November 14, 2024

ADDENDUM NO. 03 to the plans and specifications for MACOMB COUNTY – COUNTY WAREHOUSE – F & O AND PURCHASING OFFICE RENOVATION, CLINTON TOWNSHIP, MI, Architect's Project No. 242053, dated OCTOBER 31, 2024

Specification Sections: 01100, 07220, 08330, 08710, 10221, Revised Bid Form and Drawings G3.0, AD1.0, A1.0, A1.0A, A1.1, A1.2, A2.0, A3.0, A4.0, A4.1, A9.1, M1.10, M5.00, M6.00, E0.00, EP1.10, EL1.10 and E6.00 are being issued with this Addendum.

General Items: Macomb County F&O and Purchasing Questions and Answers.

ARCHITECTURAL SPECIFICATION ITEMS:

ITEM NO. AS1: Refer to Specification Section 01100 and revised bid form (Issued):
1. Alternate No.1 added

ITEM NO. AS2: Refer to Specification Section 07220 (Re-issued):
1. Composite Roof Panels

ITEM NO. AS3: Refer to Specification Section 08330 (Issued):
1. Rolling Grilles

ITEM NO. AS4: Refer to Specification Section 08710 (Issued):
1. Finish Hardware

ITEM NO. AS5: Refer to Specification Section 10221 (Issued):
1. Demountable Walls

ARCHITECTURAL DRAWING ITEMS:

ITEM NO. A1: Refer to Sheet G3.0 (Re-issued):
1. Revised sheet. Delete sheet previously issued and replace.

ITEM NO. A2: Refer to Sheet AD1.0 (Re-issued):
1. Reissued sheet. Delete sheet previously issued and replace.

ITEM NO. A3: Refer to Sheet A1.0 (Re-issued):
1. Revised sheet. Delete sheet previously issued and replace.

ITEM NO. A4: Refer to Sheet A1.0A (Re-issued):
1. Revised sheet. Delete sheet previously issued and replace.

ITEM NO. A5: Refer to Sheet A1.1 (Re-issued):
1. Revised sheet. Delete sheet previously issued and replace.

ITEM NO. A6: Refer to Sheet A1.2 (Re-issued):
1. Revised sheet. Delete sheet previously issued and replace.

ITEM NO. A7: Refer to Sheet A2.0 (Re-issued):
1. Revised sheet. Delete sheet previously issued and replace.

ITEM NO. A8: Refer to Sheet A3.0 (Re-issued):
1. Revised sheet. Delete sheet previously issued and replace.

ITEM NO. A9: Refer to Sheet A4.0 (Re-issued):
1. Revised sheet. Delete sheet previously issued and replace.

ITEM NO. A10: Refer to Sheet A4.1 (Re-issued):
1. Revised sheet. Delete sheet previously issued and replace.

ITEM NO. A11: Refer to Sheet A9.1 (Re-issued):
1. Revised sheet. Delete sheet previously issued and replace.

MECHANICAL ITEMS

ITEM NO. M1: Refer to sheet M1.10 Mechanical New Work First Floor Plan (Re-issued);
1. Adjusted layout of diffusers in vestibule. Added note to coordinate with architectural wall.

ITEM NO. M2: Refer to sheet M5.00 Mechanical Details (Re-issued);
1. Added roof curb capping detail.

ITEM NO. M3: Refer to sheet M6.00 Mechanical Schedules (Re-issued);
1. Adjusted Sk-1 model numbers
2. Adjusted airflows and discharge air temperature for tu-3
3. Added S-5

ELECTRICAL ITEMS

ITEM NO. E1: Refer to sheet E0.00 Electrical General Information and Lighting Schedule (Re-issued);
1. Modified Fixture G to “Damp Rated”.
2. Modified Fixture X.
3. Removed Fixture X1.
4. Modified Fixture X2.

ITEM NO. E2: Refer to sheet EP1.10 Electrical Power New Work First Floor Plan (Re-issued);
1. Removed data junction boxes as indicated on plans.
2. Added junction box for power for demountable wall as indicated on plans.
3. Adjusted power for small offices in purchasing as indicated on plans.
4. Modified keynote #1.
5. Modified keynote #7.

ITEM NO. E3: Refer to sheet EL1.10 Electrical Lighting New Work First Floor Plan (Re-issued);

1. Added EM (Fixture GE) to F/O entrance as indicated on plans.
2. Added downlights to purchasing entrance as indicated on plans.

ITEM NO. E4: Refer to sheet E6.00 Electrical Panel Schedules (Re-issued);

1. Added circuits to Panel RP-B.

END OF ADDENDUM NO. 3

Cc: Mary Schultz, Macomb County
Ben Treppa, Macomb County Facilities & Operations
Anthony Torelli, Macomb County
Dan Waters, Wakely Associates
Ron Syme, Wakely Associates

Macomb County Finance Department

Purchasing Division

November 14, 2024

TO: ALL BIDDERS

FROM: MARY SCHULTZ, SENIOR BUYER
PURCHASING DIVISION

SUBJECT: RFB 29-24
QUESTIONS AND ANSWERS
MC WAREHOUSE – F&O AND PURCHASING RENOVATIONS

1. Can a vendor bid on the painting and drywall only within the scope of the project, or if one company needs to handle the entire description of work? The company needs to handle the entire description of work.

2. There is to be self-leveling concrete topping, what is the extent of this work, at what locations? TBD in field. This is to level the floor as needed in all locations to get new flooring.

3. There is mounted dimensional lettering and metal graphics. Will these details and elevations be in upcoming addendums? – See addendum #3.

4. Will there be details and elevations at the vestibule that will have the etched glass? – See addendum #3.

5. Does this project require prevailing wages? - No

6. Please confirm if phasing is required for both areas of work? – Yes, project will be phased between F&O/Copy Room and Purchasing area.

7. Please confirm which rooms receive k13 spray foam insulation on the deck? – Clarified in addendum #3.

8. 10999 Miscellaneous specialties calls for (2) per building, can you confirm the quantity? Also, it talks about entrance flooring with a canopy, this isn't shown on the plans. – See addendum #3.

9. There are a few flooring clarifications needed. A104 tech floor plan and finish schedule don't align. Also, finish schedule for B115, B118, B119 don't match the floor plan. Also room A180 was added for carpet on the finish schedule but not on the plan itself. - See addendum #3.

10. What are the weekday and weekend hours in which the work is allowed to be performed? – Weekends – TBD with owner. Weekdays – 7am to 5pm.

11. Does the new entry require any foundations? – No, foundations are existing, and we are stacking new block on top of existing walls.

12. Does the new entry require any framing or steel? – Yes, covered in addendum #3.

13. What is the roofing material for the new entry? – New entry roof is standing seam metal roofing.

14. What are the sign details for the new entry? – See addendum #3.

15. The drawings are asking for an alternate for the mechanical unit screen, but there is no line for it on the bid form. Please provide this information. – See revised bid sheet in addendum #3.

16. The specification for SK-1 on print M6.00 states a single bowl Elkay #LRAD332155 sink - that sink is a double bowl sink. And the faucet shows a Kohler #K-5285-NA but that is a single bowl undermount sink. - Adjusted model numbers in schedules. Sink shall be under mount style and faucet model number was replaced. Refer to Addendum #3

17. I cannot find drawings which show details for # 2, 3, and 4. The only drawing that mentions dimensional signage is one drawing (below) which shows only an optional mounting detail. Please advise. – See addendum #3.

18. One of the hardware specs does not have the hardware set defined. It just notes hardware TBD. Please clarify? – See addendum #3.

19. Specification 93000 of the Project Manual - - Page 323 (C) Wall tile to be Portfolio / Random Linear Mosiac - Per Addendum #2 dated 11-11-24 Page A1.1 #9 Elevations Wall Tile to be 2x24 same as floor tile. Am I to assume #9. Elevations are “Typically“ for all 4 walls in bathroom or just the Wall shown? Please advise which is accurate. – See addendum #3. All walls in toilet rooms are to get tile wainscoting.

20. Specification page 323/324 (E) Understand #1 but, 2# Contradicts the elevations - Elevations per A.1.1 are to be 4’, #2 if I am reading correctly is asking for the Tile to be Full height? When using the Specified " Schulter ECK-E “part this is impossible to run – Schulter strip for top of wall tile wainscoting to be Laticrete l-shaped edge.

21. "Full Height " unless the tile is installed with this part. Per the elevations tile again is only to be installed 4' from the floor. Please explain what exactly is to be done. – That is correct, tile is to be a 4’ wainscoting. See typical detail 9 on A1.1 for all walls.

22. Specification page 324 (B) Border Profile #1 “Schluter Quad-EC Profile” does NOT exist in the Schluter book. #2 Instructions are not understandable? Please provide clarification and direction. – See question 20 for schulter strip.

23. What is the walk-off carpets specifications? – See addendum #3. 09680

24. What are the specifications for the (2) types of demountable partitions? – See addendum #3.

25. What is the hardware schedule for the doors? – Include an allowance of $20,000.00 for additional door hardware.

26. On sheet AD1.0 note 7 on 2/AD1.0 mentions an existing masonry wall where (2) window locations are to be cut open by the vestibule, but sheet A1.1 on 2/A1.1 mentioned wall type D1 which is new masonry wall. Which is it? – Revised wall note D1 on sheet A1.1. Wall is existing and not new.

27. Need further details on canopies and what is existing roof to new roof at sloped glass system? – See addendum #3.

28. What is the existing roof at existing RTU’s and proposed new location for RTU? – The existing roof is a built-up roofing system by Tremco that is out of warranty. The owner is open to other manufacturers.

29. Light fixture schedule has an “X” fixture which is an exit sign only and there are none showing in sheet EL1.10, however on that sheet are several symbols of Exit/Emergency Combo units. – See addendum #3.

30. Can I get a description of these combo units? – See addendum #3

31. What is the existing roof? Is it a gravel built up roof? Is it a ballasted EPDM roof? Is it under warranty? – See question number 28.

32. New entry on A4.0 with cable suspended canopy, but no waterproofing called out. Is there any? – Covered in addendum #3. The canopy and entry system has flashing and waterproofing as required for a watertight solution.

33. Is there a color selection for the casework and stone countertops? – Not yet

34. There is no random linear mosaic in Portfolio line. Only a 2x2 straight joint option, below is per the spec book. Please advise on how to proceed. – Delete accent tile and install the 24"X12" as shown on drawings.

C. Mosaic Ceramic Accent Wall Tile:

1. Shall meet requirements of TCA 137.1 and the requirements of this section.
2. Mosaic ceramic wall tile for Unisex Lavatories shall be:
   a. Daltile Portfolio - Random linear porcelain mosaic
      1. Color: TBD
      2. Size: Random linear
      3. Thickness: 5/16"
      4. Shade Variation: V4 random
      5. Available at Daltile, 24640 Drake Road, Farmington Hills, MI 48335. Contact: Megan Erickson, Email: megan.erickson@daltile.com Cell: 734-740-3078.

35. Per Drawing A1.2 Conference Room B119 & Print Room B 118 indicates new carpet, per drawing A9.1 Print Room B118 & Conference Room B119 indicates ETR, please clarify. – See addendum #3.

36. Per Drawing A1.2 Copy Room A120 does not indicate any flooring work to be done, per Drawing A9.1 Copy Room A120 indicates new carpet, please clarify. – Both drawings A1.2 and A9.1 show flooring as existing. There is no new flooring material being stored in that room. Just a new ceiling.

37. Per Drawing A1.2 Vestibule B115 indicates Walk Off Carpet, per Drawing A9.1 Vestibule B115 indicates Ceramic Tile, please clarify. – Walk off carpet is shown in both vestibules.

38. Per Drawing MD2.10 note #1 indicates to demo rooftop unit complete including all duct work, curb, controls, and accessories. Notes states coordinate with architectural for infill and seal roof weather tight. Per Drawing A1.0A no indication of any roof repairs is indicated, please clarify. – See addendum #3.

39. Per Drawing MD2.10 note #3 indicates to demo exhaust fan complete including all duct work, curb, controls, and accessories. Note states coordinate with architectural for infill and seal roof weather tight. Per Drawing A1.0A no indication of any roof repairs is indicated, please clarify. – See addendum #3.

40. Per Drawing MD2.10 note #2 indicates to demo the exhaust duct complete including all duct work, curb, controls, and accessories. Notes states coordinate with architectural for infill and seal roof weather tight. Per Drawing A1.0A no indication of any roof repairs is indicated, please clarify. – See answer to question 39.

41. The drawings state to figure the drywall as Abuse but the spec says Sound board for all office areas. They don't make a combined type, please clarify. – Covered in addendum #3. Drywall should be sound board.

42. Specifications call for stainless corner guards but don't appear on the plans, please clarify. – Provide stainless steel corner guards at all new/existing gyp. Brd. corners in walk areas.

43. Per the plan set, Tech A104 Room Finish Schedule is LVT, yet the Floor Finish Plan is Carpet, please clarify. – See addendum #3.

44. Regarding the trapezoid shapes on the RCP, will they be mounted to the deck or be suspended, please clarify. – They are suspended with a system manufactured by the ceiling manufacturer. See detail 14 on sheet A1.1.

45. In the area on the RCP area where the trapezoid shapes go above the 2x2 panels, please clarify if that wall is going to be framed to the deck. – The walls **do not** go to the underside of the deck in the facilities and operations side. Only in the purchasing side. See detail 15 on A1.1.

46. Per Drawings A1.1 and AD1.0, please clarify differences between wall type D1 and wall note 7. – See answer to question 26.

47. Per Drawing A2.0, please further clarify where the K13 is to be used. – See addendum #3.

48. Per Drawing A1.1 please further clarify note 1.10 regarding the opaque glass. – See addendum #3 and detail 2 on sheet A9.1.

49. Per Drawing A1.1 please further clarify the canopy for vestibule A103. – See addendum #3.

50. Per Drawing A1.1 please further clarify room A103 wall type D1. – See answer to question 26.

51. Per Drawing A1.1 please provide an elevation for the north and west wall for room A103. – See addendum #3.

52. Per Drawing A1.1 please provide refrigerator specifications. – Refrigerator provided by owner.

53. Per Drawing A4.0 please provide further details and clarifications. – See addendum #3.

54. Per Drawing A4.1 please provide further details and clarifications. – See addendum #3.

55. For the millwork will a 5-year warranty work no millworker company will provide a lifetime warranty. – 5 year warranty is acceptable.

56. Can you provide a finish schedule for the millwork solid surface and PLAM price varies so we will need a selection to be able to price. – Assume all standard price groups for quartz and P. Lam.

SECTION 01100 - ALTERNATES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

A. Attention is directed to Division 0, Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

1.02 DESCRIPTION OF WORK:

A. This section identifies each Alternate by number, and describes the basic changes to be incorporated into the work, only when the Alternate is made a part of the work by specific provisions in the Owner-Contractor Agreement.

B. Alternate schedule below is part of the Bidding Documents and will be considered in selection of Contractors and awarding contracts.

C. Unless otherwise provided, Owner will accept or reject alternates within thirty (30) days of date of contract. Owner reserves the right to reject any or all alternates.

1.03 ALTERNATES:

A. General:

1. The descriptions for each alternate listed in the schedule are primarily scope definitions, and do not necessarily detail the full range of materials and processes needed to complete the work as required.

2. Refer to applicable specification sections (Division 2 through 28), and to applicable drawings, for specific requirements of the work, regardless of whether references are so noted in description of each alternative.

3. Coordinate pertinent related work and modify surrounding work as required to properly integrate the work under each Alternate, and to provide the complete construction required by Contract Documents.

4. Referenced sections of specifications stipulate pertinent requirements for products and methods to achieve the work stipulated under each Alternate.

B. Schedule:

1. Alternate No. 1:

Provide Mechanical Unit Screen as shown on documents.

END OF SECTION 01100

SECTION 07220 – COMPOSITE ROOF PANELS

General

1.01.WORK INCLUDES

A. The work shall consist of covering all areas shown on the drawings with ventilated roof insulation

1.02.RELATED WORK

A. Specified elsewhere:
1. Section 074113.16 Metal Roofing over the ventilation insulation. Eave/intake vents.

1.03 SYSTEM DESCRIPTION

A. Description of system:
1. The ventilated roof insulation shall be a preassembled panel consisting of one layer of 7/16” oriented strand board, built-in ventilation space maintained by 1” wood spacers blocks, and polyisocyanurate insulation on the bottom.
2. **The Long Term Thermal Resistance (LTTR) R-Value of the ventilated roof insulation shall be no less than 32.90 for foam only.**
3. Wood panel edges shall be rabbetted to allow the foam edges to fit together while providing clearance between the wood sheathing on adjoining panels.
4. Foam sides and ends shall have a machined tongue and groove profile to reduce heat loss at the joints.

B. Performance Requirements:
1. The wood spacer blocks shall not exceed 8% of the panel area and shall leave 50% open for lateral (across the slope) ventilation. Spacer blocks shall not be over 12” apart in either direction.

2. The vent space shall provide a minimum of 10 sq. in. of Net Free Area per lineal foot of insulation along the 8' edge after deducting for the spacer blocks.
3. The foam insulation shall have a Flame Spread Rating of 55 (ASTM E84).

1.04. QUALITY ASSURANCE

A. The ventilated insulation shall be classified by Underwriters Laboratories Inc. as a shingle decking accessory for use with any Class A, B or C asphalt or metal shingles. Each bundle of ventilated panels shall bear an Underwriter Laboratory's label.

1.05. SUBMITTALS

A. The following will be submitted to the architect for approval:
Copies of the manufacturer's product information and installation instructions.
A sample with the edge profile specified and large enough to show the actual lateral spacing of the vent space supports. A manufacturer's dimensioned drawing showing how the 50% lateral ventilation is achieved. Calculations of spacer block percentage of panel area and the Net Free Area per Lin. Ft. of insulation after deducting for spacers.

1.06. DELIVERY AND STORAGE

A. The ventilated insulation shall be protected in the transit by plastic covers and by truck tarps. When material is stored at the jobsite, a reasonably level, drained storage area shall be provided. The insulation shall rest on firm blocking and shall be covered with tarps.

1.07. SEQUENCING/SCHEDULING

A. Erection of the ventilated insulation shall be coordinated with the roofing subcontractor so the roofing is applied as soon as possible after insulation is in place.

2. PRODUCT

2.01. Products shown below are acceptable provided they meet the requirements of this specification:

A. **ThermaCal® 1 Ventilated Roof Insulation Panels** by GAF, Tele: (800)766-3411, (800)522-9224, and www.gaf.com

B. **ThermaCal® Fasteners** as required per the appropriate fastener pattern.

3. EXECUTION

3.01. PREPARATION

A. The Structural roof deck shown in the plans shall be smooth and level and free of water or debris before the ventilated insulation is installed. Apply vapor retarder per manufacturers specifications.

3.02. SUBSTRATE INSTALLATION

A. Installation shall follow the manufacturer's written installation instructions.

B. Fasten with ThermaCal® Fasteners to the supporting roof deck shown in the plans.

C. Protect ventilated insulation work from exposure to moisture damage and deterioration, primarily by prompt installation of the roofing, sheet metal and waterproofing work.

END OF SECTION

SECTION 08330 – ROLLING GRILLES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Manual overhead rolling grilles.

B. Related Sections:
   1. 05500 Metal Fabrications. Door opening jamb and head members.
   2. 06100 Carpentry. Door opening jamb and head members.
   3. 08305 Access Doors and Panels. Access doors.
   4. 08710 Hardware. Masterkeyed cylinders.

C. Products That May Be Supplied, But Are Not Installed Under This Section:
   1. Manual release pull handle.

1.2 SYSTEM DESCRIPTION

A. Design Requirements:
   1. Cycle Life:
      a. Design grilles of standard construction for normal use of up to 5 cycles per day maximum.

1.3 SUBMITTALS

A. Reference Section 01340 “Shop Drawings, Product Data and Samples” for Submittal Procedures; submit the following items:
   1. Product Data.
   2. Shop Drawings: Include special conditions not detailed in Product Data. Show interface with adjacent work.
   3. Quality Assurance/Control Submittals:
      a. Provide proof of manufacturer ISO 9001:2008 registration.
      b. Provide proof of manufacturer and installer qualifications - see 1.4 below.
      c. Provide manufacturer's installation instructions.
   4. Closeout Submittals:
      a. Operation and Maintenance Manual.

b. Certificate stating that installed materials comply with this specification.

1.4 QUALITY ASSURANCE

A. Qualifications:
1. Manufacturer Qualifications: ISO 9001:2008 registered and a minimum of five years experience in producing grilles of the type specified.
2. Installer Qualifications: Manufacturer's approval.

1.5 DELIVERY STORAGE AND HANDLING

A. Reference Division 1 for Product Storage and Handling Requirements.

B. Follow manufacturer's instructions.

1.6 WARRANTY

A. Standard Warranty: Two years from date of shipment against defects in material and workmanship.

B. Maintenance: Submit for owner’s consideration and acceptance of a maintenance service agreement for installed products.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Manufacturer: Cornell Iron Works, Inc., Crestwood Industrial Park, Mountaintop, PA 18707. Telephone: (800) 233-8366, Fax: (800) 526-0841. Underwriters Laboratories, Inc. (UL), ISO 9001:2008 Registered.

1. Model: ESG10

B. Approved Equals:
1. The Cookson Company, Inc., Phoenix, AZ 85043, 800-390-8590
2. Amarr
3. Cloplay

2.2 MATERIALS

A. Curtain:
   1. ESG10 Straight Pattern
      a. Horizontal Rods: Solid 5/16 inch (8 mm) diameter, AISI 300 series stainless steel.
         1. Vertical Spacing: 2 inches (50.8 mm) on center.
      b. Vertical Chains: Grommetted stainless steel links, 3/4 inch (19 mm) wide, positioned by E-rings on 6 inch (152.4 mm)centers. Provide double E-rings on horizontal bars on both sides of end chains to retain curtain in guides.

   2. Bottom Bar: 2 x 3-1/2 inch (50.8 x 88.9 mm) extruded aluminum tubular section

   3. Finish:
      a. Stainless Steel Curtain with Stainless Steel Bottom Bar: Factory polished.

B. Guides, Wall Mounted: Heavy duty extruded aluminum sections with snap-on cover to conceal fasteners and polypropylene pile runners on both sides of curtain. Provide aluminum mounting angle as required for face of wall installation.
   1. Finish: Anodized Finish: Color to be selected from manufacturer’s standard color chart.

C. Counterbalance Shaft Assembly:
   1. Barrel: Steel pipe capable of supporting curtain load with maximum deflection of 0.03 inches per foot (2.5 mm per meter) of width.
   2. Spring Balance: Oil-tempered, heat-treated steel helical torsion spring assembly designed for proper balance of grille to ensure that maximum effort to operate will not exceed 25 lbs (110 N). Provide wheel for applying and adjusting spring torque.

D. Brackets: Fabricate from minimum 3/16 inch (4.76 mm) steel plate with permanently lubricated ball or roller bearings at rotating support points to support counterbalance shaft assembly and form end closures.

1. Finish: Phosphate treatment followed by a light gray baked-on polyester powder coat; minimum 2.5 mils (0.065 mm) cured film thickness.

2.3 ACCESSORIES

A. Locking:
1. Manual Push-Up: Keyed cylinder locking into both jambs operable from both sides of curtain.

2.4 OPERATION

A. Manual Push-Up: Provide pole with hook. Suitable for model ESG10 aluminum grilles up to 16’ (4.88 M) wide and up to 10’ (3.05 M) high.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine substrates upon which work will be installed and verify conditions are in accordance with approved shop drawings.

B. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates.

C. Commencement of work by installer is acceptance of substrate.

3.2 INSTALLATION

A. General: Install grille and operating equipment with necessary hardware, anchors, inserts, hangers and supports.

B. Follow manufacturer's installation instructions.

3.3 ADJUSTING

A. Following completion of installation, including related work by others, lubricate, test, and adjust grilles for ease of operation, free from warp, twist, or distortion.

3.4 CLEANING

A. Clean surfaces soiled by work as recommended by manufacturer.

B. Remove surplus materials and debris from the site.

3.5 DEMONSTRATION

A. Demonstrate proper operation to Owner's Representative.

B. Instruct Owner's Representative in maintenance procedures.

END OF SECTION

SECTION 08710 – FINISH HARDWARE

PART 1 - GENERAL

1.1 Refer to "General and Special Conditions", and "Instructions to Bidders", Division 1 of Specifications. Requirements of these Sections and the project drawings shall govern work in this section.

1.2 Work Included:

A. Furnish all items of Finish Hardware specified, scheduled, shown or required herein except those items specifically excluded from this section of the specification.

B. Related work:

1. Division 00 – Procurement and Contracting Requirements
2. Division 01 – General Requirements
3. Section 06100 – Carpentry
4. Section 08112 – Hollow Metal Work
5. Section 08210 – Wood Doors
6. Section 08410 – FRP Entrance Doors
7. Division 26 – Electrical

C. Specific Omissions: Hardware for the following is specified or indicated elsewhere, unless specifically listed in the hardware sets:

1. Cabinet Hardware.
2. Signs, except as noted.
3. Folding partitions, except cylinders where detailed.
4. Access doors and panels
5. Overhead and Coiling doors

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1.3 Quality Assurance

A. Requirements of Regulatory Agencies:

1. Furnish finish hardware to comply with the requirements of laws, codes, ordinances, and regulations of the governmental authorities having jurisdiction where such requirements exceed the requirements of the Specifications.
2. Furnish finish hardware to comply with the requirements of the regulations for public building accommodations for physically handicapped persons of the governmental authority having jurisdiction and to comply with Americans with Disabilities Act.
3. Provide hardware for fire-rated openings in compliance with NFPA 80 and state and local building code requirements. Provide only hardware that has been tested and listed by UL for types and sizes of doors required and complies with requirements of door and door frame labels.

B. Hardware Supplier:

1. Shall be an established firm dealing in contract builders' hardware. He must have adequate inventory, qualified personnel on staff and be located within 100 miles of the project. The distributor must be a factory-authorized dealer for all materials required. The supplier shall be or have in employment an Architectural Hardware Consultant (AHC).

C. Electrified Door Hardware Supplier:

1. Shall be an experienced door hardware supplier who has completed projects with electrified door hardware similar in material, design, and extent to that indicated for this project, whose work has resulted in construction with a record of successful in-service performance, and who is acceptable to manufacturer of primary materials.
2. Shall prepare data for electrified door hardware, including shop drawings, based on testing and engineering analysis of manufacturer's standard units

in assemblies similar to those indicated for this project.
3. Shall have experience in providing consulting services for electrified door hardware installations.

D. Pre-installation Meeting:

1. Before hardware installation, General Contractor will request a hardware installation meeting be conducted on the installation of hardware; specifically that of locksets, closers, exit devices, overhead stops and coordinators. Manufacturer's representatives of the above products, in conjunction with the hardware supplier for the project, shall conduct the meeting. Meeting to be held at job site and attended by installers of hardware for aluminum, hollow metal and wood doors. Meeting to address proper coordination and installation of hardware, per finish hardware schedule for this specific project, by using installation manuals, hardware schedule, templates, physical product samples and installation videos.
2. When any electrical or pneumatic hardware is specified this meeting shall also include the following trades/installers: Electrical, Security, Alarm systems and Architect.
3. Convene one week or more prior to commencing work of this Section.
4. The Hardware Supplier shall include the cost of this meeting in his proposal.

E. Manufacturer:

1. Obtain each type of hardware (latch and locksets, hinges, closers, etc.) from a single manufacturer, although several may be indicated as offering products complying with requirements.
2. Provide electrified door hardware from same manufacturer as mechanical door hardware, unless otherwise indicated.

1.4 Submittals:

A. Hardware Schedule

1. Submit number of Hardware Schedules as directed in Division 1.
2. Follow guidelines established in Door & Hardware Institute Handbook (DHI) Sequence and Format for the Hardware Schedule unless noted otherwise.
3. Schedule will include the following:
   a. Door Index including opening numbers and the assigned Finish Hardware set.
   b. Preface sheet listing category only and manufacturer's names of items being furnished as follows:

CATEGORY	SPECIFIED	SCHEDULED
Hinges	Manufacturer A	Manufacturer B
Lock sets	Manufacturer X	Manufacturer X
Kick Plates	Open	Manufacturer Z

   c. Hardware Locations: Refer to Article 3.1 B.2 Locations.
   d. Opening Description: Single or pair, number, room locations, hand, active leaf, degree of swing, size, door material, frame material, and UL listing.
   e. Hardware Description: Quantity, category, product number, fasteners, and finish.
   f. Headings that refer to the specified Hardware Set Numbers.
   g. Scheduling Sequence shown in Hardware Sets.
   h. Product data of each hardware item, and shop drawings where required, for special conditions and specialty hardware.
   i. Electrified Hardware system operation description.
   j. "Vertical" scheduling format only. "Horizontal" schedules will be returned "Not Approved."
   k. Typed Copy.
   l. Double-Spacing.

m. 8-1/2 x 11 inch sheets
n. U.S. Standard Finish symbols or BHMA Finish symbols.

B. Product Data:

1. Submit, in booklet form Manufacturers Catalog cut sheets of scheduled hardware.
2. Submit product data with hardware schedule.

C. Samples:

1. Prior to submittal of the final hardware schedule and prior to final ordering of finish hardware, submit one sample, if required, of each type of exposed hardware unit, finished as required and tagged with full description for coordination with schedule.
2. Samples will be returned to the supplier. Units, which are acceptable and remain undamaged through submittal, review and field comparison procedures may, after final check of operation, be used in the work, within limitations of keying coordination requirements.

D. Key Schedule:

1. Submit detailed schedule indicating clearly how the Owner's final keying instructions have been followed.
2. Submit as a separate schedule.

E. Electrified Hardware Drawings:

1. Submit elevation drawings showing relationship of all electrical hardware components to door and frame. Indicate number and gage of wires required.
   a. Include wiring drawing showing point to point wire hook up for all components.
   b. Include system operations descriptions for each type of opening; describe each possible condition.

F. Submit to General Contractor, the factory order acknowledgement numbers for the various hardware items to be used on the project. The factory order acknowledgement numbers shall help to facilitate and expedite any service that may be required on a particular hardware item.

General Contractor shall keep these order acknowledgement numbers on file in the construction trailer.

1.5 Product Delivery, Storage, and Handling:

A. Label each item of hardware with the appropriate door number and Hardware Schedule heading number, and deliver to the installer so designated by the contractor.

1.6 Existing Conditions:

A. Where existing doors, frames and/or hardware are to remain, conditions, preparations and functions shall be field verified to confirm compatibility with specified hardware. Where any incompatibility is discovered, notify the contractor or construction manager immediately and provide a suggested solution based on industry standard business practices.

1.7 Warranties:

A. Refer to Division 1 for warranty requirements.

B. Special Warranty Periods:

1. Closers shall carry manufacturer's 30-year warranty against manufacturing defects and workmanship.
2. Locksets shall carry manufacturer's 3-year warranty against manufacturing defects and workmanship.
3. Exit Devices shall carry manufacturer's 10-year warranty against manufacturing defects and workmanship.
4. Continuous gear hinges shall carry manufacturer's lifetime warranty to be free from defects in material and workmanship.
5. Balance of items shall carry a manufacturer's 1-year warranty against manufacturing defects and workmanship.

C. During the warranty period, replace defective work, including labor, materials and other costs incidental to the work.

PART 2 - PRODUCT

2.1 Furnish each category with the products of only one manufacturer unless specified otherwise; this requirement is mandatory whether various manufacturers are listed or not.

2.2 Provide the products of manufacturer designated or if more than one manufacturer is listed, the comparable product of one of the other manufacturers listed. Where only one manufacturer or product is listed, it is understood that this is the owner's Building Standard and "no substitution" is allowed.

A. Hinges:

1. Furnish hinges of class and size as listed in sets.
2. Numbers used are Ives (IVE).
3. Products of a BHMA member are acceptable.

B. Continuous Gear Hinge:

1. 6063-T6 aluminum alloy, anodized finish (cap on entire hinge painted if specified). Manufacture to template, uncut hinges non-handed, pinless assembly, three interlocking extrusions, full height of door and frame, fasteners 410 stainless steel plated and hardened. Anodizing of material shall be done after fabrication of components so that all bearing slots are anodized.
2. Length: 1" less than door opening height. Fastener 12-24 x 1/2" #3 Phillips keen form stainless steel self-tapping at aluminum and hollow metal doors, 12-1/2" #3 Philips, flathead full thread at wood doors.
3. Furnish fire rated hinges "FR" at labeled openings.

4. Numbers used are Ives.
   a. For Aluminum frames;
      1) Ives 112XY/224XY
      2) Equal products by Pemko & Select will also be accepted.

C. Locksets and Latchsets - Mortise Type:

1. Locksets shall be manufactured from heavy gauge steel, minimum lockcase thickness 1/8", containing components of steel with a zinc dichromate plating for corrosion resistance.
2. Locks are to have a standard 2 ¾" backset with a full ¾" throw two-piece stainless steel mechanical anti-friction latchbolt. Deadbolt shall be a full 1" throw, constructed of stainless steel.
3. Lockcase shall be easily handed without chassis disassembly by removing handing screw on lockcase and installing in opposite location on reverse side. Changing of door hand bevel from standard to reverse hand shall be done by removing the lockcase scalp plate, and pulling and rotating the latchbolt 180 degrees.
4. Lock trim shall be through-bolted to the door to assure correct alignment and proper operation. Lever trim shall have external spring cage mechanism to assist in support of the lever weight.
5. Function numbers are Schlage.
   a. Schlage L9000
6. Lockset Trim:
   a. Schlage 03N
7. Provide strikes with extended lips where required to protect trim from being marred by latch bolt. Provide strike lips that do not project more than 1/8" beyond door frame trim at single doors and have 7/8" lip to center at pairs of 1-3/4" doors.

D. Exit Devices:

1. Exit devices shall be touchpad style, fabricated of brass, bronze, stainless steel, or aluminum, plated to the standard architectural finishes to match the balance of the door hardware.

2. Provide cylinder dogging on panic exit hardware where noted in hardware sets.
3. Exit devices shall be UL listed panic exit hardware. All exit devices for fire rated openings shall be UL labeled fire exit hardware.
4. Von Duprin 98 Series. Series and function numbers as listed in sets.
5. Trim:
   a. As specified in sets.
   b. Levers to match lockset design where specified.

E. Auto Operators/Closers:

1. Door closers shall have fully hydraulic, full rack and pinion action with a high strength cast iron cylinder. Cylinder body shall be 1 ½" in diameter, and double heat treated pinion shall be 11/16" in diameter with double D slab drive arm connection.
2. Hydraulic fluid shall be of a type requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to –30 degrees F.
3. Spring power shall be continuously adjustable over the full range of closer sizes, and allow for reduced opening force for the physically handicapped. Hydraulic regulation shall be by tamper-proof, non-critical valves. Closers shall have separate adjustment for latch speed, general speed, and backcheck.
4. All closers shall have solid forged steel main arms (and forged forearms for parallel arm closers).
5. All surface mounted mechanical closers shall be certified to exceed ten million (10,000,000) full load cycles by a recognized independent testing laboratory.
6. Closers will have Powder coating finish certified to exceed 100 hours salt spray testing by ETL, an independent testing laboratory used by BHMA for ANSI certification.
7. Refer to door and frame details and furnish accessories such as drop plates, panel adapters, spacers and supports as required to correctly install door closers. State degree of door swing in the hardware schedule.
8. LCN Series as listed in sets.

F. Overhead Holders and Stops:

1. Type, function and fasteners must be same as Glynn-Johnson specified. Size per manufacturer's selector chart. Plastic end caps, hold open mechanisms and shock blocks are not allowed. End caps must be finished same as balance of unit.
2. Manufacture products using base material of Brass/Bronze for US3, US4, & US10B finished products and 300 Stainless Steel for US32 & US32D finished products.
3. Type, function, and fasteners must be the same as Glynn-Johnson specified. Size per manufacturer's selector chart.
   a. Glynn-Johnson

G. Kick Plates:

1. Furnish .050 inches thick, beveled four sides, countersunk fasteners, 10" high x door width less 2" at single doors and less 1" at pairs. Where glass or louvers prevent this height, supply with height equal to height of bottom rail less 2”.
2. Any BHMA manufacturing product meeting above is acceptable.

H. Wall Stops:

1. Provide with threaded studs and expansion shields for masonry wall construction.
   a. Ives WS443/WS447
   b. BHMA L12021

I. Thresholds:

1. 1/4" high - 6" wide. Cope at jambs.
2. Furnish full wall opening width when frames are recessed.
3. Cope in front of mullions if thresholds project beyond door faces.
4. Furnish with non-ferrous Stainless Steel Screws and Lead Anchors.
   a. Zero as listed in sets
   b. Equal of NGP or Reese

J. Door Sweeps:

1. Surface Sweeps:
   a. Zero as listed in sets
   b. Equal of NGP or Reese

K. Miscellaneous:

1. Furnish items not categorized in the above descriptions but specified by manufacturer's names in Hardware Sets.

L. Fasteners:

1. Furnish fasteners of the proper type, size, quantity and finish. Use machine screws and expansion shields for attaching hardware to concrete or masonry, and wall grip inserts at hollow wall construction. Furnish machine screws for attachment to reinforced hollow metal doors and frames and reinforced aluminum doors and frames. Furnish full thread wood screws for attachment to solid wood doors and frames. "TEK" type screws are not acceptable.
2. **Sex bolts will not be permitted on reinforced metal doors or wood doors where blocking is specified.**

2.3 Finishes:

A. Generally, Dull Chrome, US26D / BHMA 626. Provide finish for each item as indicated in sets.

2.4 Templates and Hardware Location:

A. Furnish hardware made to template. Supply required templates and hardware locations to the door and frame manufacturers.

B. Furnish metal template to frame/door supplier for continuous hinge.

C. Refer to Article 3.1 B.2, Locations, and coordinate with templates.

2.5 Cylinders and Keying:

A. All cylinders for this project will be supplied by one supplier regardless of door type and location.

B. The Finish Hardware supplier will meet with Architect and/or Owner to finalize keying requirements and obtain keying instructions in writing.
   1. Supplier shall include the cost of this service in his proposal.

C. Provide a cylinder for all hardware components capable of being locked.

D. Provide cylinders master and grand master keyed to an existing Schlage Primus FSIC (Full Size Interchangeable Core) system according to Owner's instructions. Provide change keys, master keys and grand master keys as required by Owner.

PART 3 - EXECUTION

3.1 Installation

A. General:

   1. Install hardware according to manufacturers installations and template dimensions. Attach all items of finish hardware to doors, frames, walls, etc. with fasteners furnished and required by the manufacture of the item.
   2. Provide blocking/reinforcement for all wall mounted Hardware.
   3. Reinforced hollow metal doors and frames and reinforced aluminum door and frames will be drilled and tapped for machine screws.
   4. Solid wood doors and frames: full thread wood screws. Drill pilot holes before inserting screws.
   5. Continuous gear hinges attached to hollow metal doors and frames and aluminum doors and frames: 12-24 x 1/2" #3 Phillips Keenform self-tapping. Use #13 or 3/16 drill for pilot.

6. Continuous Gear Hinges require continuous mortar guards of foam or cardboard 1/2" thick x frame height, applied with construction adhesive.
7. Install weather-strip gasket prior to parallel arm closer bracket, rim exit device or any stop mounted hardware. Gasket to provide a continuous seal around perimeter of door opening. Allow for gasket when installing finish hardware. Door closers will require special templating. Exit devices will require adjustment in backset.

B. Locations:

1. Dimensions are from finish floor to center line of items.
2. Include this list in Hardware Schedule.

CATEGORY	DIMENSION
Hinges	Door Manufacturer's Standard
Levers	Door Manufacturer's Standard
Exit Device Touchbar	Per Template

C. Field Quality Inspection:

1. Inspect material furnished, its installation and adjustment, and instruct the Owner's personnel in adjustment, care and maintenance of hardware.
2. Locksets and exit devices shall be inspected after installation and after the HVAC system is in operation and balanced, to insure correct installation and proper operation.
3. Closers shall be inspected and adjusted after the HVAC system is in operation and balanced, to insure correct installation and proper operation.
4. A written report stating compliance, and also locations and kinds of noncompliance shall be forwarded to the Architect with copies to the Contractor, hardware distributor, hardware installer and building owner.

D. Technical and Warranty Information:

1. At the completion of the project, the technical and warranty information coalesced and kept on file by the General Contractor shall be given to the Owner or Owner's Agent. In addition to both the technical and warranty information, all factory order acknowledgement numbers supplied to the General Contractor during the construction period shall be given to the Owner or Owner's Agent. The warranty information and factory order acknowledgement numbers shall serve to both expedite and properly execute any warranty work that may be required on the various hardware items supplied on the project.
2. Submit to General Contractor, two copies each of parts and service manuals and two each of any special installation or adjustment tools. Include for locksets, exit devices, door closers and any electrical products.

3.2 Hardware Sets:

Hardware Group No. 01

For use on Door #(s):

A104 A108A A108B A109 A110 A111A
A111B A116

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
	DOOR & HARDWARE	BY PARTITION MANUFACTURER		B/O

Hardware Group No. 02

For use on Door #(s):

B101 B103 B104 B107 B110 B112 B113

Provide each SGL door(s) with the following:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
	DOOR & HARDWARE	BY SLIDING DOOR MANUFACTURER		B/O

Hardware Group No. 03

For use on Door #(s):

A103

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
1	EA	CONT. HINGE	224XY TWP CON		✓	628	IVE
1	EA	ELEC FIRE EXIT HARDWARE	RX-QEL-98-L-F-03		✓	626	VON
1	EA	PRIMUS RIM CYLINDER	20-757			626	SCH
1	EA	SURFACE CLOSER	4111 CUSH MC			689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS			630	IVE
1	EA	GASKETING	488SBK PSA			BK	ZER
1	EA	CARD READER/ACCESS CONTROL	BY SECURITY CONTRACTOR		✓		B/O
1	EA	DESK MOUNT BUTTON	660-PB (AT RECEPTION DESK)		✓	628	SCE
1	EA	DOOR CONTACT	679-05 (HM/WD AS REQ'D)		✓	BLK	SCE
1	EA	POWER SUPPLY	PS902 900-2RS		✓	LGR	SCE

DOOR NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL TO READER OR DESK MOUNTED PUSH BUTTON MOMENTARILY RETRACTS LATCH ALLOWING ENTRY. FREE EGRESS AT ALL TIMES.

Hardware Group No. 04

For use on Door #(s):
B102

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	FIRE EXIT HARDWARE	98-L-NL-F-03		626	VON
1	EA	PRIMUS RIM CYLINDER	20-757		626	SCH
1	EA	SURFACE CLOSER	4111 EDA MC		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS443/447		626	IVE
1	EA	GASKETING	488SBK PSA		BK	ZER

Hardware Group No. 05

For use on Door #(s):
A113

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	PRIVACY LOCK W/ OUTSIDE INDICATOR	L9040 03N 09-544 OS-OCC		626	SCH
1	EA	SURFACE CLOSER	4111 EDA MC		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS443/447		626	IVE
1	EA	GASKETING	488SBK PSA		BK	ZER

Hardware Group No. 06

For use on Door #(s):
B117

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	PRIVACY LOCK W/ OUTSIDE INDICATOR	L9040 03N 09-544 OS-OCC		626	SCH
1	EA	SURFACE CLOSER	4011 MC		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS443/447		626	IVE
1	EA	GASKETING	488SBK PSA		BK	ZER

Hardware Group No. 07

For use on Door #(s):
A115

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	INSTITUTION LOCK	L9082J 03N		626	SCH
2	EA	PRIMUS CORE	20-740		626	SCH
1	EA	SURFACE CLOSER	4111 EDA MC		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS443/447		626	IVE
1	EA	GASKETING	488SBK PSA		BK	ZER

Hardware Group No. 08

For use on Door #(s):
A119

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	OFFICE/ENTRY LOCK	L9050J 03N 09-544		626	SCH
1	EA	PRIMUS CORE	20-740		626	SCH
1	EA	WALL STOP	WS443/447		626	IVE

Hardware Group No. 09

For use on Door #(s):
B119

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	CLASSROOM LOCK	L9070J 03N		626	SCH
1	EA	PRIMUS CORE	20-740		626	SCH
1	EA	WALL STOP	WS443/447		626	IVE

Hardware Group No. 10

For use on Door #(s):
B118

Provide each SGL door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
3	EA	HINGE	5BB1HW 4.5 X 4.5 NRP		652	IVE
1	EA	STOREROOM LOCK	L9080J 03N		626	SCH
1	EA	PRIMUS CORE	20-740		626	SCH
1	EA	SURFACE CLOSER	4011 MC		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS443/447		626	IVE
1	EA	GASKETING	488SBK PSA		BK	ZER

Hardware Group No. 11

For use on Door #(s):
B115A

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
2	EA	CONT. HINGE	112XY TWP CON		628	IVE
1	EA	FIXED MULLION	BY DOOR/FRAME MANUFACTURER			B/O
1	EA	ELEC PANIC HARDWARE	RX-QEL-98-EO		626	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-98-NL-OP-110MD		626	VON
1	EA	PRIMUS RIM CYLINDER	20-757		626	SCH
2	EA	FLUSH PULL	BY DOOR/FRAME MANUFACTURER			B/O
2	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4021 MC		689	LCN
1	EA	SURF. AUTO OPERATOR	4642		689	LCN
1	EA	TJ MOUNTING PLATE	4020-18G (AS REQ'D)		689	LCN
1	EA	ACTUATOR BUTTON	8310-853T		630	LCN
1	EA	ACT. MOUNT BOX	8310-867S			LCN
1	EA	GASKETING/WEATHERSTRIPPING	BY DOOR/FRAME MANUFACTURER			B/O
1	EA	CARD READER/ACCESS CONTROL	BY SECURITY CONTRACTOR			B/O
1	EA	DESK MOUNT BUTTON	660-PB (AT RECEPTION DESK)		628	SCE
2	EA	DOOR CONTACT	679-05 (HM/WD AS REQ'D)		BLK	SCE
1	EA	POWER SUPPLY	PS902 900-2RS		LGR	SCE

DOOR NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL TO READER OR DESK MOUNTED PUSH BUTTON MOMENTARILY RETRACTS LATCH ALLOWING ENTRY. OPENING EQUIPPED WITH AUTOMATIC OPERATOR. PRESSING EITHER ENABLED ACTUATOR WILL TEMPORARILY OPEN DOOR ALLOWING ACCESS. EXTERIOR ACTUATOR ENABLED WITH CARD ACCESS OR HEAD-END ACCESS CONTROL SYSTEM. FREE EGRESS AT ALL TIMES.

Hardware Group No. 12

For use on Door #(s):
B115B

Provide each PR door(s) with the following:

QTY		DESCRIPTION	CATALOG NUMBER			FINISH	MFR
2	EA	CONT. HINGE	112XY TWP CON		✓	628	IVE
1	EA	FIXED MULLION	BY DOOR/FRAME MANUFACTURER				B/O
1	EA	ELEC PANIC HARDWARE	RX-QEL-98-EO		✓	626	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-98-NL-OP-110MD		✓	626	VON
1	EA	PRIMUS RIM CYLINDER	20-757			626	SCH
2	EA	FLUSH PULL	BY DOOR/FRAME MANUFACTURER				B/O
2	EA	OH STOP	100S			630	GLY
1	EA	SURFACE CLOSER	4021 MC			689	LCN
1	EA	SURF. AUTO OPERATOR	4642		✓	689	LCN
1	EA	TJ MOUNTING PLATE	4020-18G (AS REQ'D)			689	LCN
1	EA	WEATHER RING	8310-801				LCN
1	EA	ACTUATOR BUTTON	8310-853T			630	LCN
1	EA	DUAL ACTUATOR BUTTON	8310-855			630	LCN
2	EA	ACT. MOUNT BOX	8310-867S				LCN
1	EA	GASKETING/WEATHERSTRIPPING	BY DOOR/FRAME MANUFACTURER				B/O
2	EA	DOOR SWEEP	39A			A	ZER
1	EA	THRESHOLD	654A-V3-223			A	ZER
1	EA	CARD READER/ACCESS CONTROL	BY SECURITY CONTRACTOR		✓		B/O
2	EA	DOOR CONTACT	679-05 (HM/WD AS REQ'D)		✓	BLK	SCE
1	EA	POWER SUPPLY	PS902 900-2RS		✓	LGR	SCE

DOOR NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL TO READER OR DESK MOUNTED PUSH BUTTON MOMENTARILY RETRACTS LATCH ALLOWING ENTRY. OPENING EQUIPPED WITH AUTOMATIC OPERATOR. PRESSING EITHER ENABLED ACTUATOR WILL TEMPORARILY OPEN DOOR ALLOWING ACCESS. EXTERIOR ACTUATOR ENABLED WITH CARD ACCESS OR HEAD-END ACCESS CONTROL SYSTEM. FREE EGRESS AT ALL TIMES.

END OF SECTION

SECTION 10221 - DEMOUNTABLE WALLS

PART 1 - GENERAL

1.1 SUMMARY

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

B. Provide labor, materials, and equipment necessary to complete the work of this Section:
   1. Framed glass unitized demountable wall system. (Allsteel Beyond Framed Glass Wall)
   2. Solid unitized demountable wall system. (Allsteel Beyond Solid Wall)

C. Work Results: Manufacture, handle, deliver and install demountable wall systems as shown on the architectural drawings or as otherwise specified and in accordance with the requirements of the contract documents.

1.2 SUBMITTALS

A. Product Data: Submit product data for each product specified. Include typical construction details and finishes.

B. Shop Drawings: Show plans, sections, elevations, details, and attachments to other building systems indicating each type of wall partition in conjunction with the partition detail indicating type and thickness of metal and glass material, glazing, anchoring, and joining hardware, trim, passage and locking hardware and accessories.

C. LEED Submittals: For projects seeking USGBC LEED certification, submit letter from manufacturer indicating post-consumer and pre-consumer recycled content percentage by weight, calculated in accordance with USGBC's LEED requirements or other sustainable goals.

D. WELL Submittals: For projects seeking WELL Building Standard certification, Allsteel products can contribute to points within the following WELL V2 features: Nourishment, Light, Movement, Materials, Mind, and Community. For more information on Allsteel's WELL V2 product contributions: Allsteel WELL V2 Product Contributions.pdf

1.3 WARRANTY

A. Manufacturer's warranty of 10 years, refer to warranty verbiage for inclusions, exclusions, and limitations.

1.4 QUALITY ASSURANCE

A. Source Limitations: Obtain demountable walls from a single source from a single manufacturer.

B. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01.

C. Qualifications:
1. Manufacturers: Fabrication processes, including laminated and tempering shall be manufactured with a minimum of ten (10) years of fabrication experience and meet ANSI / ASQC 9002 1994.
2. Installer Qualifications: Qualified installer to have a minimum of (5) years documented experience and be a certified manufacturer installer in the work of this section and who has specialized in the installation of work similar to that required for this project.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver unitized demountable walls wrapped or crated to provide protection during transit and storage on site. Store unitized demountable walls under cover and in a temperature-controlled space.

1.6 SITE CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results.

B. Do not install the demountable partition system components under environmental conditions outside manufacturer's absolute limits.

C. Environmental Limitations: Do not deliver or install the system components until building is enclosed and finishing operations, including ceiling and floor covering installation and painting, are complete.

D. Field measurements: Indicate all site dimensions including ceiling heights and “hold-to” dimensions on shop drawings.

E. Coordination of work: Coordinate layout and installation of the system components with other units of work. Installation of ceilings, floor coverings, lighting fixtures, HVAC equipment and fire suppression systems should be complete before the system components are installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design: Beyond Framed Unitized Demountable Wall System by Allsteel

B. Manufacturer:

Allsteel
505 Ford Ave.
Muscatine, Iowa 52761
1-888-Allsteel (1-888-255-7833)
www.allsteeloffice.com

C. Manufacturer's Representative Contact:

Bianca Richier
Senior Architectural Solutions Manager, Allsteel
richierb@allsteeloffice.com
312.270.5885

D. Description: Provide a non-progressive fully-unitized demountable partition capable of withstanding impact loads and seismic loads (where required), without failure, including loss due to defective manufacturing, fabrication, and installation; deterioration of glazing and panel materials; and other defects.

E. Product Requirements
1. The product must be installed in a non-progressive sequence.
2. The product must be fully-unitized, shipped from the factory as assembled panels.
3. The product must be demountable.
4. The product must be reconfigurable.

2.2 PERFORMANCE / DESIGN CRITERIA FRAMED GLASS DEMOUNTABLE WALL SYSTEM

A. Type: Framed fully-unitized demountable glass wall system, suitable for applications 18-inches to 120-inches in height, and 8-inches to 60-inches wide in 1/4-inch increments. Assembled panel thickness of 3-inches in depth. Refer to the Drawings for exact project requirements.

B. Panels: Fully-unitized with factory installed integrated top trim, continuous integrated ceiling bracket and base channels including leveling mechanisms. Two power tool operated leveling mechanisms for panels 18-inches or wider and one leveling mechanism for panels less than 18-inches wide. Panels include acoustic seals at the connection to the ceiling channel and have the option to be specified with enhanced acoustic seals to minimize sound reverberation at the ceiling channel.

C. Panel Frame: Panel frame fully captures glass on four sides. Top horizontal frame is integrated ceiling trim and is 2.65-inches. Bottom horizontal frame is 0.9-inches, sits above the base trim. Aluminum frame verticals are narrow.

D. Panel Frame Dimensions:

1. Narrow frame is 0.6 inches wide in elevation. When two panels with narrow frame verticals are installed the overall width of the two frames side by side is 1.7 inches including a 0.5-inch wide reveal for the zipper connector between frames.

E. Clerestory Glass Panels: Framed glass area able to accommodate clerestory glass, glass panels are available from 9-1/2-inches to 102-inches high at 1/4-inch increments and from 10-1/2-inches to 36-inches high at 1/4-inch increments with integrated mounting rail. Integrated ceiling trim at the top of clerestory or cornice rail in a freestanding application. Refer to drawings for location.

F. Glass Thickness, Type, Acoustic Performance and Color
1. Glass Thickness
   - 3/8-inch (10 mm)
2. Glass Type
   - Laminated

3. Glass Acoustic Performance
   - 3/8-inch (10mm) laminated glass with .030" PVB interlayer STC 36, Beyond framed 3/8-inch laminated glass panel assembly STC 34.
4. Glass Color
   - Clear

G. Connection Zippers: Manufacturer's standard copolymer zipper.

H. Finishes:
   - Black

I. Ceiling Channel: Ceiling channel is 2-1/2-inch-high. Ceiling channel is the attachment point between the panels and the ceiling condition. Beyond can be mechanically fastened to hard wall ceiling conditions. Freestanding cornice rail in lieu of ceiling channel in freestanding applications, refer to drawings for location.

J. Ceiling Trim: Ceiling trim integrated into the panel frame as part of unitized construction.
   1. Integrated Framed Glass Ceiling Trim Seals: Standard Acoustic Seals

K. Leveling Mechanisms: Power-tool-operated scissor-lift leveling capability in the base of +/- 3/4-inch and in the top +/- 3/4-inch float. Total travel range of 1-1/2-inches. Top and bottom leveling capability are independent of each other.

L. Base Channel: Manufacturer's standard base channel which houses leveling mechanism and supports the weight of the panel.

M. Base Trim: Base trim connects to the base of the framed glass panel and conceals the leveling mechanisms.
   1. Base Trim Seals: Standard Acoustic Seals

N. Base Trim Height
1. Electrical base height, 5-3/16 inches high

O. Trim Finish: Manufacturer's standard finish as selected.
1. Painted Finish: Powdercoat paint finish, AAMA 603.8, Solar Black, Grade 2

P. Posts: Two-Way, Three-Way, as applicable to wall configuration.

Q. Post Finish: Powdercoat paint finish, AAMA 603.8, Solar Black, Grade 2

R. Doors, sliding: Utilizes a 42-inch-wide door frame module *Refer to drawings for location.
1. Door Type and Material
- Thin Aluminum Framed Glass Door, 3/8-inch Glass insert, Clear
2. Door Frame for Sliding Aluminum Framed/Solid Doors
- Handed, Full Strike
3. Door Frame Acoustical Seals for Sliding Door
- Standard Acoustic Seals
4. Door Seals
- Vertical Edge Door Seals: Aluminum Framed Door, Standard Acoustics, Brush Seal
- Door Undercut: Aluminum Framed Door, Standard Acoustics
5. Door Hardware:
- Sliding Door Track Closer, With Slow Close/Slow-Open
- Sliding Door Tack, Standard Acoustic Seals
- 20-inch-high Ladder Pull
- Door Lock for Full Strike Sliding Aluminum Framed Glass Door
6. Door Hardware Finish: Black

S. Doors, Center Swing Pivot: Utilizes a 39-inch-wide door frame module anchored to the floor *Refer to drawings for location.

1. Door Type and Material
   - Thin Aluminum Framed Glass Door, 3/8-inch Glass insert, Clear
2. Door Frame for Center Swing Pivot Doors:
   - Non-handed, Roller Latch
3. Door Frame Acoustical Seals for Pivot Door
   - Standard Acoustic Seals
4. Door Hardware
   - Doorstop, Floor-Mounted Cylindrical
   - 20-inch-high Ladder Pull, Non-Locking
5. Door Hardware Finish: Black

2.3 PERFORMANCE / DESIGN CRITERIA SOLID UNITIZED DEMOUNTABLE WALL SYSTEM

A. Basis-of-Design: Beyond Solid Unitized demountable Walls by Allsteel, 2210 Second Avenue, Muscatine, Iowa 52761; Telephone 1-888-Allsteel (1-888-255-7833), www.allsteeloffice.com.

B. Type: Fully-unitized demountable wall system, suitable for applications from 18-inches to 120-inches in height, and 8-inches to 60-inches wide, at 1/4-inch increments, for frames not ported for electrical, and 30-inches to 60-inches for frames ported for electrical. Two power tool operated leveling mechanisms for panels 18-inches or wider, one leveling mechanism for panels less than 18-inches wide. Assembled panel thickness of 3-inches in depth. Refer to drawings for project requirements.

C. Panels: All solid panels ship fully unitized; frames and tiles are factory-installed and shipped fully assembled with floor channel and scissor-lift leveling mechanism(s) attached. Panels include acoustic seals at the connection to the ceiling channel.

D. Panel Electrical: Walls pre-ported for electrical routing at TV locations and light switches, conduit and empty j box provided.

E. Base Electrical: Walls with electrical power routed in the base. Electrical base height trim is 5-3/16-inches high. All ports for electrical duplexes include acoustic gaskets to prevent sound leakage when modular electrical is specified in the panel base. Modular electrical utilizing 8-wire electrical system, rated at 20 amps per circuit (15 amps Canadian). Four-circuit 3+1 type and four-circuit 2+2 type systems available. Modular wiring system is UL 183 listed for manufactured wiring system.

F. Leveling Mechanisms: Power-tool-operated scissor-lift leveling capability in the base of +/- 3/4-inch and in the top +/- 3/4-inch float. Total travel range of 1-1/2-inches. Top and bottom leveling capability are independent of each other.

G. Insulation: Standard insulation

H. Acoustic Performance
   1. Steel tiles, standard insulation STC 44
   2. Wood tiles, standard insulation STC 44
      Connection Zippers: Manufacturer's standard copolymer zipper.
   3. Zipper Finish: Black

I. Wall Tiles
   1. Type *Refer to drawings for location.
      - Monolithic
      - Segmented
   2. Joints
      - Half-inch reveal for unitized walls.
   3. Tile Acoustic Seals
      - Standard acoustic seals
   4. Tile Width
      - Standard width, mounted vertically on a single wall frame.

5. Tile Height
   - Standard with base.
6. Tile Finish *Refer to drawings for location.
   - Laminate.
   - Tackable fabric.
   - Backpainted markerboard glass.

J. Clerestory Glass Panels *Refer to drawings for location: Glass panels are available from 9-1/2-inches to 102-inches high at 1/4-inch increments and from 10-1/2-inches to 36-inches high at 1/4-inch increments with integrated mounting rail. Integrated ceiling trim at the top of the clerestory is available with standard acoustic seals. Integrated ceiling trim at the top of clerestory or cornice rail in a freestanding application. Refer to drawings for location.

K. Glass Thickness, Type, Acoustic Performance and Color
   1. Glass Thickness
      - 3/8-inch (10mm)
   2. Glass Type
      - Laminated
   3. Glass Acoustic Performance
      - 3/8-inch (10mm) laminated glass with .030” PVB interlayer STC 36, Beyond framed 3/8-inch laminated glass panel assembly STC 34.
   4. Glass Color
      - Clear

L. Glass Wall Integration: System fully integrated with manufacturer's framed and frameless glass wall systems as applicable.

M. Ceiling Channel: Ceiling channel is 2-1/2-inch-high. Ceiling channel is the attachment point between the panels and the ceiling condition. Beyond can be mechanically fastened to hard wall ceiling conditions. Freestanding cornice rail in lieu of ceiling channel in freestanding applications, refer to drawings for location.

N. Base Channel: Manufacturer's standard base channel which houses leveling mechanism and supports the weight of the panel.

O. Base Trim
1. Base trim connects to the base of the solid panel and conceals the leveling mechanisms.
2. Base Trim Seals
   - Standard Acoustic Seals
3. Base Trim Height
   - Electrical base height, 5-3/16 inches high.

P. Trim Finish: Powdercoat paint finish, AAMA 603.8, Solar Black, Grade 2

Q. Posts: Two-Way, Three-Way, as applicable to wall configuration.

R. Post Finish: Powdercoat paint finish, AAMA 603.8, Solar Black, Grade 2

1. Doors, sliding: Utilizes a 42-inch-wide door frame module
   *Refer to drawings for location.
   a. Door Type and Material
      - Thin Aluminum Framed Glass Door, 3/8-inch Glass insert, Clear
   b. Door Frame for Sliding Aluminum Framed/Solid Doors
      - Handed, Full Strike
   c. Door Frame Acoustical Seals for Sliding Door
      - Standard Acoustic Seals
   d. Door Seals
      - Vertical Edge Door Seals: Aluminum Framed Door, Standard Acoustics, Brush Seal
      - Door Undercut: Aluminum Framed Door, Standard Acoustics
   e. Door Hardware:
      - Sliding Door Track Closer, With Slow Close/Slow-Open
      - Sliding Door Tack, Standard Acoustic Seals
      - 20-inch-high Ladder Pull

- Door Lock for Full Strike Sliding Aluminum Framed Glass Door

f. Door Hardware Finish: Black

2. Doors, Center Swing Pivot: Utilizes a 39-inch-wide door frame module anchored to the floor *Refer to drawings for location.
   a. Door Type and Material
      - Thin Aluminum Framed Glass Door, 3/8-inch Glass insert, Clear
   b. Door Frame for Center Swing Pivot Doors:
      - Non-handed, Roller Latch
   c. Door Frame Acoustical Seals for Pivot Door
      - Standard Acoustic Seals
   d. Door Hardware
      - Doorstop, Floor-Mounted Cylindrical
      - 20-inch-high Ladder Pull, non-locking
   e. Door Hardware Finish: Black

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verification of Conditions:
   1. Verify prepared openings for partitions are correctly sized and within tolerance.
   2. Verify dimension and/or dimension sign offs, special product needs and on-site delivery conditions.
   3. Do not proceed with partitions until unsatisfactory conditions have been corrected.

4.1 INSTALLATION

A. General: Install demountable wall system plumb, rigid, properly aligned, and securely fastened in place. Comply with manufacturer's written instructions.
   1. Coordinate the demountable partition system installation with the work of other trades which are affected. Avoid damage to installed work.
   2. Install the demountable partition system under manufacturer’s approved, direct supervision to ensure

wall performance and compatibility with design and specification intent.

3. Erect the demountable partition system rigid, level, plumb and aligned. Install continuous light and sound seals at connection to floors, ceilings, fixed walls, and abutting surfaces.

B. Installation Tolerances: Maximum variation from plumb or level to be 1/8 inch in 3 feet or ¼ inch in any 6 feet whichever is less.

1. Install doors and hardware as specified in Sections. Adjust hardware and doors and leave in proper operating condition.
2. Repair damaged or defaced work or replace with new work, as acceptable to Architect.

C. Completely refinish defaced partition components with factory finished materials or replace defaced components.

5.1 CLEANING

A. Clean exposed frame and glass surfaces promptly after installation, using cleaning methods recommended by frame manufacturer.

B. Touch up marred frame surfaces so touchup is not visible from a distance of 24 inches.

C. Remove and replace frames with damaged finish that cannot be satisfactorily repaired.

END OF SECTION

Mark A. Hackel
County Executive

BID FORM

Bid Item # 29-24
Macomb County
County Warehouse
F & O and Purchasing Offices Renovation

County of Macomb
Mount Clemens, Michigan

OWNER

MACOMB COUNTY
MT. CLEMENS, MICHIGAN 48043

ARCHITECT
WAKELY ASSOCIATES INC.
30500 VAN DYKE AVENUE, SUITE 209
WARREN, MI 48093

Bidder:_____
(print or type company name)

_____
(Telephone Number)

GENERAL AGREEMENTS

A. The Bidder acknowledges that he/she has had the opportunity to examine the site and locality where the Work is to be performed and has become familiar with the legal requirements, laws, rules, regulations and conditions affecting the cost, progress and performance of the Work; and has made such independent investigations as Bidder deemed necessary to prepare the Bid. Further, Bidder hereby states that the Base Bid set forth in this Bid Response is true and correct.

B. The Bidder agrees that this Bid shall not be withdrawn for a period of 30 calendar days after the scheduled closing time for receiving Bids.

C. The Bidder declares that in preparing this Bid, Bidder is assured of the availability of all labor, materials and products to meet the substantial completion date.

D. The Bidder acknowledges that the price stated below includes all taxes of whatever character or description.

E. The Bidder agrees to execute a Contract for work covered by this Bid, provided that he/she be notified of its acceptance within thirty (30) days after the opening of Bids.

SCHEDULE - TIME OF COMPLETION

The undersigned agrees to commence the Work of the Contract Documents on a date specified in a written "Notice to Proceed", and shall fully complete the Work within the required time allowed. Owner requires work to be substantially complete no later than May 16, 2025. The proposed Bid is in full consideration of this.

ACKNOWLEDGEMENT OF ADDENDA

The Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:

Addendum No. 1, dated _____, Addendum No. 3, dated _____

Addendum No. 2, dated _____, Addendum No. 4, dated _____

BID FORM SUPPLEMENTS
Attached to this Bid Form and incorporated herein are the following documents, completed in full by the undersigned:

Base Bid Form Supplement – Unit Prices/Supplemental Fees

BASE BID
The undersigned Bidder, having carefully examined the Bidding and Contract Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, all as issued by the Owner, and being familiar with all conditions and requirements of the Work, hereby proposes and agrees to furnish all material, labor, equipment, tools and supervision; and to furnish all services necessary to complete the Work required in accordance with the Bidding Documents for the following projects, in the following amount:

_____ Dollars $_____
(Sum to be written out)

Note: Bidder acknowledges that the above bid includes a $100,000.00 contingency

ALTERNATES
One Alternate is being priced. As follows:

Alternate No. 1: Provide Mechanical Unit Screen as shown on documents.

ALTERNATE NO. 1: _____

Dollars $_____ (sum to be written out)

VOLUNTARY ALTERNATES
The following voluntary alternates are offered by the Bidder. The undersigned agrees that the amounts indicated below shall be added to or deducted from the Base Bid, as the case may be for each alternate which is accepted.

Description of Voluntary Alternates	Add	Deduct
1. _____	$ _____	$ _____
2. _____	$ _____	$ _____
3. _____	$ _____	$ _____
4. _____	$ _____	$ _____

Respectfully submitted this ____ day of _____, 20____.

By: _____
(Name of bidding firm or corporation)

Witness: By: _____
(Signature)

Attest: _____ _____
(Signature) (Type or print name)

By: _____ Title: _____
(Type or print name) (Owner/Partner/President/Vice Pres.)

Title: _____ Address: _____
(Corporate Secretary or Assistant Secretary Only) Phone: _____

License: _____

Federal ID No.: _____

(Affix Corporate Seal Here)

_____ _____
Company Name Company Representative

_____
Title

_____
Date

Mark A. Hackel
County Executive

BID FORM SUPPLEMENT - UNIT PRICES/SUPPLEMENTAL FEES

This form is required to be attached to the Base Bid Form.

Bid Item # 29-24
Macomb County
County Warehouse
F & O and Purchasing Offices Renovation

County of Macomb
Mount Clemens, Michigan

Bidder:_____
(print or type company name)

SUPPLEMENTAL FEES

For additional work performed upon instruction of Macomb County, by Sub-Contractors of the Undersigned, add to the Sub-Contractor's prices for such work a fee of _____**%**, which includes all the charges of the undersigned for overhead and profit.

Any additional work performed upon instruction of Macomb County by persons other than the Sub-Contractors of the undersigned, the charges will be actual cost of the labor, and materials, (less all discounts) plus the fee of _____**%**, which includes all the charges of the undersigned for overhead and profit, and to which shall be added the actual cost of insurance & taxes.

Each Bid covering extra work, shall be accompanied with complete itemized material & labor breakdowns.

For all revisions involving the deletion of contract work, it is agreed that the full credit shall be given Macomb County for such work deleted, including overhead and profit as quoted hereinbefore.

NEGOTIATION

The undersigned agrees that, should the overall cost exceed the funds available, he/she will be willing to negotiate with Macomb County and Architect; for the purpose of making further reductions in the Contract work, and shall agree to give full credit for all such reductions in the work requested by Macomb County, including full value of labor, materials, and Sub-Contract work and reasonable proportionate reductions in overhead and profit, thereby arriving at an agreed upon Contract price.

Submitted this___day of_____, 20____

By: _____
(Name of bidding firm or corporation)

By: _____
(Signature)

_____
(Type or print name)

Title: _____
(Owner/Partner/President/Vice Pres.)

Mark A. Hackel
County Executive

BID FORM SUPPLEMENT - LIST OF SUB-CONTRACTORS

All sealed bids for construction contracts shall provide a list of preferred sub-contractors and identify, with documentation, whether each subcontractor is a County-based Enterprise.

NAME OF BIDDER: ____________________

NAME OF SUB-CONTRACTOR ____________________

CONTACT PERSON ____________________

ADDRESS ____________________

TELEPHONE NO. ____________________

MACOMB COUNTY BASED ENTERPRISE (Y/N) ____________________

NAME OF SUB-CONTRACTOR ____________________

CONTACT PERSON ____________________

ADDRESS ____________________

TELEPHONE NO. ____________________

MACOMB COUNTY BASED ENTERPRISE (Y/N) ____________________

NAME OF SUB-CONTRACTOR ____________________

CONTACT PERSON ____________________

ADDRESS ____________________

TELEPHONE NO. ____________________

MACOMB COUNTY BASED ENTERPRISE (Y/N) ____________________

NAME OF SUB-CONTRACTOR ____________________

CONTACT PERSON ____________________

ADDRESS ____________________

TELEPHONE NO. ____________________

MACOMB COUNTY BASED ENTERPRISE (Y/N) ____________________

COUNTY OF MACOMB

VENDOR CERTIFICATION DEBARMENT

All information requested in this section must be completed and the document notarized. Any information omitted, or erroneously reported, may result in disqualification for current or future bidding and supply on behalf of the County of Macomb.

The undersigned warrants and presents that they have full complete authority to make representations for and on behalf of the undersigned company and that their representations are fully binding upon the undersigned company.

1. The undersigned are not presently debarred, suspended, proposed for debarment, declared ineligible, or excluded from transactions by any federal department or agency, or any state, county or local municipality, department or agency.

2. The undersigned has not within a three (3) year period preceding this bid been convicted of, or had a civil judgment rendered against them for the commission of fraud, a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local) transaction, or a contract a public transaction, violation of federal or state antitrust statutes, or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.

3. The undersigned are not presently indicted for or otherwise criminally or civilly charged by any governmental entity (federal, state or local) with commission of any of the offenses set forth in paragraph 2.

4. The undersigned have not within a three (3) year period preceding this bid, had one or more public transactions (federal, state or local) terminated or attempted to be terminated for cause or default.

IF THE APPLICANT IS UNABLE TO CERTIFY TO ANY OF THE STATEMENTS IN THIS CERTIFICATION, CERTIFICATION AND EXPLANATION SHALL BE ATTACHED AND PRESENTED WITH THIS CERTIFICATION.

THE UNDERSIGNED CERTIFIES OR AFFIRMS THE TRUTHFULNESS AND ACCURACY OF THE CONTENTS OF THE STATEMENTS SUBMITTED MADE ON BEHALF OF THE UNDERSIGNED BIDDER.

Bidder: _____

Bidder Address: _____

Applicant/Bidder Representative: _____

Signature: _____
(Print full name)

Subscribed and sworn to before me this
_____ day of _____, 20___.

_____
Notary Public
County of _____,
State of _____
My Commission expires: _____

Mark A. Hackel
County Executive

GOOD HOUSEKEEPING AND BEST MANAGEMENT PRACTICES

Bidder shall comply with the Good Housekeeping and Best Management Practices as outlined in SEMCOG's LID that can be found at:

https://semcog.org/Reports/LID/files/assets/basic-html/page-1.html#.

Where applicable, Bidder to annually certify their trucks and tanks to ensure that materials extracted stay within the truck until it reaches the permitted disposal site.

All equipment utilized in the cleaning process will abide by manufacturers recommendations.

_____
Initial

_____
Date

NEW WORK KEY NOTES - FLOOR PLAN:

1.01 PROVIDE NEW SOFFIT DROP OVER ALL DEMOUNTABLE PARTITIONS IN PURCHASING AREA ONLY. (SEE DETAIL 13 ON SHT. A1.1)

1.02 REMOVE ALL GYP. BOARD AND TRIM AROUND WINDOWS. REPLACE EXISTING GYP. BRD. AND WINDOW SILL WITH NEW SOLID SURFACE WINDOW SILL. CAULK BETWEEN DISSIMILAR MATERIALS.

1.03 LOCATION OF NEW WALL HUNG TV (BY OWNER). PROVIDE REINFORCING IN DE-MOUNTABLE WALL. PROVIDE POWER AND DATA FOR NEW TV. (SEE ELEC. DRAWINGS)

1.04 EXTEND NEW PARTITION INTO EXISTING WINDOW OPENING AND TIE INTO EXISTING MULLION. CAULK BETWEEN DIS-SIMILAR MATERIAL.

1.05 BELOW WINDOW: FUR OUT EXISTING EXTERIOR WALL W/ 2" HAT CHANNELS. INSTALL 2" RIGID INSULATION OVER ENITRE WALL AND COVER WITH (1) LAYER OF 5/8" HIGH ABUSE GYP. BRD. PAINTED.

ABOVE WINDOW: FUR OUT EXISTING WALL WITH 6" METAL STUDS AT 16" O.C. W/ 2" RIGID INSULATION FASTENED TO EXISTING EXTERIOR WALL. INSTALL 5/8" HIGH ABUSE GYPSUM BOARD PAINTED. CONSTRUCT POCKETS FOR ROLLER SHADES. COORDINATE WITH SHADE MANUFACTURER AND SUPPLIER. (SEE DETAIL)

1.06 CONSTRUCT NEW 3 5/8" METAL STUD HEAD W/ MINERAL WOOL INSULATION AND (1) LAYER OF 5/8" GYP. BRD. EACH SIDE (PAINTED) ABOVE ALL DEMOUNTABLE PARTITIONS IN PURCHASING AREA ONLY. F&O AREA IS OPEN TO EXISTING STRUCTURE.

1.07 CORE NEW HOLE IN EXISTING CONCRETE MASONRY WALL FOR NEW MECHANICAL SYSTEM. SEE MECHANICAL DRAWINGS FOR EXACT SIZE.

1.08 OPEN EXISTING CONCRETE MASONRY WALL FOR NEW MECHANICAL SYSTEM. SEE MECHANICAL DRAWINGS FOR EXACT SIZE. PROVIDE NEW PRE-CAST CONCRETE LINTEL FOR OPENING MIN. 8" BEARING EACH SIDE.

1.09 STUFF ALL EXISTING PENETRATIONS IN EXISTING WALLS AND FIRE CAULK. INSTALL FIRE SPRAY ON ENTIRE CEILING IN VESTIBULE A103 FOR A 2 HR. FIRE SEPARATION.

1.10 PREPARE EXISTING MASONRY WALL AND INSTALL 24"x12" CERAMIC TILE ON WALL FROM FLOOR TO CEILING. INSTALL CUSTOM OPAQUE GLASS WITH ETCHED MACOMB COUNTY HISTORY PROVIDED THROUGH THE COUNTY. PANELS OF GLASS SHALL BE INSTALLED WITH STAND-OFFS FASTENED TO THE NEW TILE WALL. △3

1.11 OPEN UP EXISTING GYPSUM BOARD WALLS FOR INSTALLATION OF NEW SANITARY LINE AND PLUMBING FIXTURES. REPAIR WALLS AS REQUIRED AND PAINT TO MATCH.

1.12 INFILL EXISTING DOOR W/ 3 5/8" MTL. STUDS AT 16" O.C. W/ SOUND ATTENUATING INSULATION AND (1) LAYER OF 5/8" HIGH ABUSE GYP. BRD. EACH SIDE PAINTED.

1.13 PROVIDE 6" MIN. 3 5/8" MTL. STUD CHASE FROM CEILING TO FLOOR FOR POWER AND OTHER ITEMS TO TRANSVERSE DOWN. (TYPICAL)

1.14 INSTALL NEW CLUTCH OPERATED FLEX SHADE IN BOX OUT HEAD DETAIL. (SEE DETAIL)

1.15 DEMOLISH PORTION OF EXISTING ROOF TO PREPARE FOR NEW MECHANICAL CURB INSTALLATION. PROVIDE ALL REQUIRED SUPPORT STEEL FOR ROOF DUCTWORK PENETRATIONS. AFTER NEW CURB IS INSTALLED FLASH AND ROOF IN AS REQUIRED FOR A WATERTIGHT SOLUTION. EXISTING ROOF IS MANUFACTURED BY TREMCO. PROVIDE A CERTIFIED TREMCO INSTALLER TO PERFORM WORK SO WARRANTY IS NOT VOIDED. PROVIDE TREMCO APPROVED WALK MATS AROUND ENTIRE PERIMETER OF NEW ROOF TOP UNIT.

1.16 DEMOLISH PORTION OF EXISTING ROOF TO PREPARE FOR NEW SUN DOME AND TUNNEL BY VELUX THROUGH THE EISEN GROUP 248-319-7763. PROVIDE REQUIRED CURB AND ROOF PENETRATION INCLUDING 4x3x¼" LLV SUPPORT STEEL ANGLE FOR OPENING. FLASH AND ROOF IN AS REQUIRED FOR A WATERTIGHT SOLUTION. EXISTING ROOF IS MANUFACTURED BY TREMCO. PROVIDE A CERTIFIED TREMCO INSTALLER TO PERFORM WORK SO WARRANTY IS NOT VOIDED.

1.17 OVERHEAD LOCKABLE UPWARD COILING SECURITY GRILLE. MOUNT ABOVE CEILING FROM EXISTING STRUCTURE AND FASTEN TO NEW HEADER. CREATE SLOT IN NEW CEILING GRID FOR OPERATION. △3

1.18 OPEN EXISTING STANDING SEAM METAL SIDING AND EXPOSE EXISTING LINTEL. FASTEN NEW CANOPY TO EXISTING LINTEL AND REPLACE ALL SIDING COMPONENTS INCLUDING NEW FLASHINGS AS REQUIRED FOR A WATER-TIGHT SEAL AFTER INSTALLATION OF NEW CANOPY. △3

1.19 4'h. x 6'w. SURFACE MOUNT CONTEMPORARY BULLETIN BOARD CABINET. △3

1.20 REMOVE EXISTING MECHANICAL EQUIPMENT FROM ROOF COMPLETE. (SEE M&E DRAWINGS) AFTER UNITS ARE REMOVED, PATCH EXISTING METAL DECK AND BUILT-UP ROOFING SYSTEM. THE EXISTING ROOF SYSTEM IS TREMCO THAT IS OUT OF WARRANTY. THE OWNER IS OPEN TO OTHER MANUFACTURERS FOR THE PATCHING. △3

DEMOLITION KEY NOTES - FLOOR PLAN:

1 REMOVE EXISTING WOOD DOOR, FRAME AND HARDWARE COMPLETE. DISPOSE OF DOOR AND FRAME. SALVAGE ALL EXISTING HARDWARE AND HAND OVER TO OWNER.

2 REMOVE EXISTING WALL COMPLETE.

3 REMOVE EXISTING FLOOR COVERING COMPLETE INCLUDING RUBBER BASE.

4 REMOVE EXISTING LAY-IN CEILING COMPLETE. PREP FOR NEW LAY-IN CEILING AND LIGHTING. (SEE ELEC. DRAWINGS)

5 REMOVE TOILET AND PLUMBING COMPLETE. SAWCUT EXISTING CONC. FLOOR AS REQ'D. CAP EXISTING PLUMBING BELOW GRADE. PATCH EXISTING FLOOR AS REQUIRED. (SEE MECH. DRAWINGS)

6 REMOVE SINK AND PLUMBING COMPLETE. OPEN EXISTING WALL AS REQ'D. CAP EXISTING PLUMBING BELOW GRADE. (SEE MECH. DRAWINGS)

△3 7 CUT A 4'-0"x4'-0" WINDOW IN EXISTING MASONRY WALL. PROVIDE NEW MASONRY LINTEL AT EACH OPENING W/ MIN. 8" BR'G. EACH SIDE.

8 REMOVE EXISTING WALLBOARD COMPLETE INCLUDING FURRING STRIPS.

9 REMOVE EXISTING WINDOW SILL.

10 REMOVE ALL EXISTING TOILET ROOM ACCESSORIES AND REPLACE WITH NEW. SEE PLAN DETAILS.

11 REMOVE EXISTING ALUMINUM STORE FRONT SYSTEM COMPLETE INCLUDING ALL HARDWARE. PATCH EXISTING WALLS AS REQUIRED WITH LIKE MATERIALS.

12 REMOVE EXISTING ALUMINUM VESTIBULE SYSTEM COMPLETE. PATCH ALL EXISTING WALLS AS REQUIRED WITH LIKE MATERIALS.

13 SAWCUT AND REMOVE EXISTING CONCRETE FLOOR AS REQUIRED FOR NEW ELECTRICAL FLOOR BOX AND UNDERGROUND CONDUIT INSTALLATION. PROVIDE NEW 4" CONCRETE SLAB W/ #5 BARS (EACH SIDE) @12" O.C. EPOXY SET (EMBED 4" MIN.) ON 15 MIL. VAPOR BARRIER OVER 4" MIN. GRANULAR FILL. PROVIDE EXPANSION PAPER AS REQUIRED.

14 SAWCUT AND REMOVE EXISTING CONCRETE FLOOR AS REQUIRED FOR NEW SANITARY LINE INSTALLATION. PROVIDE NEW 4" CONCRETE SLAB W/ #5 BARS (EACH SIDE) @12" O.C. EPOXY SET (EMBED 4" MIN.) ON 15 MIL. VAPOR BARRIER OVER 4" MIN. GRANULAR FILL. PROVIDE EXPANSION PAPER AS REQUIRED.

15 REMOVE EXISTING GYPSUM BOARD COMPLETE INCLUDING FURRING DOWN TO EXTERIOR WALL. REMOVE FIN-TUBE RADIATION. COMPLETE (SEE MECH.)

16 REMOVE EXISTING HORIZONTAL BLINDS AND HANGING HARDWARE COMPLETE.

17 REMOVE EXISTING WALL AS REQUIRED FOR NEW DOOR INSTALLATION. PROVIDE NEW PRE-CAST LINTEL W/ MIN. 8" BR'G. EACH SIDE. TOOTH IN MASONRY AS REQUIRED. PAINT AFTER DOOR IS INSTALLED.

NEW WORK PLAN - GENERAL NOTES: (APPLIES TO ALL ROOMS)

1. ALL DIMENSIONS TO EXISTING ELEMENTS TO BE CONSIDERED +/- (V.I.F.)
2. PATCH, PREP, & PAINT ALL AREAS DISTURBED BY CONSTRUCTION.
3. REMOVE, SALVAGE, & REINSTALL ALL EXIST SIGNAGE ON EXIST DOORS TO BE REPLACED (VIF)
4. PREP & PAINT EXISTING CONSTRUCTION TO MATCH EXISTING AT ALL AREAS OF DEMO'D MECH / ELEC FIXTURES (I.E. SURFACE MOUNTED LIGHTS, EXIT LIGHTING, ELEC PANELS, ETC.)
5. REMOVE & REPLACE EXISTING ACOUSTIC CEILING TILES, GRILLES, REGISTERS, AND DIFFUSERS AS REQUIRED FOR NEW WORK - SEE MECH & ELEC DWGS.
6. ALL OUTSIDE CORNERS OF ALL NEW PLASTIC LAMINATE COUNTERTOP TO HAVE A RADIUS.
7. IN AREAS TO RECEIVE NEW FLOORING, CONTRACTOR TO PROTECT EXISTING EQUIPMENT TO REMAIN (E.G., PROJECTORS, DIGITAL DISPLAYS, SOUND SYSTEM AMPLIFIERS, WIRELESS ACCESS POINTS, ETC.) IN EACH ROOM AFFECTED - BY OTHERS.
8. IN AREAS TO RECEIVE NEW CEILING SYSTEMS, CONTRACTOR TO TEMPORARILY SUPPORT & PROTECT EXISTING TECHNOLOGY EQUIPMENT TO REMAIN AS REQUIRED FOR NEW WORK IN EACH ROOM AFFECTED - BY OTHERS.

KEY NOTES LEGEND:

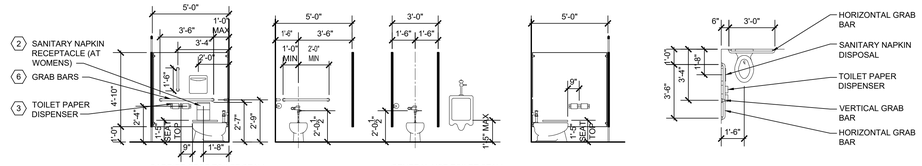
XX / # — QUANTITY OF SEGMENTS TO BE REPLACED (+/- 4'-1½" W - VIF)

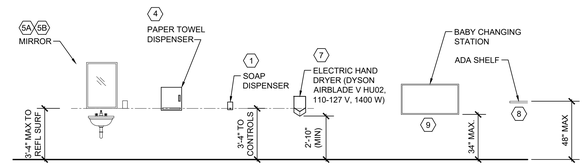
XX X'-X" W / X'-X" H — OPENING WIDTH (VIF) / OPENING HEIGHT (VIF)

LANDSCAPE LEGEND:

A / 2H — REFER TO KEYNOTE 1.02 - ITEM AS NOTED. SEE KEYNOTE FOR PLANT SPACING / EXPECTED MATURE PLANTING HEIGHT

△2





TOILET ROOM FIXTURES & ACCESSORIES

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

TOILET ACCESSORY KEYNOTES:

1 SOAP DISPENSER (OF/CI)
2 SANITARY NAPKIN DISPOSAL (CF/CI)
3 TOILET TISSUE DISPENSER (OF/CI)
4 PAPER TOWEL DISPENSER (OF/CI)
5A MIRROR (CF/CI)
5B MIRROR W/ SHELF (CF/CI)
6 GRAB BARS (CF/CI)
7 ELECTRIC HAND DRYER (CF/CI - SEE KEYNOTE 2.26)
8 ST. STL SHELF (CF/CI)
9 BABY CHANGING STATION

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VIC WERTZ BUILDING

GENERAL NOTES, & KEYNOTES

PRELIMINARY ☐
DESIGN DEVELOPMENT ☐
CONSTRUCTION ■
FINAL RECORD ☐

DRAWN BY DCW/NL
CHECKED BY RS/DCW

REVISIONS
ADDENDUM No. 1 11-7-2024
ADDENDUM No. 2 11-13-2024
△3 ADDENDUM No. 3 11-14-2024

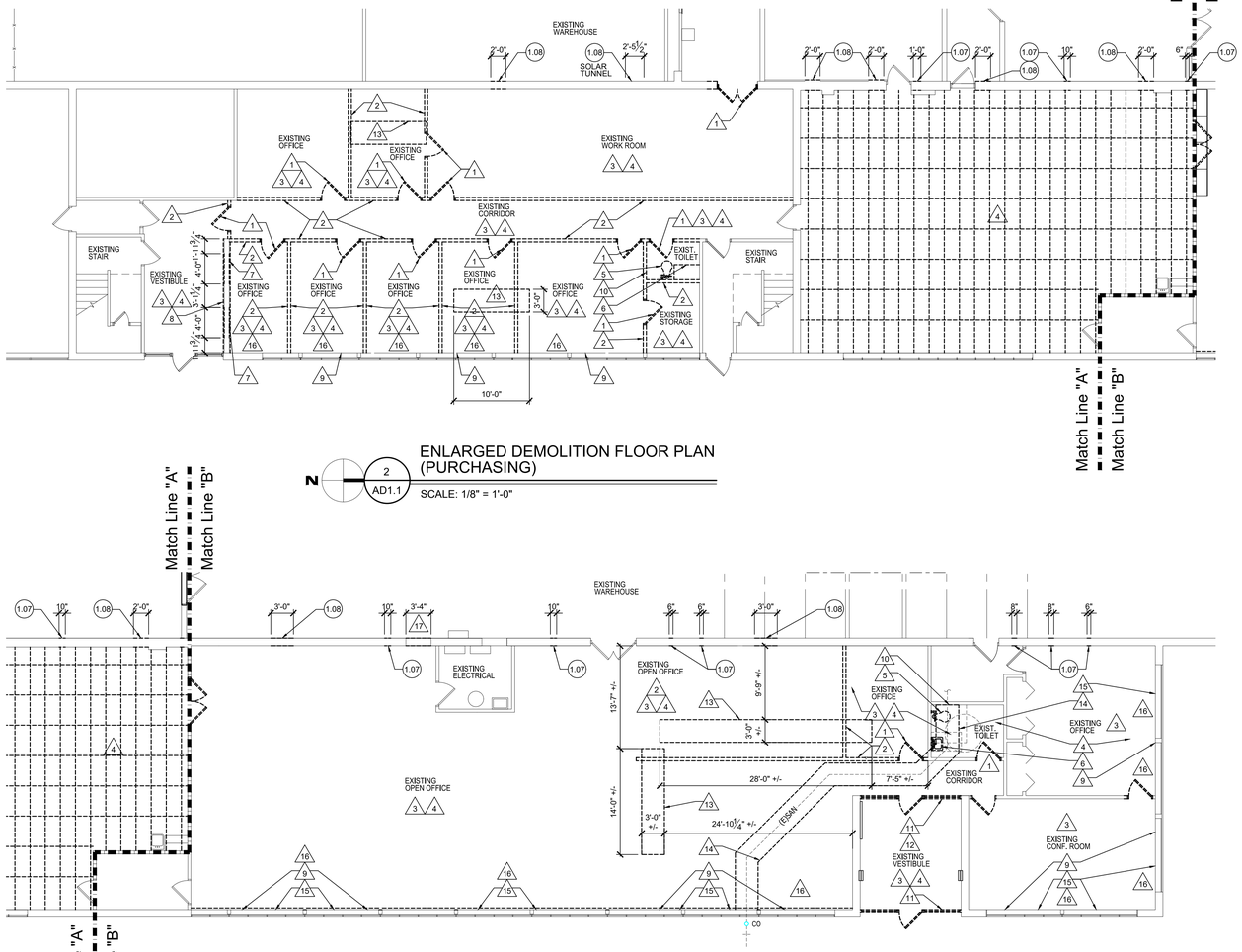
DATE: OCTOBER 31, 2024

SHEET NO.
G3.0

JOB NO. 242053

NEW WORK KEYNOTES:

SEE SHEET G3.0 FOR ALL KEYNOTES.



N 2 AD1.1

ENLARGED DEMOLITION FLOOR PLAN (PURCHASING)

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

N 1 AD1.1

ENLARGED DEMOLITION FLOOR PLAN (F & O)

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

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DEMOLITION PLAN

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DESIGN DEVELOPMENT ☐
CONSTRUCTION ■
FINAL RECORD ☐

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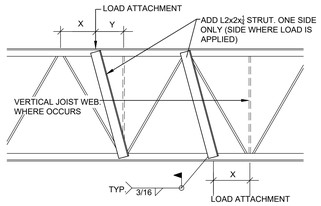
3

DATE: OCTOBER 31, 2024

SHEET NO.
AD1.0

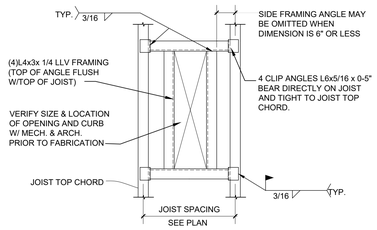
JOB NO. 242053



NOTE:
1. ALL ADDITIONAL SUPPLEMENTAL STRUT MUST BE INSTALLED IN STEEL JOISTS AT ALL CONCENTRATED LOADS IN EXCESS OF 50 LBS. UNLESS THE LOAD ATTACHMENT IS AT A PANEL POINT OF THE JOISTS.
2. AN ADDITIONAL STRUT IS NOT REQUIRED IF 'X' OR 'Y' IS LESS THAN OR EQUAL TO 6".
3. CONCENTRATED LOADS GREATER THAN 250 LBS, WHICH ARE NOT SPECIFIED ON THE PLANS, ARE NOT PERMITTED WITHOUT REVIEW BY THE PROFESSIONAL - OF - RECORD.

2 / A1.0 TYP. JOIST REINFORCEMENT DETAIL

SCALE: 1" = 1'-0"



NOTE:
LOCATE CLIP ANGLES AT TOP CHORD PANEL POINTS OR PROVIDE 2 ANGLES FROM BRG. POINT OF FRAME TO BOT. REINFORCEMENT DETAIL.

1 / A1.0 TYP. CURB FRAMING DETAIL

SCALE: 1" = 1'-0"

N / 2 / A1.0 COMPOSITE FLOOR PLAN - FIRST FLOOR

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

N / 2 / A1.0 COMPOSITE FLOOR PLAN - SECOND FLOOR

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

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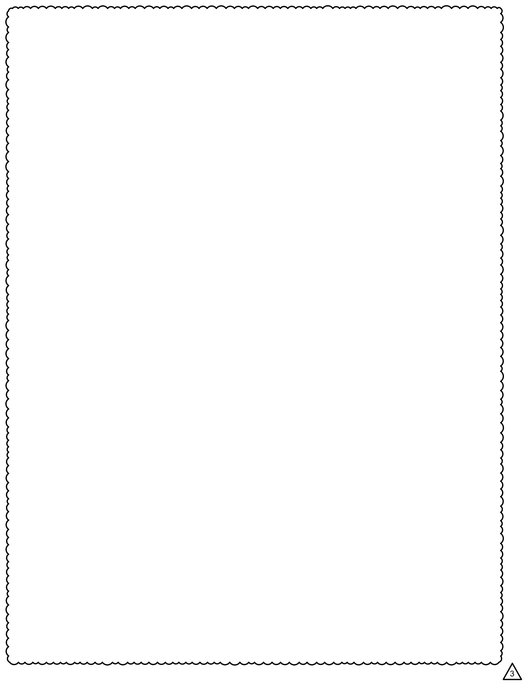

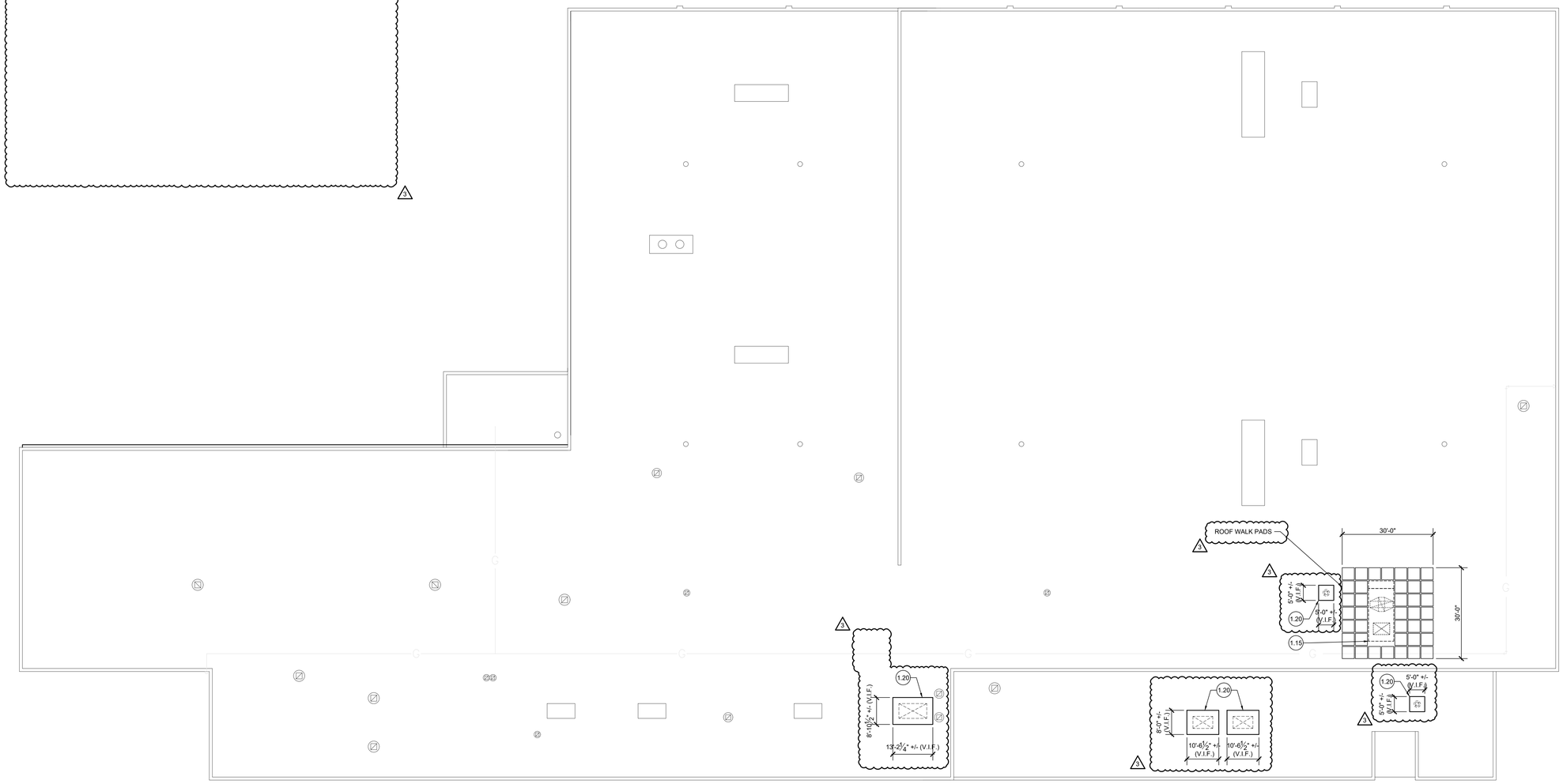

N

1 A1.0A

COMPOSITE ROOF PLAN

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

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SHEET NO.
A1.0A

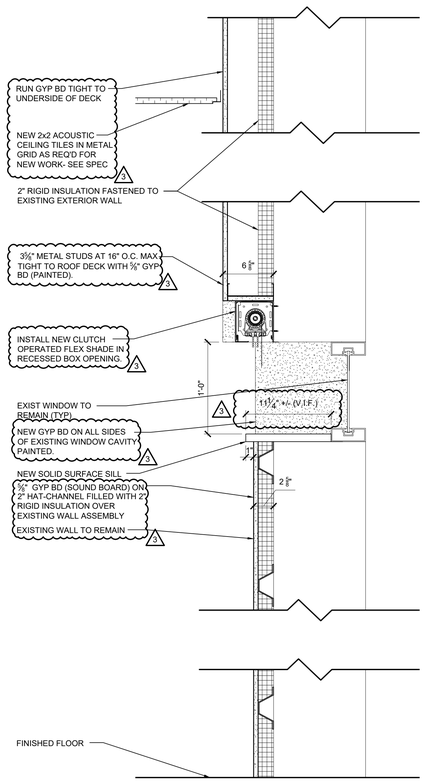
JOB NO.
242053

NEW WORK KEYNOTES:

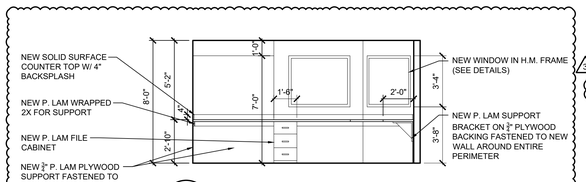
SEE SHEET G3.0 FOR ALL KEYNOTES.

GENERAL TOILET ROOM NOTES

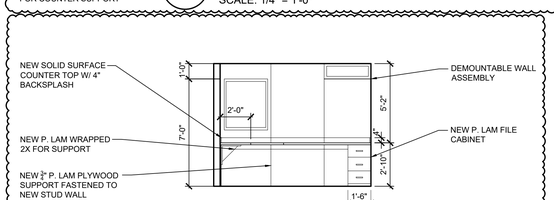
1. ALL WALLS TO BE PAINTED WITH EPOXY PAINT IN ALL TOILET ROOMS.
2. PROVIDE NEW FLOOR TRANSITIONS BETWEEN ALL DISSIMILAR MATERIALS. REFER TO SPECIFICATIONS.
3. PROVIDE ALL NEW TOILET ROOM ACCESSORIES AS SHOWN ON PLAN AND IN THE ACCESSORIES LEGEND.



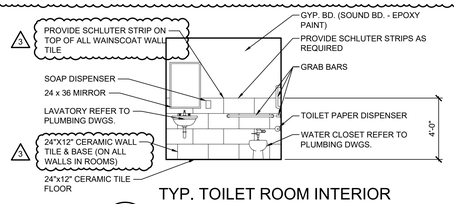
12 A1.1 WINDOW HEAD DETAIL
SCALE: 1 1/2" = 1'-0"



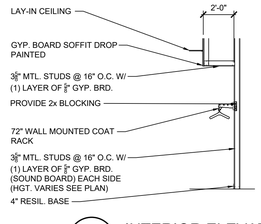
11 A1.1 INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



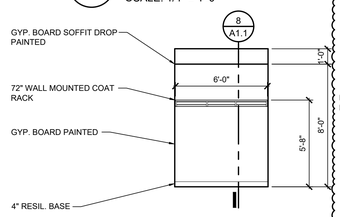
10 A1.1 INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



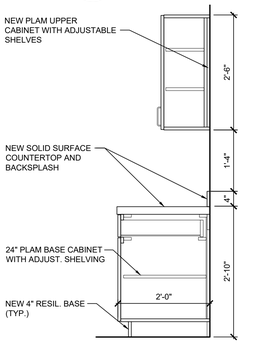
9 A1.1 TYP. TOILET ROOM INTERIOR ELEVATION (A113 & B117)
SCALE: 1/4" = 1'-0"



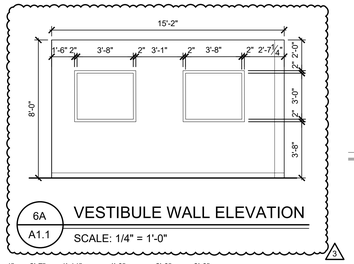
8 A1.1 INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



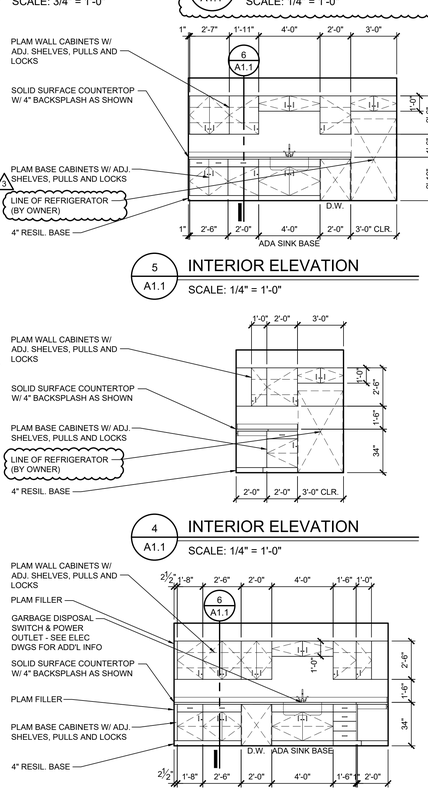
7 A1.1 INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



6 A1.1 SECTION DETAIL
SCALE: 3/4" = 1'-0"



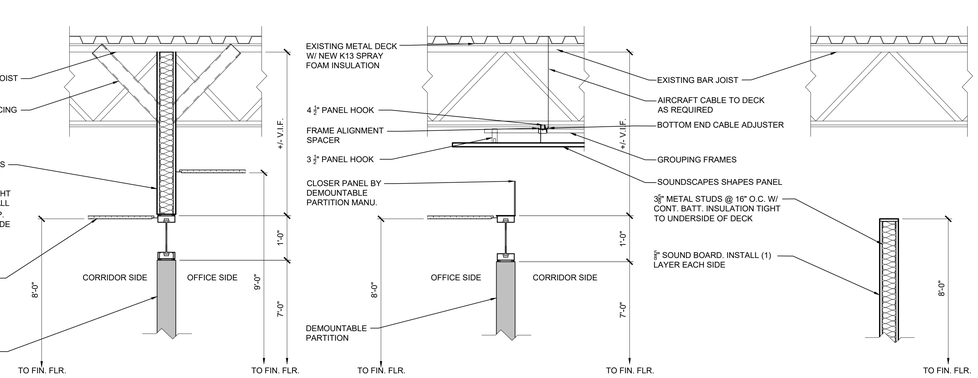
6A A1.1 VESTIBULE WALL ELEVATION
SCALE: 1/4" = 1'-0"



5 A1.1 INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"

4 A1.1 INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"

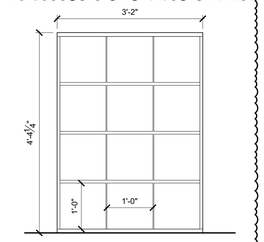
3 A1.1 INTERIOR ELEVATION
SCALE: 1/4" = 1'-0"



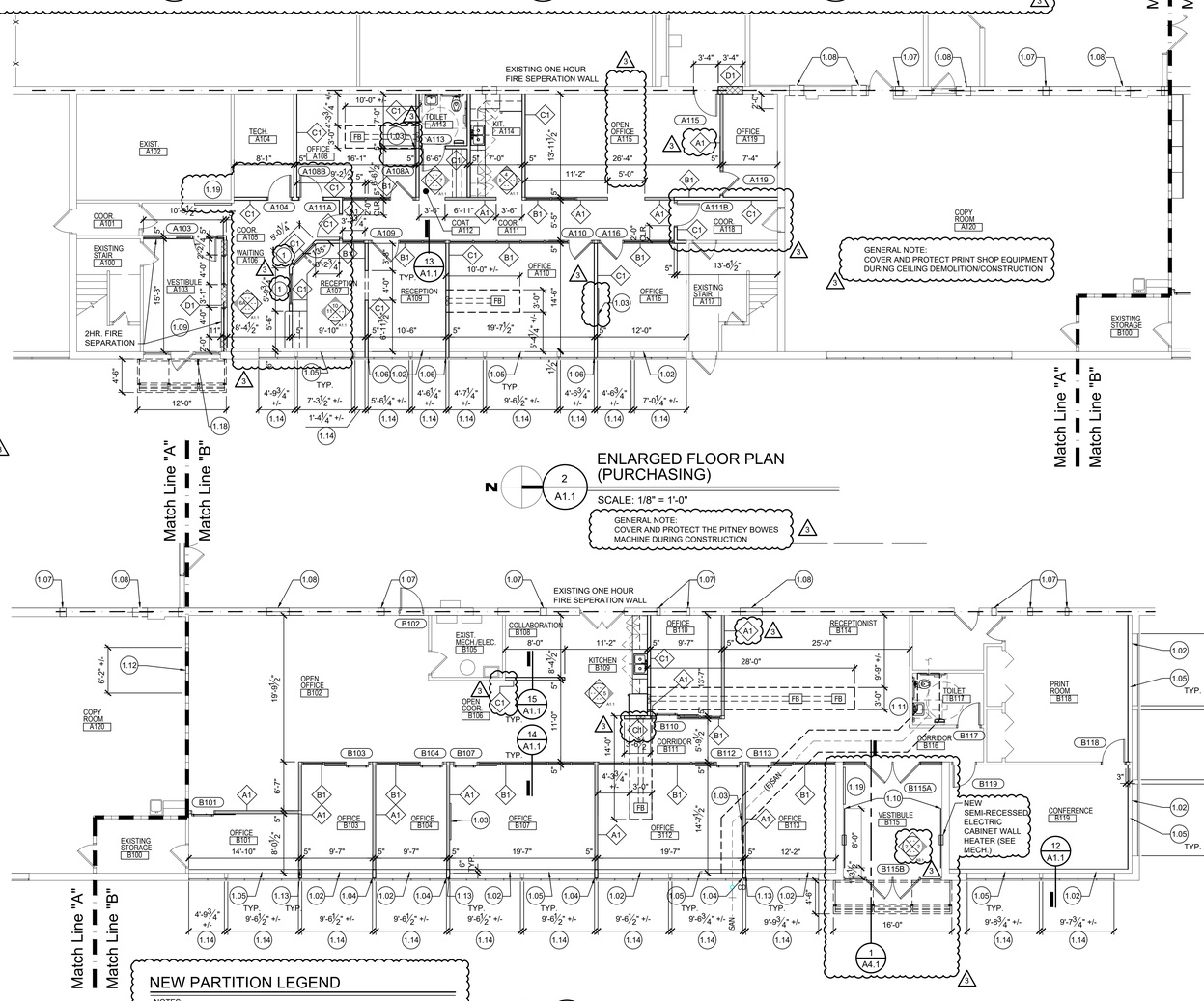
13 A1.1 DEMOUNTABLE PARTITION SECTION (PURCHASING)
SCALE: 3/4" = 1'-0"

14 A1.1 DEMOUNTABLE PARTITION SECTION (F&O)
SCALE: 3/4" = 1'-0"

15 A1.1 TYPICAL PARTITION SECTION
SCALE: 3/4" = 1'-0"



16 A1.1 HARD HAT STORAGE
SCALE: 3/4" = 1'-0"



2 A1.1 ENLARGED FLOOR PLAN (PURCHASING)
SCALE: 1/8" = 1'-0"

GENERAL NOTE: COVER AND PROTECT THE PITNEY BOWES MACHINE DURING CONSTRUCTION

1 A1.1 ENLARGED FLOOR PLAN (F & O)
SCALE: 1/8" = 1'-0"

NOTES:
1. IN ALL OPEN AREAS, (ENTIRE F&O AREA) PAINT ALL EXPOSED DECK WITH K13 INSULATION BETWEEN JOISTS AND AROUND STEEL. PAINT STRUCTURE, DUCTWORK, AND CONDUIT ETC. COMPLETE FOR A FINISHED PRODUCT.

NEW PARTITION LEGEND

NOTES:
1. ALL METAL STUD PARTITIONS IN OPEN AREA SHALL BE AT 8'-0" UNLESS OTHERWISE NOTED. DRYWALL AND FINISH ALL TOPS OF EXPOSED WALLS.
2. ALL METAL STUD PARTITIONS IN NON- OPEN AREAS SHALL BE TIGHT TO THE UNDERSIDE OF THE EXISTING DECK. STUFF OPEN FLUTES IN MINERAL WOOL INSULATION AND FIRE CAULK ALL PENETRATIONS.
3. DEMOUNTABLE PARTITIONS TO BE AT 8'-0" IN FACILITIES AND OPERATIONS AND PURCHASING.

A1 — DEMOUNTABLE PARTITION

B1 — DEMOUNTABLE PARTITION WITH 12" CLEARSTORY GLAZING (8'-0" F&O AND PURCHASING)

C1 — 3⅝" MTL. STUDS @ 16" O.C. W/ (1) LAYER OF ⅝" SOUND BOARD EACH SIDE (HGT. VARIES SEE PLAN) PROVIDE SOUND INSULATION FULL HGT. ALL NEW STUD WALLS IN PURCHASING AREA ARE TIGHT TO UNDERSIDE OF EXISTING STRUCTURE. F&O ARE AT 8'-0".

D1 — 12" CMU WITH HORIZONTAL REINFORCEMENT @16" O.C. DOWEL INTO EXISTING CONC. BLOCK WALL W/ #4 DOWEL (MIN 16" EMBED) (TIGHT TO UNDERSIDE OF DECK) STUFF OPEN DECK FLUTES WITH MINERAL WOOL AND FIRE SPRAY. FIRE CAULK ALL PENETRATIONS.

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ENLARGED FLOOR PLANS -

PRELIMINARY ☐
DESIGN DEVELOPMENT ☐
CONSTRUCTION ■
FINAL RECORD ☐

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DATE: OCTOBER 31, 2024

SHEET NO.
A1.1

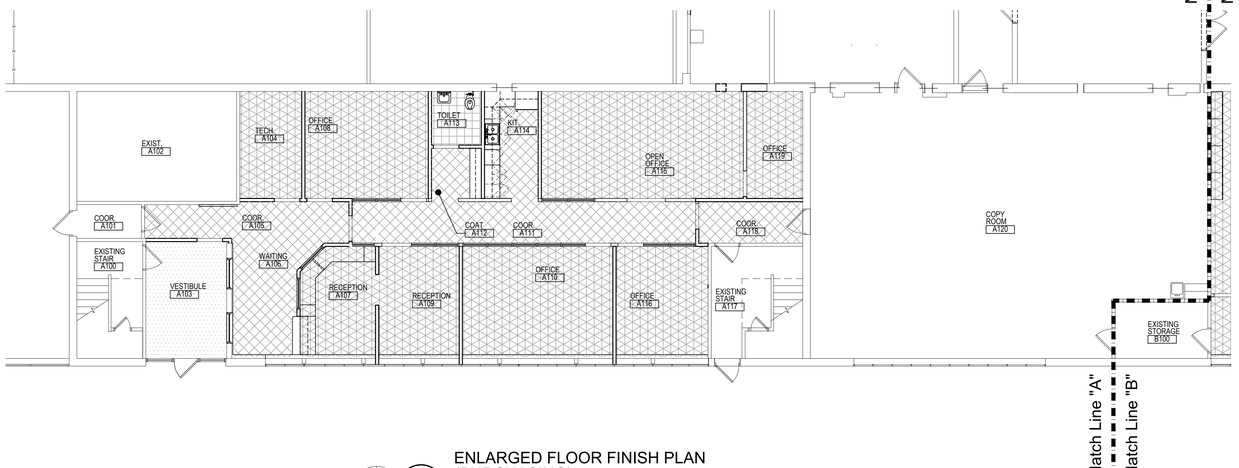
JOB NO. 242053

NEW WORK KEYNOTES:

SEE SHEET G3.0 FOR ALL KEYNOTES.

FLOORING LEGEND

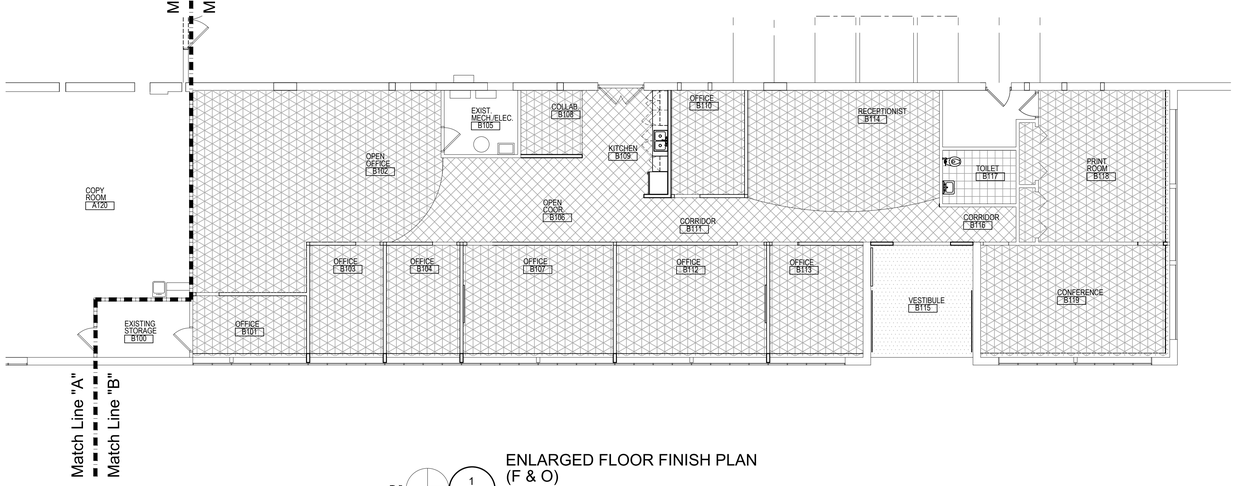
HATCH	DESCRIPTION
	NEW LVT
	NEW CARPET
	NEW CERAMIC TILE
	WALK-OFF CARPET



N 2 A1.1

ENLARGED FLOOR FINISH PLAN (PURCHASING)

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



N 1 A1.1

ENLARGED FLOOR FINISH PLAN (F & O)

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

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FLOOR FINISH PLAN

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CONSTRUCTION ■
FINAL RECORD ☐

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ADDENDUM No. 3 11-14-2024

DATE: OCTOBER 31, 2024

SHEET NO.

A1.2

JOB NO. 242053

NEW WORK KEYNOTES:

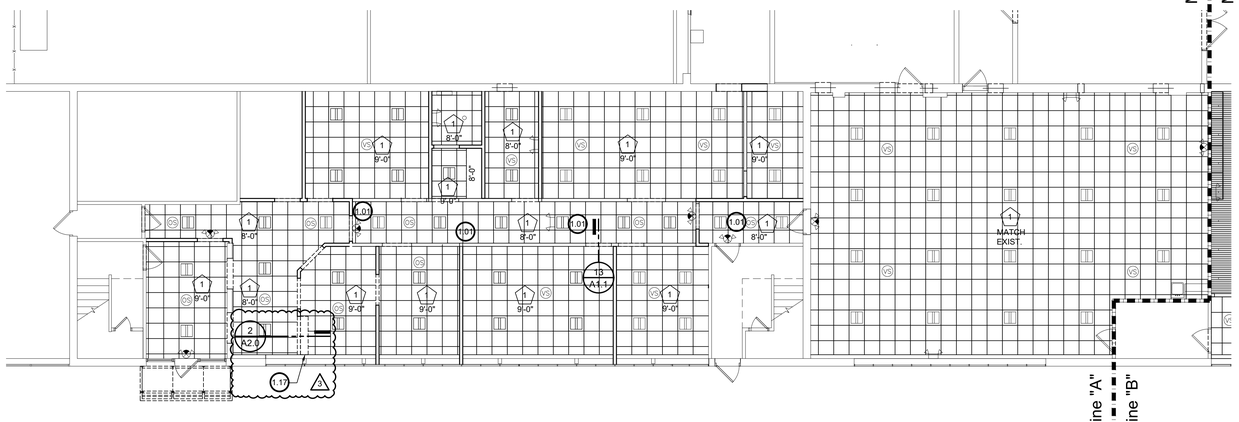
SEE SHEET G3.0 FOR ALL KEYNOTES.

REFLECTED CEILING PLAN KEYNOTES

1. NEW 24" x 24" ACOUSTICAL CEILING GRID AND TILE. REFER TO SPECS.
2. NEW WOOD AND WOOD LOOK CEILING BY ARMSTRONG. SUSPENDED FROM EXISTING STRUCTURE.
3. SOUNDSCAPES-SHAPES DESIGN CEILING BY ARMSTRONG. FASTENED TO TO UNDER SIDE OF JOIST. IF HANG POINTS SECURED TO UNDE SIDE OTHE DECK ARE DEEMED NECESSARY COORDINATE LOCATION AND IINSTALLATION WITH APPLICATION OF K13 (USE "GROUPING FRAME SYSTEM FOR AS REQUIRED FOR LARGE CLOUDS)

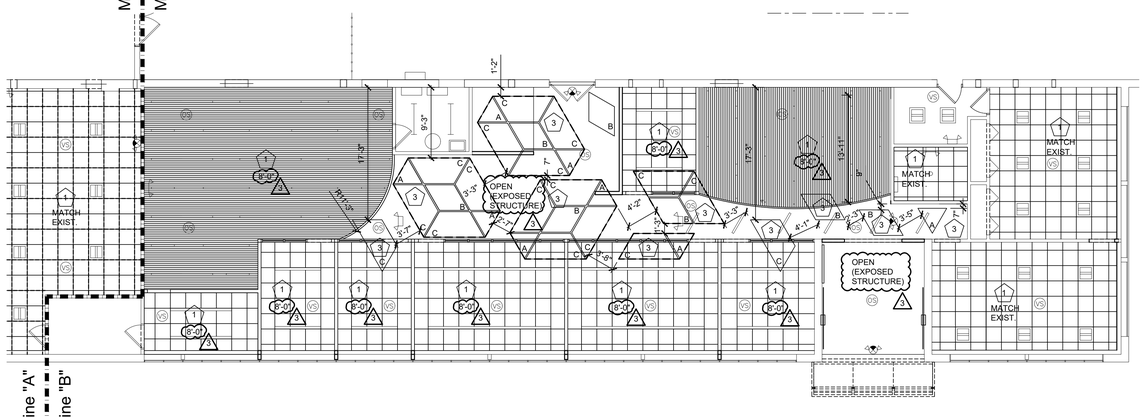
REFLECTED CEILING LEGEND

- A — SOUNDSCAPES-SHAPES DESIGN CEILING - 60 DEGREE TRIANGLE
- B — SOUNDSCAPES-SHAPES DESIGN CEILING - 60 DEGREE PARALLELOGRAM
- C — SOUNDSCAPES-SHAPES DESIGN CEILING - 60 DEGREE TRAPAZOID
- SOUNDSCAPES-SHAPES DESIGN CEILING PANEL GROUPED WITH GROUPING FRAME ASSEMBLY



ENLARGED REFLECTED CEILING PLAN (PURCHASING)

2 / A2.0 — SCALE: 1/8" = 1'-0"

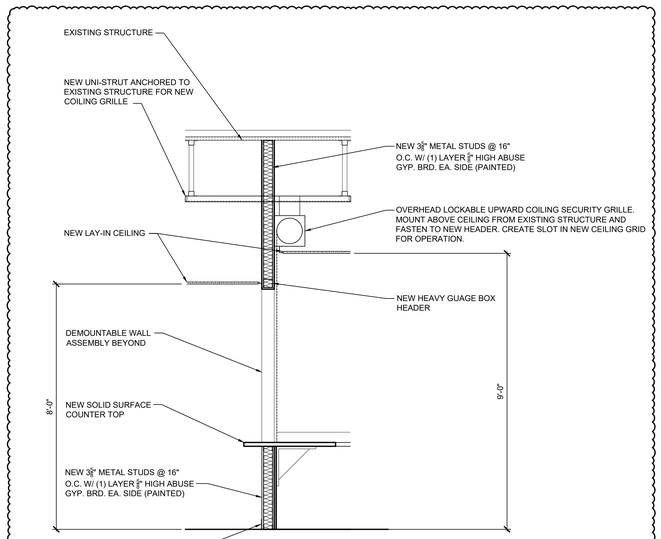


ENLARGED REFLECTED CEILING PLAN (F & O)

1 / A2.0 — SCALE: 1/8" = 1'-0"

NOTES:

1. IN ALL OPEN AREAS, (ENTIRE F&O AREA) PAINT ALL EXPOSED DECK WITH K13 INSULATION BETWEEN JOISTS AND AROUND STEEL. PAINT STRUCTURE, DUCTWORK, AND CONDUIT ETC. COMPLETE FOR A FINISHED PRODUCT.



REFLECTED CEILING DETAIL (PURCHASING)

2 / A2.0 — SCALE: 1/2" = 1'-0"

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REFLECTED CEILING PLAN

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DESIGN DEVELOPMENT ☐
CONSTRUCTION ■
FINAL RECORD ☐

DRAWN BY DCW/NL
CHECKED BY RS/DCW

REVISIONS

3 ADDENDUM No. 1 11-7-2024
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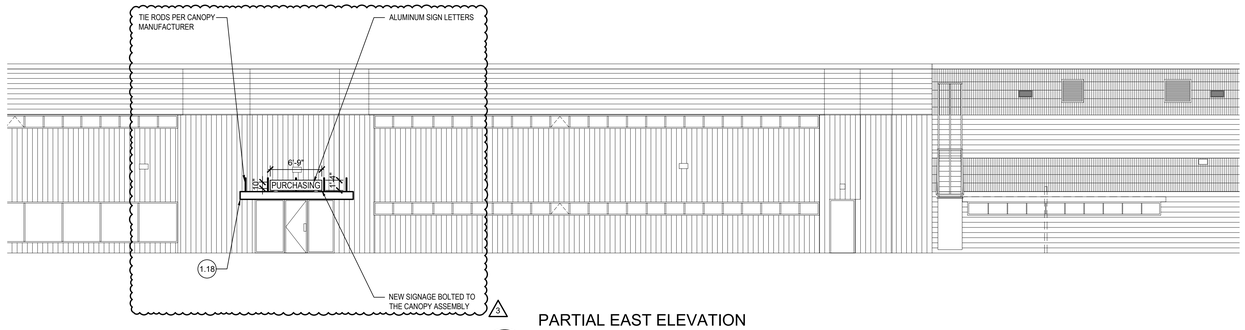
ADDENDUM No. 3 11-14-2024

DATE: OCTOBER 31, 2024

SHEET NO.

A2.0

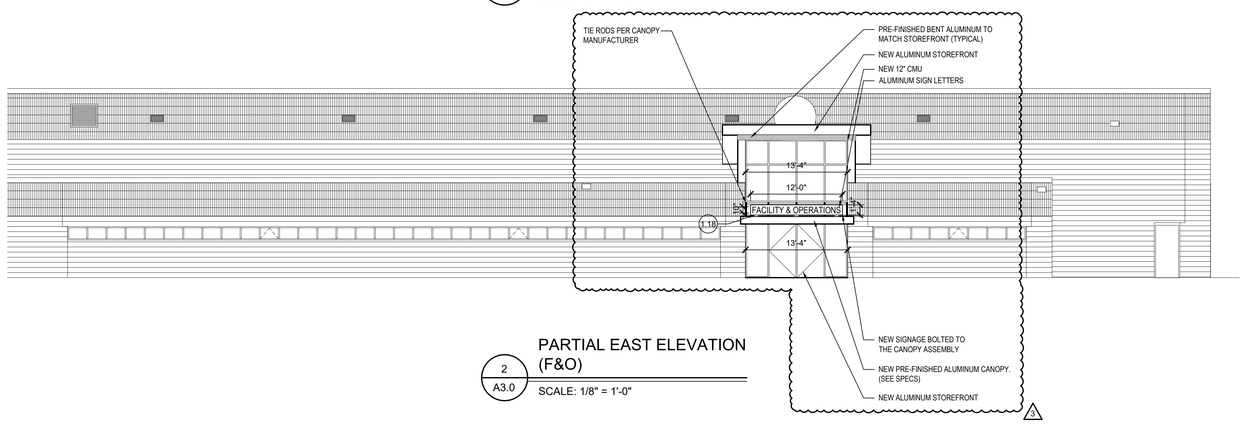
JOB NO. 242053



PARTIAL EAST ELEVATION (PURCHASING)

3 / A3.0

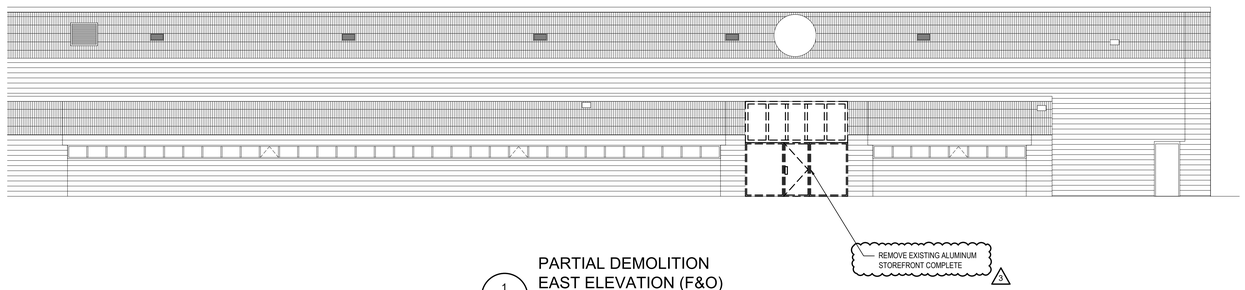
SCALE: 1/8" = 1'-0"



PARTIAL EAST ELEVATION (F&O)

2 / A3.0

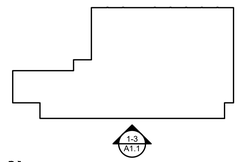
SCALE: 1/8" = 1'-0"



PARTIAL DEMOLITION EAST ELEVATION (F&O)

1 / A3.0

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



N

A / -

KEY PLAN

NO SCALE

WAKELY ASSOCIATES, INC.
ARCHITECTS

30500 VAN DYKE AVENUE
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MACOMB COUNTY
F & O / PURCHASING OFFICE RENOVATION
VIC WERTZ BUILDING

EXTERIOR ELEVATIONS

PRELIMINARY ☐
DESIGN DEVELOPMENT ☐
CONSTRUCTION ■
FINAL RECORD ☐

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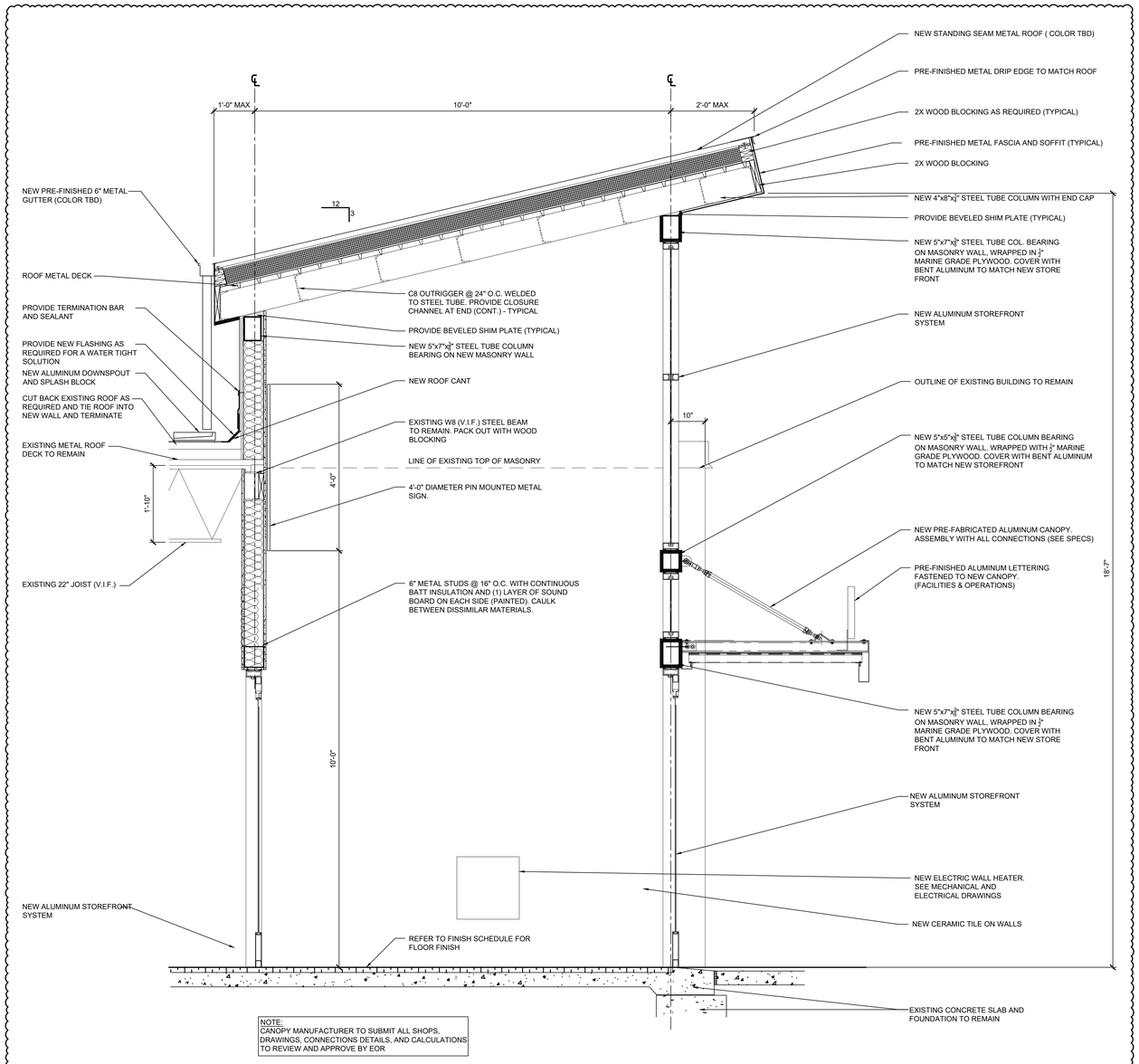
SHEET NO.

A3.0

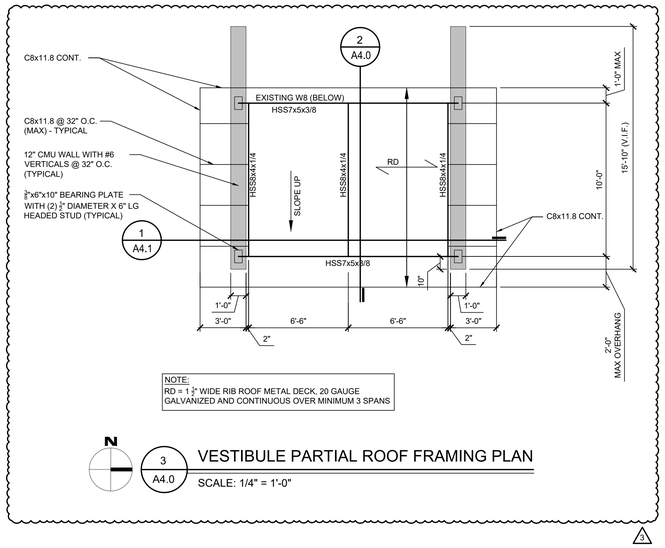
JOB NO. 242053



NOTE:
CANOPY MANUFACTURER TO SUBMIT ALL SHOPS, DRAWINGS, CONNECTIONS DETAILS, AND CALCULATIONS TO REVIEW AND APPROVE BY EOR

2 A4.0 SECTION @ NEW ENTRY OPTION 01

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

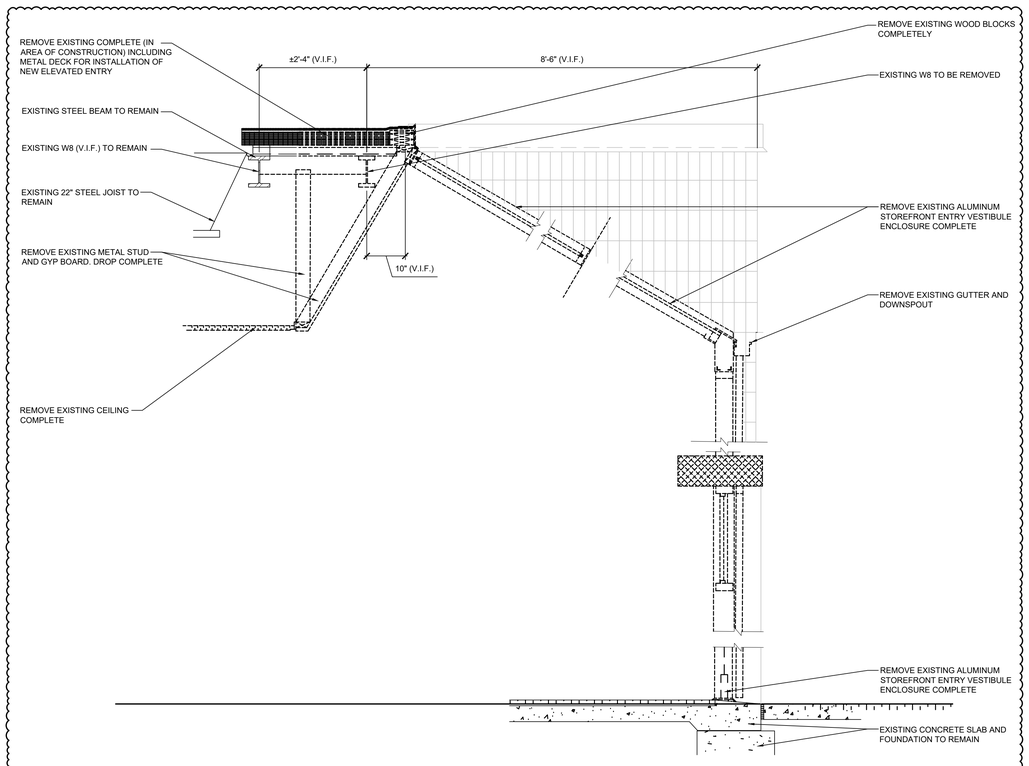


NOTE:
RD = 1 ½" WIDE RIB ROOF METAL DECK, 20 GAUGE GALVANIZED AND CONTINUOUS OVER MINIMUM 3 SPANS

N

3 A4.0 VESTIBULE PARTIAL ROOF FRAMING PLAN

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



1 A4.0 EXISTING SECTION

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

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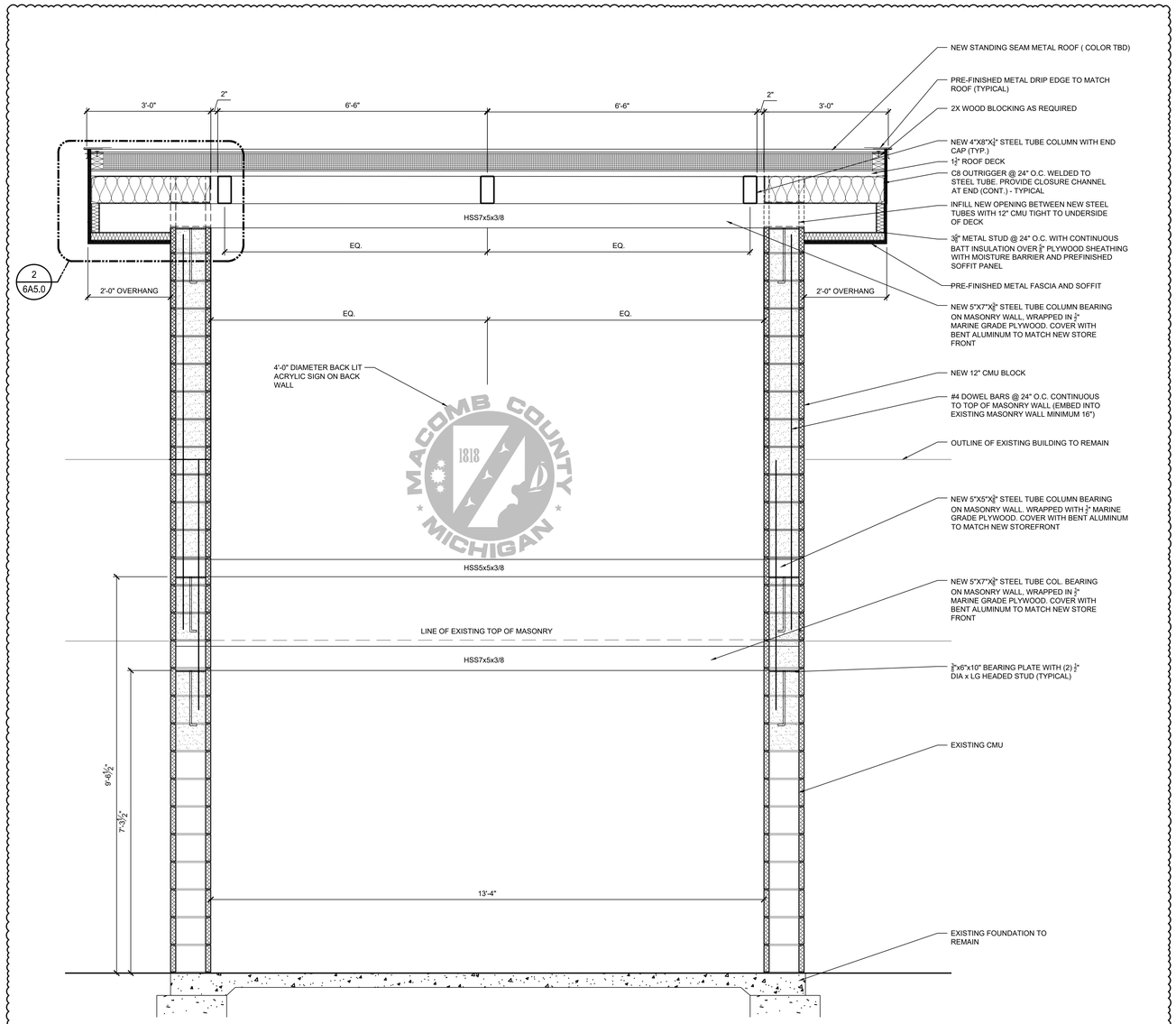

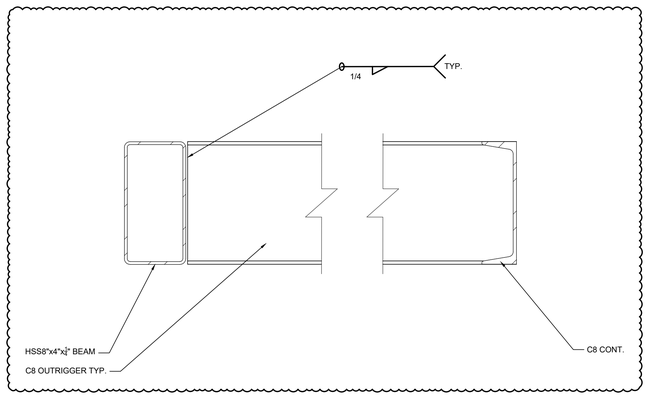

2 / A4.0 TYPICAL F&O OUTRIGGER DETAIL
SCALE: 3" = 1'-0"

1 / A4.0 NEW WORK SECTION @ F&O ENTRANCE
SCALE: 3/4" = 1'-0"

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SHEET NO.
A4.1

JOB NO. 242053

DOOR SCHEDULE

DOOR OPENING			DOOR			FRAME			DETAILS					
NO.	WIDTH	HEIGHT	TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH	HEAD	JAMB	SILL	THRESHOLD	U.L. LABEL	REMARKS
AREA "A"														
A103	3'-0"	7'-0"	F	WD	ST	2	HM	PT	H1	J1	-	-	90	-
A104	3'-0"	7'-0"	F	WD	ST	2	HM	PT	H1	J1	-	-	-	-
A108A	3'-0"	7'-0"	G	-	-	-	-	-	-	-	-	-	-	1,3
A108B	3'-0"	7'-0"	G	WD	ST	2	HM	PT	H1	J1	-	-	-	3
A109	3'-0"	7'-0"	G	-	-	-	-	-	-	-	-	-	-	1,3
A110	3'-0"	7'-0"	G	-	-	-	-	-	-	-	-	-	-	1,3
A111A	3'-0"	7'-0"	N	WD	ST	2	HM	PT	H1	J1	-	-	-	3
A111B	3'-0"	7'-0"	N	WD	ST	2	HM	PT	H1	J1	-	-	-	3
A113	3'-0"	7'-0"	F	WD	ST	2	HM	PT	H1	J1	-	MAR	-	-
A115	3'-0"	7'-0"	F	WD	ST	2	HM	PT	H2	J2	-	-	90	-
A116	3'-0"	7'-0"	G	-	-	-	-	-	-	-	-	-	-	1,3
A119	3'-0"	7'-0"	G	-	-	-	-	-	-	-	-	-	-	1,3
AREA "B"														
B101	3'-0"	7'-0"	G	-	-	-	-	-	-	-	-	-	-	2,3
B102	3'-0"	7'-0"	F	WD	ST	2	HM	PT	H2	J2	-	-	90	-
B103	3'-0"	7'-0"	G	-	-	-	-	-	-	-	-	-	-	2,3
B104	3'-0"	7'-0"	G	-	-	-	-	-	-	-	-	-	-	2,3
B107	3'-0"	7'-0"	G	-	-	-	-	-	-	-	-	-	-	2,3
B110	3'-0"	7'-0"	G	-	-	-	-	-	-	-	-	-	-	2,3
B112	3'-0"	7'-0"	G	-	-	-	-	-	-	-	-	-	-	2,3
B113	3'-0"	7'-0"	G	-	-	-	-	-	-	-	-	-	-	2,3
B115A	(2)3'-0"	7'-0"	G	AL	PFN	1	AL	PFN	H1	J1	-	-	-	3
B115B	(2)3'-0"	7'-0"	G	AL	PFN	1	AL	PFN	H1	J1	-	AL	-	4
B117	3'-0"	7'-0"	F	WD	ST	2	HM	PT	H1	J1	-	MAR	-	-
B118	3'-0"	7'-0"	N	WD	ST	2	HM	PFN	H1	J1	-	-	-	3
B119	3'-0"	7'-0"	N	WD	ST	2	HM	PFN	H1	J1	-	-	-	3

REMARKS - DOOR SCHEDULE

1	SWING DOOR, FRAME, AND HARDWARE PROVIDED BY DEMOUNTABLE PARTITION COMPANY
2	SLIDING DOOR, FRAME, AND HARDWARE PROVIDED BY DEMOUNTABLE PARTITION COMPANY
3	PROVIDE $\frac{1}{4}$" LAM. GLASS IN ALL DOOR AND FRAME OPENINGS
4	PROVIDE 1" INSULATION LAM. GLASS IN ALL DOOR OPENINGS

ABBREVIATIONS

AL	ALUMINUM
HM	HOLLOW METAL
PFN	PRE-FINISHED
PT	PAINT
MAR	MARBLE
ST	STAIN
WD	WOOD

ROOM FINISH SCHEDULE

NO.	ROOM NAME	FLOOR	BASE	WALLS				CEILING		REMARKS
				NORTH	SOUTH	WEST	EAST	MAT'L	HGT.	
AREA "A" - PURCHASING										
A100	EXISTING STAIR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	-
A101	CORRIDOR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	-
A102	EXIST. STORAGE	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	-
A103	VESTIBULE	WOC	RB	PT	PT	PT	PT	ACT	9'-0"	1,3,4
A104	TECH. OFFICE	CPT	RB	PT	PT	PT	PT	ETR	ETR	1,3,4
A105	CORRIDOR	LVT	RB	PT	PT	PT	PT	ACT	8'-0"	1,3,4
A106	WAITING	LVT	RB	PT	PT	PT	PT	ACT	8'-0"	1,4
A107	RECEPTION	CPT	RB	PT	PT	PT/DP	PT	ACT	9'-0"	1,2,4,5
A108	OFFICE	CPT	RB	PT	PT	PT	DP/PT	ACT	9'-0"	1,2,3,4,5
A109	RECEPTION	CPT	RB	PT	PT	DP	PT	ACT	9'-0"	1,2,4,5
A110	OFFICE	CPT	RB	PT	PT	DP	PT	ACT	9'-0"	1,2,4,5
A111	CORRIDOR	LVT	RB	PT	PT	DP/PT	DP	ACT	9'-0"	1,2,4,5
A112	COAT CLOSET	LVT	RB	PT	PT	PT	DP	ACT	8'-0"	1,2,4,5
A113	TOILET	CT	CT	CT/EPT	CT/EPT	CT/EPT	CT/EPT	ACT	8'-0"	1,3,4,5,7
A114	KITCHEN	LVT	RB	EPT	EPT	EPT	DP	ACT	8'-0"	1,2,3,4,5
A115	OPEN OFFICE	CPT	RB	DP	PT	PT	DP	ACT	9'-0"	1,2,3,4,5
A116	OFFICE	CPT	RB	PT	PT	DP	PT	ACT	9'-0"	1,2,3,4,5
A117	EXISTING STAIR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	-
A118	CORRIDOR	LVT	RB	PT	PT	PT	PT	ACT	8'-0"	1,2,3,4
A119	OFFICE	CPT	RB	PT	DP	PT	PT	ACT	9'-0"	1,2,3,4,5
A120	COPY ROOM	ETR	ETR	ETR	ETR	ETR	ETR	ACT	-	8
AREA "B" - FACILITIES AND OPERATION										
B100	EXISTING STORAGE	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	-
B101	OFFICE	CPT	RB	DP	PT	DP	PT	ACT/AS	8'-0"	1,2,3,4,5,6
B102	OPEN OFFICE	CPT	RB	PT	PT	PT	DP	LW/ES/AS/PT	8'-0"	2,3,4,5,6
B103	OFFICE	CPT	RB	DP	DP	DP	PT	ACT/AS	8'-0"	2,3,4,5,6
B104	OFFICE	CPT	RB	DP	DP	DP	PT	ACT/AS	8'-0"	2,3,4,5,6
B105	EXIST. MECH./ELEC.	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	-
B106	OPEN CORRIDOR	LVT	RB	-	-	PT	DP	ES/AS/PT	-	1,3,4,5,6,9
B107	OFFICE	CPT	RB	DP	DP	DP	PT	ACT/AS	8'-0"	2,3,4,5,6
B108	COLLABORATION	CPT	RB	PT	PT	PT	PT	ES/AS/PT	-	1,3,4,5,6,9
B109	KITCHEN	LVT	RB	EPT	EPT	EPT	EPT	ES/AS/PT	-	1,3,4,5,6,9
B110	OFFICE	CPT	RB	DP	PT	PT	DP	ACT/AS	8'-0"	1,2,3,4,5,6
B111	CORRIDOR	LVT	RB	-	-	DP/PT	DP	ES/AS/PT	-	1,3,4,5,6
B112	OFFICE	CPT	RB	DP	DP	DP	PT	ACT/AS	8'-0"	1,2,3,4,5,6
B113	OFFICE	CPT	RB	PT	DP	DP	PT	ACT/AS	8'-0"	1,2,3,4,5,6
B114	RECEPTIONIST	CPT	RB	PT	DP	PT	-	LW/ES/AS/PT	8'-0"	2,3,4,5,6
B115	VESTIBULE	WOC	RB	CT/GL	CT/GL	PT	PT	ES/AS/PT	VARIES	1,3,4,6
B116	CORRIDOR	LVT	RB	PT	-	PT	PT	ES/AS/PT	VARIES	1,3,4,6
B117	TOILET	CT	CT	CT/EPT	CT/EPT	CT/EPT	CT/EPT	ACT	-	3,4,7,8
B118	PRINT ROOM	CPT	RB	PT	PT	PT	PT	ACT	-	1,3,4,8
B119	CONFERENCE	CPT	RB	PT	PT	PT	PT	ACT	-	1,3,4,8

SIGNAGE SCHEDULE

QTY	PLAN NO.	TYPE	MOUNTING	TEXT
AREA "A" - PURCHASING				
1	A100	B	1	LINE 1: STAIR
1	A113	A	1	LINE 1: UNISEX
1	A117	B	1	LINE 1: STAIR
AREA "B" - FACILITIES AND OPERATION				
1	B117	A	1	LINE 1: UNISEX

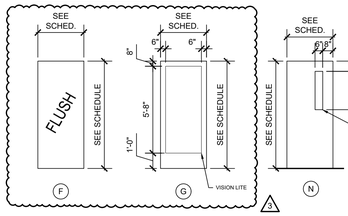
REMARKS - ROOM SCHEDULE

1	ALL GYPSUM BOARD TO BE 5/8" SOUND BOARD UNLESS OTHERWISE NOTED.
2	DEMOUNTABLE PARTITION COMPANY TO PROVIDE CEILING CLIPS TO ANCHOR NEW CEILINGS TO NEW DEMOUNTABLE PARTITIONS
3	PATCH AND REPAINT ALL EXISTING WALLS AS REQUIRED.
4	PROVIDE AND INSTALL ALL REQUIRED FLOOR TRANSITIONS, PIECES, AND THRESHOLDS
5	ALL DEMOUNTABLE PARTITIONS DO NOT HAVE RESILIENT BASE INSTALLED. RESILIENT BASE IS ONLY ON CONSTRUCTION WALLS
6	IN ALL OPEN AREAS, PAINT ALL EXPOSED DECK, STRUCTURE, DUCTWORK, CONDUIT, ETC. COMPLETE FOR A FINISHED PRODUCT (ALSO APPLIES TO ABOVE LAY-IN CEILINGS) (V.I.F.)
7	SEE ELEVATIONS FOR HEIGHT OF CERAMIC TILE ON WALL
8	NON COILING TO MATCH EXISTING (V.I.F.)
9	REFER TO SHEET A2.0 FOR LOCATIONS AND HEIGHT OF ACOUSTICAL CEILING PANEL HUNG FROM STRUCTURE

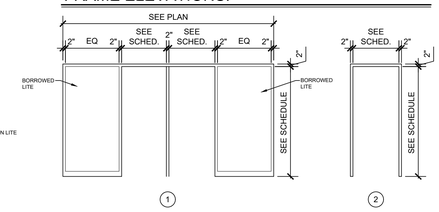
ABBREVIATIONS

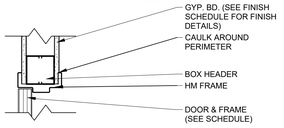
ACT	ACOUSTICAL CEILING TILE AND GRID	PT	PAINT
CMU	CONCRETE MASONRY UNITS	GL	GLASS
CT	CERAMIC TILE	DP	DEMOUNTABLE PARTITION
ETR	EXISTING TO REMAIN	LW	LINEAL WOOD
EP	EPOXY PAINT	ES	EXPOSED STRUCTURE
GB	GYPSUM BOARD	WOC	WALK-OFF CARPET
AS	ACOUSTICAL SPRAY ON DECK	RB	4" RESILIENT COVE BASE
CPT	CARPET	EPT	EPOXY PAINT

DOOR ELEVATIONS:



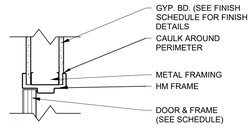
FRAME ELEVATIONS:





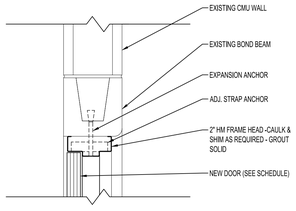
H1 / A9.1 HEAD DETAIL

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



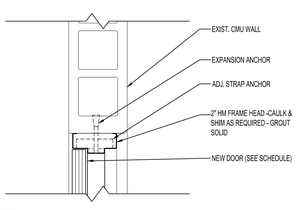
J1 / A9.1 JAMB DETAIL

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



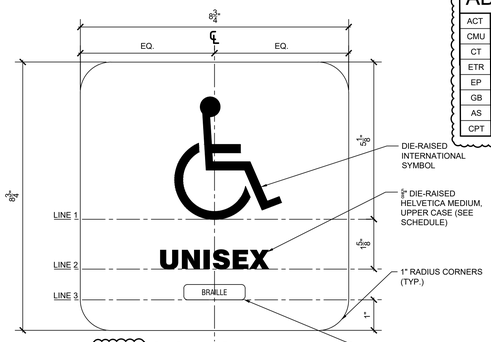
H2 / A9.1 MASONRY HEAD

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



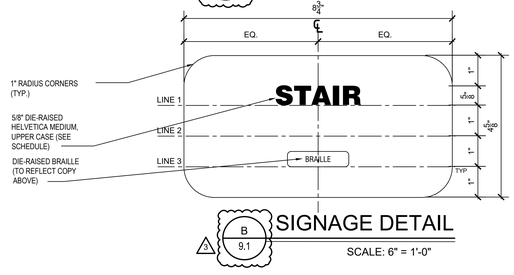
J2 / A9.1 MASONRY JAMB

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



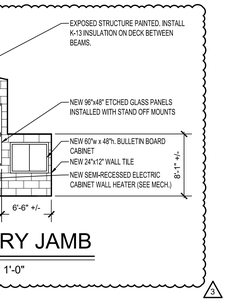
A / 9.1 SIGNAGE DETAIL

SCALE: 6" = 1'-0"



B / 9.1 SIGNAGE DETAIL

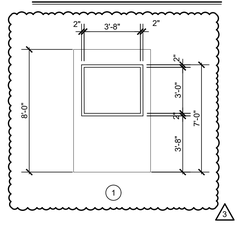
SCALE: 6" = 1'-0"

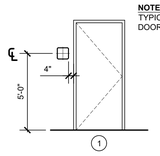


2 / A9.1 MASONRY JAMB

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

WINDOW ELEVATIONS:





1 / 9.1 MOUNTING DETAILS

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

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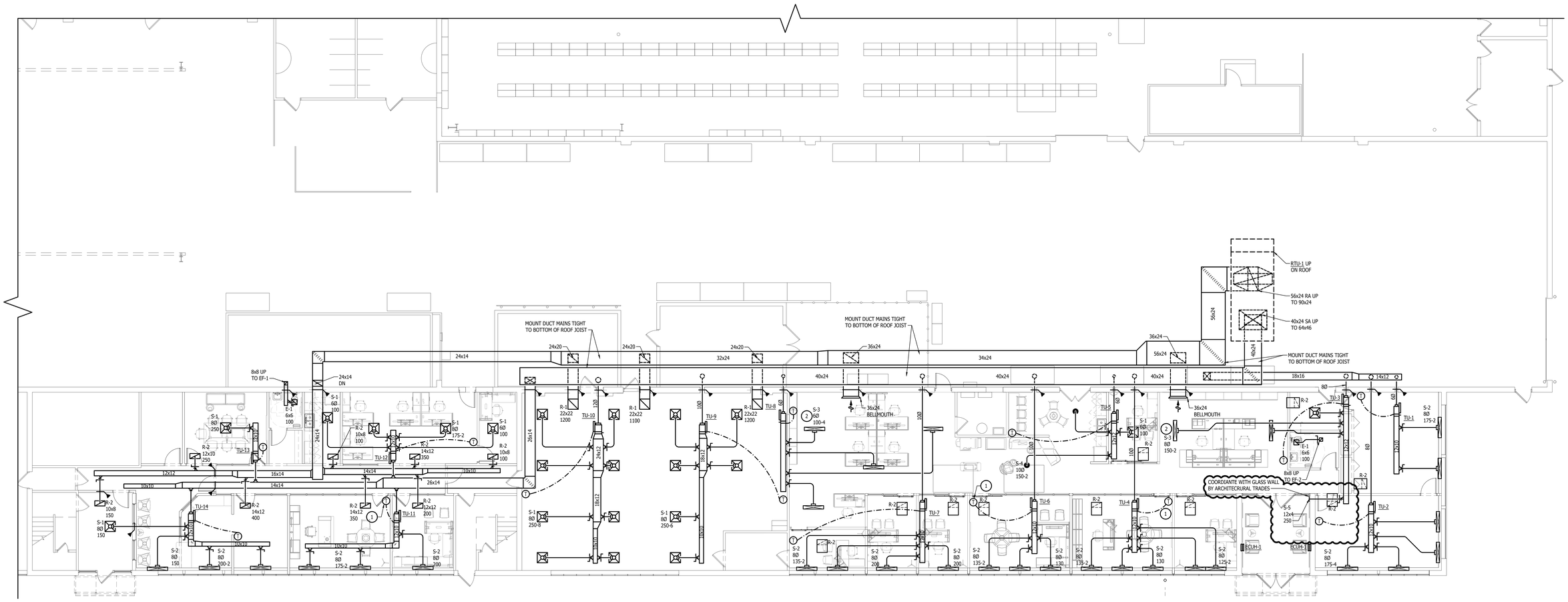
(X)	NEW WORK KEYED NOTES
1	INSTALL THERMOSTAT IN FURNITURE SYSTEM PATHWAY ABOVE LIGHT SWITCH. REMOVE SECTION OF PARTITION AS REQUIRED FOR INSTALLATION. COORDINATE ALL REQUIREMENTS WITH FURNITURE VENDOR PRIOR TO INSTALLATION.
2	INSTALL LINEAR SLOT DIFFUSERS IN ARCHITECTURAL WOOD SLOTTED CEILING. COORDINATE MOUNTING REQUIREMENTS IN FIELD PRIOR TO INSTALLATION.
3	COORDINATE MOUNTING HEIGHT

HVAC GENERAL NOTES	
A	THESE DRAWINGS ARE DIAGRAMMATIC AND REPRESENT THE GENERAL EXTENT OF THE WORK TO BE PERFORMED. PROVIDE AND EXECUTE ALL HVAC SYSTEMS PER ENGINEER'S SPECIFICATION, AND LOCAL APPLICABLE CODES INCLUDING AMENDMENTS, BULLETINS, ETC. AS WELL AS THE STANDARDS OF INSTALLATION AND EQUIPMENT ESTABLISHED FOR THE BUILDINGS, AND REQUIREMENTS OF THE OWNER.
B	EXCEPT FOR CHANGES AS MAY BE SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD, IN ACCORDANCE WITH ALTERNATES OF OPTIONS AS STATED HEREINAFTER, ALL WORK MUST BE IN FULL ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS. SYSTEMS ARE TO BE COMPLETE, EFFICIENT, AND SATISFACTORY OPERATION WHEN PROJECT IS DELIVERED TO THE OWNER.
C	THE CONTRACTOR AND EACH SUBCONTRACTOR COVENANTS AND AGREES TO INDEMNIFY, DEFEND, AND HOLD HARMLESS THE CONSULTING ENGINEER, ARCHITECT, AND OWNER FROM AND AGAINST ANY LIABILITY, LOSS, DAMAGE, OR EXPENSE INCLUDING ATTORNEYS ARISING FROM A FAILURE OR ALLEGED FAILURE ON THE PART OF THE CONTRACTOR, SUBCONTRACTORS, AND THEIR AGENTS/EMPLOYEES PROPERLY TO DISCHARGE THE OBLIGATIONS ASSUMED BY HIM/HER IN THE PERFORMANCE OF THE WORK, INCLUDING ANY ACT OR OMISSION ALLEGEDLY RESULTING IN DEATH, PERSONAL INJURY, PROPERTY DAMAGE, OR IMPROPER CONSTRUCTION PROTOCOL.
D	CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVAL FROM GOVERNING AUTHORITIES AND FILE NECESSARY FORMS, PAY ALL INSPECTION FEES.
E	CONTRACTOR TO EXAMINE ALL ADJOINING WORK BEFORE COMMENCEMENT OF HIS/HER SCOPE OF WORK. REPORT ANY DISCREPANCIES TO THE CONSTRUCTION MANAGER FOR REVIEW AND APPROVAL. COORDINATE ALL WORK WITH OTHER TRADES TO ENSURE THAT INSTALLATION IS MADE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
F	PROVIDE REQUIRED CLEARANCE IN FRONT OF ELECTRICAL EQUIPMENT; DUCTWORK/PIPING SHALL NOT INTERFERE WITH ELECTRICAL EQUIPMENT CLEARANCE.
G	CONNECTION TO EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURER'S CERTIFIED DRAWINGS. ALL PIPING CONNECTIONS SHALL BE MINIMUM 3/4" UNLESS NOTED OTHERWISE.
H	FURNISH ADEQUATE LIABILITY INSURANCE AND BONDING DOCUMENTS AS REQUIRED BY THE OWNER.
J	SUPPORT ALL ANCHORS SECURED TO THE BOTTOM OF FLOOR SLABS SHALL BE DROP-IN OR SLEEVE ANCHOR TYPE. ALL SUPPORTING STEEL SHALL BE PROVIDED BY THE CONTRACTOR.
K	DUCTWORK/PIPING SHALL NOT BE INSTALLED IN A LOCATION THAT RESTRICTS THE ACCESS TO MECHANICAL DEVICES REQUIRING ACCESS.
L	THE CONTRACTOR SHALL PROVIDE ALL MISCELLANEOUS SUPPORTING STEEL FOR THE PROPER INSTALLATION OF MECHANICAL SYSTEMS.
M	BRANCH DUCTWORK TO GRILLES, REGISTERS, AND DIFFUSERS SHALL BE THE SAME SIZE AS THE TERMINAL DEVICE NECK SIZE WHERE NO DUCT SIZE IS INDICATED.



MECHANICAL NEW WORK FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

WAKELY ASSOCIATES, INC.
ARCHITECTS

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MACOMB COUNTY
F & O / PURCHASING OFFICE RENOVATION
VIC WERTZ BUILDING

MECHANICAL NEW WORK FIRST FLOOR PLAN

PRELIMINARY ☐
DESIGN DEVELOPMENT ☐
CONSTRUCTION ■
FINAL RECORD ☐

DRAWN BY TDD
CHECKED BY DJL

REVISIONS
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DATE: OCTOBER 31, 2024

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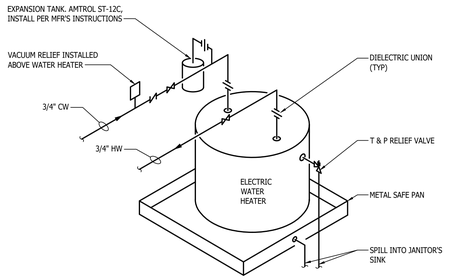
M1.10

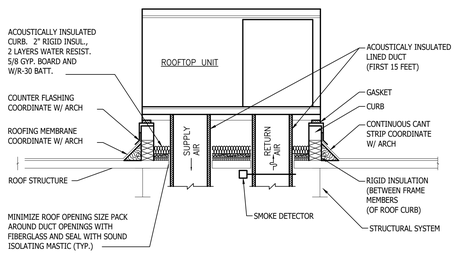
JOB NO.
242053

STATE OF MICHIGAN
DAVID JOHN LITTLEFIELD
ENGINEER
No. 62983
PROFESSIONAL ENGINEER



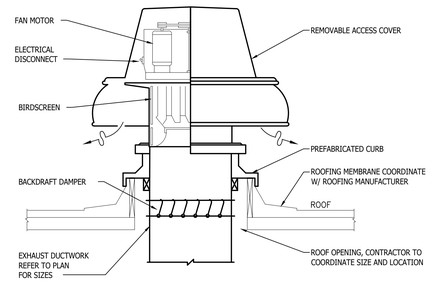
ELECTRIC WATER HEATER ON SHELF WITH EXPANSION TANK

NO SCALE



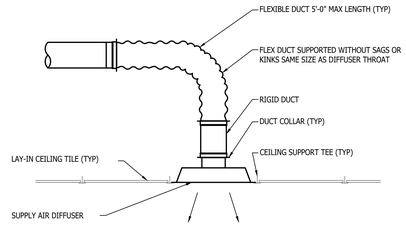
ROOFTOP UNIT - CURB MOUNTING DETAIL

NO SCALE



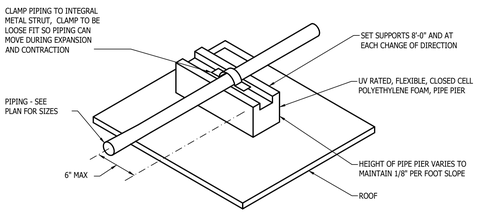
ROOF EXHAUST FAN MOUNTING DETAIL

NO SCALE



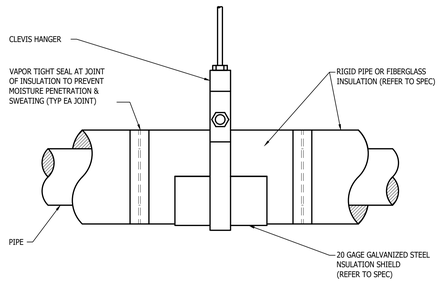
SUPPLY AIR DIFFUSER DETAIL

NO SCALE

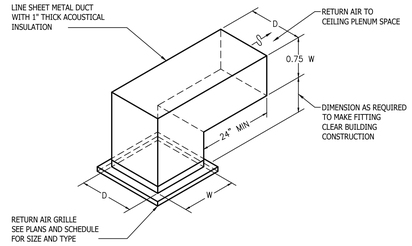


ROOF GAS PIPE SUPPORT DETAIL

NO SCALE

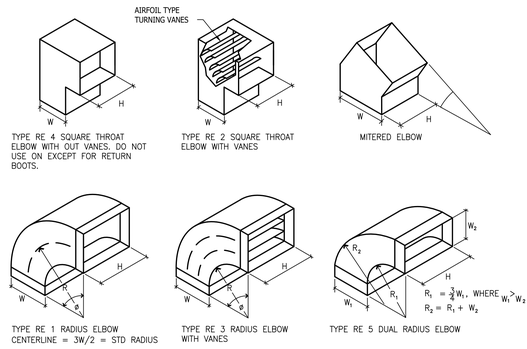


ELEVATION



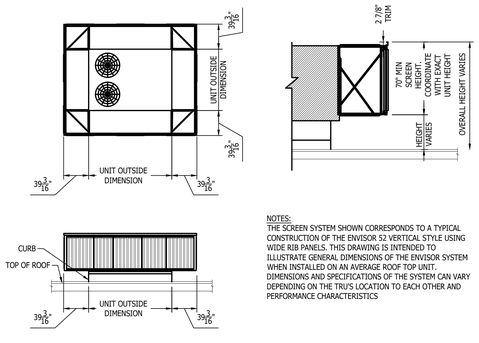
PLENUM RETURN GRILLE/BOOT DETAIL

NO SCALE



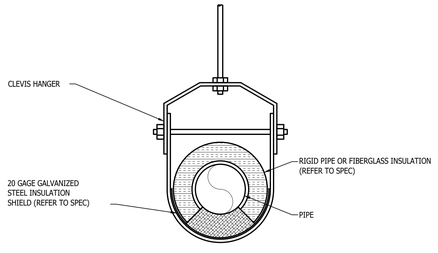
RECTANGULAR SHEET-METAL ELBOWS

NO SCALE



ROOFTOP SCREEN DETAIL

NO SCALE

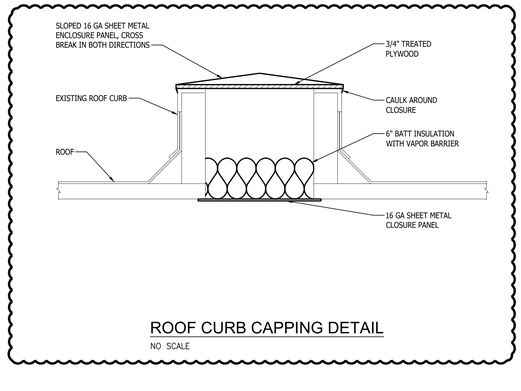


SECTION

NO SCALE

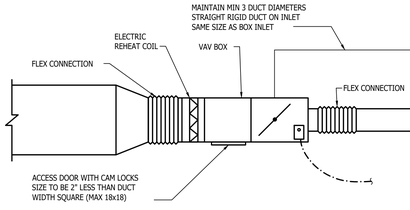
INSULATED PIPE HANGER DETAIL

NO SCALE



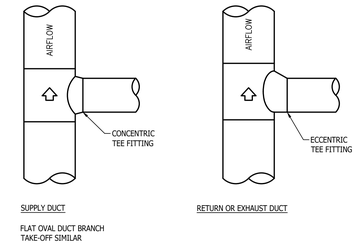
ROOF CURB CAPPING DETAIL

NO SCALE



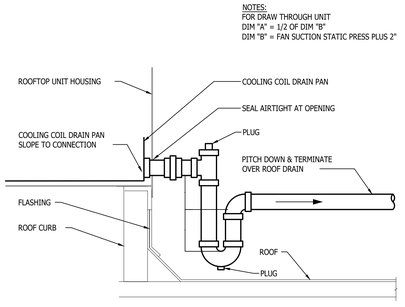
VAV BOX INSTALLATION DETAIL

NO SCALE



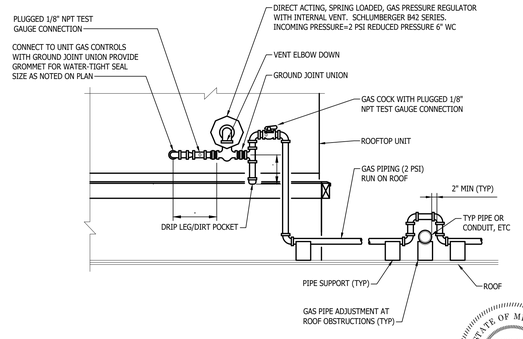
ROUND DUCT BRANCH TAKE-OFF DETAILS

NO SCALE



ROOFTOP UNIT COOLING COIL DRAIN PAN TRAP DETAIL

NO SCALE



TYPICAL GAS PIPING CONNECTION DETAIL

NO SCALE

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ADDENDUM No. 1 11-7-2024
ADDENDUM No. 3 11-14-2024

DATE: OCTOBER 31, 2024

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M5.00

JOB NO.
242053

STATE OF MICHIGAN
DAVID JOHN LITTLEFIELD
ENGINEER
No. 62881
PROFESSIONAL

PACKAGED COMMERCIAL ROOFTOP UNIT SCHEDULE - (DX - GAS)

UNIT ID	TOTAL SUPPLY (CFM)	MINIMUM OA (CFM)	SUPPLY FAN					DX COOLING COIL		AIR						NATURAL GAS HEATING SECTION							POWER EXHAUST OR BAROMETRIC RELIEF	FILTER TYPE	ELECTRICAL					DISCONNECT		CURB HEIGHT (IN)	MANUFACTURER/ MODEL NO.	REMARKS
			ESP (IN WG)	FAN TYPE	DRIVE TYPE	BHP	HP	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	EDB (°F)	EWB (°F)	LDB (°F)	LWB (°F)	APD (IN WG)	MIN. EFFICIENCY (EER)	REFRIGERANT TYPE	INPUT (MBH)	OUTPUT (MBH)	GAS PRESS. MIN.- MAX. (IN WG)	STAGES OR MODULATION TURNDOWN	BURNER TYPE	EAT (°F)	LAT (°F)			MOCP	MCA	FLA	VOLTS	PHASE	FURN. BY	INST. BY			
RTU-1	10,600	1,700	1.5	SWSI	DIRECT	8.05	15.0	346.6	275.4	77.4	64.3	55.1	53.7	0.19	10.68	R-454B	600.0	486.0	4-14	10:1	INDIRECT	57.2	99.4	POWER EXHAUST	2" MERV 8	100	88	83	460	3	MC	MC	14	AAON / RNA-031-D-A-3-GAB0B-CB2L0:00-0AHAL-G00-00000-ABNBJ-EC-CB0 A-00-00-0-AN0-E0-N000-00-5W0-A00A00-C0000B-000000B	

NOTES:

1. DUAL INPUT ENTHALPY CONTROL ECONOMIZER.
2. PROVIDE WITH REFRIGERATION CONTROLS ONLY. UNIT DDC CONTROLLER TO BE FIELD INSTALLED BY TCC.
3. 2" PLEATED MEDIA FILTERS.
4. PROVIDE WITH FACTORY MOUNTED DISCONNECT SWITCH.
5. REFRIGERATION COMPRESSORS SHALL BE VARIABLE SPEED SCROLL.

PLUMBING FIXTURE SCHEDULE

TAG	BARRIER FREE	ITEM	PIPE CONNECTION SIZES				MANUFACTURER & MODEL NO..	ACCESSORIES
			WASTE	VENT	CW	HW		
SK-1	Y	SINGLE COMPARTMENT UNDERMOUNT SINK W/ DISPOSAL	1 1/2"	1 1/2"	1/2"	1/2"	KOHLER: STRIVE K-5285-NA	FAUCET: KOHLER COMPONENTS K-28268-CP, CHROME PLATED P-TRAP AND GARBAGE DISPOSAL IN-SINKERATOR EVOLUTION EXCEL.
WC-1	Y	FLOOR MOUNTED TANK TYPE TOILET	4"	2"	1"	-	KOHLER: K-3998-0	1.28 GPF
LAV-1	Y	COUNTED MOUNTED LAVATORY	1 1/2"	1 1/2"	1/2"	1/2"	KOHLER K-2330-G	FAUCET: PARALLEL K-23484-4N-CP; PROVIDE WITH ASSE 1070 MIXING VALVE.

NOTES:

1. PROVIDE ALL ACCESSORIES NECESSARY FOR COMPLETE AND OPERABLE INSTALLATION.
2. ALL FIXTURES SHALL MEET MICHIGAN DEPT. OF PUBLIC HEALTH REQUIREMENTS, AND SHALL BE SUITABLE FOR FOOD PREPARATION AREAS.

DOMESTIC WATER HEATER SCHEDULE (ELECTRIC TANK TYPE)

UNIT ID	LOCATION/ AREA SERVED	STORAGE CAPACITY (GAL)	RECOVERY AT 100°F (GPH)	ELECTRICAL			DISCONNECT			MANUFACTURER/ MODEL NO.	REMARKS
				INPUT (KW)	VOLTS	PHASE	FURN. BY	INST. BY	TYPE		
EWH-1	PURCHASING	10	-	2.5	480	3	EC	EC	SWITCH	AO SMITH / DEL-10	

NOTES:

ELECTRIC HEATER SCHEDULE

UNIT ID	MBH	kW	CFM	ELECTRICAL			PHYSICAL SIZE (IN)			MOUNTING	MANUFACTURER / MODEL NO.	REMARKS
				VOLTS	PHASE	AMPS	LENGTH/ DEPTH	HEIGHT	WIDTH			
ECUH-1	10.2	3	100	208	1	14.0	14	19	4	2" RECESSED	QMARK / SSAR4808	

NOTES:
ABBREVIATIONS: EBB = ELECTRIC BASEBOARD; ECH = ELECTRIC COVE HEATER; ECUH = ELECTRIC CABINET UNIT HEATER; EUH = ELECTRIC UNIT HEATER; ERCP = ELECTRIC RADIANT CEILING PANEL.

1. MANUFACTURER TO PROVIDE BUILT-IN CONTROLS & FACTORY MOUNTED DISCONNECT. (IF REMOTE THERMOSTAT IS SHOWN ON DRAWINGS, PROVIDE REMOTE THERMOSTAT.

VAV TERMINAL UNIT SCHEDULE WITH TEMPERING COIL - (ELECTRIC)

UNIT ID	AIRFLOW RANGE		INLET SP (IN WG)	DUCT CONNECTIONS		MAX NC LEVEL	ELECTRIC TEMPERING COIL (MANUFACTURER)							MANUFACTURER/ MODEL NO.	REMARKS
	MIN (CFM)	MAX (CFM)		INLET SIZE (IN)	OUTLET SIZE (IN)		HTG (CFM)	APD (IN WG)	EAT (°F)	LAT (°F)	KW	VOLTS	PHASE	STAGES OF HEAT	
TU-1	145	350	0.25	6Ø	12x8	25	350	0.25	65	90	2.8	480	3	-	PRICE / SDV6	
TU-2	250	700	0.25	8ø	12x10	25	700	0.25	65	90	5.5	480	3	-	PRICE / SDV8	
TU-3	250	750	0.25	8ø	12x10	25	750	0.25	65	94.7	7.1	480	3	-	PRICE / SDV8	
TU-4	250	650	0.25	8ø	12x10	25	650	0.25	65	90	5.1	480	3	-	PRICE / SDV8	
TU-5	145	400	0.25	6Ø	12x8	25	400	0.25	65	90	3.2	480	3	-	PRICE / SDV6	
TU-6	145	400	0.25	6Ø	12x8	25	400	0.25	65	90	3.2	480	3	-	PRICE / SDV6	
TU-7	250	670	0.25	8ø	12x10	25	670	0.25	65	90	5.3	480	3	-	PRICE / SDV8	
TU-8	145	400	0.25	6Ø	12x8	25	400	0.25	65	90	3.2	480	3	-	PRICE / SDV6	
TU-9	375	1500	0.25	10Ø	14x12	25	1500	0.25	65	90	11.9	480	3	-	PRICE / SDV10	
TU-10	580	2000	0.25	12Ø	16x14	25	2000	0.25	65	90	15.8	480	3	-	PRICE / SDV12	
TU-11	145	550	0.25	8ø	12x10	25	550	0.25	65	90	4.4	480	3	-	PRICE / SDV8	
TU-12	145	550	0.25	8ø	12x10	25	550	0.25	65	90	4.4	480	3	-	PRICE / SDV8	
TU-13	80	250	0.25	6Ø	12x8	25	350	0.25	65	90	2.8	480	3	-	PRICE / SDV6	
TU-14	250	700	0.25	8ø	12x10	25	700	0.25	65	90	5.5	480	3	-	PRICE / SDV8	

NOTES:

1. MINIMUM AND MAXIMUM AIRFLOW SHALL BE SET TO THE CFM INDICATED ON FLOOR PLANS. MAXIMUM N.C. LEVEL BASED ON 3" PRESSURE DROP WITH NO ALLOWANCE FOR EXTERNAL ATTENUATION. MAXIMUM RADIATED NC LEVEL SHALL NOT EXCEED 25.
2. DISCONNECT TO BE PROVIDED BY MANUFACTURE.
3. FIELD MOUNT CONTROLLER BY TEMPERATURE CONTROLS CONTRACTOR.

EXHAUST FAN SCHEDULE

UNIT ID	SERVING	TYPE	CFM	ESP (IN WG)	FAN RPM	MOTOR				ELECTRICAL			MODEL NO.	REMARKS
						BHP	HP	RPM	DRIVE TYPE	VOLTS	PHASE	MOCP		
EF-1	BATHROOM	DOWNBLAST	100	0.25	1,485	0.01	1/15	-	DIRECT	120	1	15	G-060-VG	DISCONNECT BY MANUFACTURE
EF-2	BATHROOM	DOWNBLAST	100	0.25	1,485	0.01	1/15	-	DIRECT	120	1	15	G-060-VG	DISCONNECT BY MANUFACTURE

NOTES:

1. MODEL NUMBERS ARE GREENHECK UNLESS OTHERWISE NOTED.
2. INSTALL VARIGREEN CONTROLLER BELOW ROOF.
3. INSTALL ON 14" CURB.

GRILLE, REGISTER AND DIFFUSER SCHEDULE

UNIT ID	FACE SIZE	NECK SIZE	MOUNTING	FINISH	MATERIAL	PRICE/ MODEL NO.	REMARKS
S-1	24x24	SEE PLANS	CEILING	WHITE	STEEL	SPD	
S-2	48x6	SEE PLANS	CEILING	WHITE	STEEL	TBD7	2 SLOT, 2 WAY
S-3	48x6	SEE PLANS	CEILING	MATCH CEILING COLOR	STEEL	TBD7	2 SLOT, 1 WAY, COORDINATE WITH CEILING DESIGN AND ARCHITECTURAL FOR PROPER INSTALLATION IN TO CEILING.
S-4	22-1/2"	SEE PLANS	DUCT MOUNTED	WHITE	STEEL	RCD	
S-5	NECK+2"	SEE PLANS	WALL	WHITE	STEEL	520	
R-1	24x24	22x22	CEILING	WHITE	STEEL	PDDR	PROVIDE WITH SOUND ATTEN. BOOT IF NOT DUCTED.
R-2	24"x12"	22x12	CEILING	WHITE	STEEL	PDDR or 80	PROVIDE WITH SOUND ATTEN. BOOT IF NOT DUCTED.
E-1	24x24	SEE PLANS	CEILING	WHITE	STEEL	PDDR	

NOTES:

1. COORDINATE WITH LIGHTING AND FRAME TYPE ACCORDINGLY WITH ARCHITECTURAL CEILING LAYOUT.

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ARCHITECTS

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STATE OF MICHIGAN
DAVID JOHN LITTLEFIELD
ENGINEER
No. 62881
PROFESSIONAL ENGINEERS

LUMINAIRE SCHEDULE

FIXTURE SYMBOL	FIXTURE TAG	DESCRIPTION	MANUFACTURER(S)	LAMP SOURCE	WATTS
	A	2'x2' LOW PROFILE TROFFER VOLUMETRIC DISTRIBUTION LED LUMINAIRE, CENTER SQUARE SMOOTH DIFFUSER OPTION SUITABLE FOR RECESS MOUNTING IN LAY-IN TYPE GRID CEILING, DIE FORMED ENCLOSURE, HIGH REFLECTANCE BAKED MATTE WHITE ENAMEL FINISH, HIGH OPTICAL GRADE ACRYLIC LENS AND DIRECTED OPTICAL DISTRIBUTION, 3800 LUMENS, ELECTRONIC DRIVER, 3500K. 0-10V DIMMING CAPABLE, UNIVERSAL VOLTAGE.	1. COOPER METALUX CRUZE 2. LITHONIA BLT SERIES	LED 80CRI 3800 LUMENS	26.9
	B	1.5" WIDE X 3" HIGH PENDANT MOUNTED DIRECT ONLY LED FIXTURE, SQUARE SHAPE CONTINUOUS RUN, WITH LIGHTED CORNERS. LENGTH AS SHOWN ON PLANS. EXTRUDED ALUMINUM BODY. FINSIH TO BE SELECTED BY ARCHITECT, FLUSH DOWNLIGHT DIFFUSER. USING 600 LM/FT OUTPUT PACKAGE. 3500K, 80 CRI. SINGLE CIRCUIT, UNIVERSAL VOLTAGE, 0-10V 1% DIMMING.	1. AXIS SCULPT 2. LUMENWERX VIA 1.5	LED 80CRI 600 LM/FT	6.6 W/FT
	C	4" WIDE RECESSED LINEAR SUITABLE FOR INSTALLATION IN LAY-IN TYPE GRID CEILING. LED FIXTURE, SQUARE SHAPE CONTINUOUS RUN. LENGTH AS SHOWN ON PLANS. EXTRUDED ALUMINUM BODY. FLUSH DIFFUSER. USING 600 LM/FT OUTPUT PACKAGE. 3500K, 80 CRI. UNIVERSAL VOLTAGE, 0-10V 1% DIMMING.	1. AXIS BEAM 4 2. FINELITE HP-4	LED 80CRI 600 LM/FT	4.9 W/FT
	E	1.25" WIDE X 2.25" LINEAR LED FIXTURE FOR USE IN ARMSTRONG WOODWORKS CEILINGS. LENGTH AS SHOWN ON PLANS. EXTRUDED ALUMINUM BODY. FINISH TO BE SELECTED BY ARCHITECT, FLUSH DOWNLIGHT DIFFUSER. USING 400 LM/FT OUTPUT PACKAGE. 3500K, 80 CRI. UNIVERSAL VOLTAGE, 0-10V 1% DIMMING.	1. AXIS SLATE 1 2. APPROVED EQUAL	LED 80CRI 400 LM/FT	4.1 W/FT
	F	1.5" WIDE X 3" GEOMETRIC RECESSED LED FIXTURE FOR USE IN ARMSTRONG SOUNDSCAPES CEILINGS. SHAPE/LENGTH AS SHOWN ON PLANS. EXTRUDED ALUMINUM BODY. FLUSH DOWNLIGHT DIFFUSER. USING 600 LM/FT OUTPUT PACKAGE. 3500K, 80 CRI. SINGLE CIRCUIT, UNIVERSAL VOLTAGE, 0-10V 1% DIMMING.	1. AXIS GEOMETRIC 2. APPROVED EQUAL	LED 80CRI 600 LM/FT	6.6 W/FT
	G	6" DIAMETER HIGH BRIGHTNESS LIGHT EMITTING DIODES (LED'S) RECESS MOUNTED LED DOWNLIGHT SUITABLE FOR INSTALLATION IN DRYWALL OR LAY-IN TYPE CEILING CONSTRUCTION. WIDE DISTRIBUTION, MATT DIFFUSE ALUMINUM REFLECTOR WITH CLEAR APERTURE/TRIM, CONSTANT CURRENT LED DRIVER, 0-10V DIMMING DRIVER DOWN TO 1% MVOLT OPERATION. NOMINAL 2500 LUMEN OUTPUT. DAMP RATED.	1. HALO COMMERCIAL 2. GOTHAM EVO	LED 85CRI 2500 LUMENS	28.9
	H	4'L X 2.6"W X 2.7" D LED LINEAR STRIP FIXTURE. ROLLED STEEL HOUSING, END CAPS, WHITE FINISH, FLAT DIFFUSED LENS, LED ELECTRONIC DRIVER 0-10V DIMMING DOWN TO 10%. 5000 LUMENS, 3500K, 80 CRI. CABLE HUNG, 120V OPERATION.	1. COOPER METALUX SLSTP 2. LITHONIA CLX48	LED 80CRI 5000 LUMENS	40.0
	I	24" X 36" TRACK LIGHTED MIRROR. 6300 LUMENS, 3500K, 85 CRI, 120V OPERATION.	1. OXYGEN 2. APPROVED EQUAL	LED 85CRI 6300 LUMENS	102.4
	#E	SAME AS TYPE # EXCEPT THIS FIXTURE WILL BE CONNECTED THROUGH EXISTING EMERGENCY GENERATOR SYSTEM CIRCUIT IN THE AREA. PROVIDE GENERATOR TRANSFER SWITCH (GTS) IN ALL ROOMS.			
	X	EXIT LIGHT EMERGENCY LIGHT COMBO SHALL BE UNIVERSAL MOUNT, POLYCARBONATE, HIGH OUTPUT LED DIFFUSE LIGHT PANEL, RED LETTERS WITH MAINTENANCE FREE NICKEL CADIUM BATTERY CAPABLE OF PROVIDING 90 MINUTE FULL LIGHT OPERATION.	1. SURELITES LPXC 2. LITEALARMS	120-277V	2.3
	X2	CONTEMPORARY COMMERCIAL LED EMERGENCY LIGHT. TWO HIGH PERFORMANCE LEDS PROVIDING 640 TOTAL LUMENS. MAINTENANCE FREE NICKEL CADIUM BATTERY CAPABLE OF PROVIDING 90 MINUTE FULL LIGHT OPERATION.	1. SURELITES SEL50 2. LITHONIA LIGHTING ELM4L	120-277V	3.2

LIGHTING SYMBOL LIST

SYMBOL	DESCRIPTION
	LIGHT FIXTURE – CEILING/GRID MOUNT
T	LIGHT FIXTURE – INTERIOR WALL MOUNT LINEAR
	LIGHT FIXTURE – DOWNLIGHT WITH WALLWASH DIST.
	LIGHT FIXTURE – INTERIOR WALL SCONCE
	LIGHT FIXTURE – INTERIOR SURFACE MOUNT
	LIGHT FIXTURE – INTERIOR WALL MOUNTED
	LIGHT FIXTURE – INTERIOR PENDANT MOUNT
	LIGHT FIXTURE – INTERIOR PENDANT MOUNT CYLINDER
	TRACK AND TRACK MOUNTED LIGHT FIXTURES
	EXIT LIGHT – CEILING MOUNTED – ARROWS AS INDICATED ON PLAN (SHADED AREA INDICATES FACE(S) OF FIXTURE)
	EXIT LIGHT – WALL MOUNTED – ARROWS AS INDICATED ON PLAN (SHADED AREA INDICATES FACE(S) OF FIXTURE)
	EMERGENCY LIGHT FIXTURE – EMERGENCY BATTERY UNIT
	EMERGENCY LIGHT FIXTURE – BATTERY UNIT/EXIT SIGN
	LIGHT FIXTURE – EXTERIOR POLE MOUNT TYPE
	LIGHT FIXTURE – EXTERIOR WALL MOUNT TYPE
	LIGHT FIXTURE – EXTERIOR POST TOP TYPE
	LIGHT FIXTURE – EXTERIOR BOLLARD TYPE

NOTES:
1. LIGHTING SYMBOLS AS INDICATED ON PLANS ARE NOT DRAWN TO SCALE UNLESS NOTED OTHERWISE.

LIGHTING CONTROLS LEGEND

SYMBOL	DESCRIPTION
$	SWITCH SINGLE POLE
$O	OCCUPANCY SENSOR SWITCH
$V	VACANCY SENSOR SWITCH
$VD	VACANCY DIMMER SENSOR SWITCH
$D	LOW VOLTAGE DIMMER SWITCH
(OS)	CEILING MOUNTED OCCUPANCY SENSOR
(VS)	CEILING MOUNTED VACANCY SENSOR
$3	SWITCH THREE-WAY
$K	SINGLE POLE KEY SWITCH
$W	WIRELESS SWITCH
$WD	WIRELESS DIMMING SWITCH

DRAWING NOTATION

SYMBOL	DESCRIPTION
LA	LIGHTING FIXTURE TAG
(1)	CONSTRUCTION KEY NOTE NUMBER 1
1	DEMOLITION KEY NOTE NUMBER 1
1	FEEDER SIZE TAG (REFER TO FEEDER SCHEDULE ON THIS SHEET)
EF 1	EQUIPMENT DESIGNATION, (I.E. EXHAUST FAN NUMBER 1)
	EXISTING DEVICES OR EQUIPMENT
	NEW OR MODIFIED DEVICES OR EQUIPMENT
	NEW OR MODIFIED UNDERGROUND WIRING
	EXISTING SYSTEM COMPONENT TO BE REMOVED

POWER SYMBOL LIST

SYMBOL	DESCRIPTION
	CONDUIT DOWN
	CONDUIT UP
C	CONTACTOR
	DISCONNECT SWITCH – NON FUSED
	DISCONNECT SWITCH – FUSED
	DISCONNECT SWITCH – COMB. MOTOR STARTER
	ELECTRICAL PANEL – 208/240 VOLTS
	ELECTRICAL PANEL – 480 VOLTS
	GROUNDING ROD
	GROUND
	GROUNDING BAR
J	JUNCTION BOX
J	JUNCTION BOX WITH HARDWIRED CONNECTION
M	METER
	MOTOR – SINGLE PHASE
	MOTOR – THREE PHASE
$M	MOTOR RATED SWITCH
	POWER RECEPTACLE – SIMPLEX TYPE
	POWER RECEPTACLE – DUPLEX TYPE
	POWER RECEPTACLE – DUPLEX 6" ABOVE COUNTER
USB	POWER RECEPTACLE – USB/DUPLEX COMBO. DEVICE
	POWER RECEPTACLE – QUADRUPLEX TYPE
	POWER RECEPTACLE – RECESSED FLOOR TYPE
	POWER RECEPTACLE – SPECIALTY TYPE
	CORD REEL
SPD	SURGE PROTECTION DEVICE
TC	TIME CLOCK
T	TRANSFORMER (REFER TO SCHEDULES FOR INFO)
VSD	VARIABLE SPEED DRIVE

NOTES:
1. ALL DEVICE RATINGS/SIZES SHALL BE COORDINATED WITH PLANS AND SCHEDULES.

AUXILIARY SYST. SYMBOL LIST

SYMBOL	DESCRIPTION
	CAMERA
CR	CARD READER
	COMMUNICATIONS DEVICE – 6" ABOVE COUNTER
	COMMUNICATIONS DEVICE – FLOOR
	COMMUNICATIONS DEVICE – WALL
DH	MAGNETIC DOOR HOLDER
	PUSH BUTTON
S	SPEAKER
	WALL CLOCK – SINGLE FACE
	WALL CLOCK – DOUBLE FACE
CS	WALL CLOCK AND SPEAKER UNIT

NOTES:
1. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR BOX AND CONDUIT FOR ALL DEVICES INDICATED.
2. LOW VOLTAGE CONTRACTOR SHALL PROVIDE EXACT SPECIFICATIONS AND LOCATIONS OF ALL DEVICES.

FIRE ALARM SYMBOL LIST

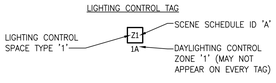
SYMBOL	DESCRIPTION
S	DETECTION DEVICE
S	DETECTION DEVICE – DUCT MOUNTED
FS	DETECTION DEVICE – FLOW SWITCH
TS	DETECTION DEVICE – TAMPER SWITCH
FAA	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FD	FIRE DEPARTMENT COMMUNICATION OUTLET
F	MANUAL DEVICE – PULL STATION
F	NOTIFICATION DEVICE – WALL MOUNTED
	NOTIFICATION DEVICE – CEILING MOUNTED

NOTES:
1. DRAWINGS INDICATE DESIGN INTENT ONLY. FINAL LOCATIONS AND DEVICE SPECIFICATIONS SHALL BE PROVIDED BY FIRE ALARM MANUFACTURER. REFER TO PROJECT SPECIFICATIONS FOR APPROVED MANUFACTURERS.

ELECTRICAL ABBREVIATIONS

ABBREV.	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
A	AMPERE
AF	AMPERE FUSE/AMPERE FRAME
AWG	AMERICAN WIRE GAUGE
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AIC	AVAILABLE INTERRUPTING CURRENT (AMPS)
C	CONDUIT OR CEILING MOUNTED
CB	CIRCUIT BREAKER
CU	COPPER
CT	CURRENT TRANSFORMER
DIA	DIAMETER
DISC	DISCONNECT
EMT	ELECTRICAL METALLIC TUBING
EWC	ELECTRIC WATER COOLER
EPO	EMERGENCY POWER OFF
(E)	EXISTING ELECTRICAL EQUIPMENT OR WORK
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
F	FUSE
G/GRD	GROUND
GFCI/GFI	GROUND FAULT CIRCUIT INTERRUPTER
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
IG	ISOLATED GROUND
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
LP	LIGHTING PANEL
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MLO	MAIN LUG ONLY
MAX	MAXIMUM
MIN	MINIMUM
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N/NEU	NEUTRAL
NF	NON-FUSIBLE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NIC	NOT IN CONTRACT
OF/CI	OWNER FURNISHED / CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED / OWNER INSTALLED
PH. OR ø	PHASE
P	POLE
PF	POWER FACTOR
PVC	POLYVINYL CHOLRIDE (PLASTIC)
(R)	RELOCATED EXISTING ELECTRICAL EQUIPMENT
(RR)	REMOVE AND REINSTALL
RMC	RIGID METALLIC CONDUIT
RP	RECEPTACLE PANEL
SPEC/SPECS	SPECIFICATIONS
TBB	TELEPHONE BACKBOARD
TYP.	TYPICAL
UC	UNDER COUNTER
UL	UNDERWRITERS LABORATORIES
UPS	UNINTERRUPTIBLE POWER SUPPLY
USB	UNIVERSAL SERIAL BUS
V	VOLT
VA	VOLT AMPERE
W	WATT
WG	WIRE GUARD
WP	WEATHERPROOF
XFMR	TRANSFORMER

DRAWING INDEX



APPLICABLE CODES AND REGULATIONS

YEAR	CODE
2015	MICHIGAN BUILDING CODE
2015	MICHIGAN ENERGY CODE
2023	MICHIGAN ELECTRICAL CODE RULES, PART 8
2021	NATIONAL ELECTRICAL CODE (NFPA 70)
2013	NFPA 20
2013	NFPA 72
2012	NFPA 101
2013	NFPA 110
2009	ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS & FACILITIES

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MACOMB COUNTY
F & O / PURCHASING OFFICE RENOVATION
VIC WERTZ BUILDING

ELECTRICAL GENERAL INFORMATION AND LIGHTING SCHEDULE

PRELIMINARY ☐
DESIGN DEVELOPMENT ☐
CONSTRUCTION ■
FINAL RECORD ☐

DRAWN BY TJO
CHECKED BY DJL

REVISIONS
ADDENDUM No. 1 11-7-2024
ADDENDUM No. 3 11-14-2024

DATE: OCTOBER 31, 2024

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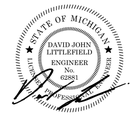
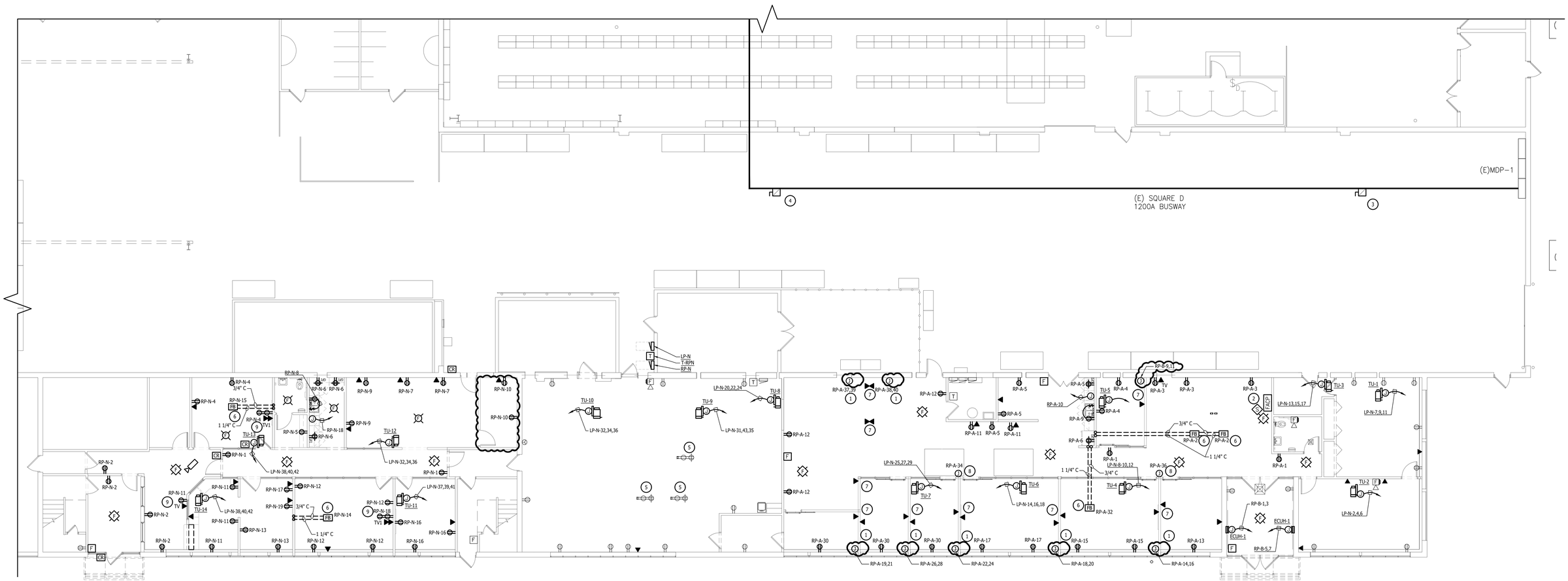


(X)	NEW WORK KEYED NOTES
1	NEW JUNCTION BOX FOR POWER. VERIFY EXACT LOCATION WITH FURNITURE PLANS PRIOR TO ROUGH IN. MOUNT 8'6" AFF.
2	RELOCATED FIRE ALARM CONTROL PANEL.
3	PROVIDE NEW BUS PLUG FOR RTU-1
4	PROVIDE NEW BUS PLUG FOR PANEL LP-N
5	RE-SUPPORT POWER POLE AFTER INSTALLATION OF NEW GRID CEILING.
6	INSTALL NEW DOUBLE GANG COMBINATION FLOOR BOX WITH (1)DUPLEX RECEPTACLE AND (1) DATA PORT (LEGRAND: OMNIBOX OR SIMILAR) IN EXISTING FLOOR. CONFIRM EXACT LOCATION WITH FURNITURE PLANS. NEW WIRING AND CONDUIT IN FLOOR. REFER TO ARCHITECTURAL FOR SAW CUTTING. PROVIDE 20A OUTLET.
7	DATA ON DEMOUNTABLE WALL SHALL BE ROUTED THROUGH BUILT-IN RACEWAY AND TERMINATED IN MODULAR DATA OUTLETS. BUILT-IN RACEWAY IS PART OF THE MODULAR DEMOUNTABLE WALL.
8	JUNCTION BOX FOR TV POWER. TV SHALL BE MOUNTED ON DEMOUNTABLE WALL. POWER SHALL BE ROUTED THROUGH BUILT-IN RACEWAY. BUILT-IN RACEWAY IS PART OF THE MODULAR DEMOUNTABLE WALL. COORDINATE EXACT LOCATION OF JUNCTION BOX WITH FURNITURE PLANS.
9	REFER TO DETAILS SHEET FOR ROUGH IN DETAILS FOR TV AND TV-1. COORDINATE EXACT HEIGHT IN THE FIELD PRIOR TO ROUGH IN.

POWER GENERAL NOTES	
A	THESE DRAWINGS ARE DIAGRAMMATIC AND REPRESENT THE GENERAL EXTENT OF THE WORK TO BE PERFORMED. PROVIDE AND EXECUTE ALL HVAC SYSTEMS PER ENGINEER'S SPECIFICATION, AND LOCAL APPLICABLE CODES INCLUDING AMENDMENTS, BULLETINS, ETC. AS WELL AS THE STANDARDS OF INSTALLATION AND EQUIPMENT ESTABLISHED FOR THE BUILDINGS, AND REQUIREMENTS OF THE OWNER.
B	EXCEPT FOR CHANGES AS MAY BE SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD IN ACCORDANCE WITH ALTERNATES OF OPTIONS AS STATED HEREINAFTER, ALL WORK MUST BE IN FULL ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS. SYSTEMS ARE TO BE COMPLETE, EFFICIENT, AND SATISFACTORY OPERATION WHEN PROJECT IS DELIVERED TO THE OWNER.
D	CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVAL FROM GOVERNING AUTHORITIES AND FILE NECESSARY FORMS, PAY ALL INSPECTION FEES.
E	ELECTRICAL CONTRACTOR SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE, LIFE SAFETY CODE AND APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.
F	ELECTRICAL EQUIPMENT AND WIRING SHALL BE NEW AND SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED.
G	WIRING SHALL BE IN CONDUIT. CONDUIT SHALL BE 3/4" CONDUIT MINIMUM. CONDUITS IN FINISHED AREAS SHALL BE CONCEALED.
H	NEW WIRES SHALL BE TYPE THHN. MINIMUM SIZE SHALL BE #12 AWG, UNLESS OTHERWISE NOTED. FINAL CONNECTIONS TO EQUIPMENT, FURNISHED AND INSTALLED BY OTHERS, SHALL BE PROVIDED BY THIS CONTRACTOR.
J	ALL PA AND SPEAKER SCOPE BY OTHERS. REFER TO TECH DRAWINGS FOR FURTHER INFORMATION.



ELECTRICAL POWER NEW WORK FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

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F & O / PURCHASING OFFICE RENOVATION
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ELECTRICAL POWER NEW WORK FIRST FLOOR PLAN

PRELIMINARY ☐
DESIGN DEVELOPMENT ☐
CONSTRUCTION ■
FINAL RECORD ☐

DRAWN BY TJO
CHECKED BY DJL

REVISIONS
ADDENDUM No. 1 11-7-2024
ADDENDUM No. 3 11-14-2024

DATE: OCTOBER 31, 2024

SHEET NO.
EP1.10

JOB NO.
242053

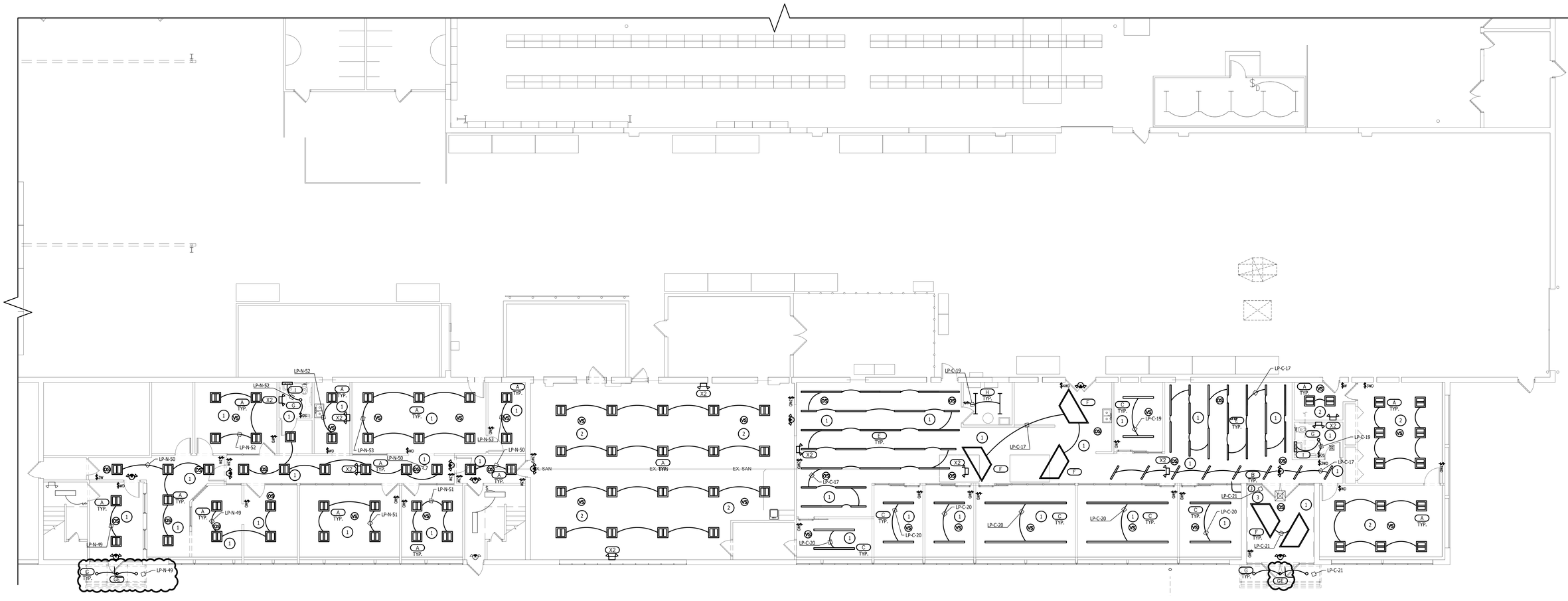
STATE OF MICHIGAN
DAVID JOHN LITTLEFIELD
ENGINEER
No. 62881
PROFESSIONAL ENGINEER

LIGHTING GENERAL NOTES

A	THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF WORK TO BE PERFORMED. THE EXACT EXTENT OF DEMOLITION SHALL BE DETERMINED BY THE NEW WORK.
B	ANY INTERRUPTIONS OF EXISTING SERVICES AND/OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE PRESENT BUILDING'S OPERATION.
C	PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING SITE CONDITIONS, SYSTEMS, AND UTILITIES. NOTIFY DESIGN PROFESSIONAL OF ANY INTERFERENCES OR DISCREPANCIES.
D	ALL ITEMS INDICATED WITH CROSS-HATCHING SHALL BE REMOVED COMPLETELY WITH ALL RELATED ITEMS INCLUDING HANGERS, SUPPORTS, INSULATION, CONTROLS, ETC. CAP ALL OPEN-ENDED PIPES AND DUCTS.
E	THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL EQUIPMENT BEING REMOVED. ALL ITEMS REMOVED SHALL BE LEGALLY DISPOSED OF. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING RELOCATED AND OWNER-PROVIDED EQUIPMENT.
F	VERIFY DEPTH, SIZE, LOCATIONS, AND CONDITIONS OF EXISTING UTILITIES IN THE FIELD, INCLUDING POINTS OF CONNECTION PRIOR TO STARTING ANY WORK.
G	ALL ITEMS ON DEMOLITION PLAN SHALL BE CONSIDERED EXISTING UNLESS OTHERWISE NOTED. ALL WORK INDICATED ON PLANS HAS BEEN LOCATED PER EXISTING DRAWINGS AND/OR FIELD OBSERVATION AND REQUIRES FIELD VERIFICATION.
H	ALL EXISTING WORK TO REMAIN SHALL BE PROTECTED FROM DAMAGE. WHERE DUCT WORK PIPE INSULATION HAS BEEN DAMAGED DURING DEMOLITION, THE CONTRACTOR SHALL REPAIR INSULATION AS REQUIRED TO MATCH EXISTING.
J	ALL SWITCHES SHALL BE WHITE WITH BRUSHED SILVER COVERPLATE.

(X) NEW WORK KEYED NOTES

1	NEW LED FIXTURES. PROVIDE NEW CONTROL SENSORS AND SWITCHING AS SHOWN. PROVIDE NEW WIRELESS LIGHTING CONTROL SYSTEM. PROVIDE ALL PROGRAMMING AS REQUIRED FOR A COMPLETE SYSTEM.
2	NEW LED FIXTURES TO REPLACE EXISTING FIXTURES. PROVIDE NEW CONTROL SENSORS AND SWITCHING AS SHOWN, CONNECT TO EXISTING CIRCUIT AVAILABLE AS A RESULT OF DEMOLITION IN THIS AREA. ALL WIRING AND CONDUIT SHALL BE NEW. RE-USE EXISTING SWITCH LOCATIONS FOR NEW SWITCHES. PROVIDE NEW WIRELESS LIGHTING CONTROL SYSTEM. PROVIDE ALL PROGRAMMING AS REQUIRED FOR A COMPLETE SYSTEM.
3	JUNCTION BOX FOR BACK LIT SIGN. COORDINATE EXACT ROUGH IN LOCATIONS WITH SIGN MANUFACTURE PRIOR TO INSTALLATION. VERIFY SIGN VOLTAGE PRIOR TO TERMINATION.



ELECTRICAL LIGHTING NEW WORK FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

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STATE OF MICHIGAN
DAVID JOHN LITTLEFIELD
ENGINEER
No. 62881
PROFESSIONAL ENGINEER

Panel Designation: (E) LP-C
Panel Location: SEE FLOOR PLANS
Fed From:
Feeder Size: EXISTING
EXISTING PANEL

Main: 200A MLO
Bussing: 200A
Ground Bus: STANDARD
Mounting: SURFACE
Neutral: 100%

P-P Voltage: 480
P-N Voltage: 277
Phase: 3
Wire: 4
Min SC Interrupting Rating: EXISTING

Remarks	Light Load	Recept Load	Cont Load	nonC Load	OC Prot	CKT	Ø A	Ø B	Ø C	CKT	OC Prot	nonC Load	Cont Load	Recept Load	Light Load	Remarks
PRICE SHOP LIGHTS					20	1	X			2	20					MICROFILM LIGHTS
CORRIDOR LIGHTS					20	3		X		4	20					MICROFILM LIGHTS
BORTH OFFICEE LIGHTS					20	5			X	6	20					EAST EXTERIOR LIGHTS
RTU #3					60	7	X			8	60					RTU #4
						9		X		10						
						11			X	12						
VESTIBULE N. HEATER					20	13	X			14	20					HOT WATER TANK
VESTIBULE S. HEATER					20	15		X		16						
LIGHTS - B104, B104, B102	1415				**20**	17			X	18						
LIGHTS - B101, B103 & B105	211				**20**	19	X			20	**20**				588	**LIGHTS - B107-B112**
LIGHTS - VESTIBULE	751				**20**	21		X		22	--					SPACE
SPACE					20	23			X	24	--					SPACE
SPACE					20	25	X			26	--					SPACE
SPACE					20	27		X		28	--					SPACE
SPACE					20	29			X	30	--					SPACE

	Connected Load				Demand	Demand Load			
Load Description	**ØA**	**ØB**	**ØC**	**Total**	**Factor**	**ØA**	**ØB**	**ØC**	**Total**
Lighting or Continous Load (Volt-Amps)	799	751	1415	2966	1.00	799	751	1415	2966
180VA Receptacle Load (Volt-Amps)	0	0	0	0	1.00 (First 10kVA)	0	0	0	0
	Amount over 10kVA			0	0.50 (> 10kVA)	0	0	0	0
Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Non-Continuous Load (Volt-Amps)	0	0	0	0	0.80	0	0	0	0
Total Load (kVA)	0.80	0.75	1.42	2.97	**125% of Light/Cont and Recept**	0.80	0.75	1.42	2.97
Total Ampacity (Amps)	2.9	2.7	5.1	3.6	**(<10kVA) load plus other load**	2.9	2.7	5.1	3.6
Minimum Feeder Sizing (Amps)	3.6	3.4	6.4	4.5	**<---- per NEC Article 215.2 ---->**	3.6	3.4	6.4	4.5

Receptacle Demand Factor per Article 220.44 of the National Electical Code.

Panel Designation: (E) RP-A
Panel Location:
Fed From:
Feeder Size: EXISTING
EXISTING PANEL

Main: 150MCB
Bussing: 150A
Ground Bus: STANDARD
Mounting: SURFACE
Neutral: 100%

P-P Voltage: 208
P-N Voltage: 120
Phase: 3
Wire: 4
Min SC Interrupting Rating: EXISTING

Remarks	Light Load	Recept Load	Cont Load	nonC Load	OC Prot	CKT	Ø A	Ø B	Ø C	CKT	OC Prot	nonC Load	Cont Load	Recept Load	Light Load	Remarks
HALLWAY AND BATHROOM B101		540			**20**	1	X			2	20			360		**B102 FLOORBOXES**
B102 RECEPTACLES		540			**20**	3		X		4	20			360		**B103 RECEPTACLES**
B104 RECEPTACLES		720			**20**	5			X	6	20	500				**B104 REFRIGERATOR**
ELECTRICAL ROOM LGTS	1000				20	7	X			8	20		700			FIRE ALARM
B104 DISPOSER		500			**20**	9		X		10	20	1000				**B104 DISHWASHER**
B106 COPIERS		1000			**20**	11			X	12	20					**B106 RECEPTACLES**
B107 RECEPTACLES		180			**20**	13	X			14	20			360		**B108 POWERED WALL**
B108 RECEPTACLES		360			**20**	15		X		16	20			360		**B109 POWERED WALL**
B109/B110 RECEPTACLES		360			**20**	17			X	18	20			360		**B109 POWERED WALL**
B112 POWERED WALL		360			**20**	19	X			20	20			360		**B110 POWERED WALL**
B112 POWERED WALL		360			**20**	21		X		22	20			360		**B110 POWERED WALL**
						23			X	24	20			360		**B110 POWERED WALL**
SURGE SUPRESSION UNIT					30	25	X			26	20			360		**B111 POWERED WALL**
						27		X		28	20			360		**B111 POWERED WALL**
NAC PNL #1					20	29			X	30	20			180		**B110/B112 RECEPTACLES**
WAREHOUSE EXH FAN#1					20	31	X			32	20			180		**B108 FLOORBOX**
WAREHOUSE EXH FAN#2					20	33		X		34	20			500		**B106 TV**
WAREHOUSE RECEPT					20	35			X	36	20			500		**HALLWAY TV**
B106 POWERED DESKS		360			**20**	37	X			38	**20**			360		**B106 POWERED DESKS**
B106 POWERED DESKS		360			**20**	39		X		40	**20**			360		**B106 POWERED DESKS**
SPARE					20	41	X			42	20					SPARE

	Connected Load				Demand	Demand Load			
Load Description	**ØA**	**ØB**	**ØC**	**Total**	**Factor**	**ØA**	**ØB**	**ØC**	**Total**
Lighting or Continous Load (Volt-Amps)	1000	0	0	1000	1.00	1000	0	0	1000
180VA Receptacle Load (Volt-Amps)	3420	4420	3480	11320	1.00 (First 10kVA)	3021	3905	3074	10000
	Amount over 10kVA			1320	0.50 (> 10kVA)	199	258	203	660
Continuous Load (Volt-Amps)	700	0	0	700	1.00	700	0	0	700
Non-Continuous Load (Volt-Amps)	0	1000	500	1500	0.80	0	800	400	1200
Total Load (kVA)	5.12	5.42	3.98	14.52	**125% of Light/Cont and Recept**	4.92	4.96	3.68	13.56
Total Ampacity (Amps)	42.6	45.1	33.1	40.3	**(<10kVA) load plus other load**	41.0	41.3	30.6	37.6
Minimum Feeder Sizing (Amps)	51.0	53.3	39.5	47.9	**<---- per NEC Article 215.2 ---->**	49.3	49.4	37.0	45.3

Receptacle Demand Factor per Article 220.44 of the National Electical Code.

Panel Designation: (E) RP-B
Panel Location: SEE FLOOR PLANS
Fed From:
Feeder Size: EXISTING
EXISTING PANEL

Main: 100A MLO
Bussing: 100A
Ground Bus: STANDARD
Mounting: SURFACE
Neutral: 100%

P-P Voltage: 208
P-N Voltage: 120
Phase: 3
Wire: 4
Min SC Interrupting Rating: EXISTING

Remarks	Light Load	Recept Load	Cont Load	nonC Load	OC Prot	CKT	Ø A	Ø B	Ø C	CKT	OC Prot	nonC Load	Cont Load	Recept Load	Light Load	Remarks
			1456			1	X			2	20					SPARE
ECUH-1			1456		**20**	3		X		4	20					SPARE
			1456			5			X	6	20			360		ELECT RM GFCI
ECUH-1			1456		**20**	7	X			8	20					SPARE
POWERED WALL		360			**20**	9		X		10	20					SPARE
POWERED WALL		360			**20**	11			X	12	20			540		ROOF GFCI & OFFICE RECEPT
SPARE					20	13	X			14	20					SPARE
SPARE					20	15		X		16	20					SPARE
SPARE					20	17			X	18	20					SPARE
SPARE					20	19	X			20	20					SPARE
SPARE					20	21		X		22	20					SPARE
SPARE					20	23			X	24	20					SPARE
SPARE					20	25	X			26						
SPARE					20	27		X		28	30					SURGE SUPRESSION UNIT
SPARE					20	29			X	30						

	Connected Load				Demand	Demand Load			
Load Description	**ØA**	**ØB**	**ØC**	**Total**	**Factor**	**ØA**	**ØB**	**ØC**	**Total**
Lighting or Continous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
180VA Receptacle Load (Volt-Amps)	0	360	1260	1620	1.00 (First 10kVA)	0	360	1260	1620
	Amount over 10kVA			0	0.50 (> 10kVA)	0	0	0	0
Continuous Load (Volt-Amps)	2912	1456	1456	5824	1.00	2912	1456	1456	5824
Non-Continuous Load (Volt-Amps)	0	0	0	0	0.80	0	0	0	0
Total Load (kVA)	2.91	1.82	2.72	7.44	**125% of Light/Cont and Recept**	2.91	1.82	2.72	7.44
Total Ampacity (Amps)	24.2	15.1	22.6	20.7	**(<10kVA) load plus other load**	24.2	15.1	22.6	20.7
Minimum Feeder Sizing (Amps)	24.2	15.9	25.2	21.8	**<---- per NEC Article 215.2 ---->**	24.2	15.9	25.2	21.8

Receptacle Demand Factor per Article 220.44 of the National Electical Code.

Panel Designation: LP-N
Panel Location: SEE FLOOR PLANS
Fed From: BUS DUCT
Feeder Size: SEE ONE LINE DIAGRAM
NEW LOCATION

Main: 200A MCB
Bussing: 250A
Ground Bus: STANDARD
Mounting: SURFACE
Neutral: 100%

P-P Voltage: 480
P-N Voltage: 277
Phase: 3
Wire: 4
Min SC Interrupting Rating: 42,000

Remarks	Light Load	Recept Load	Cont Load	nonC Load	OC Prot	CKT	Ø A	Ø B	Ø C	CKT	OC Prot	nonC Load	Cont Load	Recept Load	Light Load	Remarks
	0	2480	0	500		1	X			2		1833.33				
XFMR TO PANEL RP-N	0	2340	0	0	50	3		X		4	20	1833.33				TU-2
	0	2160	0	1500		5			X	6		1833.33				
				933.333		7	X			8		1700				
TU-1				933.333	20	9		X		10	20	1700				TU-4
				933.333		11			X	12		1700				
				1066.67		13	X			14		1066.67				
TU-3				1066.67	20	15		X		16	20	1066.67				TU-6
				1066.67		17			X	18		1066.67				
				933.333		19	X			20		1066.67				
TU-5				933.333	20	21		X		22	20	1066.67				TU-8
				933.333		23			X	24		1066.67				
				1766.67		25	X			26		5266.67				
TU-7				1766.67	20	27		X		28	25	5266.67				TU-10
				1766.67		29			X	30		5266.67				
				3966.67		31	X			32		1466.67				
TU-9				3966.67	20	33		X		34	20	1466.67				TU-12
				3966.67		35			X	36		1466.67				
				1466.67		37	X			38		1833.33				
TU-11				1466.67	20	39		X		40	20	1833.33				TU-14
				1466.67		41			X	42		1833.33				
				933.333		43	X			44						
TU-13				933.333	20	45		X		46	20					SPARE
				933.333		47			X	48						
LIGHTS- EXIT VESTIBULE, ROOMS A108 & A109	161				20	49	X			50	20				323	LIGHTS - A100
LIGHTS - A110 & A111	215				20	51		X		52	20				212	LIGHTS A103 & A104
LIGHTS - A106 & A107	215				20	53			X	54	20					SPARE
SPARE					20	55	X			56	20					SPARE
SPARE					20	57		X		58	20					SPARE
SPARE					20	59			X	60	--					SPACE
SPACE					--	61	X			62	--					SPACE
SPACE					--	63		X		64	--					SPACE
SPACE					--	65			X	66	--					SPACE
SPACE					--	67	X			68	--					SPACE
SPACE					--	69		X		70	--					SPACE
SPACE					--	71			X	72	--					SPACE
SPACE					--	73	X			74	--					SPACE
SPACE					--	75		X		76	--					SPACE
SPACE					--	77			X	78	--					SPACE
SPACE					--	79	X			80	--					SPACE
SPACE					--	81		X		82	--					SPACE
SPACE					--	83			X	84	--					SPACE

	Connected Load				Demand	Demand Load			
Load Description	**ØA**	**ØB**	**ØC**	**Total**	**Factor**	**ØA**	**ØB**	**ØC**	**Total**
Lighting or Continous Load (Volt-Amps)	373	427	215	1016	1.00	373	427	215	1016
180VA Receptacle Load (Volt-Amps)	2480	2340	2160	6980	1.00 (First 10kVA)	2480	2340	2160	6980
	Amount over 10kVA			0	0.50 (> 10kVA)	0	0	0	0
Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Non-Continuous Load (Volt-Amps)	25800	25300	26800	77900	0.09	2320	22770	24120	70110
Total Load (kVA)	28.65	28.07	29.18	85.90	**125% of Light/Cont and Recept**	26.07	25.54	26.50	78.11
Total Ampacity (Amps)	103.4	101.3	105.3	103.3	**(<10kVA) load plus other load**	94.1	92.1	95.6	93.9
Minimum Feeder Sizing (Amps)	106.0	103.8	107.4	105.7	**<---- per NEC Article 215.2 ---->**	96.7	94.6	97.7	96.3

Receptacle Demand Factor per Article 220.44 of the National Electical Code.

Panel Designation: RP-N
Panel Location: SEE FLOOR PLANS
Fed From: XFMR T-RPN
Feeder Size: SEE ONE LINE DIAGRAM
NEW PANEL

Main: 100A MCB
Bussing: 100A
Ground Bus: STANDARD
Mounting: SURFACE
Neutral: 100%

P-P Voltage: 208
P-N Voltage: 120
Phase: 3
Wire: 4
Min SC Interrupting Rating: 22,000

Remarks	Light Load	Recept Load	Cont Load	nonC Load	OC Prot	CKT	Ø A	Ø B	Ø C	CKT	OC Prot	nonC Load	Cont Load	Recept Load	Light Load	Remarks
SPARE					20	1	X			2	20			720		A101 RECEPTACLES
SPARE					20	3		X		4	20			720		CONF. ROOM A103 RECEPTACLES
BATHROOM A104 RECEPTACLES		180			20	5			X	6	20			540		BREAKROOM A105 RECEPTACLES
OPEN OFFICE A106 RECEPTACLES		720			20	7	X			8	20			540		BREAKROOM A105 DISPOSER
OPEN OFFICE A106 RECEPTACLES		360			20	9		X		10	20			540		OFFICE A107 RECEPTACLES
ROOM A108 RECEPTACLES		720			20	11			X	12	20			720		ROOM A110 RECEPTACLES
ROOM A109 RECEPTACLES		360			20	13	X			14	20			180		ROOM A110 FLOORBOX
CONF. ROOM A103 FLOORBOX		180			20	15		X		16	20			540		ROOM A111 RECEPTACLES
ROOM A109 COPIER				500	20	17			X	18	20	1000				BREAKROOM A105 DISHWASHER
ROOM A109 COPIER				500	20	19	X			20	20			180		ROOM A110 TV
SPARE					20	21		X		22	20					SPARE
SPARE					20	23			X	24	20					SPARE
SPARE					20	25	X			26	20					SPARE
SPACE					--	27		X		28	--					SPACE
SPACE					--	29			X	30	--					SPACE
SPACE					--	31	X			32	--					SPACE
SPACE					--	33		X		34	--					SPACE
SPACE					--	35			X	36	--					SPACE
SPACE					--	37	X			38	--					SPACE
SPACE					--	39		X		40	--					SPACE
SPACE					--	41			X	42	--					SPACE

	Connected Load				Demand	Demand Load			
Load Description	**ØA**	**ØB**	**ØC**	**Total**	**Factor**	**ØA**	**ØB**	**ØC**	**Total**
Lighting or Continous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
180VA Receptacle Load (Volt-Amps)	2480	2340	2160	6980	1.00 (First 10kVA)	2480	2340	2160	6980
	Amount over 10kVA			0	0.50 (> 10kVA)	0	0	0	0
Continuous Load (Volt-Amps)	0	0	0	0	1.00	0	0	0	0
Non-Continuous Load (Volt-Amps)	500	0	1500	2000	0.90	450	0	1350	1800
Total Load (kVA)	2.98	2.34	3.66	8.98	**125% of Light/Cont and Recept**	2.93	2.34	3.51	8.78
Total Ampacity (Amps)	24.8	19.5	30.5	24.9	**(<10kVA) load plus other load**	24.4	19.5	29.2	24.4
Minimum Feeder Sizing (Amps)	30.0	24.4	35.0	29.8	**<---- per NEC Article 215.2 ---->**	29.6	24.4	33.7	29.2

Receptacle Demand Factor per Article 220.44 of the National Electical Code.

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MACOMB COUNTY
F & O / PURCHASING OFFICE RENOVATION
VIC WERTZ BUILDING

ELECTRICAL PANEL SCHEDULES

PRELIMINARY ☐
DESIGN DEVELOPMENT ☐
CONSTRUCTION ■
FINAL RECORD ☐

DRAWN BY TJO
CHECKED BY DJL

REVISIONS
ADDENDUM No. 1 11-7-2024
ADDENDUM No. 3 11-14-2024

DATE: OCTOBER 31, 2024
SHEET NO.
E6.00
JOB NO.
242053

STATE OF MICHIGAN
DAVID JOHN LITTLEFIELD
ENGINEER
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