SF
C138A	PASSAGE	127 SF
C138B	STUDIO	54 SF
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C151	MECHANICAL	5687 SF
C152	-	927 SF

TECHNOLOGY PLAN NOTES

T2 ROUTE CABLING IN CONDUIT PARALLEL OR PERPENDICULAR TO BAR JOISTS. ALL CONDUIT AND BOXES SHALL BE INSTALLED SO THAT EQUIPMENT IS NO LOWER THAN BOTTOM CHORD OF TRUSS.

T20 SEE DETAIL 2/T1.03 FOR INTERCOM PAGING STROBE CABLING DETAIL.

CAMERA SCHEDULE

NUMBER	ROOM	MODEL	LENS	RESOLUTION	MOUNTING	NOTES
CAM-1	EXTERIOR	XND-8082RV		6MP	WALL	
CAM-2	EXTERIOR	XND-8082RV		6MP	WALL	
CAM-3	EXTERIOR	XND-8082RV		6MP	WALL	
CAM-4	EXTERIOR	XND-8082RV		6MP	WALL	
CAM-5	C101F	XND-8082RV		6MP	CEILING	
CAM-6	C101F	QND-8080R		5MP	CEILING	
CAM-7	C101D	QND-8080R		5MP	CEILING	
CAM-8	C101D	PNM-900VD	1	2X5MP	CEILING	
CAM-9	C101J	QND-8080R		5MP	CEILING	
CAM-10	C101H	PNM-12082RVD		2X6MP	CEILING	
CAM-11	C124	AG-UX90 Pro 4K UHD			CEILING	PANASONIC
CAM-12	RADIO HALL	PNM-900VD		2X5MP	CEILING	
CAM-13	RADIO HALL	QND-8080R		5MP	CEILING	

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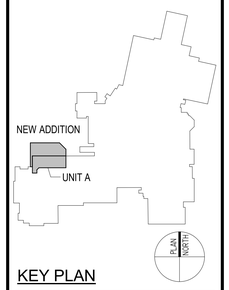

KEY PLAN

CONSTRUCTION DOCUMENTS

DRAWN BY: JJR

PROJECT NUMBER: 221165.01

PROJECT ISSUE DATE: 08/31/2023

REV. NO.	DESCRIPTION	DATE
1	ADDENDUM #1	9/21/2023
2	ADDENDUM #2	10/04/2023

UNIT A - FIRST FLOOR TECHNOLOGY PLAN

T3.01

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