

EXPRESS OIL CHANGE & TIRE ENGINEERS

SINGLE BUILDING / RIGHT HAND OIL CHANGE / FRONT ENTER / SIDE TIRE STORAGE

332 OLD DOUGLAS DAM ROAD
SEVIERVILLE, TENNESSEE 37876



ATTENTION AUTHORITY HAVING JURISDICTION

Notice is hereby given that Aho Architects, LLC, the Architect of Record on the above referenced project, will be providing construction administration services on a limited basis, supplemented by a third-party independent engineering consulting service as described below.

This project has been designed by the Architect and Engineers ("Design Team") for its specific location, or adapted from prototypical designs, to comply with the following codes, ordinances, and similar requirements adopted by the Authority Having Jurisdiction ("AHJ"):
 • See codes listed on Sheet LS100.

During the Construction Administration Phase of the Project:

- **General:** The Design Team will respond to inquiries or requests from the Owner or Contractor, specifically related to documents prepared by the Design Team. As is standard in Construction Law and Professional Service Agreements, the Design Team shall not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Project(s), nor shall the Architect be responsible for the Owner's or Contractor's failure to perform the work in accordance with the requirements of the Permit Set Documents. The Architect shall be responsible for the Architect's negligent acts or omissions, but shall not have control over or charge of, and shall not be responsible for, acts or omissions of the Owner, Contractor, or of any other persons or entities performing portions of the work.
- **Experienced Contractor:** The Owner will use experienced and licensed Contractors familiar with the construction of Projects of this type and in similar locations, and experienced with the applicable building codes, selection of materials and systems, and methods of installation and construction; and able to implement the Permit Set Documents through completion of the Project(s).
- **Submittals:** The Design Team's Basic Construction Administration Services include review of critical submittals (e.g. shop drawings) by engineering disciplines (Structural). The Design Team shall also review, approve or take other appropriate action on any submittal for which the AHJ requires approval by the Architect/Engineer, as Additional Services.
- **Site Visits:** The Architect and Design Engineers typically will not be making any site visits unless specifically required to do so.
 - The Owner has been advised and acknowledges that some States and AHJs require the Architect to perform at least some site visits or provide a notice such as this statement.
 - In consideration of this, the Owner will provide site visits, observation, testing, and related work by a third party independent engineering consulting service:
 - The Owner has an agreement with ECS Southeast, LLC., a provider of geotechnical, environmental, construction materials and facilities engineering
 - Experienced Professional Engineers or field technicians under the responsible control of a Professional Engineer will perform site observation, construction materials testing, and required Special Inspections (per IBC Chapter 17; see Schedule of Special Inspections on structural drawings provided) including review of construction for conformance with the permit drawings, supplemental drawings, shop drawings/submittals, and similar relevant documents. Written reports shall be provided, with the Design Team included on the distribution list and involved in resolving any deficiencies noted or other items requiring the Design Team's input.
- If the above provisions are not acceptable to the AHJ and the AHJ gives notice requiring the Architect to make site visit(s), the Owner has agreed to authorize the Architect's Additional Services and Reimbursable Expenses to comply with the AHJ's requirements.

If you have any questions, or if there is anything else we can do for you, please do not hesitate to contact April Cain, the project manager or Tim Aho, Architect at the address/phone listed below, or by email at [HYPERLINK "mailto:acain@ahoarch.com"](mailto:HYPERLINKmailto:acain@ahoarch.com) acain@ahoarch.com or [HYPERLINK "mailto:taho@ahoarch.com"](mailto:HYPERLINKmailto:taho@ahoarch.com) taho@ahoarch.com. Thank you very much, and we appreciate the opportunity to be involved in this project in your jurisdiction.



*Image above is generic. See Civil for actual site conditions

Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

FINAL

No.	Description	Date

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Title Sheet

Project number 24005
Date 5/15/2024

Drawn by ARC
Checked by N/A

T100

Scale 1/2" = 1'-0"

ARCHITECT

AHO ARCHITECTS, LLC
1855 DATA DRIVE, SUITE 150
HOOVER, ALABAMA 35244
205-983-6000

CIVIL ENGINEER

CIVIL CONSULTANTS, INC.
3528 VANN ROAD, SUITE 105
BIRMINGHAM, ALABAMA 35235
205-655-1991

STRUCTURAL ENGINEER

BARNETT-JONES-WILSON, LLC
125 18TH STREET NORTH
PELL CITY, ALABAMA 35125
205-884-5334

MECHANICAL / PLUMBING ENGINEER

PINNACLE ENGINEERING, INC.
2111 PARKWAY OFFICE CIRCLE, SUITE 125
BIRMINGHAM, ALABAMA 35244
205-733-6912

ELECTRICAL ENGINEER

GIDEON WAMAE, P.E.
4120 OVERLOOK CIRCLE
TRUSSVILLE, ALABAMA 35173
205-413-4112

FINAL

GENERAL PROJECT NOTES

- These documents are considered accurate and true to the best knowledge of the Architect at this time, but do not necessarily represent, nor are they intended to represent, actual existing conditions, dimensions, and tolerances. Contractor shall field-verify existing conditions including, but not limited to materials, construction, elevations, and dimensions prior to bidding and undertaking the work. Items of concern shall be brought to the attention of the Architect. Submittal of a proposal (bid) by a Contractor and their Subcontractors shall constitute an acknowledgement and confirmation of having complied with these requirements.
- All work shall comply with all applicable local, state, and national codes, rules, ordinances and regulations and authorities having jurisdiction.
- The Contractor shall comply with all applicable provisions of the specifications, including, but not limited to all general conditions, supplementary general conditions, special conditions, and material and construction provisions, which apply to materials or construction methods required by this project.
- Where warranties are concerned, Contractor shall follow manufacturer's standards and recommendations unless specifically directed otherwise. Any conditions which might negatively affect the warranty shall be brought to the attention of the Architect in advance.
- The Owner and Contractor shall promptly report to the Architect any defects, suspected defects, or discrepancies in the Architect's work or services of which the Owner or Contractor may become aware, so that the Architect may take measures to minimize the consequences of such a defect. Failure to notify the Architect shall relieve the Architect of costs of remedying the defects above the sum such remedy would have cost had prompt notification been given.
- Neither the professional activities of the Architect, nor the presence of the Architect or its employees and consultants at a construction site shall relieve the Contractor or others of their obligations, duties, and responsibilities including, but not limited to: construction means and methods, sequence, techniques, or procedures necessary for performing, superintending, or coordinating all portions of the work in accordance with the contract documents and any health and safety precautions required by agencies having jurisdictional authority over the project. The Architect and its personnel have no authority to exercise control over any Contractor or other entity or their employees in connection with their means, methods, or safety precautions. The Contractor is solely responsible for jobsite safety. The Owner, Architect, and their Consultants shall be indemnified and shall be made additional insureds under the Contractor's general liability insurance policy.
- All work, unless specifically indicated otherwise, shall be the responsibility of the General Contractor and shall be performed by the tradesmen skilled in the required field.
- "Provide" shall mean to furnish and install, complete and ready for intended use.
- Provide pressure treated wood where in contact with concrete or masonry.
- The Contractor shall be responsible for all cutting, fitting, and patching that may be required to complete the work.
- Dimensions of existing construction and repetitive dimensions are sometimes omitted. Detailed dimensions not indicated may be found on large-scale drawings of the same areas. Drawings are intended to reflect the existing conditions as closely as possible, however, the Contractor shall field verify and accept all existing conditions and dimensions. Notify Architect of any discrepancies affecting the work.
- Provide all temporary services required to facilitate the work indicated, including but not limited to the following: power, lighting, heat, and water.
- The Contractor(s) shall provide all barriers, shoring, warning lights, etc. as required to conduct the work and maintain the site in a safe condition consistent with good construction practices and with all applicable rules and regulations.
- All exist. utility services including domestic water, sanitary sewer, electricity, fuel oil and/or gas shall be disconnected and made safe prior to any demolition work. Any work which might require interruption of utility services to Owner or other tenants, shall be approved and coordinated beforehand with the Owner.
- It is the intent of the bid and construction documents to indicate complete and fully operational systems (i.e. structural, HVAC, plumbing, electrical, roofing, etc.). The Contractor shall provide operational systems and testing which comply with applicable codes, regulations, and requirements of authorities having jurisdiction.
- Any work or utility outages which might disrupt the operations of the Owner or others shall be approved and coordinated in advance with the Owner and the Architect. The Contractor shall give the Owner and Architect at least three days advance notice prior to undertaking work which might cause disruption. Activities which produce utility outages, excessive noise, dust and other disruption shall be coordinated with the Owner and Architect. Some of these activities may need to occur at "off hours" to minimize disruption of the Owner's operations.
- All wood blocking, trim, decking, etc. shall be decay-resistant treated, or as specified.
- To prepare substrate for all wall mounted items, wall fixture, toilet accessories, etc. - fill all voids in the CMU surface to provide a sound base (provide blocking in stud walls) for all new wall mounted items, fixtures, etc. Install per manufacturer's specifications and recommendations.
- Do not paint any caulking or sealants which are subject to movement. Control joints shall be caulked after paint and special coating applications. Provide caulking or sealants in colors which match adjacent finished surface as approved by the Architect.
- Bidders shall be responsible for obtaining a copy of the Geotech Report from the Owner.
- The project may include some items that are delegated design. Bidders shall ensure these items are covered in their base bid.
- All questions that affect cost, time, etc. shall be presented in the form of RFI's to the Architect prior to bid.

ENERGY CODE EXEMPTION

Per 2018 International Energy Conservation Code:

C402.1.1 Low Energy Buildings. The following low-energy buildings, or portions thereof, separated from the remainder of the building by building thermal envelope assemblies complying with this section, shall be exempt from the building thermal envelope provisions of Section C402:

- Those with a peak design rate of energy usage less than 3.4 Btu/h x ft² or 1.0 watt/ft² of floor area for space conditioning purposes.
- Those that do not contain "conditioned space".
- Greenhouses

Per Chapter 2:

Definition of Conditioned Space: An area, room or space that is **enclosed** within the building thermal envelope and is directly or indirectly heated or cooled. Spaces are indirectly heated or cooled where they communicate through openings with conditioned spaces, where they are separated from conditioned spaces by uninsulated walls, floors, or ceilings, or where they contain uninsulated ducts, piping or other sources of heating or cooling.

While the Oil Change & Service areas do have radiant heaters, during normal operations, the Oil Change, Service, and Pit areas are **not enclosed** and are outside the building thermal envelope assembly. These areas are separated from the remainder of the building by building thermal envelope assemblies complying with this code. Section C403.12.1 allows radiant heating outside the building. Therefore, these areas shall be exempt from the building thermal envelope provisions of this code.

GENERAL ACCESSIBILITY NOTES

- All door hardware shall be accessible type per section 404 of the 2017 ICC A117.1 / 2010 ADA Standards.
- All walking surfaces shall have a maximum slope of 1:20 per section 405 of the 2017 ICC A117.1 / 2010 ADA Standards
- All floor or ground surfaces shall be stable, firm, and slip resistant per section 302 of the 2017 ICC A117.1 / 2010 ADA Standards
- Changes in level of 1/4" high maximum shall be permitted to be vertical per section 303 of the 2017 ICC A117.1 / 2010 ADA Standards
- Provide maneuvering clearances at manual swinging doors per section 404 of the 2017 ICC A117.1 / 2010 ADA Standards
- ADA mounting heights, dimensions, tolerances, etc. shall apply to all construction and the location of all fixtures, etc. unless specifically noted otherwise.

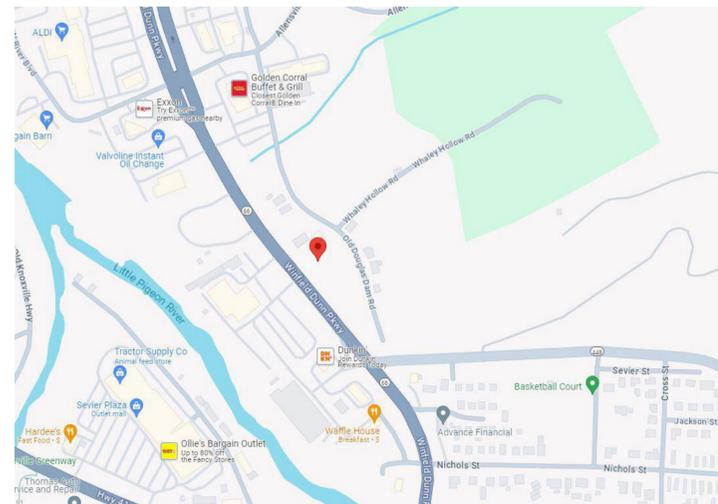
GENERAL INTERIOR NOTES

- Quantities (area, perimeter, etc.) shown on finish schedule are approximate and are provided as a convenience to the Contractor. Actual quantities may vary and it is the responsibility of the Contractor to field verify.
- Anything specified with a directional pattern (e.g. brushed aluminum, wood grain laminate, etc.) the pattern shall go in the same direction as directed by Architect.
- The Contractor shall provide all necessary blocking in walls for support of all equipment, shelving, accessories, grab bars, and other required elements.
- Provide pressure treated wood where in contact with concrete or masonry.
- Ease all edges on casework to prevent sharp corners.
- Paint all HVAC wall grilles to match adjacent surface color unless otherwise noted or instructed by the Architect.
- Use moisture resistant gypsum board at all walls subject to moisture unless wall will be subject to standing water or frequent wetting in which case you shall use cementitious backer.
- Provide thresholds where required. All shall be ADA compliant.
- All gypsum board to have a level 4 finish unless otherwise indicated.
- All toilet walls to have moisture resistant paint.

BIDDING INQUIRES

Company: Express Oil Change
 Contact: John Davis
 E-Mail: jdavis@expressoil.com
 Phone: 205-945-1771

Note: Sub-contractors to call bidding General Contractor for questions



Express Oil Change & Tire Engineers
 332 Old Douglas Dam Rd
 Sevierville, TN, 37876



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 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Sevierville, Tennessee

FINAL

No.	Description	Date

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General Information

Project number: 24005
 Date: 5/15/2024
 Drawn by: ARC
 Checked by: N/A

G100

Scale: 12" = 1'-0"

GENERAL NOTES

- GENERAL CONTRACTOR SHALL ENSURE EACH OF THE FOLLOWING HAVE BEEN REVIEWED BY THE MANUFACTURER FOR COMPLIANCE WITH LOCAL CONDITIONS/REQUIREMENTS PRIOR TO BIDDING/ORDERING/INSTALLING: ROOFING, DOORS, WINDOWS/STOREFRONT, GLAZING, DOOR HARDWARE, PAINT, AND FIRE EXTINGUISHERS.**
- GENERAL CONTRACTOR SHALL PROVIDE SUBMITTALS / SHOP DRAWINGS FOR EACH PRODUCT LISTED UNDER ARCHITECTURAL SPECIFICATIONS. ALL SUBMITTALS / SHOP DRAWINGS ARE TO BE APPROVED BY THE OWNER AND/OR THE A/E PRIOR TO ORDERING.**
- PROVIDE MANUFACTURER'S STANDARD WARRANTY FOR ALL SPECIFIED PRODUCTS.**
- ALL EXTERIOR SIGNAGE, LIGHT BARS, AND SCONCES BY OTHERS.**
- ALL FURNITURE AND EQUIPMENT BY OTHERS. COORDINATE PLACEMENT WITH OWNER PRIOR TO ROUGHING IN REQUIRED UTILITIES.**
- ALL COMPARABLE PRODUCTS TO BE REVIEWED AND APPROVED BY THE OWNER PRIOR TO BID.**
- GC SHALL BE RESPONSIBLE FOR CHECKING WITH THE LOCAL AHJ ON ANY DEFERRED SUBMITTALS THAT MAY BE REQUIRED TO BE APPROVED BY THE AHJ PRIOR TO CONSTRUCTION.**

DIVISION 4 - MASONRY

042200 - Concrete Unit Masonry

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Block USA or a comparable product by an approved manufacturer.

Products:

- A. Concrete Masonry Units
- Finish: Smooth and split-face
 - Min. Compressive Strength: See Structural
 - Density Classification: See Structural
 - Provide types, shapes and sizes as indicated
 - Integral Water Repellent: Provide RainBloc 80 by ACM Chemistries or a comparable product by an approved manufacturer.

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Concrete Products Group or Echelon Masonry or approved comparable product by an approved manufacturer.

Products:

- B. Structural Half-Highs
- Spec-Brik (CPG) or Quik-Brik (Echelon)
 - Size: 8x4x16
 - Color: Stanton Blend (CPG) or Richfield Blend (Echelon) with flash.

*Provide full mock-up for Owner's Approval prior to ordering.

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Argos or an approved comparable product by an approved manufacturer.

Products:

- C. Mortar
- Type: See Structural
 - Color: Argos Magnolia Dark at cmu and structural half-highs
 - Liquid Mortar Additive: Provide RainBloc for Mortar or a comparable product by an approved manufacturer.

Subject to compliance with requirements, provide products indicated below:

Products:

- D. Joint Reinforcement
- Type: Hot dipped galvanized, carbon steel (truss)
 - Size: 0.187" diameter
 - Length: Not less than 10'

DIVISION 5 - METALS

055000 - Metal Fabrications

Products:

- A. Concrete-filled Steel Pipe Bollards
- Material: Schedule 40 steel pipe
 - Height: 3'-6"
 - Diameter: 4"
 - Finish: Painted (See Finish Schedule)

Installation:
See drawings for installation details.

055113 - Metal Pan Stairs

Delegated Design: Engage a qualified professional engineer to design stairs and railings and provide sealed calculations and drawings.

Products:

- A. Metal Pan Stairs
- Steel Sheet Thickness: 0.067" minimum
 - Uniform Load: 100 lbf/sf
 - Concentrated Load: 300 lbf applied on an area of 4 sq. in.
 - Finish: Painted (See Finish Schedule)
 - Uniform and concentrated loads need not be assumed to act concurrently.
 - Stair Framing: Capable of withstanding stresses resulting from railing loads in addition to loads specified above.
- B. Stair Railings
- Rails and Posts: 1 5/8" diameter
 - Picket Infill: 1/2" round pickets spaced less than 4 inches clear.
- C. Installation: Install per manufacturer's standard written instructions.
- D. Warranty: Provide manufacturer's standard material warranty.

055213 - Pipe and Tube Railings

Delegated Design: Engage a qualified professional engineer to design stairs and railings and provide sealed calculations and drawings.

- A. Handrails & Top Rails of Guards
- Rails and Posts: 1 1/2" diameter
 - Uniform Load: 50lbf/ft in any direction.
 - Concentrated Load: 200 lbf applied in any direction

055213 - Pipe and Tube Railings (continued):

- A. Handrails & Top Rails of Guards
- Uniform and concentrated loads need not be assumed to act concurrently.
 - Type: F or S
 - Material: Schedule 40
 - Finish: Painted (See Finish Schedule)
 - Seismic Performance: See Structural
- B. Infill of Guards
- Concentrated Load: 50 lbf applied horizontally on an area of 1 SF.
 - Infill load and other loads need not be assumed to act concurrently.

Installation:
Install stairs and railings according to manufacturers' written instructions and with welded connections.

DIVISION 6 - WOOD, PLASTICS AND COMPOSITES

061000 - Rough Carpentry

Products:

- A. Framing with Dimensional Lumber (Interior Non-Load-Bearing)
- Thoroughly Dried
 - No. 2 Southern Yellow Pine or No. 2 Douglas Fir
 - Of sizes, shapes, and lengths required.
 - Moisture content shall not exceed 19% at time of installation
- B. Miscellaneous Lumber (e.g. Blocking, Furring, etc.)
- Thoroughly Dried
 - No. 2 Southern Yellow Pine or No. 2 Douglas Fir
 - Of sizes, shapes, and lengths required.
 - Moisture content shall not exceed 19% at time of installation
- C. Temporary Bracing, Shoring, etc. as required
- Thoroughly Dried
 - No. 2 Southern Yellow Pine or No. 2 Douglas Fir
 - Of sizes, shapes, and lengths required.
 - Moisture content shall not exceed 19% at time of installation
- D. Wood Fascia Board (inc. frieze board)
- Thoroughly Dried
 - No. 2 Southern Yellow Pine or No. 2 Douglas Fir
 - Of sizes, shapes, and lengths required.
 - Moisture content shall not exceed 19% at time of installation
 - Painted (See Finish Schedule)
- E. Plywood (Ceilings)
- Plywood Type: Exposure 1
 - Plywood Grade: BC
 - Thickness: As indicated on drawings
 - Square Edge
 - Provide batten strips as indicated on drawings
 - Painted (See Finish Schedule)
 - Class: C Fire Rating
 - Flame Spread Rating 76-200 / Smoke Developed Index <450
- F. Plywood decking (roof)
- Plywood Type: Exposure 1
 - Plywood Grade: BC
 - Thickness: As indicated on drawings
 - Square Edge

Note:
1. All plywood which has any edge or surface permanently exposed to the weather shall be of the exterior type.
2. All wood exposed to weather and/or in contact with masonry or concrete shall be pressure-treated lumber.

061533 - Composite Decking

Products:

- A. Plastic Decking for Dumpster Enclosure Doors
- Composite plastic lumber
 - Solid shapes made from a mixture of cellulose fiber and polyethylene or polypropylene.
 - Surface Texture: Smooth
 - Color: See Finish Schedule.
 - Size: See dumpster details.

Installation:
Install plastic decking according to manufacturers' written instructions.

Warranty:
Provide manufacturer's standard material warranty.

064116 - Plastic-Laminate-Faced Architectural Cabinets

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by DBIW, LLC or a comparable product by an approved manufacturer.

Products:

- A. Plastic-Laminate Faced Architectural Cabinets
- See details on Sheet G301.

Installation:
Install plastic laminate according to manufacturers' written instructions.

- B. Cabinet Hardware
- See details on Sheet G301.

Installation:
Install cabinet hardware according to manufacturers' written instructions.

- C. Warranty
- Provide manufacturer's standard material warranty.

066400 Plastic Paneling (Fiberglass Reinforced Panels)

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Marlite Wall Systems, or a comparable product by one of the following:

- Kal-Lite
- Crane Composites
- Panolam

Product Requirements:

- A. Provide standard FRP (Fiber Reinforced Plastic) panels in 4' x 8' textured panels.
- B. Color to be selected by Architect from Manufacturer's full range.
- C. Conform to all building code requirements for interior finish for smoke and flame spread requirements tested in accordance with ASTM 84
- D. Wall required Rating - Class A

Submittals:
Submit shop drawings (elevations of each wall) showing location of paneling and trim members.

Installation:
A. Install per manufacturer's written standards.

Warranty:
A. Provide manufacturer's standard warranty.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

071900 - Water Repellents

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Ghostshield or a comparable product from an approved manufacturer.

Products:

- A. Water Repellent
- ISO-Tek 8540
 - Color: Clear

Installation:
Install water repellents according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

072100 - Thermal Insulation

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Owens Corning, or a comparable product by one of the following:

- Johns Manville
 - CertainTeed
- Products:
- A. Kraft Faced (Vapor Retarder) Batt Insulation:
- EcoTouch PINK Fiberglass Insulation
 - R-13 & R-20; where indicated
- B. Unfaced Batt Insulation:
- EcoTouch PINK Fiberglass Insulation
 - R-38; where indicated
- C. Eave Ventilation Troughs:
- Preformed, rigid fiberboard or plastic sheets designed and sized to fit between roof framing members and to provide ventilation between insulated attic space and vented eaves.
- D. Rigid Insulation
- R-10 for slab on grade at thermal envelope

Installation:
Install insulation and accessories according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard material warranty.

072600 Vapor Retarders

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Reef Industries, or a comparable product by an approved manufacturer.

Products:

- A. Reinforced Under Slab Vapor Retarder:
- Griffolyn 10 Mil Green
 - Thickness: 10 mil
 - Max Perm Rating: 0.1 perm
 - Lap: 12" and tape with manufacturer recommended tape

Installation:
Install vapor retarders according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

072726 - Fluid-Applied Membrane Air Barrier

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by W.R. Meadows, or a comparable product by an approved manufacturer.

Products:

- A. Liquid Membrane Air/Vapor & Liquid Moisture Barrier
- Air-Shield LMP

Installation:
Install fluid applied membrane air barriers according to manufacturers' written instructions.

Warranty:
Provide manufacturer's standard product warranty.

074113.16 - Standing-Seam Metal Roof Panels (Standard)

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Berridge Manufacturing Co. or comparable product by an approved manufacturer.

Products:

- A. Metal Panel: Cee-Lock
- Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E 1592.
 - Wind Loads: See Structural.
 - Other Design Loads: See Structural.
 - Deflection Limits: See Structural.
 - Air Infiltration: Air leakage of not more than 0.06 cfm/sq. ft when tested according to ASTM E 1680 and ASTM E 283 at the following test-pressure difference:
 - Test-Pressure Difference: 6.24 lbf/sq. ft.
 - Water Penetration under Static Pressure: No water penetration when tested according to ASTM E 1646 and ASTM E 331 at the following test-pressure difference:
 - Test-Pressure Difference: 15 lbf/sq. ft.
 - Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.
 - Uplift Rating: UL 90.
 - Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects.
 - Material: Metallic coated steel
 - Nominal Thickness: 24 gauge
 - Finish: Two-coat fluoropolymer.
 - Color: See Finish Schedule (verify sample with Owner prior to ordering)
 - Panel Coverage: 16.5 inches
 - Panel Height: 1.5 inches
 - Slope: As indicated on roof plan

- B. Underlayment
- Two layers of 15# felt.

- C. Snowguards
- Provide snowguards if required by AHJ.

- D. Ridge/Hip Cap
- Provide preformed ridge/hip cap by roofing manufacturer.
 - Color: Match Roof Color.
 - Material: Match Roof.

- E. Roof Vents
- Provide roof mounted REBE downblast propeller exhaust ventilator by Cook. (See Mech.)
 - CFM: As indicated on the mechanical plans.
 - Color: Match Roof Color.

Installation:
Install metal panels, underlayment, vents, and accessories according to manufacturers' written instructions.

074113.16 - Standing-Seam Metal Roof Panels (Standard) continued:

Warranty:
Provide manufacturers' standard material and product warranties.

074293 Soffit Panels (Standard)

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by James Hardie Building Products, Inc. or a comparable product by an approved manufacturer.

Products:

- A. Smooth Vented Soffits
- Structural Performance: Provide soffit systems capable of withstanding the effects of the following loads:
 - Wind Loads: See Structural.
 - Deflection Limits: See Structural.
 - Net Free Area: 5 sq. in. per linear foot.
 - Width: 12"
 - Thickness: 0.25"
 - Color: Painted. (See Finish Schedule)
 - Jointing: Provide paintable PVC "H" Jointer between panels.

Installation:
Install soffit panels and accessories according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard material warranty.

077100 - Roof Specialties (Standard)

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Roof Drainage Components & Accessories, Inc. or a comparable product by an approved manufacturer.

Products:

- A. Gutters (alum.):
- Style: Smooth Box Gutter - "F" Style
 - Size: 5"
 - Color: Match Roof Color

- B. Downspouts (alum.):
- Style: Smooth Box Downspout
 - Size: 3"x4"
 - Color: Match Roof Color

- C. Downspout boot - Match downspout color - See Civil.

- D. Straps
- Smooth Box Downspout Strap.
 - Color: Match Roof Color.

- E. Gutter Guard
- Continuous screened leaf guard w/ frame.
 - Material: Stainless Steel

Installation:
Install roof specialties according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard material warranty.

077100 - Roof Specialties (Standard)

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by OMG Roofing Products or comparable product by an approved manufacturer.

Products:

- A. Coping Cap
- Product: Permasnap 2
 - 20 gauge w/ kynar finish
 - Color to match roof
 - Face & Back Dimension: 4 inches minimum (Dumpster / HVAC Enclosure)
 - Face & Back Dimension: 8 inches minimum (Building)

Installation:
Install roof specialties according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard material warranty.

078443 - Joint Firestopping

Basis-of-Design Product: For joints in or between Fire-Resistance-Rated Construction: Subject to compliance with requirements, provide products indicated below by Tremco, or a comparable product by one of the following:

- 3M Fire Protection Products
- Owens Corning
- Hilti, Inc.

Product Requirements:

- A. Provide joint firestopping systems with ratings determined per ASTM E1966 or UL 2079
- B. Provide products that upon curing, do not re-emulsify, dissolve, leach, breakdown or otherwise deteriorate over time from exposure to atmospheric moisture, sweating pipes, ponding water or other forms of moisture.
- C. Provide firestop products that do not contain ethylene glycol.
- D. Fire resistance rating must be equal to or exceed the fire resistance rating of the wall, floor or roof in or between which it is installed.
- E. Exposed Joint firestopping systems must have a flame-spread and smoke-developed index of less than 25 and 450, respectively, as determined per ASTM E84

Accessories:

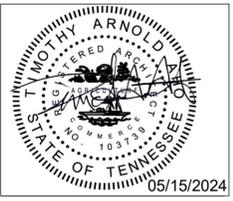
- A. Provide components of joint firestopping systems, including primers and forming materials, that are needed to install elastomeric fill materials and to maintain ratings required. Use only components specified by joint firestopping system manufacturer and approved by the qualified testing agency for conditions indicated.

Installation:

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for joint configurations, substrates, and other conditions affecting performance of the Work.
- B. Install sealants and proper backing according to manufacturers' written instructions.
- C. Identify joint firestopping systems with legible metal or plastic labels. Attach labels permanently to surfaces adjacent to and within 6 inches of joint edge so labels are visible to anyone seeking to remove joint firestopping system. Include the following on the labels:

- "Warning - Joint Firestopping - Do NOT Disturb. Notify Building Management of Any Damage."
- Contractor's name, address and phone number.
- Designation of applicable testing agency
- Date of Installation
- Manufacturer's name
- Installer's name

Warranty:
Provide manufacturers' standard product warranty.



Express Oil Change & Tire Engineers

Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage

Sevierville, Tennessee

FINAL		
No.	Description	Date

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Architectural Specifications

Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A
G200	
Scale	12" = 1'-0"

079200 - Joint Sealants

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Tremco, or a comparable product by one of the following:

- BASF Building Systems
- Pecora Corporation
- Dow Corning Corp.

Products:

A. Silicone (for use around plumbing fixtures and around glazing):

- Spectrem 2
- Color: Clear

B. Urethane (for use at masonry, control joints, and rough openings)

- Dymonic 100
- Color: To match adjacent material color (color and paintable)

C. Joint Sealant Backing:

- Closed cell material with a surface skin or as approved by sealant manufacturer

Installation:
Install sealants and proper backing according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

079219 - Acoustical Joint Sealants

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by USG or a comparable product by an approved manufacturer.

Products:

A. Acoustical Joint Sealant

- USG Sheetrock Brand Acoustical Sealant

Installation:
Install sealants according to manufacturers' written instructions.

Warranty:
Provide manufacturer's standard warranty.

DIVISION 08 - OPENINGS

081113 - Hollow Metal Doors and Frames (Standard)

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by CECO Door, Products, or a comparable product by one of the following:

- Curries Company
- Steelcraft
- Or Approved equal

Products:

Materials

A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

B. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.

C. Frame Anchors: ASTM A 653/A 653M, Commercial Steel (CS), Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.

Hollow Metal Doors

A. General: Provide 1-3/4 inch doors of design indicated, not less than thickness indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces unless otherwise indicated. Comply with ANSI/SDI A250.8 and ANSI/NAAMM HMMMA 867.

B. Exterior Doors (Energy Efficient): Face sheets fabricated of commercial quality hot-dipped zinc coated steel that complies with ASTM A924 A60. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model, ANSI/SDI A250.4 for physical performance level, and HMMMA 867 for door construction.

- Design: Flush panel.
- Core Construction: Foamed in place polyurethane and steel stiffened laminated core with no stiffener face welds, in compliance with HMMMA 867 "Laminated Core".
 - Provide 22 gauge steel stiffeners at 6 inches on-center internally welded at 5" on-center to integral core assembly, foamed in place polyurethane core chemically bonded to all interior surfaces. No stiffener face welding is permitted.
 - Thermal properties to rate at a fully operable minimum U-Factor 0.29 and R-Value 3.4, including insulated door, thermal-break frame and threshold.
 - Kerf Type Frames: Thermal properties to rate at a fully operable minimum U-Factor 0.36 and R-Value 2.7, including insulated door, kerf type frame, and threshold.
- Level/Model: Level 3 and Physical Performance Level A (Extra Heavy Duty), Minimum 16 gauge (0.053 inch - 1.3-mm) thick steel, Model 2.
- Vertical Edges: Vertical edges to be mechanically interlocked with hairline seam. Beveled Lock Edge, 1/8 inch in 2 inches (3 mm in 50 mm).
- Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet. Doors with an inverted top channel to include a steel closure channel, screw attached, with the web of the channel flush with the face sheets of the door. Plastic or composite channel fillers are not acceptable.
- Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9".
- Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

C. Exterior Doors: Face sheets fabricated of commercial quality hot-dipped zinc coated steel that complies with ASTM A 653/A 653M, Coating Designation A60. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level.

- Design: Flush panel.
- Level/Model: Level 2 and Physical Performance Level B (Heavy Duty), Minimum 18 gauge (0.042-inch - 1.0-mm) thick steel, Model 2.
- Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet. Doors with an inverted top channel to include a steel closure channel, screw attached, with the web of the channel flush with the face sheets of the door. Plastic or composite channel fillers are not acceptable.
- Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9" or minimum 14 gauge continuous channel with pierced holes, drilled and tapped.
- Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

D. Interior Doors (Energy Efficient): Face sheets fabricated of commercial quality cold rolled steel that complies with ASTM A366 or 620. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:

- Design: Flush panel.
- Core Construction: Steel stiffened laminated core with fiberglass filler with no stiffener face welds, in compliance with HMMMA 867 "Laminated Core".
 - Provide 22 gauge steel-stiffeners at 6 inches on-center internally welded at 5" on-center to integral core assembly. No stiffener face welding is permitted.
 - Acoustical sound transmission rating shall be no less than STC 38 complying with ASTM E 90 and must be visible on factory applied labels.
- Level/Model: Level 2 and Physical Performance Level A (Heavy Duty), Minimum 18 gauge (0.042 inch - 1.1-mm) thick steel, Model 2.
- Vertical Edges: Vertical edges to be mechanically interlocked with hairline seam. Beveled Lock Edge, 1/8 inch in 2 inches (3 mm in 50 mm).

081113 - Hollow Metal Doors and Frames (Standard) continued:

D. Interior Doors (Energy Efficient):

- Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet. Doors with an inverted top channel to include a steel closure channel, screw attached, with the web of the channel flush with the face sheets of the door. Plastic or composite channel fillers are not acceptable.
- Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9".
- Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

E. Interior Doors: Face sheets fabricated of commercial quality cold rolled steel that complies with ASTM A 1008/A 1008M. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:

- Design: Flush panel.
 - Fire Door Core: As required to provide fire-protection and temperature-rise ratings indicated.
 - Level/Model: Level 2 and Physical Performance Level B (Heavy Duty), Minimum 18 gauge (0.042-inch - 1.0-mm) thick steel, Model 2.
- Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet.
- Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9" or minimum 14 gauge continuous channel with pierced holes, drilled and tapped.
- Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

F. Manufacturers Basis of Design:

- CECO Door Products (C) Honeycomb Core - Regent Series.

Hollow Metal Frames

A. General: Comply with ANSI/SDI A250.8 and with details indicated for type and profile.

B. Exterior Frames: Fabricated of hot-dipped zinc coated steel that complies with ASTM A 653/A 653M, Coating Designation A60.

- Fabricate frames with mitered or coped corners. Profile as indicated on drawings.
- Manufacturers Basis of Design:
 - CECO Door Products (C) - SQSeries.
 - Curries Company (CU) - M Series.

C. Interior Frames: Fabricated from cold-rolled steel sheet that complies with ASTM A 1008/A 1008M.

- Fabricate frames with mitered or coped corners. Profile as indicated on drawings.
- Manufacturers Basis of Design:
 - CECO Door Products (C) - SQ Series.
 - Curries Company (CU) - M Series.

D. Fire rated frames: Fabricate frames in accordance with NFPA 80, listed and labeled by a qualified testing agency, for fire-protection ratings indicated.

E. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 Table 4 with reinforcement plates from same material as frames.

Frame Anchors

A. Jamb Anchors:

- Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, formed from A60 metallic coated material, not less than 0.042 inch thick, with corrugated or perforated straps not less than 2 inches wide by 10 inches long; or wire anchors not less than 0.177 inch thick.
- Stud Wall Type: Designed to engage stud and not less than 0.042 inch thick.
- Compression Type for Drywall Slip-on (Knock-Down) Frames: Adjustable compression anchors.
- Windstorm Opening Anchors: Types as tested and required for indicated wall types to meet specified wind load design criteria.

B. Floor Anchors: Floor anchors to be provided at each jamb, formed from A60 metallic coated material, not less than 0.042 inches thick.

C. Mortar Guards: Formed from same material as frames, not less than 0.016 inches thick.

Installation:
Install hollow metal doors and frames according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

081416 - Flush Interior Wood Doors

Door Construction - General

A. WDMA I.S. 1-A Performance Grade: Extra Heavy Duty; Aesthetic Grade: Premium.

B. U-Factor: 0.50

Core Construction

A. Particleboard Core Doors:

- Particleboard: Wood fiber based materials complying with ANSI A208.1 Particleboard standard. Grade LD-2.
- Adhesive: Fully bonded construction using Polyurethane (PUR) glue.
- Blocking: As indicated under article "Blocking".

Veneered Doors for Painted Finish

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

- ASSA ABLOY Wood Doors (GR): GPD Series.
- Eggers Industries (EG): Premium Series.
- Marshfield-Algoma (MF): Signature Series.
- VT Industries (VT): Artistry Series.

B. Interior Solid Core Doors:

- Grade: Custom.
- Faces: Veneer grades as noted below; veneer minimum 1/50-inch (0.5mm) thickness at moisture content of 12% or less.
 - Rotary Sliced Natural Birch, A grade faces.
- Match between Veneer Leaves: Book match.
- Assembly of Veneer Leaves on Door Faces:
 - Running Match.
- Pair and Set Match: Provide for doors hung in same opening or separated only by mullions.
- Transom Match: Continuous match.
- Vertical Edges: Matching same species as faces. Wood or composite material, one piece, laminated, or veneered. Minimum requirements per WDMA section P-1, Performance Standards for Architectural Wood Flush Doors.
- Horizontal Edges: Solid wood or structural composite material meeting the minimum requirements per WDMA section P-1, Performance Standards for Architectural Wood Flush Doors
- Construction: Five plies. Stiles and rails are bonded to core, then entire unit sanded before applying face veneers.
- At doors over 40% of the face cut-out for lights and/or louvers, furnish engineered composite lumber core.

Light Frames and Glazing

A. Metal Frames for Light Openings in doors with up to 1-inch thick insulated glazing.

- Low profile beveled vision lite frame
- Color: Gray
- 20 gauge cold rolled steel
- Mitered and welded corners with counter sunk mounting holes
- Size as indicated on plans.

B. Glazing: Comply with installation requirements in Division 08 Section "Glazing" and with the flush wood door manufacturer's written instructions.

Fabrication

A. Factory fit doors to suit frame opening sizes indicated.

- Comply with requirements in NFPA 80 for fire rated doors.
- Undercut: As required per manufacturer's templates and sill condition.

B. Factory machine doors for hardware that is not surface applied. Comply with final hardware schedules, door frame Shop Drawings, DHI A115-W series standards, and hardware templates.

- Coordinate with hardware mortises in metal frames to verify dimensions and alignment before factory machining.
- Metal Astragals: Factory machine astragals and formed steel edges for hardware for pairs of fire rated doors.

C. Openings: Cut and trim openings through doors in factory.

- Light Openings: Trim openings with moldings of material and profile indicated.
- Glazing: Comply with applicable requirements in Division 08 Section "Glazing."

Installation

A. **Install per manufacturers' standard written instructions.**

Warranty

A. **Provide manufacturers' standard material warranty.**

083113 - Access Doors and Frames

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Williams Brothers, or a comparable product by an approved manufacturer.

Products:

A. Attic Ladder: Super Simplex Disappearing Stairway

- Opening Size: 30 inches x 54 inches
- Floor to Mezzanine Height: 8' - 10 1/2"
- Floor to Ceiling Height: 8' - 0"
- Ladder width: 18 inches min.

Installation:
1. Install attic access according to manufacturer's written instructions.

Warranty:
1. Provide manufacturers' standard product warranty.

083613 - Sectional Doors (Standard and Hurricane Non-Impact):

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Raynor Garage Doors, or a comparable product by an approved manufacturer.

Please note: Overhead Door Company is not an approved manufacturer.

Products:

Notes:

- All glazing to have proper labels as required by local AHJ and building codes.
- All glazing shall be reviewed and approved by the local distributor to meet the requirements for the region in which the glazing is being installed. Any issues with items specified shall be brought to the attention of the Architect prior to bid.

1.1 MANUFACTURERS

A. Acceptable Manufacturer: Raynor, which is located at: 1101 East River Rd. P. O. Box 448; Dixon, IL 61021-0448; Toll Free Tel: 800-4-RAYNOR; Tel: 815-288-1431; Fax: 888-598-4790; Email: HYPERLINK "https://admin.arcad.com/users.pl?action=UserEmail&company=Raynor&cid=35092&rep=&msg=88-598-4790&message=FE%20&question%20(08360rgd):%20%20&mf=" request info (architectsupport@raynor.com); Web http://www.raynor.com

B. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

1.2 SECTIONAL RIBBED PAN DOOR (Standard Windload)

A. SteelForm as manufactured by Raynor Garage Doors:

- Doors:
 - Operation:
 - Provide doors designed for manual operation.
 - Jamb Construction:
 - Steel jambs with self-tapping fasteners.
 - Structural Performance Requirements:
 - Wind Loads: See Structural.
- Sections:
 - SteelForm S24C (Basic):
 - Section end stiles and center stiles to be a minimum 16 gauge galvanized steel. End stiles and center stiles to be riveted to outside face with stainless steel rivets and resistance welded to interior rail.
 - Material: Steel pan construction, 2 inches thick, roll formed from 24 gauge embossed thickness, commercial quality, hot-dipped galvanized (G40) steel complying with ASTM A 653. Extender of door to have two deep ribs, four pencil grooves, and roll-formed tongue-and-groove joints for weathertight closure.
 - Finish: Exterior skin to have two coats of paint, one primer coat and one finish coat.
 - Color: White polyester paint.
 - Seals: Bottom of door to have flexible U-shaped vinyl seal retained in aluminum rail. Optional blade seal on top section to prevent airflow above header
 - Trussing: Doors designed to withstand specified windload. Deflection of door in horizontal position to be maximum of 1/120th of door width.
- Windows: Locations to comply with door elevation drawings.
 - Full-view windows consisting of aluminum stile and rail construction and (where applicable) color matched to door exterior with powdercoat paint in specified door sections. - See door elevation sheet.
 - Non-Impact Rated Glazing: 1/4 inch Clear Tempered Glass consisting of one pane of 1/4 inch non-insulated glass.
- Mounting: Sections mounted in door opening using:
 - Lap Jamb Angle Mounting: section overlap door jambs by 1 inch on each side of door opening.
- Track:
 - Material: Hot-dipped galvanized steel (ASTM A 653), fully adjustable for adequate sealing of door to jamb or weatherseal.
 - Track Size: 2 inches.
 - Jamb Type: Steel.
 - Mounting: QuikClip. Clip-Angle brackets pre-assembled to continuous angle from floor to door header and continuous angle from door header to door shaft. Angle size: 2-5/16 x 1-1/4 x 3/32 inches.
- Counterbalance:
 - Counterbalance System: Provided with aircraft-type, galvanized steel lifting cables with minimum safety factor of 5. Torsion Springs consisting of heavy-duty oil-tempered wire torsion springs on a continuous ball-bearing cross-header shaft.
 - Spring Cycle Requirements: High cycle: 50,000 cycles.
- Hardware:
 - Hinges and Brackets: Fabricated from galvanized steel.
 - Perimeter Seal: Provide complete weather stripping system to reduce air infiltration. Weather stripping shall be replaceable.
 - For angle mounted doors provide angle clip-on seal.
 - Furnish door system with locks: Two interior slide locks with dead bolt provided with hole to receive padlock provided by Owner.
 - Provide leaf spring bumpers.
- SteelForm Limited Warranty: Raynor warrants the door sections against defects in material and workmanship, and deterioration due to rust-through for ten years from date of delivery to the original purchaser. Window components are warranted against defects in material and workmanship for one year from date of delivery to the original purchaser. Raynor warrants all hardware and spring components against defects in material and workmanship for one year (or cycle life of the springs) from date of delivery to the original purchaser. Additional Limited Warranty requirements in accordance with manufacturer's full standard limited warranty documentation.
- Configuration Type: Vertical Lift Clearance. Track must provide 35" available headroom, which will maintain 4" minimum clearance from finish floor to underside of lift equipment. Follow manufacturer's instructions for installation. Support tracks are to be adequately reinforced with continuous angle attached to structure.

087100 - Door Hardware (Standard Single Bldg. w/ Side Tire Storage)

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by the following manufacturers, or approved equal:

- MK- McKinney
- AD- Adams Rite
- YA- Yale
- RO-Rockwood
- NO-Norton
- PE- Pemko

General Notes:

- Hardware listed for design criteria, confirm with specific door manufacturer.
- Finishes for all door hardware are to be as indicated on Finish Schedule.

Hardware Sets:

Set: 1.0
Doors: 1
Description: EXT - ALUM

1	Continuous Hinge	MCK-25HD	MK
1	Deadlatch	4900 x 4591	AD
1	Cylinder	Mort/ Cyl as required	YA
2	Pull	BF168	RO
1	Surface Closer	CLP8501	NO
1	Mtg Plate	as required	NO
1	Threshold	271A Pemkote MSES25SS	PE
1	Gasketing	by door / frame mfg	
1	Sweep	315CN	PE

Set: 2.0
Doors: 2, 3, 21, 22
Description: BAYS

4	Hinge	TA2714 4-1/2" x 4-1/2"	MK
1	Cylindrical Lock (classroom)	PB 5408LN	YA
1	Surface Closer	8501 Reg / PA	NO
1	Kick Pull	K1050 8" X 2" LDW 4BE CSK	RO
1	Door Stop	409 / 446 [as required]	RO
1	Gasketing	S773D	PE

Set: 3.0
Doors: 4
Description: WAITING - ALUM

1	Continuous Hinge	MCK-25HD	MK
2	Door Pull	BF168	RO
1	Surface Closer	8501 Reg / PA	NO
1	Door Stop	409 / 446 [as required]	RO
1	Gasketing	by door / frame mfg	

PART 2 EXECUTION

2.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared. Verify that site conditions are acceptable for installation of doors, operators, controls and accessories. Ensure that openings are square, flush and plumb.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

2.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

2.3 INSTALLATION

A. General: Install door, track and operating equipment complete with all necessary accessories and hardware according to shop drawings, manufacturer's instructions.

B. Lubricate bearings and sliding parts, and adjust doors for proper operation, balance, clearance and similar requirements.

083613 - Sectional Doors (Standard and Hurricane Non-Impact) continued:

2.4 PROTECTION

A. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove and legally dispose of construction debris from project site.

B. Remove temporary coverings and protection of adjacent work areas. Repair or replace installed products damaged prior to or during installation.

C. Lubricate bearings and sliding parts, assure weather tight fit around door perimeter and adjust doors for proper operation, balance, clearance and similar requirements. Protect installed products until completion of project.

D. Touch-up, repair or replace damaged products before Substantial Completion.

Installation:
Install sectional doors according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

084113 - Aluminum-Framed Entrances and Storefronts (Standard & Hurricane Non-Impact)

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by YKK AP America Inc., or a comparable product by one of the following:

- Kawneer
- Or Approved equal

Products:

A. Exterior Storefront System

- YES 45 TU
- Center set.
- Thermal Barrier: Provide continuous thermal barrier by means of a poured and debridged pocket consisting of a two part, chemically curing high density polyurethane which is bonded to the aluminum by YKK ThermoBond Plus.
 - Materials: Anodized Aluminum; 0.050" minimum thickness.
 - Accessories: As recommended by the manufacturer.
- Components: Manufacturer's standard extruded aluminum mullions, entrance doors, framing, and indicated shapes, perimeter anchor fillers and steel reinforcing as required.
- Glazing Stops: Manufacturer's standard glazing stops with EPDM glazing gaskets to prevent water infiltration at the exterior and Dow Corning 995 Structural Silicone Sealant with fixed stops at the interior. Color to match storefront.
- Finish: See finish schedule.
- Wind Load: See Structural for design pressures.
- Door: 35D - Medium Stile
 - Material: 0.050" aluminum min. thickness
 - Finish: See finish schedule.
 - Hardware: See Division 8 Door Hardware
 - Accessories: Manufacturer's standard
 - Glass: See Division 8 Glazing
 - Glazing Stops: Manufacturer's standard
 - Weather-stripping: Manufacturer's standard

B. Interior Storefront System

- YES 45 FS
- Center set.
- Materials: Anodized Aluminum; 0.050" minimum thickness.
- Accessories: As recommended by the manufacturer.
- Finish: See finish schedule.

C. Storefront Glazing

- Glazing: Comply with Division 08 "Glazing"
- Glazing Gaskets: Manufacturer's standard sealed-corner pressure-glazing system of light gray resilient elastomeric glazing gaskets, setting blocks, and shims or spacers.
- Glazing Sealants: As recommended by the manufacturer.

Installation:
Install aluminum-framed entrances and storefronts according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

087100 - Door Hardware (Standard Single Bldg. w/ Side Tire Storage)

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by the following manufacturers, or approved equal:

- MK- McKinney
- AD- Adams Rite
- YA- Yale
- RO-Rockwood
- NO-Norton
- PE- Pemko

General Notes:

- Hardware listed for design criteria, confirm with specific door manufacturer.
- Finishes for all door hardware are to be as indicated on Finish Schedule.

Hardware Sets:

Set: 1.0
Doors: 1
Description: EXT - ALUM

1	Continuous Hinge	MCK-25HD	MK
1	Deadlatch	4900 x 4591	AD
1	Cylinder	Mort/ Cyl as required	YA
2	Pull	BF168	RO
1	Surface Closer	CLP8501	NO
1	Mtg Plate	as required	NO
1	Threshold	271A Pemkote MSES25SS	PE
1	Gasketing	by door / frame mfg	
1	Sweep	315CN	PE

Set: 2.0
Doors: 2, 3, 21, 22
Description: BAYS

4	Hinge	TA2714 4-1/2" x 4-1/2"	MK
1	Cylindrical Lock (classroom)	PB 5408LN	YA
1	Surface Closer	8501 Reg / PA	NO
1	Kick Pull	K1050 8" X 2" LDW 4BE CSK	RO
1	Door Stop	409 / 446 [as required]	RO
1	Gasketing	S773D	PE

Set: 3.0
Doors: 4
Description: WAITING - ALUM

1	Continuous Hinge	MCK-25HD	MK
2	Door Pull	BF168	RO
1	Surface Closer	8501 Reg / PA	NO
1	Door Stop	409 / 446 [as required]	RO
1	Gasketing	by door / frame mfg	



05/15/2024

Express Oil Change & Tire Engineers

Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage

Sevierville, Tennessee

FINAL

No.	Description	Date

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Architectural Specifications

Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A
G201	
Scale	12" = 1'-0"

087100- Door Hardware (Standard Single Bldg. w/ Side Tire Storage) continued:

Set: 3.1
Doors: 9, 19, 20, 23
Description: EXT - BAYS

4	Hinge (heavy weight)	T4A3386 NRP 4-1/2" x 4-1/2"	MK
1	Exit Device (rim, nightlatch)	7150 WS PB627F	YA
1	Cylinder	Mort / Cyl as required	YA
1	Surface Closer	CLP8501	NO
1	Threshold	271A Pemkote MSES25SS	PE
1	Gasketing	S773D	PE
1	Rain Guard	346C x LAR	PE
1	Sweep	315CN	PE

Set: 4.0
Doors: 5
Description: TOILET

4	Hinge	TA2714 4-1/2" x 4-1/2"	MK
1	Cylindrical Lock (privacy)	PB 5402LN	YA
1	Mop Plate	K1050 4" X 1" LDW 4BE CSK	RO
1	Door Stop	409 / 446 [as required]	RO
1	Gasketing	S773D	PE
1	Surface Closer	8501 Reg / PA	NO

Set: 5.0
Doors: 13
Description: OFFICE

4	Hinge	TA2714 4-1/2" x 4-1/2"	MK
1	Cylindrical Lock (entry)	PB 5407LN	YA
1	Door Stop	409 / 446 [as required]	RO
1	Threshold	271A Pemkote MSES25SS	PE
1	Gasketing	S773D	PE
1	Sweep	315CN	PE
1	Surface Closer	8501 Reg / PA	NO

Set: 6.0
Doors: 14
Description: BREAK

4	Hinge	TA2714 4-1/2" x 4-1/2"	MK
1	Passage Set	PB 5401LN	YA
1	Surface Closer	8501 Reg / PA	NO
1	Mop Plate	K1050 4" X 1" LDW 4BE CSK	RO
1	Kick Plate	K1050 8" X 2" LDW 4BE CSK	RO
1	Door Stop	409 / 446 [as required]	RO
1	Gasketing	S773D	PE

Set: 7.0
Doors: 15
Description: SHOP TOILET

4	Hinge	TA2714 4-1/2" x 4-1/2"	MK
1	Cylindrical Lock (privacy)	PB 5402LN	YA
1	Mop Plate	K1050 4" X 1" LDW 4BE CSK	RO
1	Door Stop	409 / 446 [as required]	RO
1	Threshold	271A Pemkote MSES25SS	PE
1	Gasketing	S773D	PE
1	Sweep	315CN	PE
1	Surface Closer	8501 Reg / PA	NO

Set: 8.0
Doors: 6, 7, 8, 10, 11, 12, 16, 17, 18, 24, 25, 26
Description: OH DOOR

1	Hardware	By door mfg	
---	----------	-------------	--

Installation:
Install door hardware according to manufacturers' written instructions.
All door hardware (Interior and Exterior) to be keyed alike.

Warranty:
Provide manufacturers' standard product warranty.

DIVISION 9 - FINISHES

092900- Gypsum Board

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Lafarge, unless otherwise indicated, or a comparable product by one of the following:

- Georgia-Pacific
- USG
- National Gypsum

Products:

A. Moisture and Mold-Resistant Type: Mold Defense

- Thickness: 1/2 inch
- Long Edges: Tapered
- Finish: Level 4 in areas exposed to view. Level 1 in concealed areas.

B. Water-resistant Type: Watercheck (@ Toilet Rooms and behind plumbing fixtures)

- Thickness: 1/2 inch
- Long Edges: Tapered
- Finish: Level 4
- Cuts: All cuts in board shall be covered with special waterproofing sealant as recommended by the manufacturer.

C. Type X: Firecheck (As Required)

- Thickness: 5/8"
- Long Edges: Tapered
- Finish: Level 4
- All penetrations and joints to be sealed with fire caulk as recommended by the manufacturer.

Installation:
Install gypsum board and accessories according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

093013- Ceramic Tiling

Manufacturer:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below:

Products:

A. Ceramic Tile: Volume 1.0 by Daltile

- Size: 12"x12"
- Color: Intensity Pebble VL72

B. Epoxy Grout: Kerapoxy by MAPEI

- Color: 47 Charcoal

C. Transition Strip: RENO-U 3/8" /10 mm by Schluter Systems

- Type: ADA Compliant
- Finish: Satin Anodized Aluminum

Installation:
Install ceramic tile and accessories according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

096513- Resilient Base and Accessories

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Roppe, or a comparable product by one of the following:

- Johnsonite, a Tarkett Company
- Armstrong World Industries
- Or Approved equal

Products:

A. Rubber Base: Pinnacle Rubber by Roppe

- Height: 4"
- Length: Coils in manufacturer's standard length
- Outside Corners: Job formed
- Inside Corners: Job formed
- Color as indicated on finish schedule.

B. Adhesives: As recommended by the manufacturer

Installation:
Install resilient base according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

099113- Exterior Painting

Manufacturer:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Sherwin Williams.

Products:

A. Masonry: Pro Industrial Urethane Alkyd Enamel Gloss, B54-150 Series

B. Steel: Pro Industrial Urethane Alkyd Enamel Gloss, B54-150 Series

C. Wood: Pro Industrial Urethane Alkyd Enamel Gloss, B54-150 Series

D. Aluminum: Pro Industrial Urethane Alkyd Enamel Gloss, B54-150 Series

Note: Use 1 coat primer as recommended by manufacturer and 2 finish coats unless otherwise recommended by the manufacturer.

Installation:
Install exterior paint according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

099123- Interior Painting

Manufacturer:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Sherwin Williams.

Products:

A. Masonry: Pro Industrial Pre-Catalyzed Water Based Epoxy Semi-Gloss, K46W151 Series

B. Steel: Pro Industrial Urethane Alkyd Enamel Gloss, B54-150 Series

C. Wood: Pro Industrial Urethane Alkyd Enamel Gloss, B54-150 Series

D. Gypsum Board in Office Area: ProMar 200 Zero VOC Interior Latex Egshel, B20W2600 Series. Use extreme bond primer at vinyl graphics.

E. Gypsum Board in Bay Area: ProMar 200 Zero VOC Interior Latex Egshel, B20W2600 Series. Use extreme bond primer at vinyl graphics.

F. Gypsum Board Ceilings: ProMar 200 Zero VOC Interior Latex Flat, B30W2650 Series

G. Plywood Ceilings: ProMar 200 Zero VOC Interior Latex Flat, B30W2650 Series

H. Sealed Concrete Floors: ArmorSeal Rexthane 1 Floor Coating + Shark Grip (1000 HS primer)

Installation:
Install interior paint according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

099123- Interior Painting (continued):

Note: Use 1 coat primer as recommended by manufacturer and 2 finish coats unless otherwise recommended by the manufacturer.

Installation:
Install interior paint according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

DIVISION 10 - SPECIALTIES

101419- Dimensional Letter Signage - By others.

101423.13 Room-Identification Signage

See drawing on A602.

102600 - Wall and Door Protection

Manufacturer:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by InPro Corporation.

Products:

A. Stainless Steel Flush Mount Corner Guards

B. Corner Radius: 1/8"

C. Height: 4'-0"

D. Width: 1 1/2"

E. Materials: Stainless Steel: Type 430, 16 gauge

F. Attachment: Pre-drilled beveled holes and phillips head screws.

G. Finish: Stainless Steel No. 4 satin finish.

H. Location: As indicated on drawings

J. Installation: Install per manufacturer's standard written instructions.

K. Warranty: Provide manufacturers' standard product warranty.

102800- Toilet, Bath, and Laundry Accessories

The following list of accessories is essentially complete; however, the Contractor shall examine the drawings carefully and shall supply such items not specifically called for to provide a complete installation.

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Bradley Corporation or a comparable product by one of the following:

- Bobrick Washroom Equipment, Inc.
- American Specialties, Inc.
- Or Approved Equal

Products:

A. Robe Hook: Bradley Model 915

B. Grab Bars: Bradley Model 8120-00142, Model 8120-00136, and Model 8120-00124

C. Toilet Tissue Dispenser: Bradley Model 5425 (**By Others**)

D. Mirror: Bradley Model 780-02436

E. Soap Dispenser: Bradley Model 6563 (**By Others**)

F. Paper Towel Dispenser: Bradley Model 2494 (**By Others**)

G. Under Lavatory Guard: Truebro Lav Guard 2 by IFS Corporation

H. Baby Changing Station: Bradley Model 9631 (Light Gray)

Installation:

- Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and heights indicated.
- Install grab bars to withstand a downward load of at least 250 lbf, when tested according to ASTM F 446.

Warranty:
Provide manufacturers' standard product warranty.

104413- Fire Department Lock Box

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Knox, or a comparable product by one of the following:

- Kidde
- Or Approved Equal

Products:

A. Lock Box: 3200 Series Hinged Door Surface Mount

- Color: As indicated on Finish Schedule

Installation:

- Install fire department lock box in location and height as required by the authorities having jurisdiction.
- Install per manufacturer's written installation instructions.

Warranty:
Provide manufacturers' standard product warranty.

104416- Fire Extinguishers

Manufacturers:

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Amerex Corporation, or a comparable product by one of the following:

- Larsens Manufacturing Company
- JL Industries
- Or Approved Equal

Products:

A. ABC Dry Chemical Extinguisher: Amerex Model B456

B. Wall Bracket: Amerex Model 0546 Wall

C. UL and ULC Rating: 4A-80BC

Installation:

- Install fire extinguishers in locations and heights indicated and in compliance with requirements of authorities having jurisdiction.
- Install fire extinguishers and brackets according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

DIVISION 12- FURNISHINGS

123623.13 Plastic-Laminate-Clad Countertops

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Wilsonart.

Products:

A. Plastic Laminate #1

- High pressure decorative laminate: NEMA LD3
- Grade: HG5
- Color: 4880-38 Carbon Mesh

B. Adhesives: as recommended by the manufacturer

Installation:
Install plastic laminate according to manufacturers' written instructions.

Warranty:
Provide manufacturers' standard product warranty.

DIVISION 31- EARTHWORK

313116- Termite Control

Provide EPA Registered termiticide acceptable to authorities having jurisdiction, in an aqueous solution formulated to prevent termite infestation.

DIVISION 33 - UTILITIES

334600- Subdrainage

Basis-of-Design Product: Subject to compliance with requirements, provide products indicated below by Carlisle.

Products:

A. CCW MiraDrain 6200 and 9800

B. CCW MiraStop

C. CCW MiraClay Woven Geotextile

D. CCW MiraClay Granules or Mastic

Installation:
Install subdrainage products according to manufacturers' written instructions.



Express Oil Change & Tire Engineers

Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage

Sevierville, Tennessee

FINAL

No.	Description	Date

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Architectural Specifications

Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A
G202	
Scale	12" = 1'-0"

EXPRESS OIL CHANGE & TIRE ENGINEER STANDARDS - EXTERIOR

EXTERIOR

RED BRICK

On newer prototype buildings, the red brick is not required. The Blue Brick stripe extends all the way up to the rafters on the roof down to the top of the bay doors and all the way around the buildings. On peak buildings, the peak is painted summit gray.

The Bay Doors are painted a bright white. The bollards that protect the bay doors are painted Safety Blue. Downspouts and gutters to be painted Blue Blood.
If the building does not have a Peak, you must use the GRAY BRICK color scheme.
Must have a Gray, Black, or Blue Roof



3

PAINTED GRAY BRICK

Painted buildings include all of the same specs as the RED BRICK buildings except the red brick is painted Summit Gray. Downspouts are painted to match the background of the building.

If the building does not have a Peak, the blue stripe will go all the way around the building.

Must have a Gray, Black, or Blue Roof



4

EXTERIOR

EOC & TE SIGN FOR PEAK BUILDINGS



5

Signage by Others

EXTERIOR

CUSTOM LIGHTBAR (OPTIONAL)

The new lightbar sits underneath the letters and is an aesthetic architectural complement during the day and catches the viewers attention at night.

The lightbar is to sit even with the top of the bay doors and span across all bay doors.



7

Lightbar by Others

CHANNEL LETTERS

White channel letters with 3" depth. Channel letter sizing is dictated by space and also may change due to the local sign regulations. In most cases, these letters are braced as directional signage. In most cases, sizes vary from 18" to 24".

FONT

Interstate Bold Condensed - 60pt tracking

LETTERING FOR FRONT BUILDING
10 MINUTE OIL CHANGE
FULL SERVICE AUTO CARE
TIRE CENTER

LETTERING FOR BACK BUILDINGS
TIRES ALIGNMENT ROTATE & BALANCE
DIAGNOSTICS A/C BRAKES

8

Letters by Others

EXTERIOR

AWNING

The new metal awning adds a nice modern, industrial look to the buildings and features built-in lighting for customers entering and exiting in late afternoons. Standard size is 12' for most buildings.



9

Awnings by General Contractor. See Details

BRANDED SCONCES

40"x20" aluminum sconces light up your building from top to bottom with a glowing logo in center. E sconces are to be placed on oil change side. TE sconces are to be placed on mechanical side. Sconces to be evenly spaced between the bay doors, and vertically centered with the bay doors.



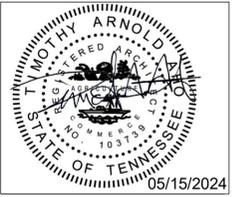
10

Branded Sconces by Others

Note: Items shown on this page are EOC standards. See Finish Schedule for actual materials to be used on this project.



www.ahoarch.com



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

FINAL

No.	Description	Date

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EOC Standards - Exterior

Project number 24005
Date 5/15/2024
Drawn by ARC
Checked by N/A

G300

Scale 12" = 1'-0"

COMcheck Software Version COMcheckWeb
Envelope Compliance Certificate

Project Information
 Energy Code: 2018 IECC
 Project Title: 24005_EOC Sevierville, TN
 Location: Sevierville, Tennessee
 Climate Zone: 4a
 Project Type: New Construction
 Vertical Glazing / Wall Area: 6%

Construction Site: 332 066 Douglas Dam Road, Sevierville, Tennessee 37876
 Owner/Agent: John Davis, Express Oil Change & Tire
 Designer/Contractor: Marc Brunson, Aho Architects, LLC, 1855 Data Drive, Suite 150, Hoover, Alabama 35244

Additional Efficiency Packages (a)
 Credits: 1.75 earned, 0.0 proposed
 Reduced Lighting Power, 1.0 credit

Building Area
 Nonresidential: 668

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor
Roof: Attic Roof, Wood joists, [Bldg. Use 1 - Automotive Facility]	668	38.0	0.0	0.027	0.027
Floor: Unheated Slab-On-Grade, Vertical 2 ft., [Bldg. Use 1 - Automotive Facility] (C)	137	—	15.0	0.520	0.540
WALLS					
Ext. Wall @ Corridor, Wood-Framed, 16in. o.c., [Bldg. Use 1 - Automotive Facility]	90	20.0	0.0	0.064	0.064
Ext. Wall @ Storage 10, Wood-Framed, 16in. o.c., [Bldg. Use 1 - Automotive Facility]	224	20.0	0.0	0.064	0.064
Ext. Wall @ Storage 10, Wood-Framed, 16in. o.c., [Bldg. Use 1 - Automotive Facility]	617	20.0	0.0	0.064	0.064
Window A, Metal Frame, Fixed, Perf. Specs., Product ID Solarban 90 on Clear, SHGC 0.23, PF 3.67, [Bldg. Use 1 - Automotive Facility] (D)	12	—	—	0.270	0.380
Window B, Metal Frame, Fixed, Perf. Specs., Product ID Solarban 90 on Clear, SHGC 0.23, PF 3.67, [Bldg. Use 1 - Automotive Facility] (D)	8	—	—	0.270	0.380
Door #2, Wood, Swinging, [Bldg. Use 1 - Automotive Facility]	21	—	—	0.500	0.610
Door #13, Wood, Swinging, [Bldg. Use 1 - Automotive Facility]	21	—	—	0.500	0.610
GLAZING					
Ext. Wall, Wood-Framed, 16in. o.c., [Bldg. Use 1 - Automotive Facility]	228	20.0	0.0	0.064	0.064

Project Title: 24005_EOC Sevierville, TN
 Data Filename: 24005_EOC Sevierville, TN
 Report date: 05/07/24
 Page: 1 of 9

Section # & Req. ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.5.1 (M13)	Stair and elevator shaft vents have monitored dampers that automatically close. Reference section C403.7.7 for operational details.	Complies Does Not Not Observable Not Applicable	
C403.7.7 (M13)	Outdoor air and exhaust systems have installed dampers that automatically close when not in use and meet maximum leakage rates. Check gravity dampers where allowed. Reference section language for operational details.	Complies Does Not Not Observable Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)
 Project Title: 24005_EOC Sevierville, TN
 Data Filename: 24005_EOC Sevierville, TN
 Report date: 05/07/24
 Page: 6 of 9

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor
Scored/roft: Metal Frame with Thermal Break, Fixed, Perf. Specs., Product ID Solarban 90 on Clear, SHGC 0.23, PF 0.63, [Bldg. Use 1 - Automotive Facility] (D)	85	—	—	0.270	0.380
Door #1, Class (over 50% glazing), Metal Frame, Entrance Door, Perf. Specs., Product ID Solarban 90 on Clear, SHGC 0.23, PF 0.63, [Bldg. Use 1 - Automotive Facility] (D)	21	—	—	0.270	0.770
Ext. Wall, Wood-Framed, 16in. o.c., [Bldg. Use 1 - Automotive Facility]	109	20.0	0.0	0.064	0.064
Door #14, Wood, Swinging, [Bldg. Use 1 - Automotive Facility]	21	—	—	0.500	0.610
WALLS					
Ext. Wall, Wood-Framed, 16in. o.c., [Bldg. Use 1 - Automotive Facility]	618	20.0	0.0	0.064	0.064
Door #3, Wood, Swinging, [Bldg. Use 1 - Automotive Facility]	21	—	—	0.500	0.610
Door #15, Wood, Swinging, [Bldg. Use 1 - Automotive Facility]	21	—	—	0.500	0.610

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
 (b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
 (c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.
Envelope PASS5: Design 11% better than code

Envelope Compliance Statement
 Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2018 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Marc Brunson
 Name Title Signature Date 05/07/2024

Project Title: 24005_EOC Sevierville, TN
 Data Filename: 24005_EOC Sevierville, TN
 Report date: 05/07/24
 Page: 2 of 9

Section # & Req. ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.6 (EL2)	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	Complies Does Not Not Observable Not Applicable	
C405.7 (EL2)	Electric motors meet the minimum efficiency requirements of Tables C405.7.1 through C405.7.4. Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer unless certification programs do not exist.	Complies Does Not Not Observable Not Applicable	
C405.8.2 (EL2)	Elevators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	Complies Does Not Not Observable Not Applicable	
C405.9 (EL2)	Total voltage drop across the combination of feeders and branch circuits <= 3%.	Complies Does Not Not Observable Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)
 Project Title: 24005_EOC Sevierville, TN
 Data Filename: 24005_EOC Sevierville, TN
 Report date: 05/07/24
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COMcheck Software Version COMcheckWeb
Inspection Checklist

Energy Code: 2018 IECC
 Requirements: 5.0% were addressed directly in the COMcheck software
 Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req. ID	Plan Review	Complies?	Comments/Assumptions
C103.2 (PR1)	Plans and/or specifications provide all information with which compliance can be determined for the building envelope and document where exceptions to the standard are claimed.	Complies Does Not Not Observable Not Applicable	
C402.4.1 (PR10)	The vertical fenestration area <= 30 percent of the gross above-grade wall area.	Complies Does Not Not Observable Not Applicable	
C402.4.1 (PR11)	The skylight area <= 3 percent of the gross roof area.	Complies Does Not Not Observable Not Applicable	
C402.4.2 (PR14)	In enclosed spaces > 500 ft ² directly under a roof with ceiling heights > 8 ft, and used as an office, lobby, atrium, concourse, corridor, storage, gymnasium, leisure center, convention center, automotive service, manufacturing, non-refrigerated warehouse, retail store, manufacturing area, the following requirements apply: (a) the skylight area under skylight is >= 1/2 the floor area. (b) the skylight area to daylight zone is >= 3 percent with a skylight V >= 0.40, or minimum daylight zone effective aperture >= 1 percent.	Complies Does Not Not Observable Not Applicable	
C406 (PR9)	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	Complies Does Not Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)
 Project Title: 24005_EOC Sevierville, TN
 Data Filename: 24005_EOC Sevierville, TN
 Report date: 05/07/24
 Page: 3 of 9

Section # & Req. ID	Insulation Inspection	Complies?	Comments/Assumptions
C303.1 (R10)	Roof insulation installed per manufacturer's instructions. Blank or poured loose-fill insulation is installed only when the roof slope is <= 3 in 12.	Complies Does Not Not Observable Not Applicable	
C402.3.4 (R20)	Insulation installed on a suspended ceiling having ceiling tiles is not being specified for racking assemblies. Continuous insulation board installed in 2 or more layers with edge joints offset between layers.	Complies Does Not Not Observable Not Applicable	
C303.1 (R10)	Building envelope insulation is labeled with R-value or insulation certificate providing R-value and other relevant data.	Complies Does Not Not Observable Not Applicable	
C303.1 (R17)	Below-grade wall insulation installed per manufacturer's instructions.	Complies Does Not Not Observable Not Applicable	
C105 (R4)	Installed above-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	Complies Does Not Not Observable Not Applicable	See the Envelope Assemblies table for values.
C402.2.3 (R8)	Installed floor insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	Complies Does Not Not Observable Not Applicable	See the Envelope Assemblies table for values.
C402.2.6 (R18)	Radon gas and associated components, designed for heat transfer from the panel surface to the occupants or indoor space are installed with a minimum of 0.5.	Complies Does Not Not Observable Not Applicable	
C105 (R2)	Installed roof insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports. For some racking systems, verification may need to occur during Framing Inspection.	Complies Does Not Not Observable Not Applicable	See the Envelope Assemblies table for values.
C402.3.1 (R1)	All sources of air leakage in the building thermal envelope are sealed, caulked, gasketed, weather stripped or wrapped with moisture vapor-permeable wrapping material to minimize air leakage.	Complies Does Not Not Observable Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)
 Project Title: 24005_EOC Sevierville, TN
 Data Filename: 24005_EOC Sevierville, TN
 Report date: 05/07/24
 Page: 8 of 9

Section # & Req. ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C303.1.3 (F13)	Slab edge insulation installed per manufacturer's instructions.	Complies Does Not Not Observable Not Applicable	
C303.2.1 (F6)	Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities.	Complies Does Not Not Observable Not Applicable	
C105 (F03)	Installed slab-on-grade insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	Complies Does Not Not Observable Not Applicable	See the Envelope Assemblies table for values.
C402.2.4 (F17)	Slab edge insulation depth/length, slab insulation extending away from building is covered by pavement or >= 10 inches of soil.	Complies Does Not Not Observable Not Applicable	See the Envelope Assemblies table for values.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)
 Project Title: 24005_EOC Sevierville, TN
 Data Filename: 24005_EOC Sevierville, TN
 Report date: 05/07/24
 Page: 4 of 9

Section # & Req. ID	Final Inspection	Complies?	Comments/Assumptions
C402.3 (F23)	Building envelope contains a continuous air barrier that has been tested and deemed to limit air leakage <= 0.05 cfm/ft ² .	Complies Does Not Not Observable Not Applicable	
C402.3.6 (F37)	Weatherstrips installed on all loading dock cargo door openings and provide direct contact along the top and side of vehicles parked in the doorway.	Complies Does Not Not Observable Not Applicable	
C108.1.1 (F37)	Building operations and maintenance documents will be provided to the owner. Documents will contain manufacturers' information, specifications, programming procedures and means of illustrating to owner how building equipment and systems are intended to be installed, maintained, and operated.	Complies Does Not Not Observable Not Applicable	

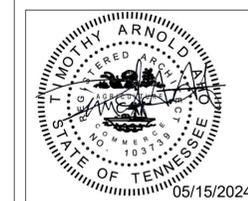
Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)
 Project Title: 24005_EOC Sevierville, TN
 Data Filename: 24005_EOC Sevierville, TN
 Report date: 05/07/24
 Page: 5 of 9

Section # & Req. ID	Framing / Rough-In Inspection	Complies?	Comments/Assumptions
C303.1.3 (F13)	Fenestration products rated in accordance with NFRC.	Complies Does Not Not Observable Not Applicable	
C303.1.3 (F13)	Fenestration products are certified as to performance labels or certificates provided.	Complies Does Not Not Observable Not Applicable	
C402.4.3 (F10)	Vertical fenestration SHGC values.	Complies Does Not Not Observable Not Applicable	See the Envelope Assemblies table for values.
C402.4.3 (F11)	Installed vertical fenestration U-factor and SHGC consistent with label specifications and as reported in plans and COMcheck reports.	Complies Does Not Not Observable Not Applicable	See the Envelope Assemblies table for values.
C402.5.7 (F17)	Weatherstrips are installed on all building entrances. Doors have self-closing devices.	Complies Does Not Not Observable Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)
 Project Title: 24005_EOC Sevierville, TN
 Data Filename: 24005_EOC Sevierville, TN
 Report date: 05/07/24
 Page: 5 of 9



Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Sevierville, Tennessee

FINAL

No.	Description	Date

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Building COMCheck

Project number: 24005
 Date: 5/15/2024
 Drawn by: ARC
 Checked by: N/A

G400

Scale: _____

1 General Information

PROJECT INFORMATION

Name of Project: Single Building / Front Enter / Side Tire Storage
 Client: Express Oil Change & Tire Engineers
 Location: Sevierville, Tennessee
 Authority Having Jurisdiction (AHJ): City: Sevierville County: N/A State: N/A
 Square Footage / Stories / Height: Main Level G.S.F. = 5,654 Stories = 1 + Pit Height = 34'-11 5/8"
 Pit Level G.S.F. = 1,340
 Total G.S.F. = 6,994

PROJECT TYPE

New Construction Addition Other

Alteration Change of Occupancy

BUILDING USE

Single Use Mixed Use (Separated) Mixed Use (Non-Separated)

Description: Automotive repair garage used for general service on automobiles.

SPRINKLERED

Yes Partial No

4 Special Detailed Requirements Based On Use and Occupancy (2021 IBC)

406.8 Repair Garages

Project complies with 406.8 through 406.8.3

413 Combustible Storage

413.1 High-piled storage of combustible materials over 12'-0" or high-hazard commodities over 6'-0"
 Yes No

413.2 Storage of combustible materials in attics, under-floor, and concealed spaces
 Yes No

414 Hazardous Materials

Project complies with 414.2.1 through 414.2.5 (IFC) Control Areas

Number of Control Areas Provided: Entire Building is one control area

Location

Inside Outside

Use

Open Closed Storage Only

Types of Hazardous Materials (Table 307.1.(1) of IBC and 3206.2 of IFC)

Class IIIB Liquids Actual Storage per control area: 4040.13 gallons
 Class IA Flammable Liquids Actual Storage per control area: 0.94 gallons
 Class IB Flammable Liquids Actual Storage per control area: 3.25 gallons
 High-Hazard Commodities per IFC 2018 3203.6 / 3206.2 (Rubber Tires)
 Allowable Quantity: 0-500 s.f. Actual Quantity: X<500 s.f.

7 Fire And Smoke Protection Systems (2021 IBC)

718.4 Draftstopping in Attics

Yes No Not Required

Openings in the partitions shall be protected by self-closing doors with automatic latches constructed as required for the partitions.

Installed in attics and concealed roof spaces such that any horizontal area does not exceed 3,000 s.f.

8 Interior Finishes (2021 IBC)

Table 803.13 Interior Wall and Ceiling Finish Requirements by Occupancy

Group	Exit Enclosures and Exit Passageways	Corridors	Rooms and Enclosed Spaces
S-1	B	B	C
B	A	B	C

804.4.2 Minimum Critical Radiant Flux

Class I Class II

2 Codes

2021 International Building Code 2021 International Plumbing Code
 2018 International Energy Conservation Code 2017 ICC/ANSI 117.1
 2021 International Fire Code 2017 National Electrical Code
 2021 International Fuel Gas Code
 2021 International Mechanical Code

5 General Building Heights and Areas (2021 IBC)

504 Building Height and Areas and 506 Building Area (Per Table 504.3, 504.4, and 506.2)

Allowable Building Height = 40'-0" Actual Building Height = 34'- 11 5/8"
 Allowable Number of Stories Above Grade Plane = 1 Actual Number of Stories Above Grade Plane = 1
 Allowable Area Factor = 9,000 s.f. Actual Area = 6,994 s.f. (5654 Main Level + 1340 Pit)

505.3 Equipment Platforms

Project complies with 505.3 through 505.3.3

508 Mixed Use and Occupancy

Mixed Use Occupancy (Separated) Mixed Use Occupancy (Non-Separated) Does not apply

No separation required between Group B and Group S-1 Occupancies

9 Fire Protection Systems (2021 IBC)

903 Automatic Sprinkler Systems

903.2.9.1 Repair Garages

Yes Partial Not Required

906 Portable Fire Extinguishers

Yes No
 Project complies with 906.1 through 906.10
 Project complies NFPA 10

907 Fire Alarm and Detection System

Yes Not Required

3 Use and Occupancy Classification(s) (2021 IBC)

Assembly Group A-1 High-Hazard Group H-2 Residential Group R-2
 Assembly Group A-2 High-Hazard Group H-3 Residential Group R-3
 Assembly Group A-3 High-Hazard Group H-4 Residential Group R-4
 Assembly Group A-4 High-Hazard Group H-5 Storage Group S-1
 Assembly Group A-5 Institutional Group I-1 Storage Group S-2
 Business Group B Institutional Group I-2 Utility & Misc Group U
 Educational Group E Institutional Group I-3
 Factory Group F-1 Institutional Group I-4
 Factory Group F-2 Mercantile Group M
 High-Hazard Group H-1 Residential Group R-1

6 Types of Construction (2021 IBC)

601 General and 602 Construction Classification

Type IA Type IB Type IIA Type IIB Type IIIA
 Type IIIB Type IV Type VA Type VB

Table 601 Fire Resistance Rating Requirements for Building Elements

Building Elements	Hours Required	Hours Provided
Primary Structural Frame	0	0
Bearing Walls (Exterior)	0	0
Bearing Walls (Interior)	0	N/A
Nonbearing Walls & Partitions (Exterior)	0	0
Nonbearing Walls & Partitions (Interior)	0	0
Floor Construction & Associated Secondary Members	0	0
Roof Construction & Associated Secondary Members	0	0

Table 705.5 Fire Resistance Requirements for Exterior Walls Based on Fire Separation Distance

Fire Separation Distance	Rear (North)	Right (East)	Front (South)	Left (West)
X < 5				
5 ≤ X < 10				10'
10 ≤ X < 30		28'		
X ≥ 30	>30'		>30'	

X≥30' for Group B and S-1 = 0 hours

10≤X<30' for Group B and S-1 = 0 hours

10 Means of Egress (2021 IBC)

DT_2021 IBC Table 1004.5 Maximum Floor Area Allowance Per Occupant (Group S-1)

Occupancy Classification	Name	Number	Area	S.F. Per Occupants	No. of Occupants
S-1	Oil Change	5	1271 SF	200	6.36
S-1	Corridor	6	94 SF	200	0.47
S-1	Service	9	2485 SF	200	12.42
S-1	Storage	10	220 SF	300	0.73
S-1	Pit	11	1218 SF	200	6.09
S-1	Storage	12	500 SF	300	1.67
S-1	Storage	13	258 SF	300	0.86
Subtotal			6047 SF		28.60

Please note: For the above calculations the occupant load factor used is the 200 gross square feet occupant factor for Group H-5 Fabrication and Manufacturing Areas, since there is not an occupant factor for repair garages.

DT_2021 IBC Table 1004.5 Maximum Floor Area Allowance Per Occupant (Group B)

Occupancy Classification	Name	Number	Area	S.F. Per Occupants	No. of Occupants
B	Service Writing	1	145 SF	150	0.96
B	Waiting Room	2	129 SF	150	0.86
B	Toilet	3	43 SF	150	0.29
B	Manager	4	51 SF	150	0.34
B	Break Room	7	65 SF	150	0.43
B	Toilet	8	43 SF	150	0.29
Subtotal			477 SF		3.18

10 Means of Egress (2021 IBC)

DT_2021 IBC Sections 1005.3.1 & 1005.3.2 Egress width Stairways and Other Egress Components (Group S-1)

Occupancy Classification	Name	Number	No. of Occupants	Egress - Stairways	Required Stairway Width	Other Egress Components	Required Capacity in Inches
S-1	Oil Change	5	6.36			0.2	1.27
S-1	Corridor	6	0.47			0.2	0.09
S-1	Service	9	12.42			0.2	2.48
S-1	Storage	10	0.73			0.2	0.15
S-1	Pit	11	6.09	0.3	1.83		
S-1	Storage	12	1.67			0.2	0.33
S-1	Storage	13	0.86			0.2	0.17
Subtotal			28.60		1.83		4.50

DT_2021 IBC Table 1005.3.2 Egress width Other Egress Components (Group B)

Occupancy Classification	Name	Number	No. of Occupants	Other Egress Components	Required Capacity in Inches
B	Service Writing	1	0.96	0.2	0.19
B	Waiting Room	2	0.86	0.2	0.17
B	Toilet	3	0.29	0.2	0.06
B	Manager	4	0.34	0.2	0.07
B	Break Room	7	0.43	0.2	0.09
B	Toilet	8	0.29	0.2	0.06
Subtotal			3.18		0.64

Tables 1006.2.1 Spaces with One Exit or Exit Access Doorway

Occupancy	Max Occupant Load	Max Occupant Load Provided	Number of Exits Required	Number of Exits Provided	Max. Common Path of Travel Allowable (Nonsprinkled)	Max. Provided Common Path of Travel (Nonsprinkled)
S-1	29	28.60	1	4	100'-0"	≤ 100'-0"
B	49	3.18	1	1	100'-0"	≤ 100'-0"

Table 1006.3.3 Minimum Number of Exits or Access to Exits Per Story

Occupant Load Per Story	Minimum Number of Exits or Access to Exits from Story	Number of Exits or Access to Exits from Story Provided
1-500	2	5

Table 1017.2 Exit Access Travel Distance

Occupancy	Without Sprinkler System (Feet)	With Sprinkler System	Max Travel Distance Provided (Feet)
S-1	200	N/A	71'-1"
B	200	N/A	87'- 10"

12 Interior Environment (2021 IBC)

1208.1 Minimum Room Widths

Habitable spaces are not less than 7 feet in any plan dimension

Yes No

1208.2 Minimum Ceiling Heights

Occupiable spaces, habitable spaces, and corridors have a ceiling height of not less than 7 feet 6 inches. Bathrooms, toilet rooms, kitchens, storage rooms, and laundry rooms have a ceiling height of not less than 7 feet.

Yes No

1209.2 Attic spaces

Opening not less than 20 inches by 30 inches is provided for attic area with clear height over 30 inches. 30" headroom provided at or above access opening

Yes Not Required



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 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Sevierville, Tennessee

FINAL

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Life Safety / Code Summary

Project number 24005
 Date 5/15/2024
 Drawn by ARC
 Checked by N/A

LS100

Scale 12" = 1'-0"

29 Plumbing Systems (2021 IBC)

2902.1 Minimum Number of Required Plumbing Fixtures (Group S-1)

DT_Plumbing Fixture_Group S-1												
Total Occupant Load	Male	Female	Required Water Closets		Water Closets Provided	Required Lavatories		Lavatories Provided	Required Drinking Fountains	Drinking Fountains Provided	Required Service Sinks	Service Sinks Provided
			Male	Female		Male	Female					
28.60	14.3	14.3	0.14	0.14	1	0.14	0.14	1	0.03	1	1	1

2902.1 Minimum Number of Required Plumbing Fixtures (Group B)

DT_Plumbing Fixture_Group B												
Total Occupant Load	Male	Female	Required Water Closets		Water Closets Provided	Required Lavatories		Lavatories Provided	Required Drinking Fountains	Drinking Fountains Provided	Required Service Sinks	Service Sinks Provided
			Male	Female		Male	Female					
3.18	1.59	1.59	0.06	0.06	1	0.04	0.04	1	0.03	1	1	1

2902.2 Separate Facilities

Separate facilities provided for each sex

Yes Not Required per 2902.2 Exception 2

2902.2.1 Family or assisted use toilet facilities serving as separate facilities

Yes No Not Required

2902.3 Employee and public toilet facilities

Employee toilet combined with public toilet facilities

2902.3.1 Access

Route to public toilet facilities does not pass through kitchens, storage rooms, or closets and is accessible.

Yes No

2902.3.3 Location of toilet facilities in occupancies other than covered mall buildings

Located not more than one story above or below the space required to be provided with toilet facilities

Yes No

Path of travel to such facilities does not exceed 500 feet

Yes No

2902.4 Signage

Yes No

Legible sign designating the sex provided in visible location near entrance to toilet facility

Yes Not Required per 2902.2.1

Plumbing Fixture Notes:

- High / Low drinking fountain provided for the entire building.
- Service Sink provided for the entire building.
- Family Assisted-Use Toilet Rooms serving as separate facilities each containing (1) lavatory and (1) water closet provided for the entire building.

32 High Piled Combustible Storage (2021 IFC)

3203.6 High-hazard commodities

Yes No

Project does contain high-hazard commodities (Rubber Tires)

Definitions per Chapter 2 of the International Fire Code

High-piled Combustible Storage. Storage of combustible materials in closely packed piles or combustible materials on pallets, in racks or on shelves where the top of storage is greater than 12'-0" in height. When required by the fire code official, high-piled combustible storage also includes certain high-hazard commodities, such as rubber tires, Group A plastics, flammable liquids, idle pallets, and similar commodities, where the top of storage is greater than 6'-0" in height.

Project does contain high piled combustible storage over 6'-0" (<500 s.f. of rubber tire storage over 6 feet high).

Table 3206.2 General Fire Protection and Life Safety Requirements

Commodity Class	Size of High Piled Storage Area	All Storage Areas			
		Automatic Fire Extinguishing System	Fire Detection System	Building Access	Smoke and Heat Removal
High Hazard	0-500 s.f.	Not Required	Not Required	Not Required	Not Required

Solid-Piled Storage, Shelf Storage and Palletized Storage			
Max. Pile Dimension (Feet)	Max. Permissible Storage Height (Feet)	Max. Pile Volume (Cubic Feet)	
60 feet	Not Required	Not Required	

34 Tire Rebuilding and Tire Storage (2021 IFC)

3409 Indoor Storage Arrangement

Project complies with 3409.1 Pile Dimensions

Pile dimension less than 50'-0" in direction of wheel hole.

Tires stored adjacent to or along one wall shall not extend more than 25'-0" from that wall.

5 Fire Service Features (2021 IFC)

505.1 Address Identification

Yes No Not Required

Project complies 505.1 Address Identification

506 Key Boxes

Yes No Not Required

Project complies 506.1 Where Required

23 Motor Fuel-Dispensing Facilities and Repair Garages (2021 IFC)

2311.2.2 Waste oil, motor oil and other Class III B Liquids

Project complies with 2311.2.2 Waste oil, motor oil and other Class III B liquids.

2311.2.2.1 Tank Location

Project complies with 2311.2.2.1 tank location Not Applicable

2311.2.3 Drainage and disposal of liquid and oil-soaked waste

Yes No Not Required

Garage floors do not contain floor drains.

2311.4 Below-grade areas

Project complies with 2311.4.1 through 2311.4.3 Not Applicable

2311.7 Fire Extinguishers

Project complies with 2311.7 fire extinguishers (See Section 9 Fire Protection Systems)

50 Hazardous Materials - General Provisions (2021 IFC)

Table 5003.1.1 (1) Maximum Allowable Quantity Per Control Area of Hazardous Materials Posing a Physical Hazard

Project complies with Table 5003.1.1 (1).

Project contains Class III B Liquid Storage that does not exceed 13,200 liquid gallons per control area.

Project contains Class III B Liquid Open-System that does not exceed 3,300 liquid gallons per control area.

Project contains Flammable Liquid IA Storage that does not exceed 30 liquid gallons per control area.

Project contains Flammable Liquid IA Open System that does not exceed 10 liquid gallons per control area.

Project contains Flammable Liquid IB Storage that does not exceed 120 liquid gallons per control area.

Project contains Flammable Liquid IB Open System that does not exceed 30 liquid gallons per control area.

Project complies 5003.8.3.1 through 5003.8.3.4

Entire building is one single control area.

57 Flammable and Combustible Liquids (2021 IFC)

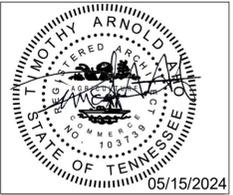
5703.2 Fire Protection

Project complies with 5703.2.1 portable fire extinguishers an hose lines. (See Section 9 Fire Protection Systems).

5703.4 Spill Control and Secondary Containment

Not required. Project does not exceed maximum allowable quantity per control area.

Though not required, the pit itself acts as a secondary containment. There are no drains in the pit.



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

FINAL		
No.	Description	Date

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Life Safety / Code Summary	
Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A
LS101	
Scale	12" = 1'-0"

LIFE SAFETY SYMBOL LEGEND

-  Exit Sign
-  Maneuvering clearances at manual swinging doors
-  HC EXIT 32"
Handicap Accessible Egress Width
-  Travel Distance
-  32"
Exit from room (# = minimum clear width in inches)
-  1 Hour Rated

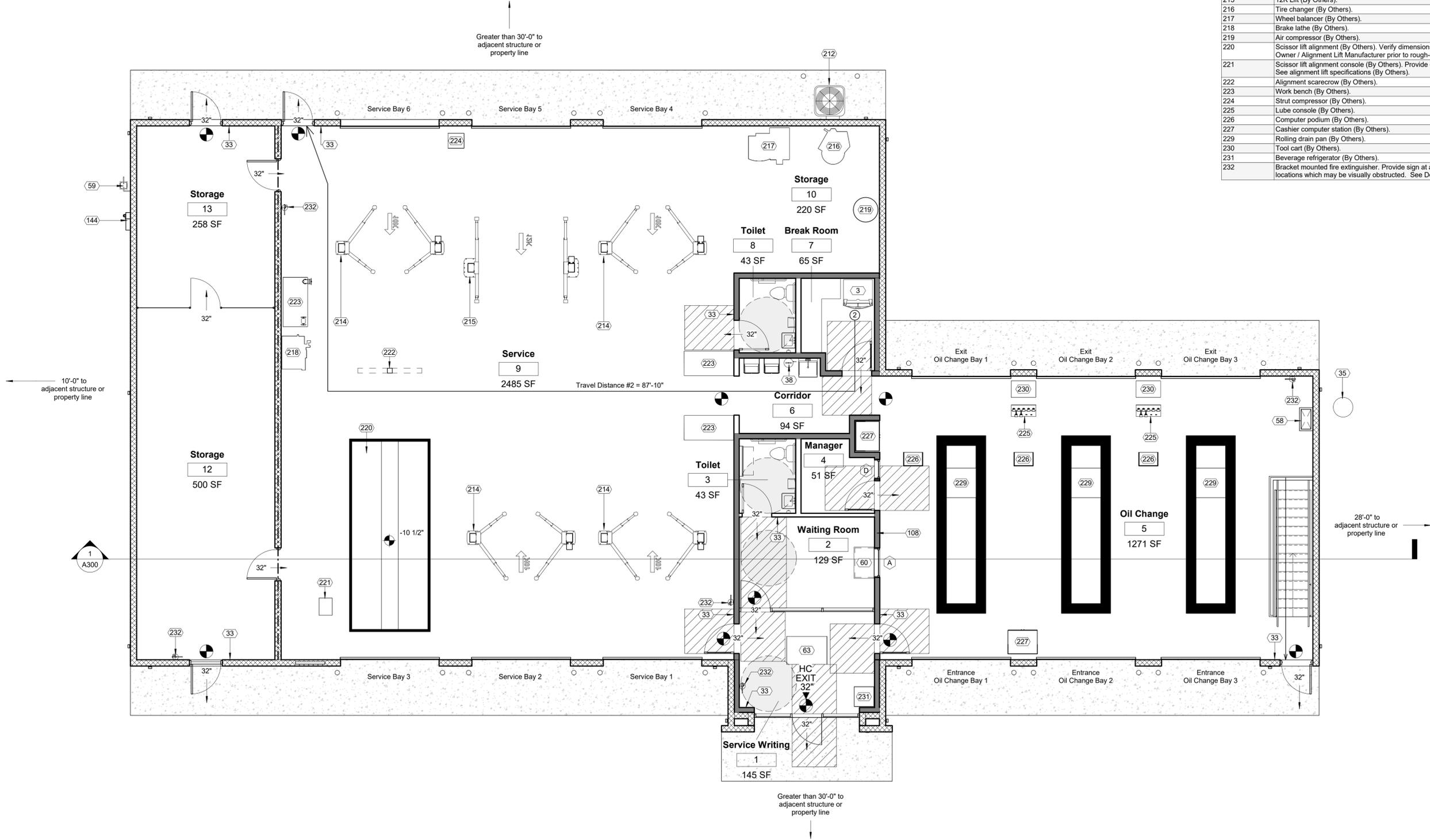
Keynote Schedule	
Tag	Text
3	Location of 30" wide refrigerator (By Others).
33	ADA compliant room / exit sign. See Details on Sheet A602.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
38	Eyewash station. See Plumbing.
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings.
59	Gas meter. See Plumbing.
60	Coffee cabinet. See Details on sheet G301.
63	Service Desk. See Details on sheet G301.
108	Gray shading indicates these walls are the boundaries for the building thermal envelope assembly.
144	Electrical meter. See Electrical.
212	HVAC condensing unit. See Mechanical.
214	10K Lift (By Others).
215	12K Lift (By Others).
216	Tire changer (By Others).
217	Wheel balancer (By Others).
218	Brake lathe (By Others).
219	Air compressor (By Others).
220	Scissor lift alignment (By Others). Verify dimensions of alignment pit with Owner / Alignment Lift Manufacturer prior to rough-in.
221	Scissor lift alignment console (By Others). Provide conduit in slab as required. See alignment lift specifications (By Others).
222	Alignment scarecrow (By Others).
223	Work bench (By Others).
224	Strut compressor (By Others).
225	Lube console (By Others).
226	Computer podium (By Others).
227	Cashier computer station (By Others).
229	Rolling drain pan (By Others).
230	Tool cart (By Others).
231	Beverage refrigerator (By Others).
232	Bracket mounted fire extinguisher. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details on Sheet A602.



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No.	Description	Date

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Life Safety Plan - Main

Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A
LS102	
Scale	As indicated

1 11 Life Safety Plan Main
 3/16" = 1'-0"

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LIFE SAFETY SYMBOL LEGEND

	Exit Sign		Maneuvering clearances at manual swinging doors
	Handicap Accessible Egress Width		Travel Distance
	Exit from room (# = minimum clear width in inches)		1 Hour Rated

LIFE SAFETY NOTES

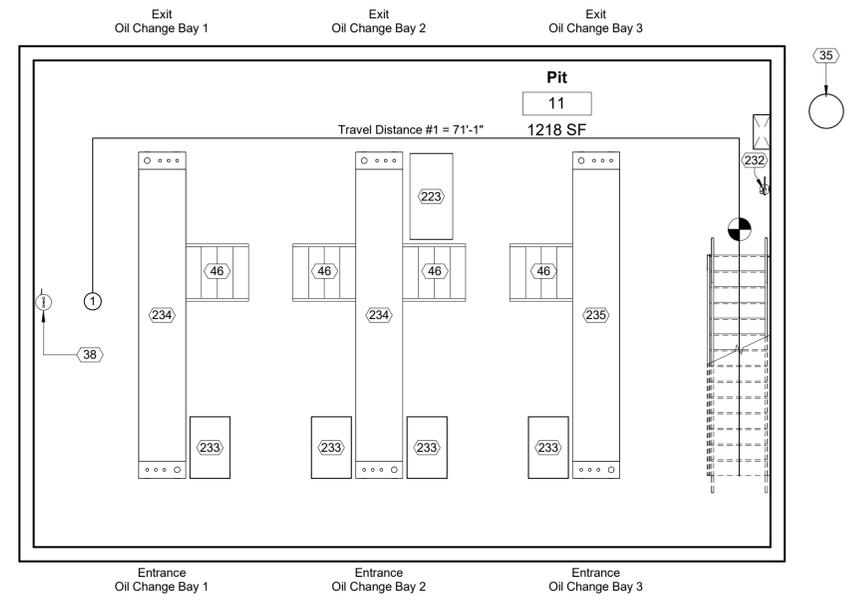
Notes:

- Tanks by others contain 928 gallons and 275 gallons each of Class IIIB Liquids (motor oil). See Chapter 50 on Sheet LS101.
- All equipment by others unless otherwise noted.

Keynote Schedule	
Tag	Text
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
38	Eyewash station. See Plumbing.
46	Oil tank stairs (By Others).
223	Work bench (By Others).
232	Bracket mounted fire extinguisher. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details on Sheet A602.
233	275-gallon Class IIIB new oil tank (By Others).
234	928-gallon Class IIIB new oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
235	928-gallon Class IIB waste oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.



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10 Life Safety Plan Pit
3/16" = 1'-0"

Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

FINAL

No.	Description	Date

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Life Safety - Pit

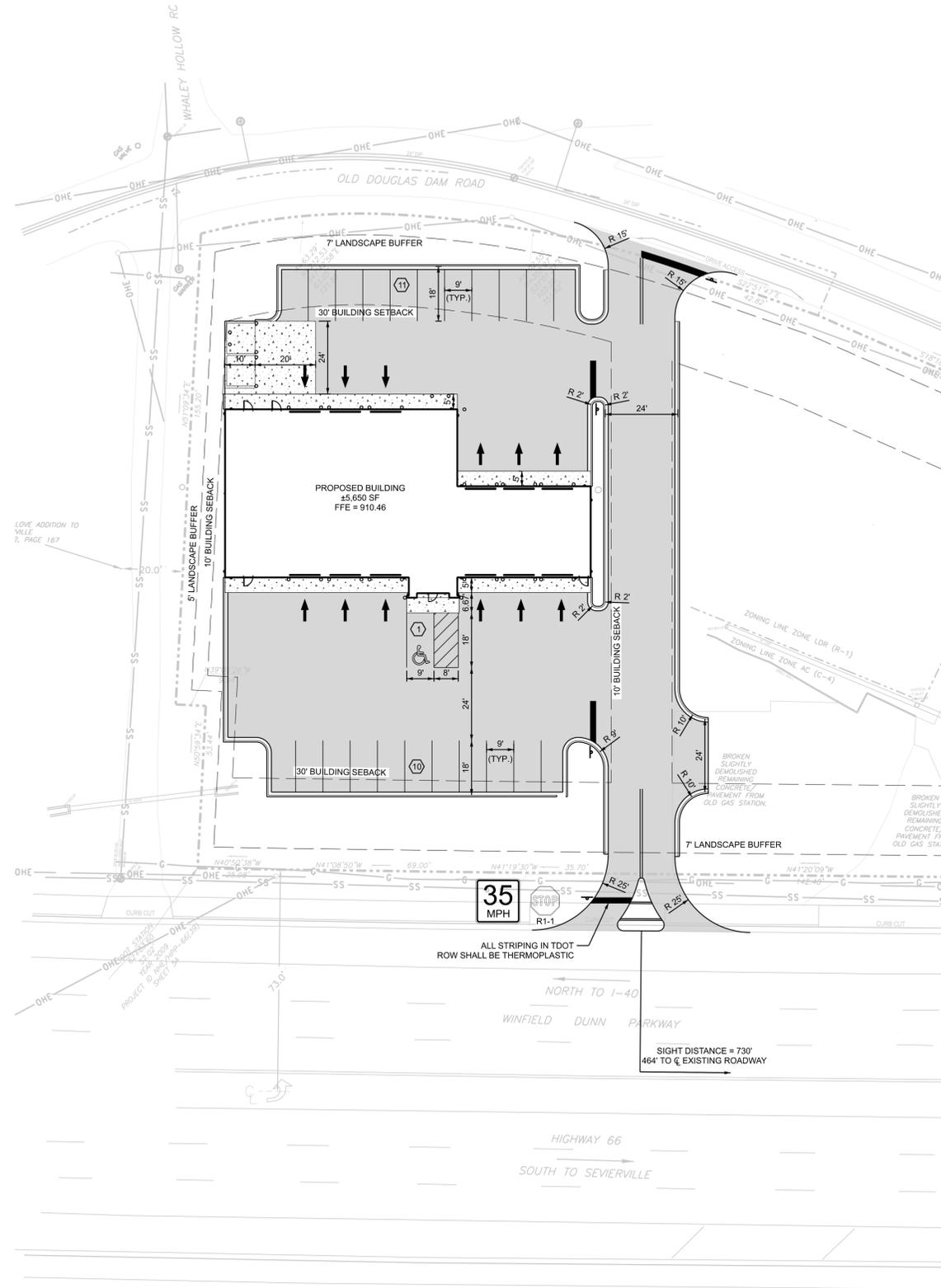
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Date	5/15/2024
Drawn by	ARC
Checked by	N/A

LS103
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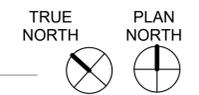


NOTE:

THIS PLAN IS TO SHOW THE BUILDING AS IT RELATES TO THE SITE. A COMPLETE SET OF CIVIL DRAWINGS ARE TO BE SUBMITTED TO THE AHJ INDEPENDENT OF THIS SUBMITTAL. REFER TO THOSE DRAWINGS FOR ACTUAL INFORMATION.



1 Architectural Site Plan
N.T.S.



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

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No.	Description	Date

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Architectural Site Plan

Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A

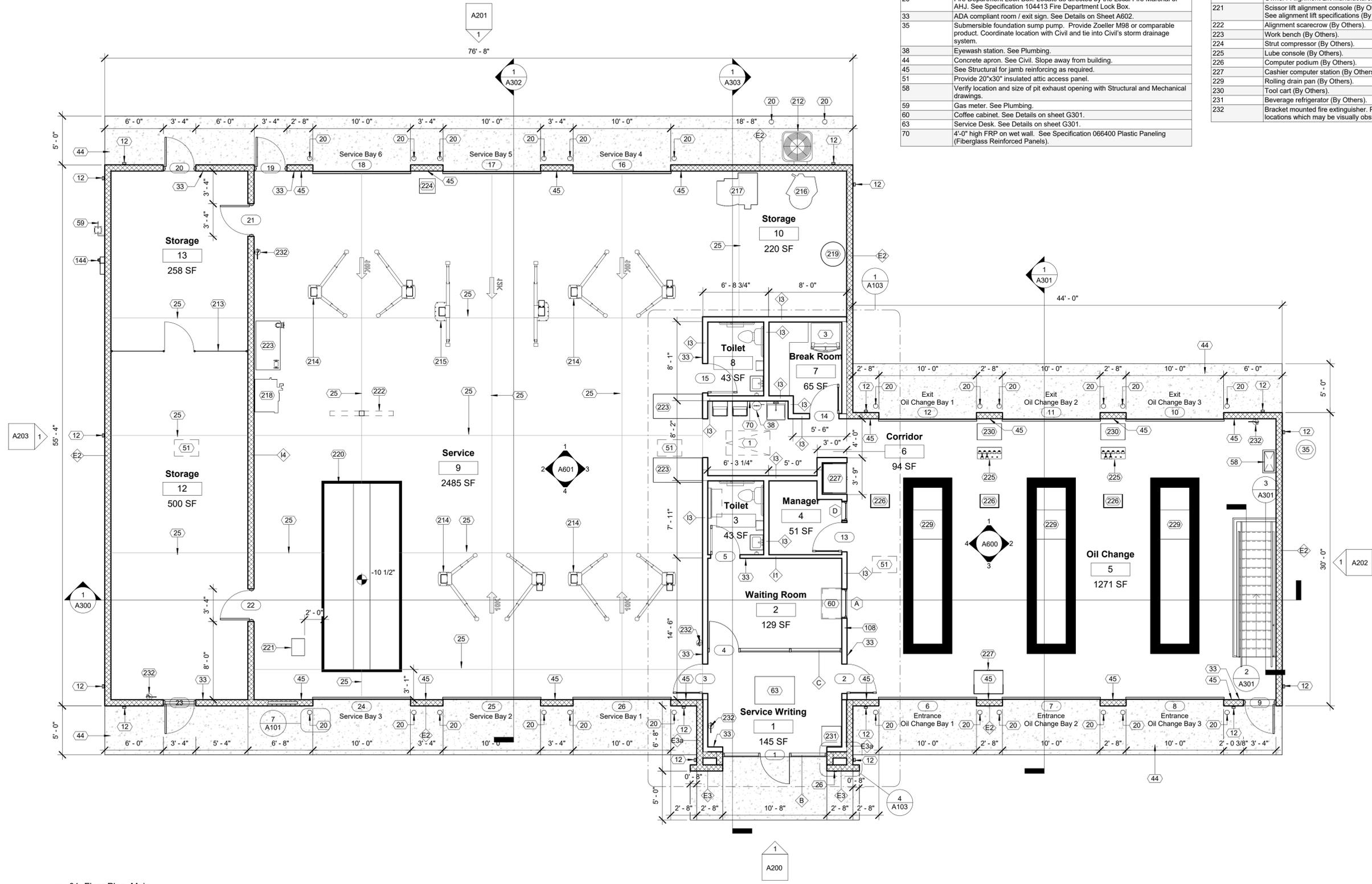
AS100
Scale N.T.S.

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Tag	Text
1	Pull down attic access and ladder. See Specification 083113 Access Doors and Frames.
3	Location of 30" wide refrigerator (By Others).
12	Pre-finished metal downspout and boot piped to storm drainage system. See Civil for tie-in. See Specification 077100 Roof Specialties.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details on sheet A101. See Specification 055000 Metal Fabrications.
25	Control joint. For control joints in concrete floor slabs, coordinate location with equipment layout by others. Max. distance between control joints in slabs not to exceed 12'-0". Control joints in walls shall be 4'-0" max from wall intersection or corner and every 20'-0".
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
33	ADA compliant room / exit sign. See Details on Sheet A602.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
38	Eyewash station. See Plumbing.
44	Concrete apron. See Civil. Slope away from building.
45	See Structural for jamb reinforcing as required.
51	Provide 20"x30" insulated attic access panel.
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings.
59	Gas meter. See Plumbing.
60	Coffee cabinet. See Details on sheet G301.
63	Service Desk. See Details on sheet G301.
70	4'-0" high FRP on wet wall. See Specification 066400 Plastic Paneling (Fiberglass Reinforced Panels).

Tag	Text
108	Gray shading indicates these walls are the boundaries for the building thermal envelope assembly.
144	Electrical meter. See Electrical.
212	HVAC condensing unit. See Mechanical.
213	Full height chain-link fence with 3'-0" x 7'-0" gate.
214	10K Lift (By Others).
215	12K Lift (By Others).
216	Tire changer (By Others).
217	Wheel balancer (By Others).
218	Brake lathe (By Others).
219	Air compressor (By Others).
220	Scissor lift alignment (By Others). Verify dimensions of alignment pit with Owner / Alignment Lift Manufacturer prior to rough-in.
221	Scissor lift alignment console (By Others). Provide conduit in slab as required. See alignment lift specifications (By Others).
222	Alignment scarecrow (By Others).
223	Work bench (By Others).
224	Strut compressor (By Others).
225	Lube console (By Others).
226	Computer podium (By Others).
227	Cashier computer station (By Others).
229	Rolling drain pan (By Others).
230	Tool cart (By Others).
231	Beverage refrigerator (By Others).
232	Bracket mounted fire extinguisher. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details on Sheet A602.



1 01 Floor Plan Main
3/16" = 1'-0"

Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

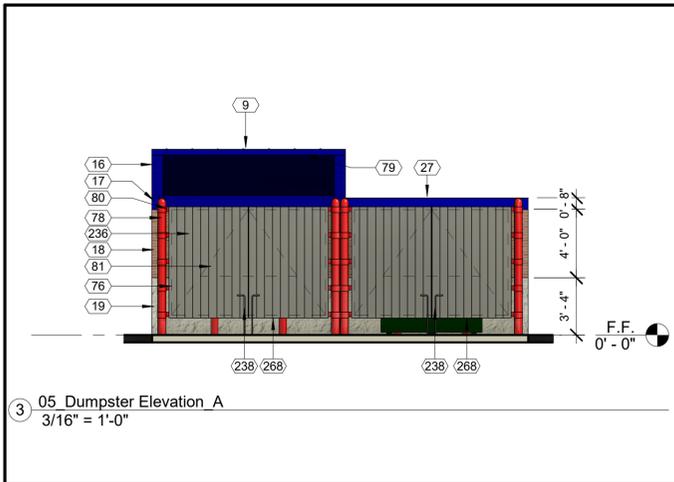
FINAL

No.	Description	Date

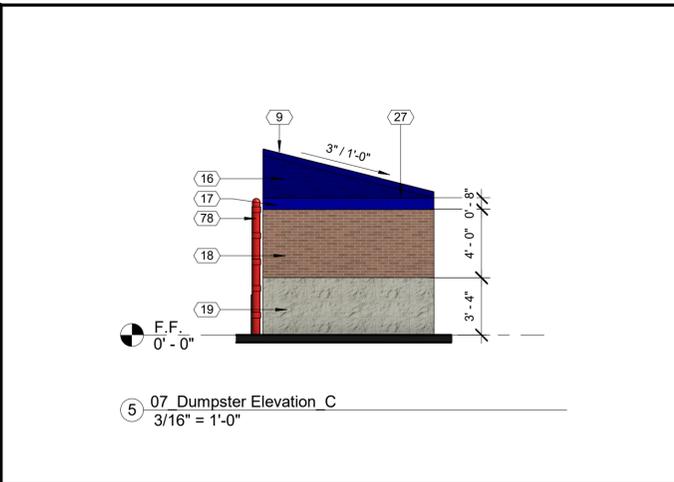
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Floor Plan - Main

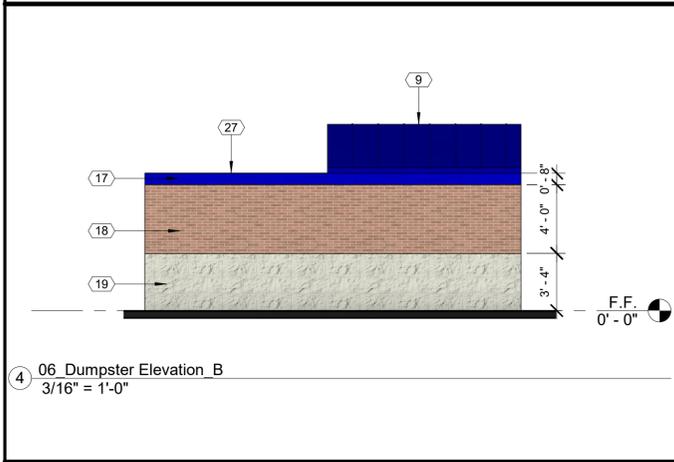
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Date	5/15/2024
Drawn by	ARC
Checked by	N/A
A100	
Scale	3/16" = 1'-0"



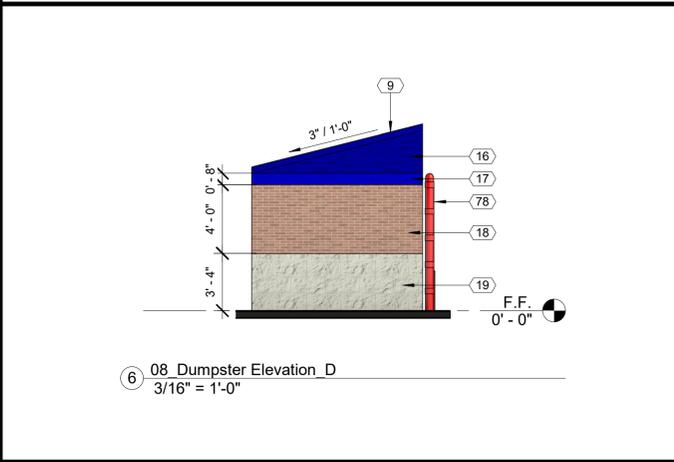
3 05 Dumpster Elevation A
3/16" = 1'-0"



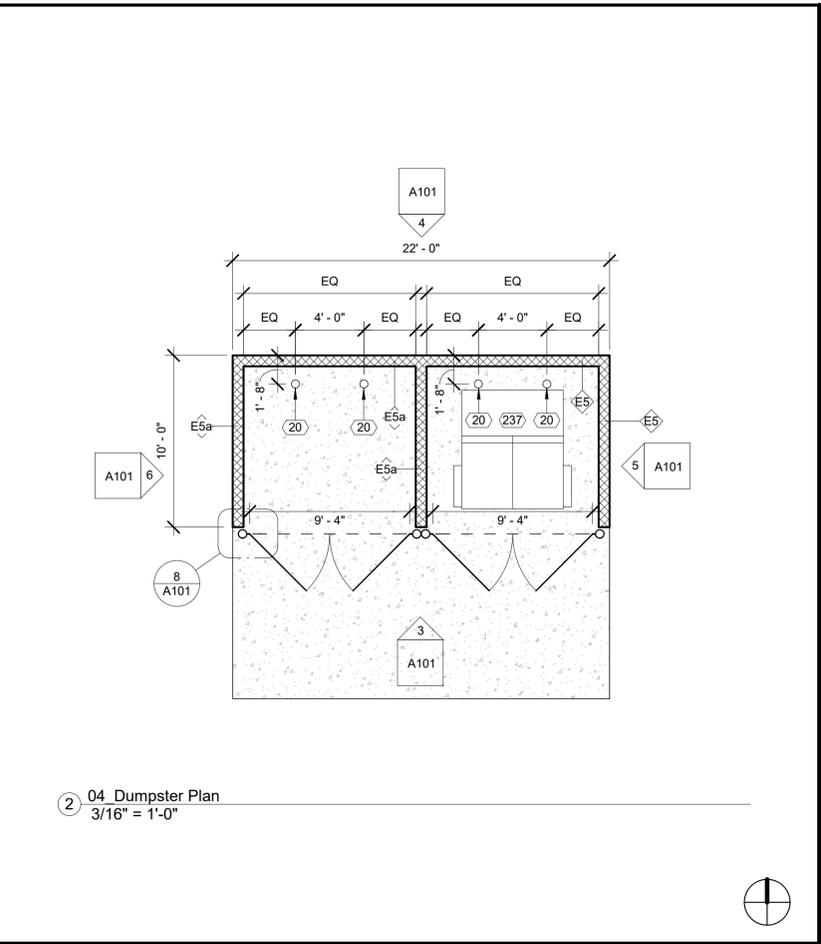
5 07 Dumpster Elevation C
3/16" = 1'-0"



4 06 Dumpster Elevation B
3/16" = 1'-0"

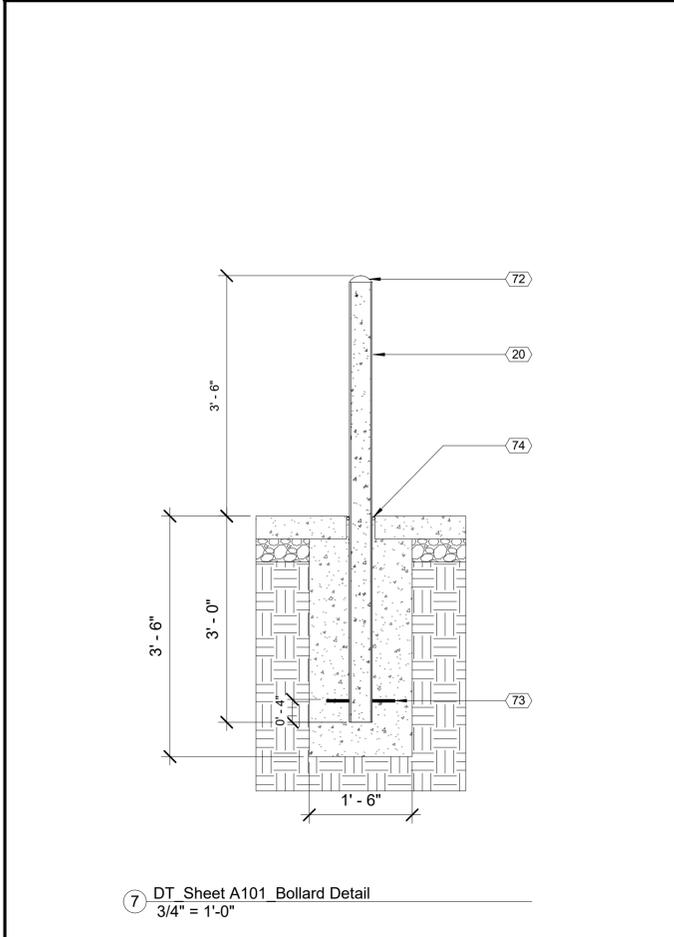


6 08 Dumpster Elevation D
3/16" = 1'-0"

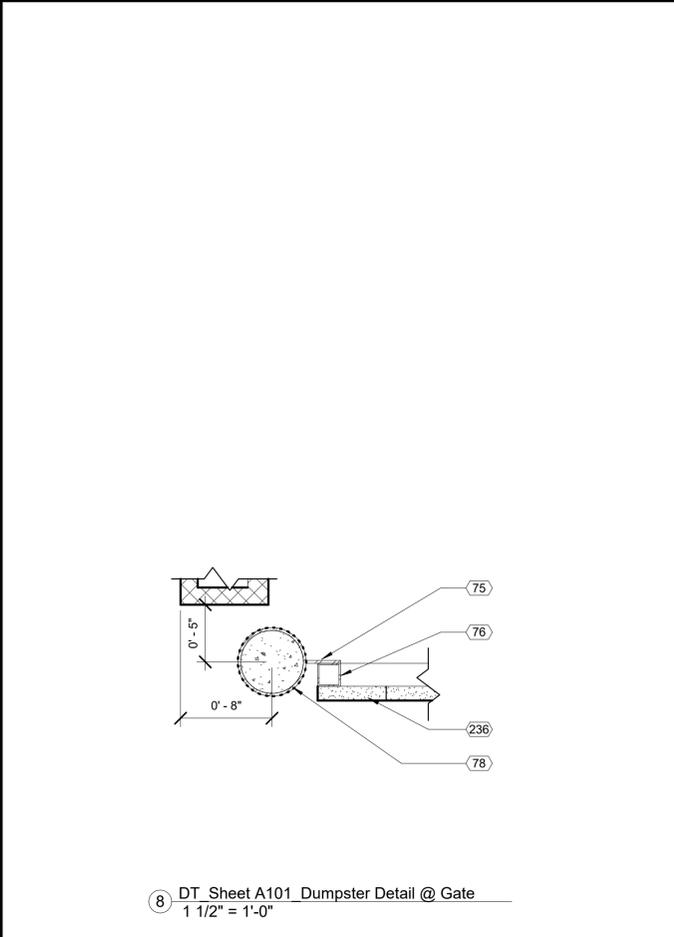


2 04 Dumpster Plan
3/16" = 1'-0"

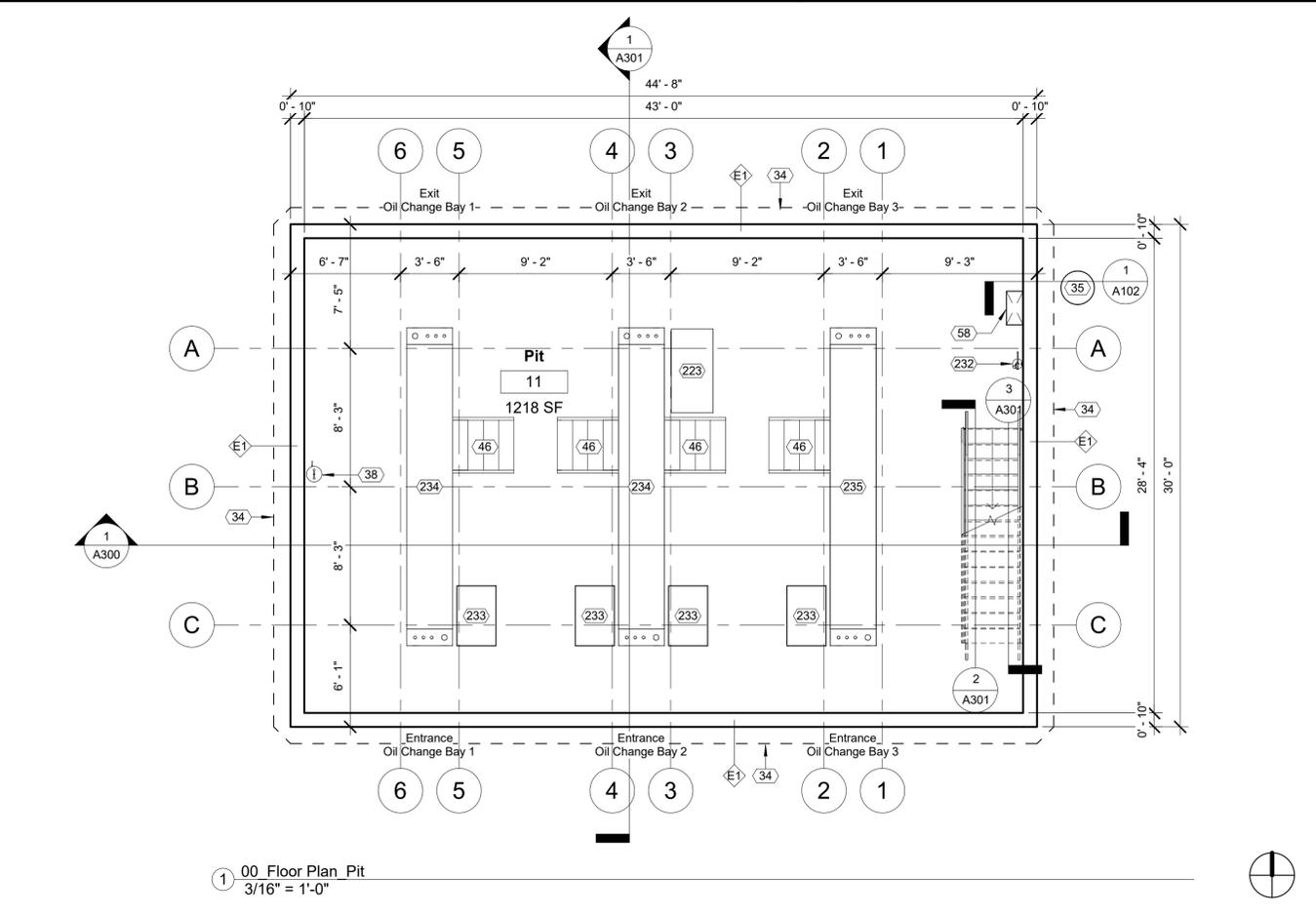
Keynote Schedule	
Tag	Text
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
16	Painted structural half-highs. See Specification 042200 Concrete Unit Masonry.
17	Painted 8" split-face CMU (bond beam where indicated, see Structural). As required, provide painted smooth-face, grout filled "U" block bond beam at lightbars only. As required, paint CMU lintel above OH doors as indicated on finish schedule. See Structural. See Specification 042200 Concrete Unit Masonry.
18	Unpainted structural half-highs. See Specification 042200 Concrete Unit Masonry.
19	Painted 8" split-face CMU (bond beam where indicated, see Structural). See Specification 042200 Concrete Unit Masonry.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details on sheet A101. See Specification 055000 Metal Fabrications.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking Slope to drain.
34	4" perforated perimeter drain with silt filtration fabric. See Details on Sheet A102.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
38	Eyewash station. See Plumbing.
46	Oil tank stairs (By Others).
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings.
72	Painted concrete cap for pipe bollard. Color as indicated on Finish Schedule.
73	1/2" diameter x 4" long metal studs. Provide a total of 4.
74	1/2" expansion joint with backer rod and sealant.
75	1/4"x6" painted steel bracket with continuous fillet weld to painted steel collar hinge and frame.
76	2"x2"x1/4" painted steel gate frame with welded connections.
78	6" diameter painted steel dumpster post. See Finish Schedule for color.
79	Wrap front face and underside of dumpster roof joists with metal panels to match standing seam metal roof.
80	Hinge collar with grease fitting. Collar welded all around to post. Typical.
81	2"x2"x1/4" painted steel cross bracing with horizontal bracing in thirds (beyond).
223	Work bench (By Others).
232	Bracket mounted fire extinguisher. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details on Sheet A602.
233	275-gallon Class IIB new oil tank (By Others).
234	928-gallon Class IIB new oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
235	928-gallon Class IIB waste oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
236	1x6 painted Trex slats secured to frame. See Finish Schedule for color.
237	Dumpster (By Others).
238	Cane bolts with stops.
268	Hold bottom of gate above grade as necessary to clear adjacent curb height to ensure gates can swing 180 degrees. Coordinate with Civil drawings for clearance needed.



7 DT_Sheet A101 Bollard Detail
3/4" = 1'-0"



8 DT_Sheet A101 Dumpster Detail @ Gate
1 1/2" = 1'-0"



1 00 Floor Plan Pit
3/16" = 1'-0"



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Sevierville, Tennessee

FINAL		
No.	Description	Date

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Pit Floor Plan and Site Details	
Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A
A101	
Scale	As indicated

FINAL

No.	Description	Date

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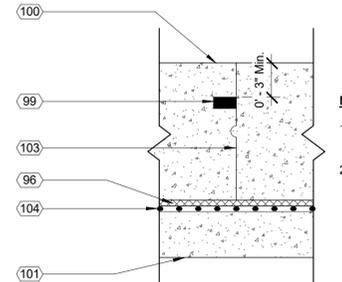
Foundation Details

Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A

A102

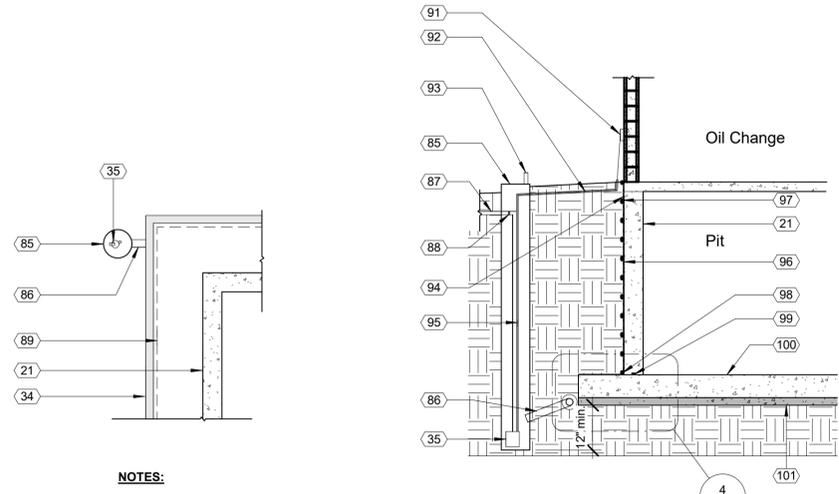
Scale As indicated

Tag	Text
21	10" Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
34	4" perforated perimeter drain with silt filtration fabric. See Details on Sheet A102.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
85	18" diameter black corrugated pipe with inlet fittings and solid heavy duty corrugated locking pipe cover set in concrete with power grommet, or Nyloplast drain basin with inlet fittings and lockable cover and power grommet. Contractor's Option. Set pipe in concrete 2'x2'x1'. Embed pipe 6" into concrete.
86	4" discharge pipe to sump pump.
87	2" discharge pipe from sump pump to storm drainage system. Coordinate with Civil.
88	Install union at serviceable depth.
89	Concrete foundation. See Structural.
91	Provide power for sump pump. See Electrical.
92	Power cord for sump pump to be run in conduit from outlet to sump below grade.
93	2" - 3" vent pipe
94	Fasteners at 12" max o.c. for securing subdrainage to pit wall. Follow manufacturer's installation instructions.
95	Pull rope or wire for submersible sump pump.
96	CCW MiraClay woven geotextile against wall/slab.
97	CCW MiraDrain 6200.
98	CCW MiraClay granules or CCW MiraClay mastic.
99	CCW MiraStop.
100	Concrete slab. See Structural.
101	4" mud slab. See Structural.
103	Construction joint.
104	CCW MiraDrain 9800.
105	3" washed #57 stone wrapped in silt filtration fabric.
107	CCW MiraClay 12" Reinforcing Angle Strip at all outside corners.
245	Lockable cover @ sump pump.



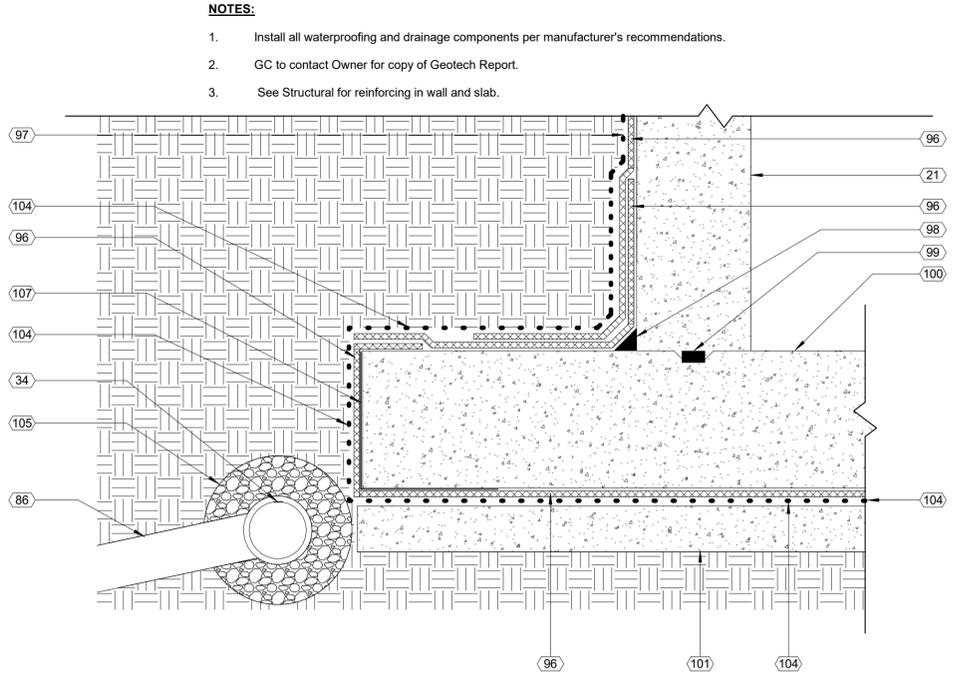
- NOTES:**
1. Install all waterproofing per manufacturer's recommendations.
 2. GC to contact Owner for copy of Geotech Report.

3 DT_Sheet A102_Foundation Construction Joint
1 1/2" = 1'-0"



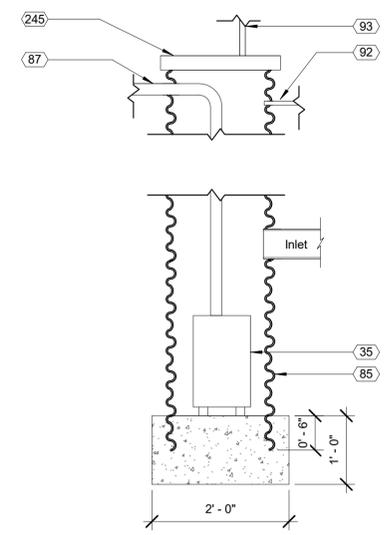
- NOTES:**
- 1) Install sump and basin per manufacturer's recommendations.
 - 2) Provide traffic rated lid without vent if located in drive aisle.

1 DT_Sheet A102_Sump Pump Detail
1/4" = 1'-0"

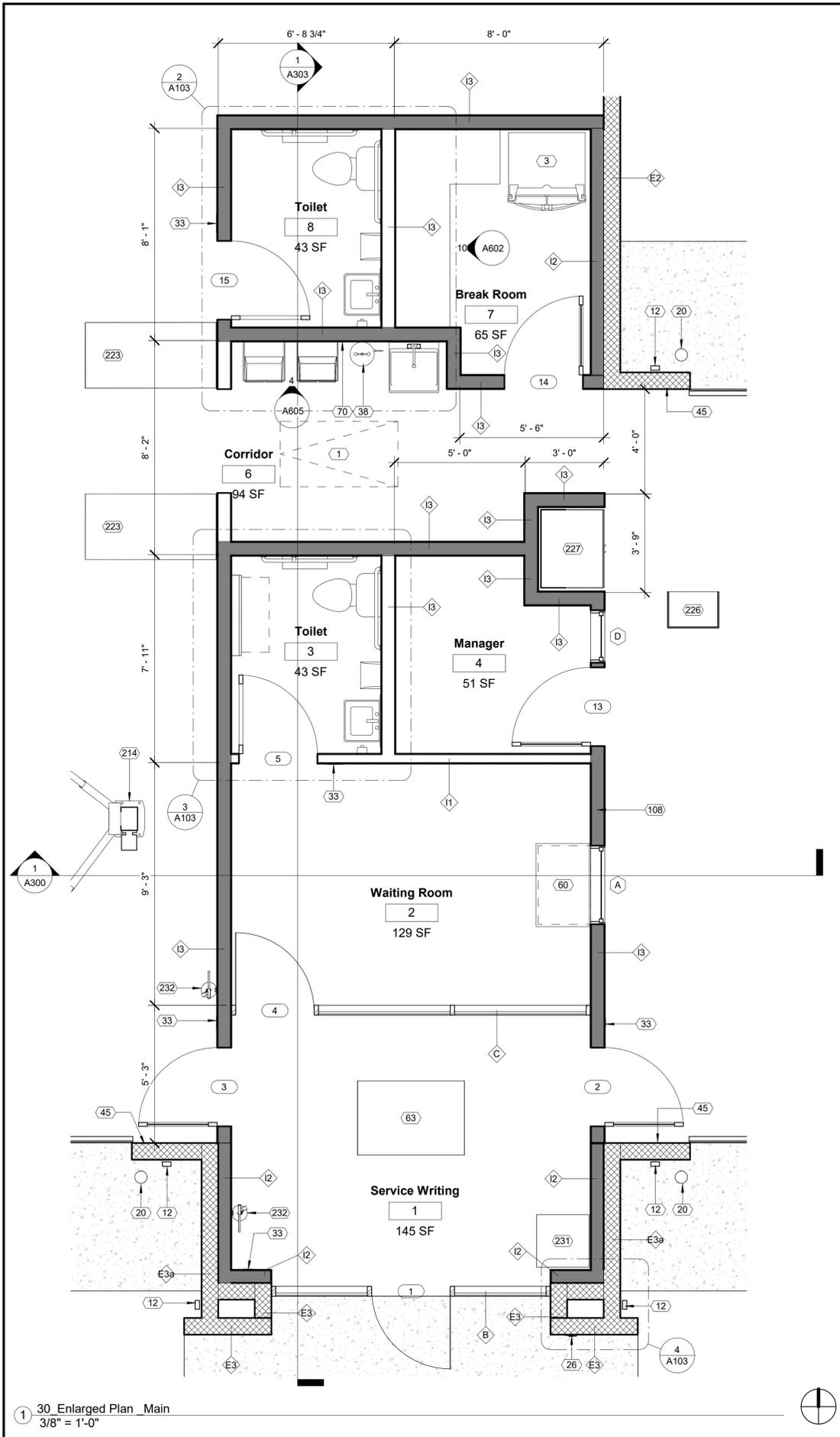


- NOTES:**
1. Install all waterproofing and drainage components per manufacturer's recommendations.
 2. GC to contact Owner for copy of Geotech Report.
 3. See Structural for reinforcing in wall and slab.

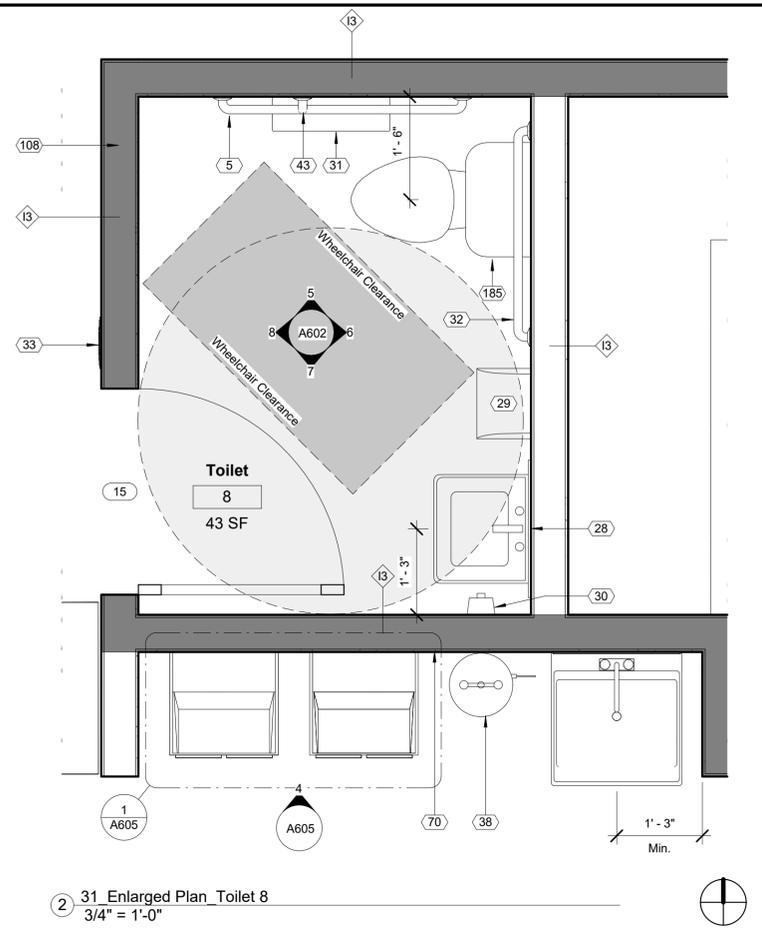
4 DT_Sheet A102_Foundation Waterproofing
1 1/2" = 1'-0"



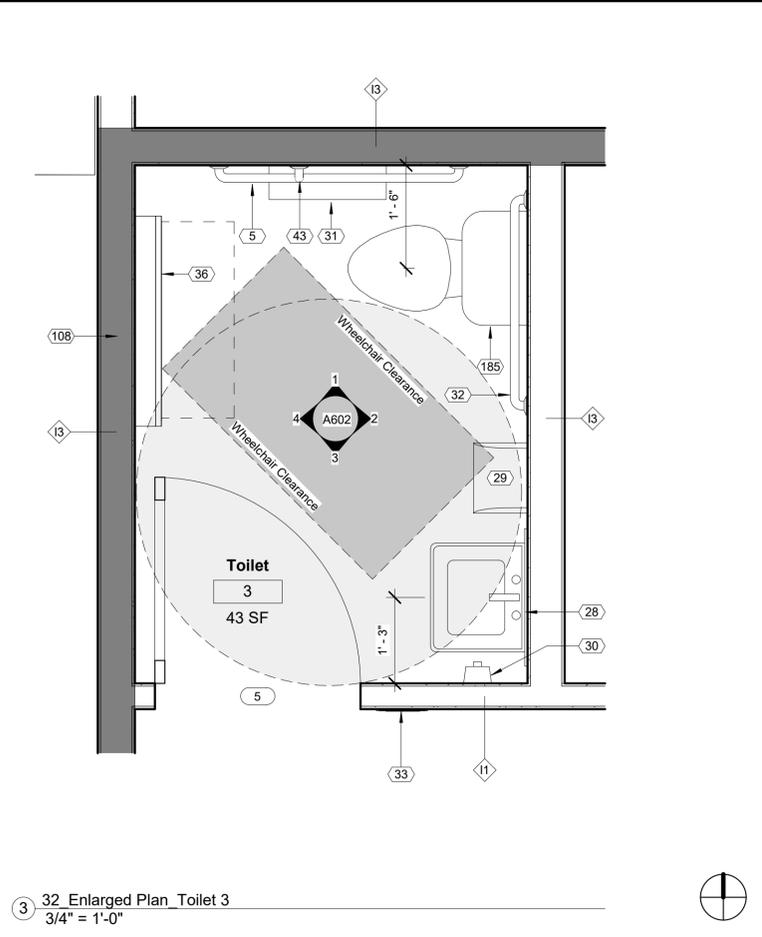
2 DT_Sheet A102_Sump Pump Pipe Section
3/4" = 1'-0"



1 30 Enlarged Plan Main
3/8" = 1'-0"

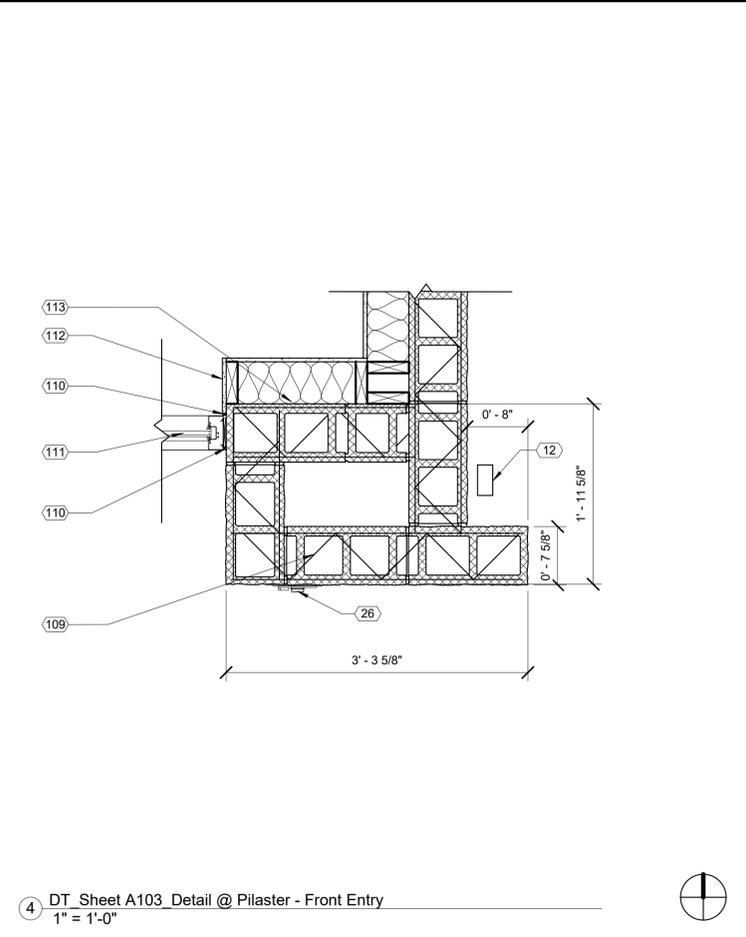


2 31 Enlarged Plan Toilet 8
3/4" = 1'-0"



3 32 Enlarged Plan Toilet 3
3/4" = 1'-0"

Keynote Schedule	
Tag	Text
1	Pull down attic access and ladder. See Specification 083113 Access Doors and Frames.
3	Location of 30" wide refrigerator (By Others).
5	42" grab bar with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
12	Pre-finished metal downspout and boot piped to storm drainage system. See Civil for tie-in. See Specification 077100 Roof Specialties.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details on sheet A101. See Specification 055000 Metal Fabrications.
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
28	Framed mirror. See Specification 102800 Toilet, Bath, and Laundry Accessories.
29	Automatic Towel Dispenser (By others). Provide blocking in wall as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
30	Wall mounted soap dispenser (By Others). Provide blocking in wall as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
31	Jumbo Dual Roll Toilet Tissue dispenser (By Others). Provide blocking in wall as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
32	36" grab bar with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
33	ADA compliant room / exit sign. See Details on Sheet A602.
36	Surface mounted baby changing station with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
38	Eyewash station. See Plumbing.
43	24" vertical grab bar with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
45	See Structural for jamb reinforcing as required.
60	Coffee cabinet. See Details on sheet G301.
63	Service Desk. See Details on sheet G301.
70	4'-0" high FRP on wet wall. See Specification 066400 Plastic Paneling (Fiberglass Reinforced Panels).
108	Gray shading indicates these walls are the boundaries for the building thermal envelope assembly.
109	Horizontal joint reinforcement at 16" o.c. vertical.
110	Sealant with backer rod.
111	Aluminum storefront with insulated glazing. See Details on sheet A620.
112	Painted 1/2" gypsum board on 2x6 wood studs at 16" o.c. with kraft-face R-20 batt insulation (kraft in contact with gypsum board). See Details on sheet A400.
113	Fluid applied vapor permeable air barrier. See Specification 072726 Fluid Applied Membrane Air Barrier.
185	Flush valve on transfer side of water closet.
214	10K Lift (By Others).
223	Work bench (By Others).
226	Computer podium (By Others).
227	Cashier computer station (By Others).
231	Beverage refrigerator (By Others).
232	Bracket mounted fire extinguisher. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details on Sheet A602.



4 DT_Sheet A103_Detail @ Pilaster - Front Entry
1" = 1'-0"



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Sevierville, Tennessee

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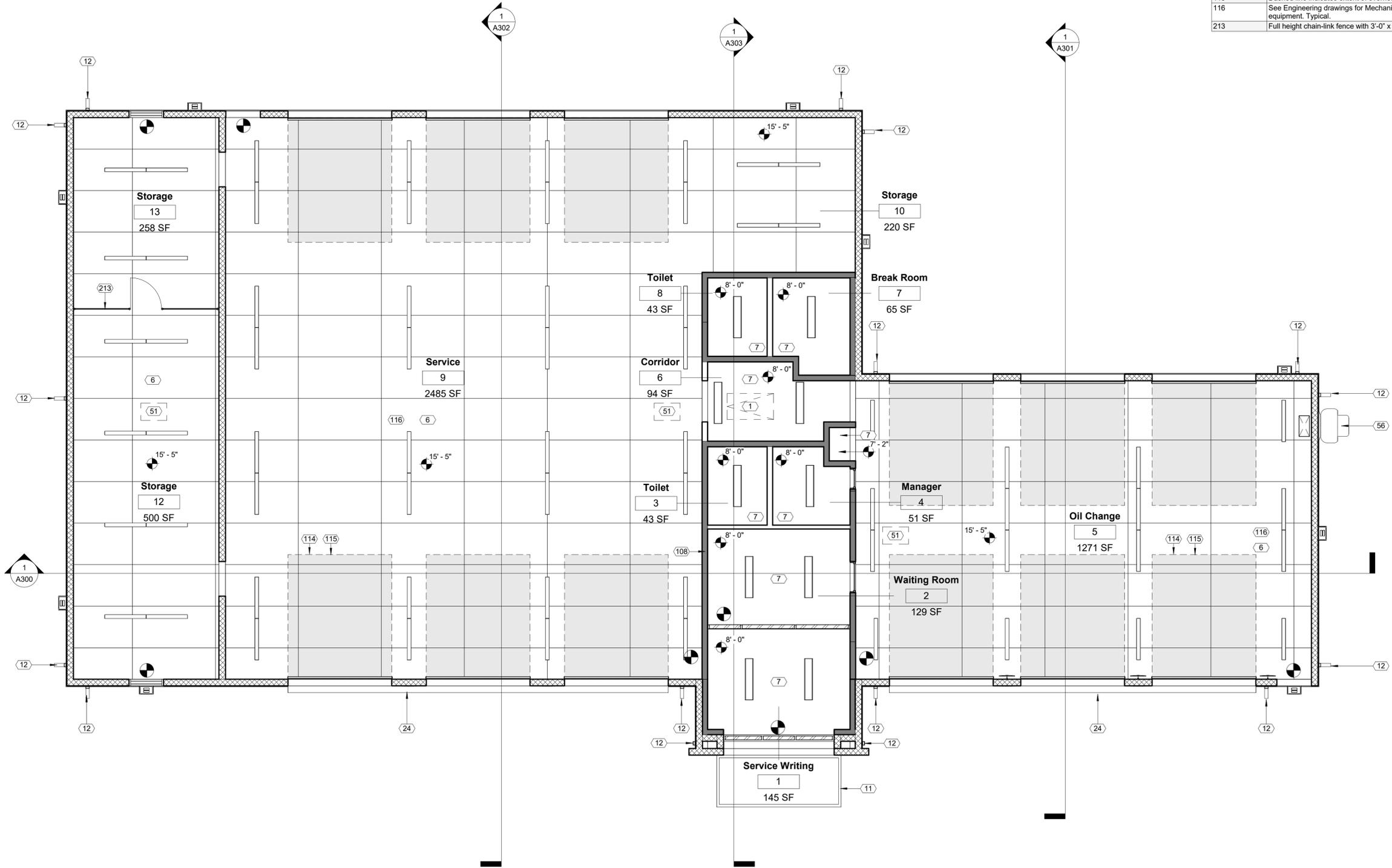
Enlarged Floor Plans and Details	
Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A
A103	
Scale	As indicated



www.ahoarch.com



Tag	Text
1	Pull down attic access and ladder. See Specification 083113 Access Doors and Frames.
6	Painted 1/2" thick fire-rated plywood with 1/4" x 1 1/4" fire-rated painted wood batten strips at seams, secured to underside of roof trusses. Provide painted 1"x4" fire-rated wood trim at perimeter.
7	Painted 1/2" gypsum board ceiling. 5/8" Type X where indicated.
11	Pre-finished metal canopy. See Details on sheet A303 (A302 for OC Building Only).
12	Pre-finished metal downspout and boot piped to storm drainage system. See Civil for tie-in. See Specification 077100 Roof Specialties.
24	Lightbar (By Others). Provide blocking as required. See Electrical.
51	Provide 20"x30" insulated attic access panel.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
108	Gray shading indicates these walls are the boundaries for the building thermal envelope assembly.
114	Contractor to ensure overhead door, track, etc. meets the minimum vertical clearance required for equipment (By Others). Typical.
115	Dashed line indicates extent of overhead doors. Typical.
116	See Engineering drawings for Mechanical/Electrical/Plumbing fixtures and equipment. Typical.
213	Full height chain-link fence with 3'-0" x 7'-0" gate.



01 RCP_Main
3/16" = 1'-0"



Express Oil Change & Tire Engineers
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 Sevierville, Tennessee

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No.	Description	Date

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Reflected Ceiling Plan - Main

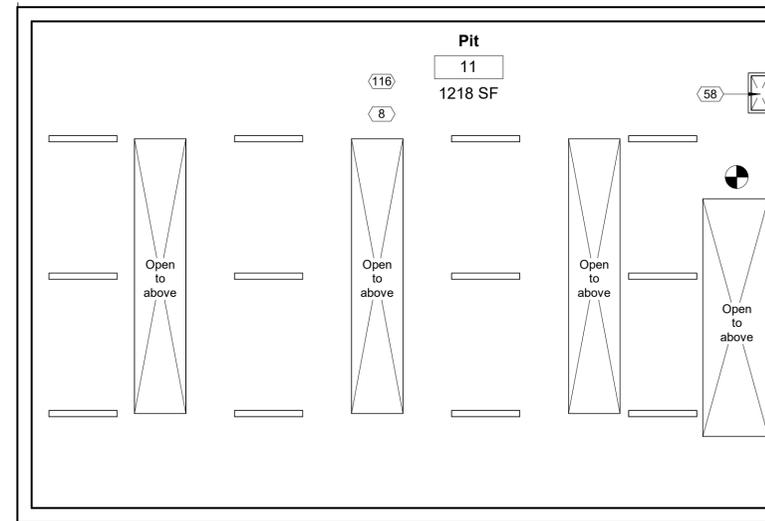
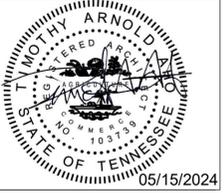
Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A

A104

Scale 3/16" = 1'-0"

5/14/2024 11:57:51 AM

Keynote Schedule	
Tag	Text
8	Exposed to structure above.
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings.
116	See Engineering drawings for Mechanical/Electrical/Plumbing fixtures and equipment. Typical.



① 00_RCP_Pit
3/16" = 1'-0"



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 Sevierville, Tennessee

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No.	Description	Date

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Reflected Ceiling Plan - Pit

Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A

A105
Scale 3/16" = 1'-0"

NOTES:

- Equipment platform is designed for mechanical equipment only. This space is not intended for occupants other than during general maintenance.

Tag	Text
1	Pull down attic access and ladder. See Specification 083113 Access Doors and Frames.
11	Pre-finished metal canopy. See Details on sheet A303 (A302 for OC Building Only).
24	Lightbar (By Others). Provide blocking as required. See Electrical.
51	Provide 20"x30" insulated attic access panel.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
108	Gray shading indicates these walls are the boundaries for the building thermal envelope assembly.
116	See Engineering drawings for Mechanical/Electrical/Plumbing fixtures and equipment. Typical.
232	Bracket mounted fire extinguisher. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details on Sheet A602.



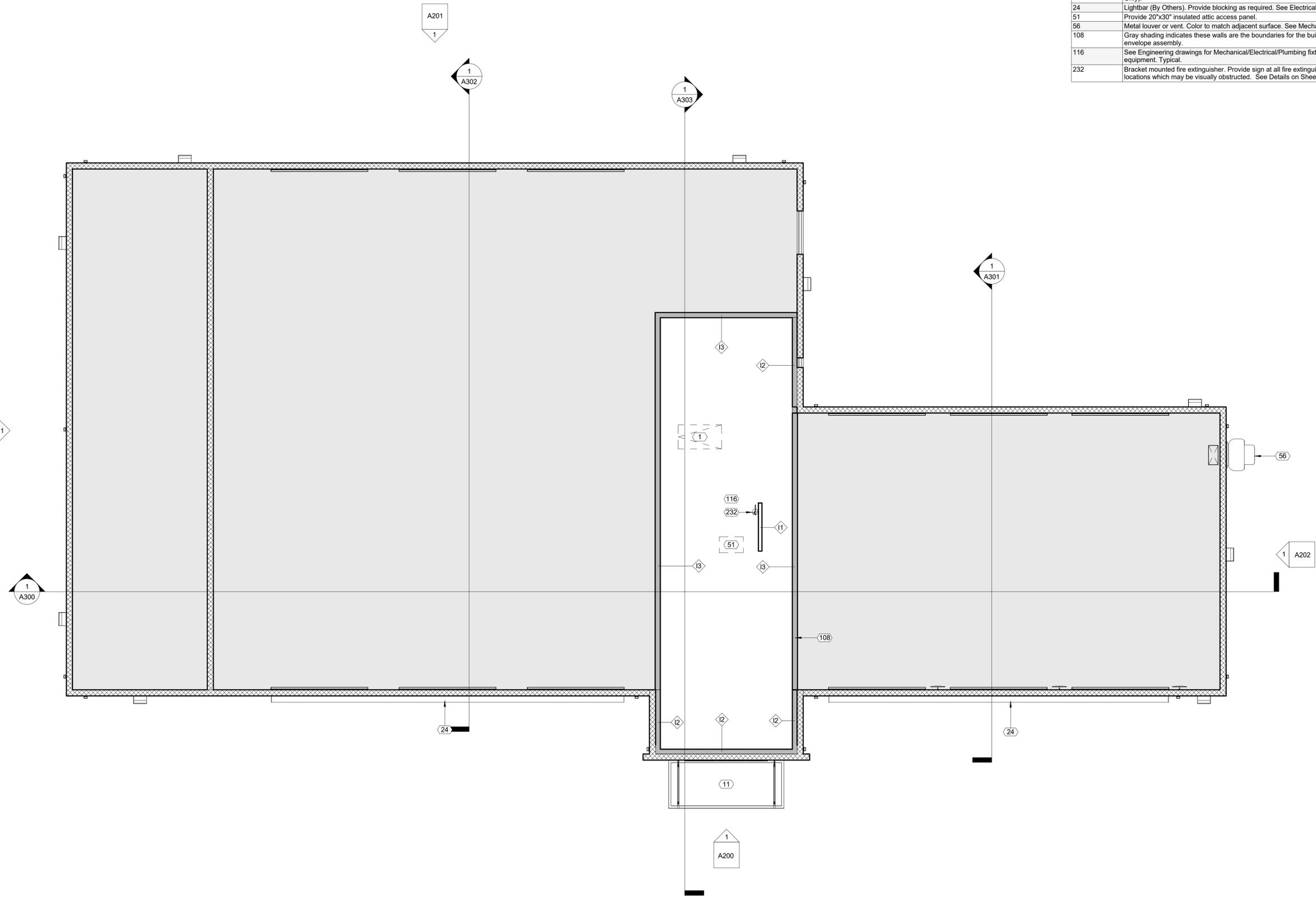
Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Sevierville, Tennessee

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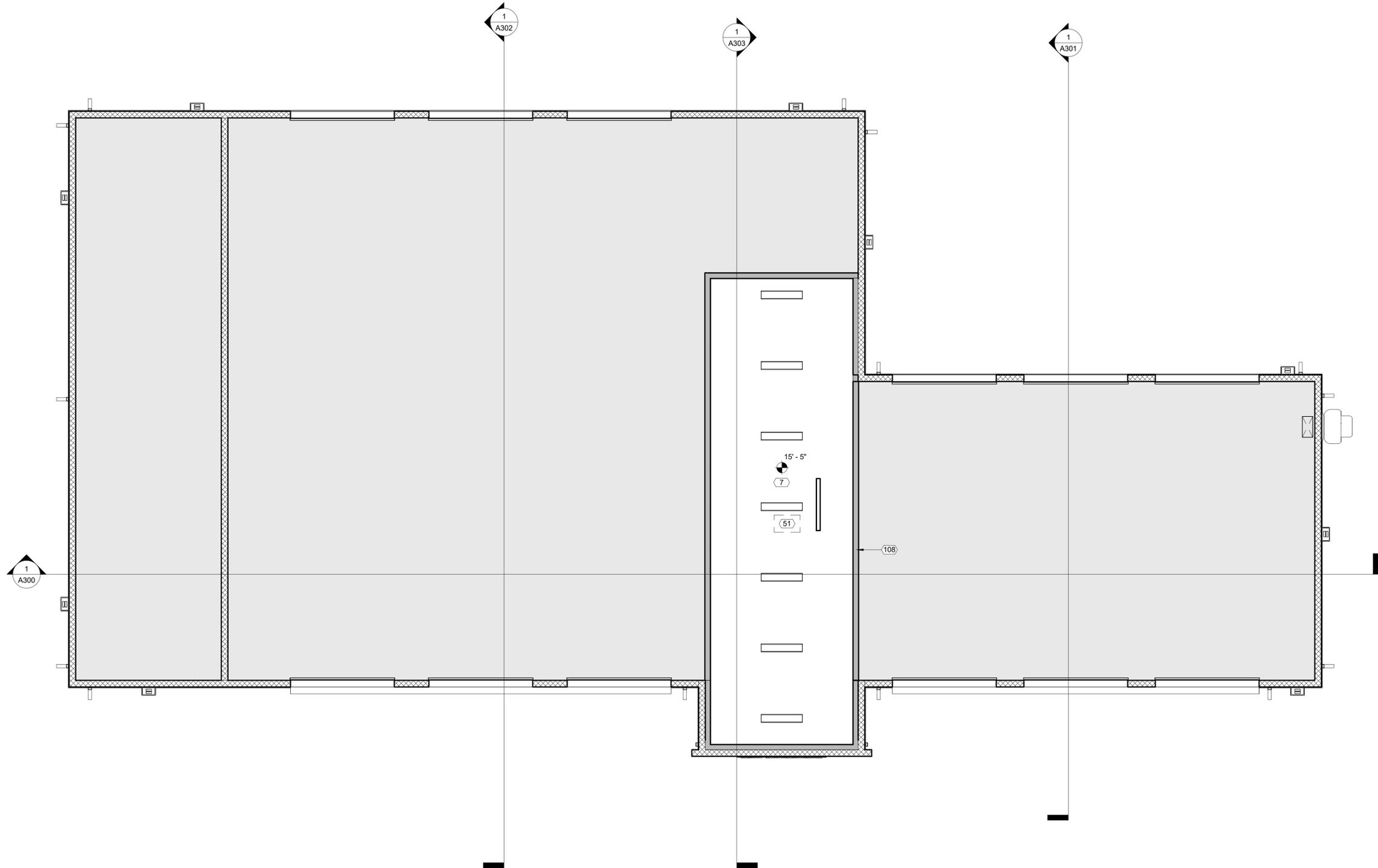
No.	Description	Date

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Floor Plan - Equipment Platform	
Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A
A106	
Scale	3/16" = 1'-0"



Keynote Schedule	
Tag	Text
7	Painted 1/2" gypsum board ceiling, 5/8" Type X where indicated.
51	Provide 20"x30" insulated attic access panel.
108	Gray shading indicates these walls are the boundaries for the building thermal envelope assembly.



① 02_RCP_Equip. Platform
3/16" = 1'-0"



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 Sevierville, Tennessee

FINAL

No.	Description	Date

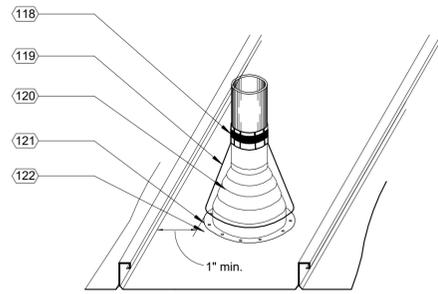
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Reflected Ceiling Plan - Equipment Platform

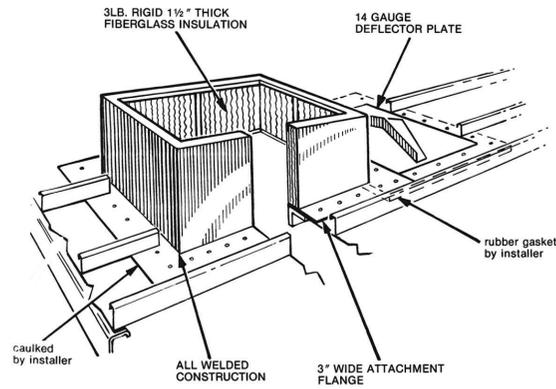
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Date	5/15/2024
Drawn by	ARC
Checked by	N/A

A107

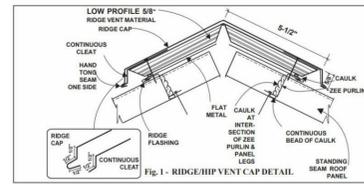
Scale 3/16" = 1'-0"



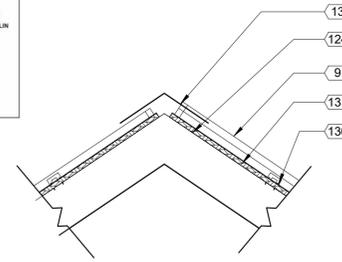
2 DT_Sheet A108_SSMR Roof Penetration Detail
1 1/2" = 1'-0"



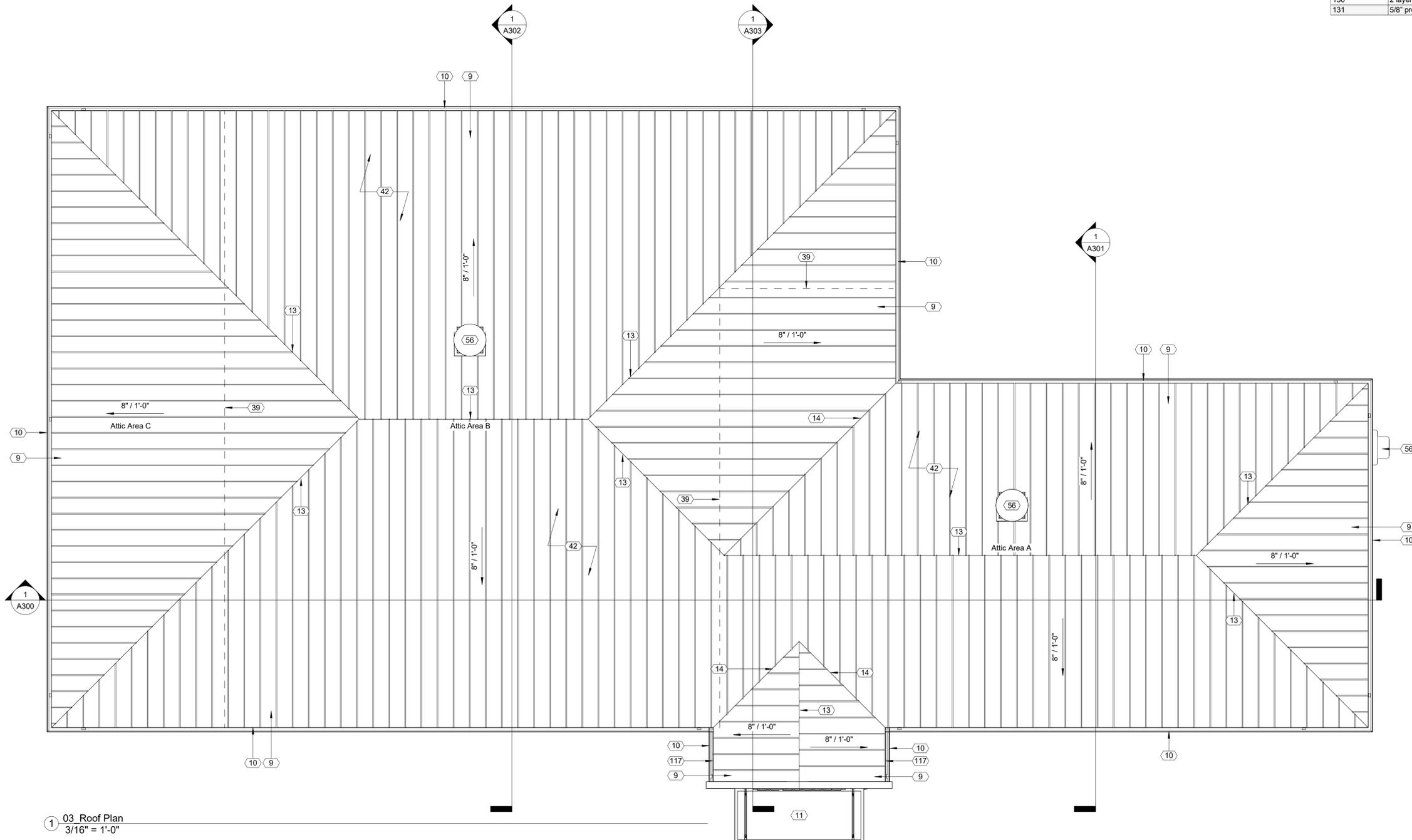
3 DT_Sheet A108_SSMR Roof Curb Detail
1 1/2" = 1'-0"



4 DT_Sheet A108_Ridge-Hip Detail, Concealed Venting
1" = 1'-0"



Keynote Schedule	
Tag	Text
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
10	Pre-finished metal gutter system. See Specification 077100 Roof Specialties.
11	Pre-finished metal canopy. See Details on sheet A303 (A302 for OC Building Only).
13	Pre-finished metal hip and ridge cap by metal roofing manufacturer. Provide concealed ridge venting if indicated. Color to match roof. See Specification 074113.16 Standing Seam Metal Roof Panels.
14	Pre-finished metal valley flashing. Color to match roof.
39	Provide attic draftstop partition and access door per IBC. Wall shall read "Seal All Penetrations" every 25'-0" o.c. Attic "Floor" area within draftstop areas shall not exceed 3,000 s.f. Draftstop materials shall not be less than 1/2" gypsum board adequately supported. The integrity of draftstop shall be maintained. Provide 1 opening per partition, protected by a self-closing door constructed as required for the partition with automatic latch. Door shall not be less than 20"x30" which is required for attic access specified in Section 1209.2 of the IBC. Provided max. 3,000 s.f. area is not exceeded, draftstop locations shall align with structural supports.
42	Paint all roof penetrations to match roof color.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
117	No roof overhang at entry gable. See Structural.
118	Stainless steel draw band.
119	Metal storm collar. Finish to match roof.
120	Rubber boot. Cut to suit pipe penetration.
121	Rivet boot to panel with continuous bead of sealant between boot and panel.
122	When pipe is fixed to structure and not designed to float with roof panel, cut hole in panel to allow for thermal expansion.
124	Pre-engineered wood roof truss. See Structural.
130	2 layers of #15 roofing felt.
131	5/8" pressure treated plywood decking. See Structural.



1 03_Roof Plan
3/16" = 1'-0"



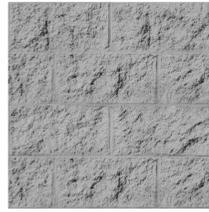
Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

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No.	Description	Date

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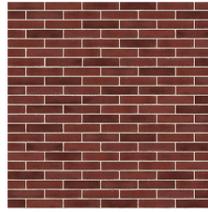
Roof Plan	
Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A
A108	
Scale	As indicated

EXTERIOR FINISH MATERIAL LEGEND



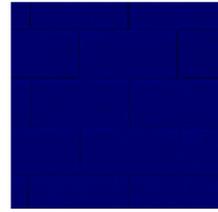
PAINTED SPLIT-FACE CMU

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



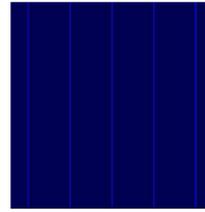
STRUCTURAL HALF-HIGHS

Color: Richfield Blend
Manuf: Echelon



EXTERIOR PAINT

Color: SW6966 Blueblood
Manuf: Sherwin Williams



ROOF

Color: Royal Blue
Manuf: Berridge



HM DOORS

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



STOREFRONT DOORS

Color: Clear Anodized Aluminum
Manuf: YKK

NOTE:
Align top of exterior wall packs with bottom of banding at 12'-0" a.f.f. Do not locate exterior wall packs on side of building that contains illuminated lightbars or sconces by others, unless at exit doors as indicated on the Electrical Drawings.

Keynote Schedule	
Tag	Text
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
10	Pre-finished metal gutter system. See Specification 077100 Roof Specialties.
11	Pre-finished metal canopy. See Details on sheet A303 (A302 for OC Building Only).
12	Pre-finished metal downspout and boot piped to storm drainage system. See Civil for tie-in. See Specification 077100 Roof Specialties.
13	Pre-finished metal hip and ridge cap by metal roofing manufacturer. Provide concealed ridge venting if indicated. Color to match roof. See Specification 074113.16 Standing Seam Metal Roof Panels.
15	1x pressure treated painted fascia board, continuous.
16	Painted structural half-highs. See Specification 042200 Concrete Unit Masonry.
17	Painted 8" split-face CMU (bond beam where indicated, see Structural). As required, provide painted smooth-face, grout filled "U" block bond beam at lightbars only. As required, paint CMU lintel above OH doors as indicated on finish schedule. See Structural. See Specification 042200 Concrete Unit Masonry.
18	Unpainted structural half-highs. See Specification 042200 Concrete Unit Masonry.
19	Painted 8" split-face CMU (bond beam where indicated, see Structural). See Specification 042200 Concrete Unit Masonry.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details on sheet A101. See Specification 055000 Metal Fabrications.
21	10" Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
22	Signage (By Others). Provide blocking as required. See Electrical.
23	Wall sconce (By Others). Provide blocking as required. See Electrical. Locate junction box for sconces 5'-0" a.f.f. vertically and 4" from center horizontally. Verify with sign company prior to rough-in.
24	Lightbar (By Others). Provide blocking as required. See Electrical.
25	Control joint. For control joints in concrete floor slabs, coordinate location with equipment layout by others. Max. distance between control joints in slabs not to exceed 12'-0". Control joints in walls shall be 4'-0" max from wall intersection or corner and every 20'-0".
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking Slope to drain. Color to match roof.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
47	Provide address identification as directed by the Local Fire Marshal or AHJ.
53	Conduit to be centered horizontally for lights in canopy. Verify with sign company prior to rough-in.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
68	1x pressure treated painted frieze board, continuous.



1 01 Exterior Elevation Front (South)
3/16" = 1'-0"



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

FINAL		
No.	Description	Date

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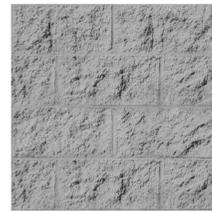
Exterior Elevation - Front (South)

Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A

A200

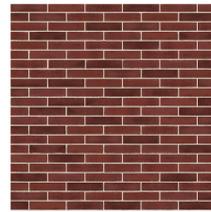
Scale 3/16" = 1'-0"

EXTERIOR FINISH MATERIAL LEGEND



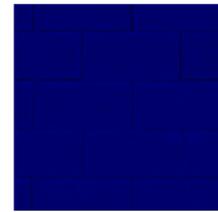
PAINTED SPLIT-FACE CMU

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



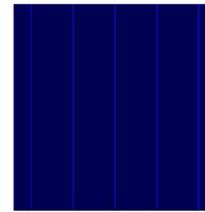
STRUCTURAL HALF-HIGHS

Color: Richfield Blend
Manuf: Echelon



EXTERIOR PAINT

Color: SW6966 Blueblood
Manuf: Sherwin Williams



ROOF

Color: Royal Blue
Manuf: Berridge



HM DOORS

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



STOREFRONT DOORS

Color: Clear Anodized Aluminum
Manuf: YKK

NOTE:

Align top of exterior wall packs with bottom of banding at 12'-0" a.f.f. Do not locate exterior wall packs on side of building that contains illuminated lightbars or sconces by others, unless at exit doors as indicated on the Electrical Drawings.

Keynote Schedule	
Tag	Text
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
10	Pre-finished metal gutter system. See Specification 077100 Roof Specialties.
12	Pre-finished metal downspout and boot piped to storm drainage system. See Civil for tie-in. See Specification 077100 Roof Specialties.
13	Pre-finished metal hip and ridge cap by metal roofing manufacturer. Provide concealed ridge venting if indicated. Color to match roof. See Specification 074113.16 Standing Seam Metal Roof Panels.
15	1x pressure treated painted fascia board, continuous.
16	Painted structural half-highs. See Specification 042200 Concrete Unit Masonry.
17	Painted 8" split-face CMU (bond beam where indicated, see Structural). As required, provide painted smooth-face, grout filled "U" block bond beam at lightbars only. As required, paint CMU lintel above OH doors as indicated on finish schedule. See Structural. See Specification 042200 Concrete Unit Masonry.
18	Unpainted structural half-highs. See Specification 042200 Concrete Unit Masonry.
19	Painted 8" split-face CMU (bond beam where indicated, see Structural). See Specification 042200 Concrete Unit Masonry.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details on sheet A101. See Specification 055000 Metal Fabrications.
21	10" Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
25	Control joint. For control joints in concrete floor slabs, coordinate location with equipment layout by others. Max. distance between control joints in slabs not to exceed 12'-0". Control joints in walls shall be 4'-0" max from wall intersection or corner and every 20'-0".
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
59	Gas meter. See Plumbing.
68	1x pressure treated painted frieze board, continuous.
144	Electrical meter. See Electrical.
212	HVAC condensing unit. See Mechanical.



① 02 Exterior Elevation_Rear (North)
3/16" = 1'-0"



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

FINAL

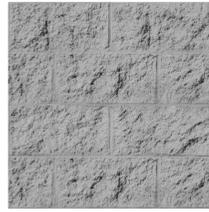
No.	Description	Date

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Exterior Elevation - Rear (North)

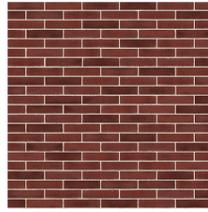
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Date	5/15/2024
Drawn by	ARC
Checked by	N/A
A201	
Scale	3/16" = 1'-0"

EXTERIOR FINISH MATERIAL LEGEND



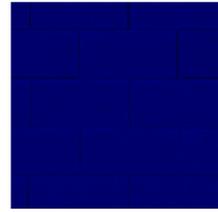
PAINTED SPLIT-FACE CMU

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



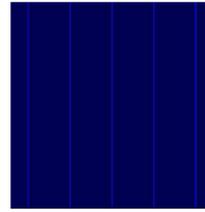
STRUCTURAL HALF-HIGHS

Color: Richfield Blend
Manuf: Echelon



EXTERIOR PAINT

Color: SW6966 Blueblood
Manuf: Sherwin Williams



ROOF

Color: Royal Blue
Manuf: Berridge



HM DOORS

Color: SW7669 Summit Gray
Manuf: Sherwin Williams

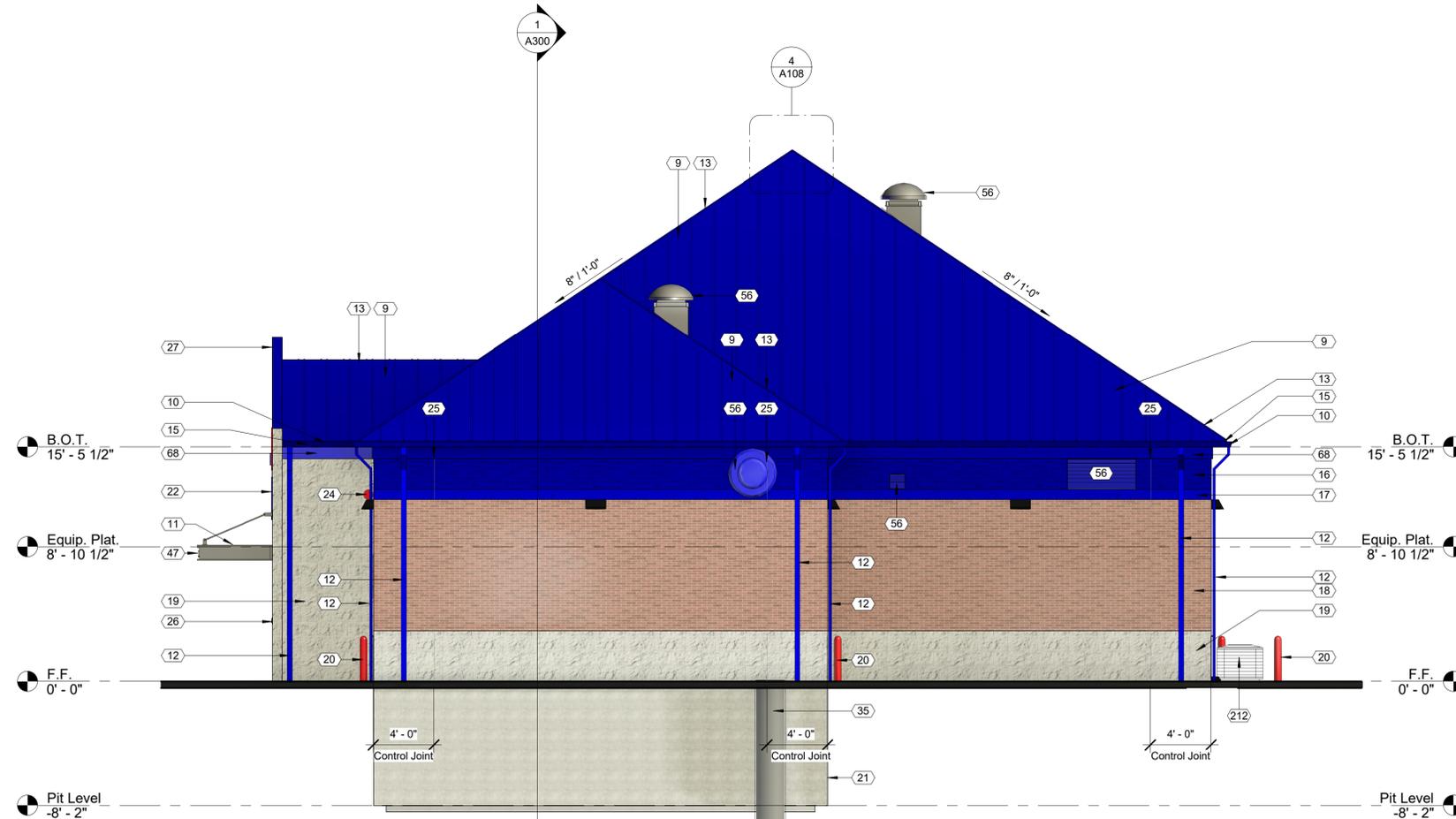


STOREFRONT DOORS

Color: Clear Anodized Aluminum
Manuf: YKK

NOTE:

Align top of exterior wall packs with bottom of banding at 12'-0" a.f.f. Do not locate exterior wall packs on side of building that contains illuminated lightbars or sconces by others, unless at exit doors as indicated on the Electrical Drawings.



① 03 Exterior Elevation Right (East)
3/16" = 1'-0"

Keynote Schedule	
Tag	Text
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
10	Pre-finished metal gutter system. See Specification 077100 Roof Specialties.
11	Pre-finished metal canopy. See Details on sheet A303 (A302 for OC Building Only).
12	Pre-finished metal downspout and boot piped to storm drainage system. See Civil for tie-in. See Specification 077100 Roof Specialties.
13	Pre-finished metal hip and ridge cap by metal roofing manufacturer. Provide concealed ridge venting if indicated. Color to match roof. See Specification 074113.16 Standing Seam Metal Roof Panels.
15	1x pressure treated painted fascia board, continuous.
16	Painted structural half-highs. See Specification 042200 Concrete Unit Masonry.
17	Painted 8" split-face CMU (bond beam where indicated, see Structural). As required, provide painted smooth-face, grout filled "U" block bond beam at lightbars only. As required, paint CMU lintel above OH doors as indicated on finish schedule. See Structural. See Specification 042200 Concrete Unit Masonry.
18	Unpainted structural half-highs. See Specification 042200 Concrete Unit Masonry.
19	Painted 8" split-face CMU (bond beam where indicated, see Structural). See Specification 042200 Concrete Unit Masonry.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details on sheet A101. See Specification 055000 Metal Fabrications.
21	10" Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
22	Signage (By Others). Provide blocking as required. See Electrical.
24	Lightbar (By Others). Provide blocking as required. See Electrical.
25	Control joint. For control joints in concrete floor slabs, coordinate location with equipment layout by others. Max. distance between control joints in slabs not to exceed 12'-0". Control joints in walls shall be 4'-0" max from wall intersection or corner and every 20'-0".
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking Slope to drain. Color to match roof.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
47	Provide address identification as directed by the Local Fire Marshal or AHJ.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
68	1x pressure treated painted frieze board, continuous.
212	HVAC condensing unit. See Mechanical.



Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Sevierville, Tennessee

FINAL

No.	Description	Date

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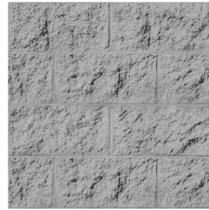
Exterior Elevation - Right (East)

Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A

A202

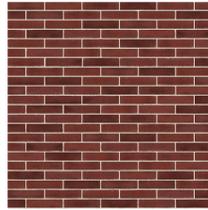
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EXTERIOR FINISH MATERIAL LEGEND



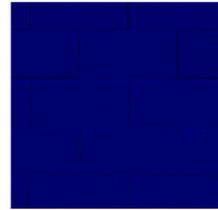
PAINTED SPLIT-FACE CMU

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



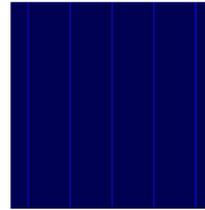
STRUCTURAL HALF-HIGHS

Color: Richfield Blend
Manuf: Echelon



EXTERIOR PAINT

Color: SW6966 Blueblood
Manuf: Sherwin Williams



ROOF

Color: Royal Blue
Manuf: Berridge



HM DOORS

Color: SW7669 Summit Gray
Manuf: Sherwin Williams



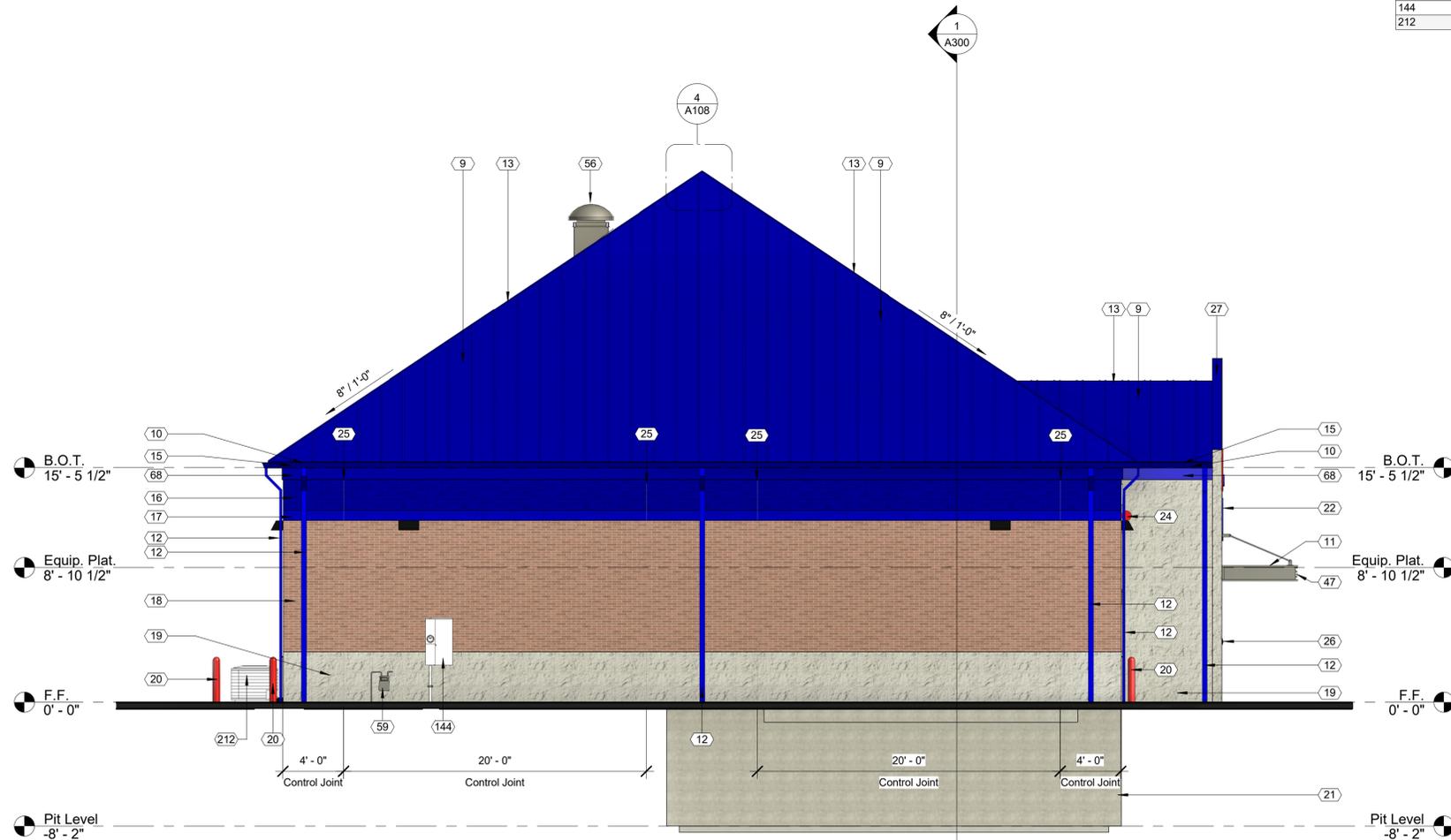
STOREFRONT DOORS

Color: Clear Anodized Aluminum
Manuf: YKK

NOTE:

Align top of exterior wall packs with bottom of banding at 12'-0" a.f.f. Do not locate exterior wall packs on side of building that contains illuminated lightbars or sconces by others, unless at exit doors as indicated on the Electrical Drawings.

Keynote Schedule	
Tag	Text
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
10	Pre-finished metal gutter system. See Specification 077100 Roof Specialties.
11	Pre-finished metal canopy. See Details on sheet A303 (A302 for OC Building Only).
12	Pre-finished metal downspout and boot piped to storm drainage system. See Civil for tie-in. See Specification 077100 Roof Specialties.
13	Pre-finished metal hip and ridge cap by metal roofing manufacturer. Provide concealed ridge venting if indicated. Color to match roof. See Specification 074113.16 Standing Seam Metal Roof Panels.
15	1x pressure treated painted fascia board, continuous.
16	Painted structural half-highs. See Specification 042200 Concrete Unit Masonry.
17	Painted 8" split-face CMU (bond beam where indicated, see Structural). As required, provide painted smooth-face, grout filled "U" block bond beam at lightbars only. As required, paint CMU lintel above OH doors as indicated on finish schedule. See Structural. See Specification 042200 Concrete Unit Masonry.
18	Unpainted structural half-highs. See Specification 042200 Concrete Unit Masonry.
19	Painted 8" split-face CMU (bond beam where indicated, see Structural). See Specification 042200 Concrete Unit Masonry.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details on sheet A101. See Specification 055000 Metal Fabrications.
21	10" Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
22	Signage (By Others). Provide blocking as required. See Electrical.
24	Lightbar (By Others). Provide blocking as required. See Electrical.
25	Control joint. For control joints in concrete floor slabs, coordinate location with equipment layout by others. Max. distance between control joints in slabs not to exceed 12'-0". Control joints in walls shall be 4'-0" max from wall intersection or corner and every 20'-0".
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking Slope to drain. Color to match roof.
47	Provide address identification as directed by the Local Fire Marshal or AHJ.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
59	Gas meter. See Plumbing.
68	1x pressure treated painted frieze board, continuous.
144	Electrical meter. See Electrical.
212	HVAC condensing unit. See Mechanical.



04 Exterior Elevation Left (West)
3/16" = 1'-0"



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

FINAL

No.	Description	Date

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Exterior Elevation - Left (West)

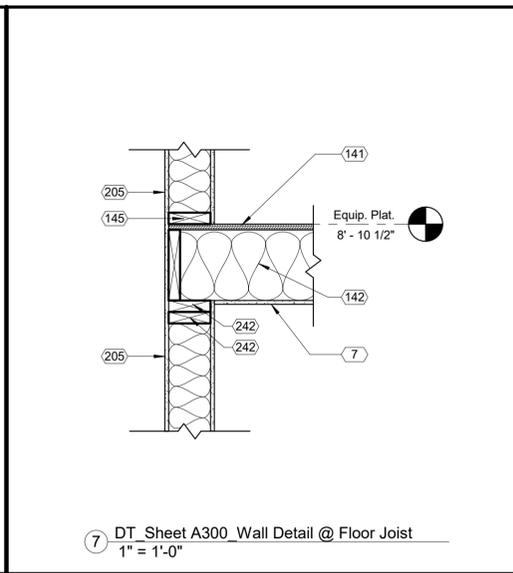
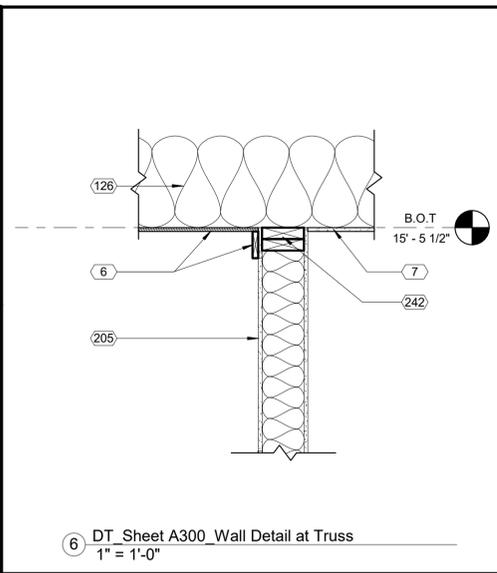
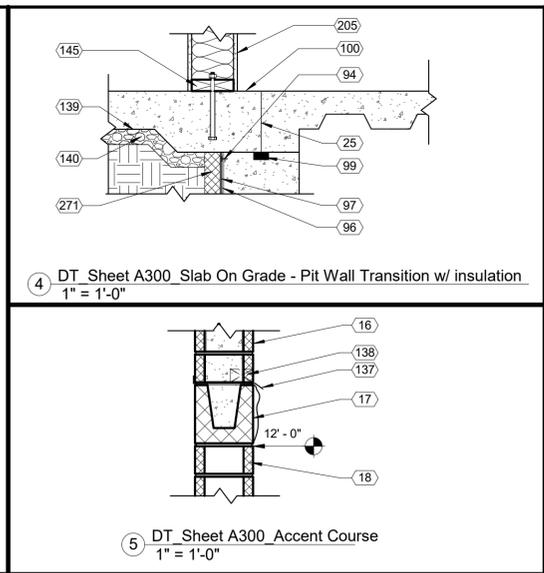
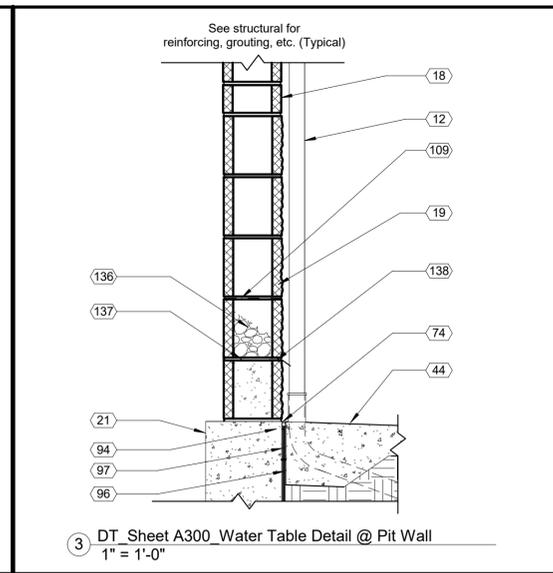
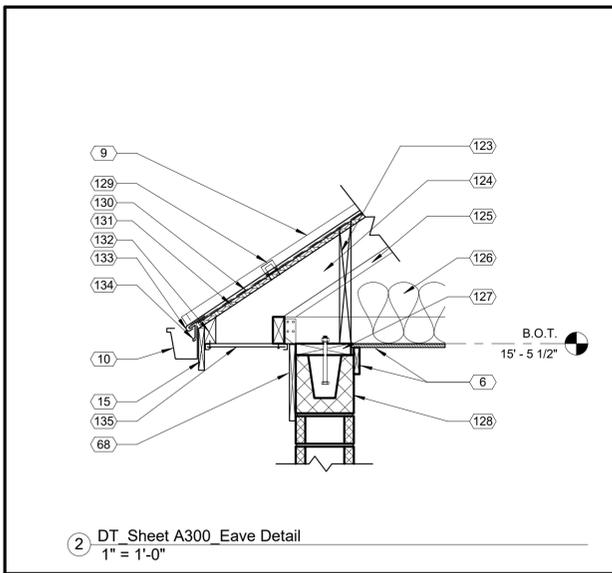
Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A

A203

Scale 3/16" = 1'-0"



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee



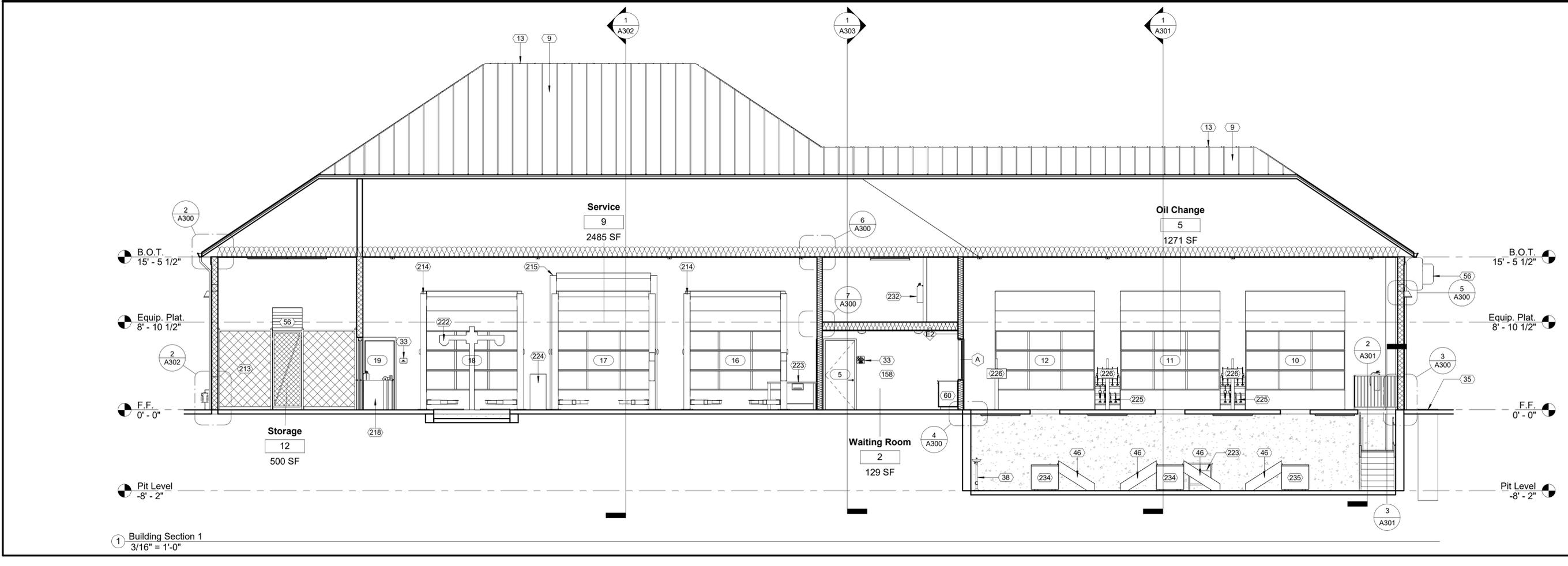
Tag	Text
6	Painted 1/2" thick fire-rated plywood with 1/4" x 1 1/4" fire-rated painted wood batten strips at seams, secured to underside of roof trusses. Provide painted 1"x4" fire-rated wood trim at perimeter.
7	Painted 1/2" gypsum board ceiling, 5/8" Type X where indicated.
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
10	Pre-finished metal gutter system. See Specification 077100 Roof Specialties.
12	Pre-finished metal downspout and boot piped to storm drainage system. See Civil for tie-in. See Specification 077100 Roof Specialties.
13	Pre-finished metal hip and ridge cap by metal roofing manufacturer. Provide concealed ridge venting if indicated. Color to match roof. See Specification 074113.16 Standing Seam Metal Roof Panels.
15	1x pressure treated painted fascia board, continuous.
16	Painted structural half-highs. See Specification 042200 Concrete Unit Masonry.
17	Painted 8" split-face CMU (bond beam where indicated, see Structural). As required, provide painted smooth-face, grout filled "U" block bond beam at lightbars only. As required, paint CMU lintel above OH doors as indicated on finish schedule. See Structural. See Specification 042200 Concrete Unit Masonry.
18	Unpainted structural half-highs. See Specification 042200 Concrete Unit Masonry.

Tag	Text
19	Painted 8" split-face CMU (bond beam where indicated, see Structural). See Specification 042200 Concrete Unit Masonry.
21	10" Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
25	Control joint. For control joints in concrete floor slabs, coordinate location with equipment layout by others. Max. distance between control joints in slabs not to exceed 12'-0". Control joints in walls shall be 4'-0" max from wall intersection or corner and every 20'-0".
33	ADA compliant room / exit sign. See Details on Sheet A602.
35	Submersible foundation sump pump. Provide Zoeller M98 or comparable product. Coordinate location with Civil and tie into Civil's storm drainage system.
38	Eyewash station. See Plumbing.
44	Concrete apron. See Civil. Slope away from building.
46	Oil tank stairs (By Others).
56	Oil tank louver or vent. Color to match adjacent surface. See Mechanical.
60	Coffee cabinet. See Details on sheet G301.
68	1x pressure treated painted frieze board, continuous.
74	1/2" expansion joint with backer rod and sealant.

Tag	Text
94	Fasteners at 12" max o.c. for securing subdrainage to pit wall. Follow manufacturer's installation instructions.
96	CCW MiraClay woven geotextile against wall/slab.
97	CCW MiraDrain 6200.
99	CCW MiraStop.
100	Concrete slab. See Structural.
109	Horizontal joint reinforcement at 16" o.c. vertical.
123	Blocking. See Structural.
124	Pre-engineered wood roof truss. See Structural.
125	Insulation baffle.
126	Unfaced R-38 batt insulation. See Specification 072100 Thermal Insulation.
127	2x pressure treated wood nailer.
128	Painted smooth-face 8" concrete-filled "U" block bond beam. Condition varies. See Structural.
129	"H" clips at mid-span on standing seam metal roof.
130	2 layers of #15 roofing felt.
131	5/8" pressure treated plywood decking. See Structural.
132	2x wood sub-fascia, continuous.

Tag	Text
133	Field cut seam and form pan around eave flashing.
134	Eave flashing with drip edge.
135	Painted vented soffit with paintable PVC "H" jointers between panels, fastened to pressure treated 2"x4" wood blocking. See Specification Section 074293 Soffit Panels.
136	Pea gravel above aluminum through wall flashing.
137	Aluminum through wall flashing.
138	Drainable weeps at every third mortar joint.
139	10 mil vapor barrier. See Specification 072600 Vapor Retarders.
140	4" porous fill. See Geotechnical Report.
141	3/4" tongue and groove plywood on wood joists. See Structural.
142	Unfaced R-30 batt insulation. See Specification 072100 Thermal Insulation.
145	2x pressure treated wood sill plate.
158	Vinyl letters (By Others).
205	1 layer of 1/2" painted gypsum board on both sides of 2"x6" wood studs at 16" o.c. Infill with kraft-faced R-20 batt insulation. Kraft in contact with gypsum board.
213	Full height chain-link fence with 3'-0" x 7'-0" gate.
214	10K Lift (By Others).
215	12K Lift (By Others).

Tag	Text
218	Brake lathe (By Others).
222	Alignment scarecrow (By Others).
223	Work bench (By Others).
224	Strut compressor (By Others).
225	Lube console (By Others).
226	Computer podium (By Others).
232	Bracket mounted fire extinguisher. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details on Sheet A602.
234	928-gallon Class IIB new oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
235	928-gallon Class IIB waste oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
242	2x pressure treated wood top plate.
271	R-10 continuous rigid insulation for 24" below slab at perimeter of thermal envelope.



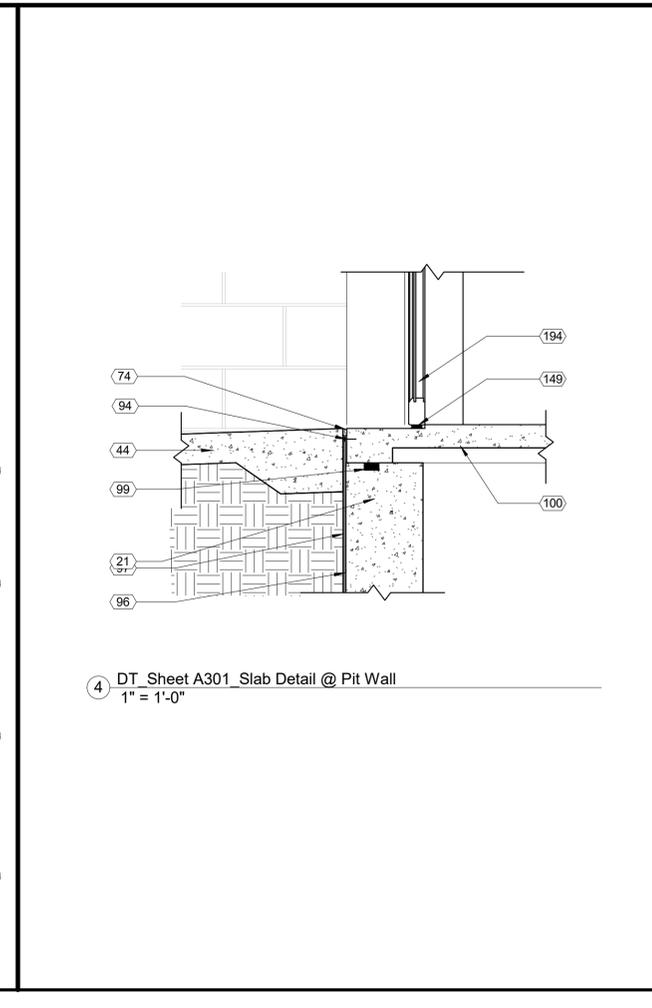
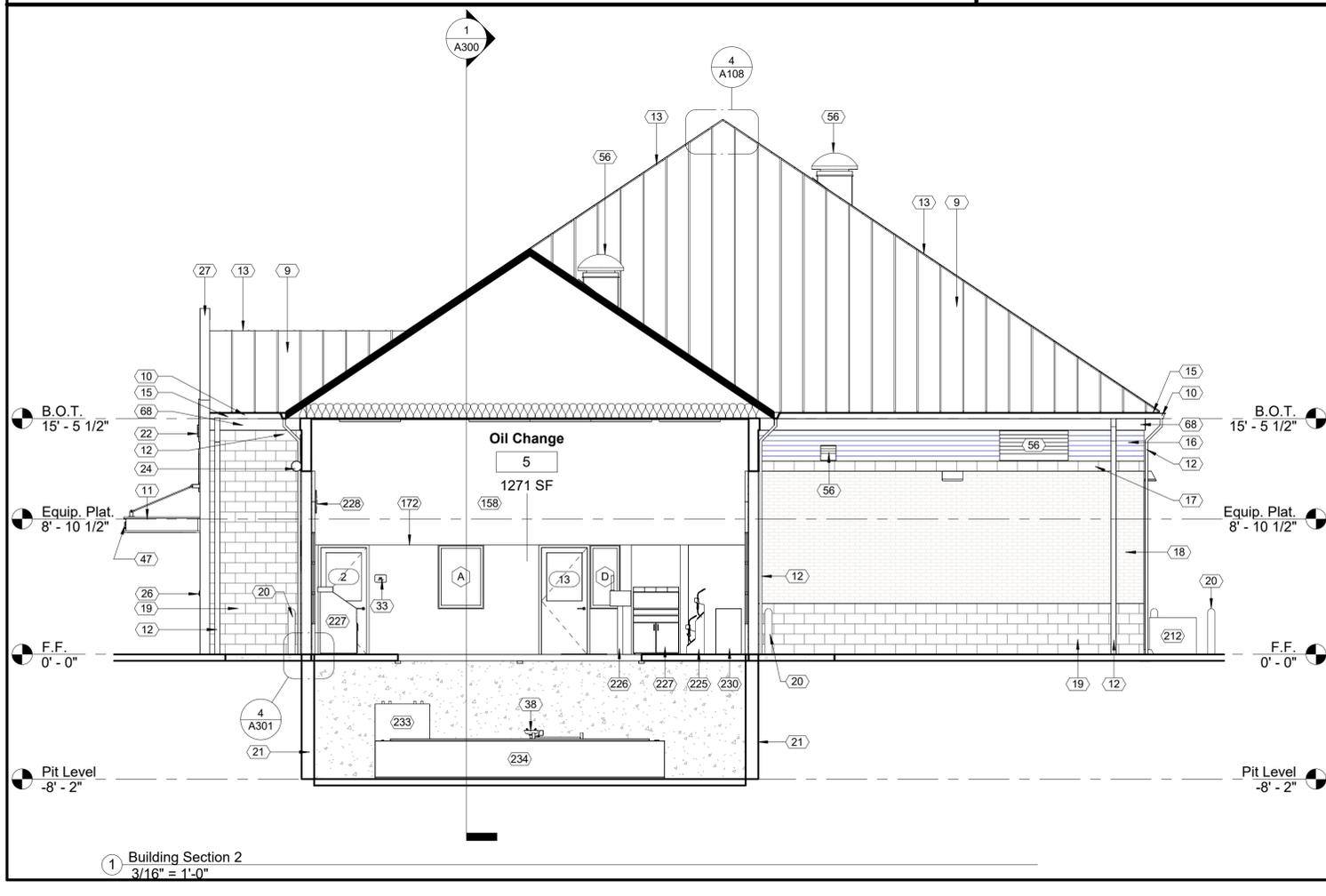
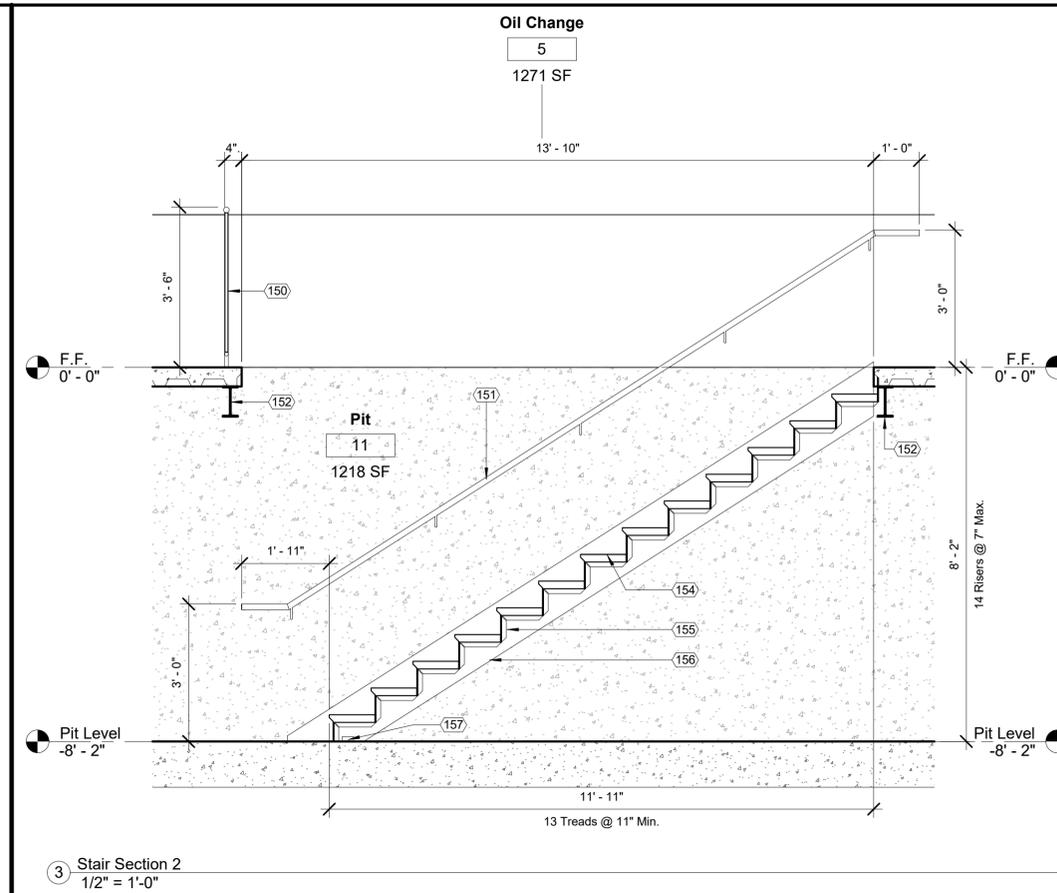
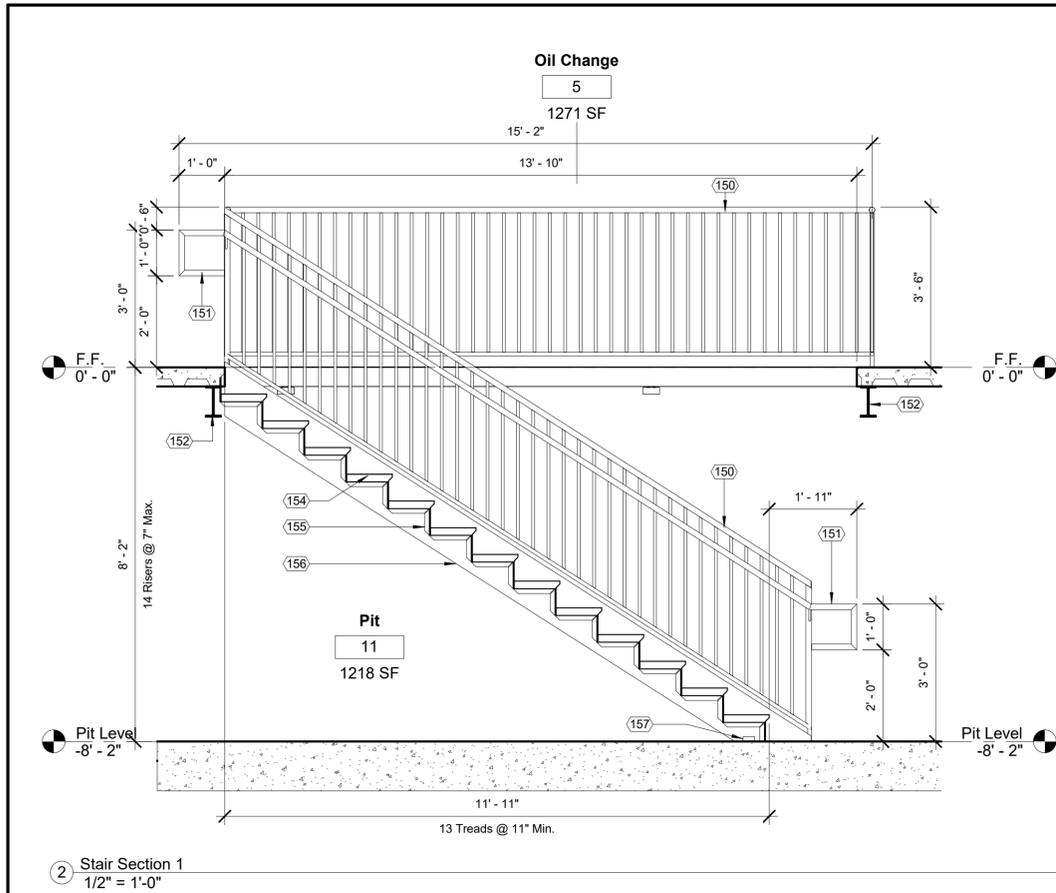
FINAL

No.	Description	Date

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Building Sections

Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A
A300	
Scale	As indicated



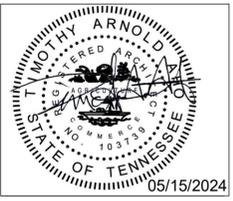
Keynote Schedule	
Tag	Text
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
10	Pre-finished metal gutter system. See Specification 077100 Roof Specialties.
11	Pre-finished metal canopy. See Details on sheet A303 (A302 for OC Building Only).
12	Pre-finished metal downspout and boot piped to storm drainage system. See Civil for tie-in. See Specification 077100 Roof Specialties.
13	Pre-finished metal hip and ridge cap by metal roofing manufacturer. Provide concealed ridge venting if indicated. Color to match roof. See Specification 074113.16 Standing Seam Metal Roof Panels.
15	1x pressure treated painted fascia board, continuous.
16	Painted structural half-highs. See Specification 042200 Concrete Unit Masonry.
17	Painted 8" split-face CMU (bond beam where indicated, see Structural). As required, provide painted smooth-face, grout filled "U" block bond beam at lighbars only. As required, paint CMU lintel above OH doors as indicated on finish schedule. See Structural. See Specification 042200 Concrete Unit Masonry.
18	Unpainted structural half-highs. See Specification 042200 Concrete Unit Masonry.
19	Painted 8" split-face CMU (bond beam where indicated, see Structural). See Specification 042200 Concrete Unit Masonry.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details on sheet A101. See Specification 055000 Metal Fabrications.
21	10" Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
22	Signage (By Others). Provide blocking as required. See Electrical.
24	Lightbar (By Others). Provide blocking as required. See Electrical.
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking Slope to drain. Color to match roof.
33	ADA compliant room / exit sign. See Details on Sheet A602.
38	Eyewash station. See Plumbing.
44	Concrete apron. See Civil. Slope away from building.
47	Provide address identification as directed by the Local Fire Marshal or AHJ.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
68	1x pressure treated painted frieze board, continuous.
74	1/2" expansion joint with backer rod and sealant.
94	Fasteners at 12" max o.c. for securing subdrainage to pit wall. Follow manufacturer's installation instructions.
96	CCW MiraClay woven geotextile against wall/slab.
97	CCW MiraDrain 6200.
99	CCW MiraStop.
100	Concrete slab. See Structural.
149	1/2" recess at scheduled door. See Structural.
150	Painted guardrail with painted 1/2" round pickets at 4" max o.c. See Finish Schedule for color. See Specification 055213 Pipe and Tube Railings.
151	Painted 1-1/2" outside diameter pipe handrail. Return handrail to guard/wall. Typical. See Finish Schedule for color. See Specification 055213 Pipe and Tube Railings.
152	Paint all structural steel P-5 Safety Yellow.
154	Concrete filled pre-fabricated metal pan stair treads with safety yellow abrasive nosing, full grit, full length, adhered and fastened. Typical. See Finish Schedule for color. See Specification 055113 Metal Pan Stairs.
155	1-1/4" steel angle clips.
156	10" steel channel stringer. See Finish Schedule for color. See Specification 055113 Metal Pan Stairs.
157	3"x3"x3-1/4" angle floor clip.
158	Vinyl letters (By Others).
172	Ensure paint line occurs at top of door and window frames. Ensure all openings, alcoves and windows align with top of door frame. Typical in Oil and Service Bays.
194	Scheduled door. See plans for details.
212	HVAC condensing unit. See Mechanical.
225	Lube console (By Others).
226	Computer podium (By Others).
227	Cashier computer station (By Others).
228	Convex mirrors (By Others).
230	Tool cart (By Others).
233	275-gallon Class IIIB new oil tank (By Others).
234	928-gallon Class IIIB new oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.

FINAL

No.	Description	Date

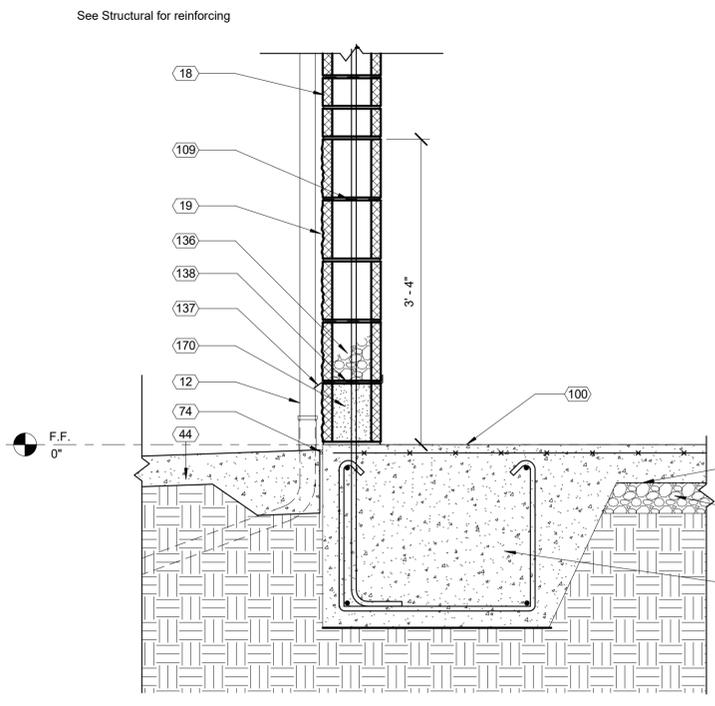
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Building Sections	
Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A
A301	
Scale	As indicated

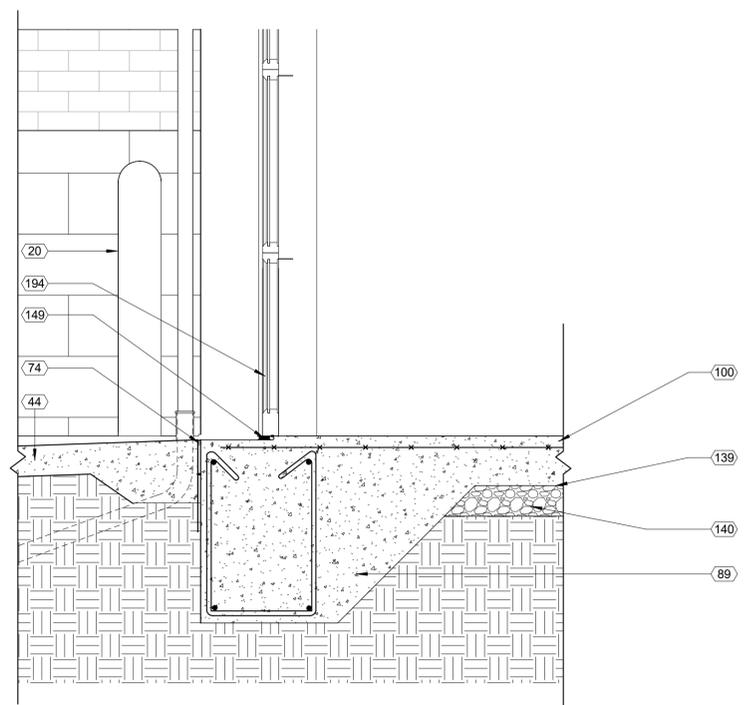


Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

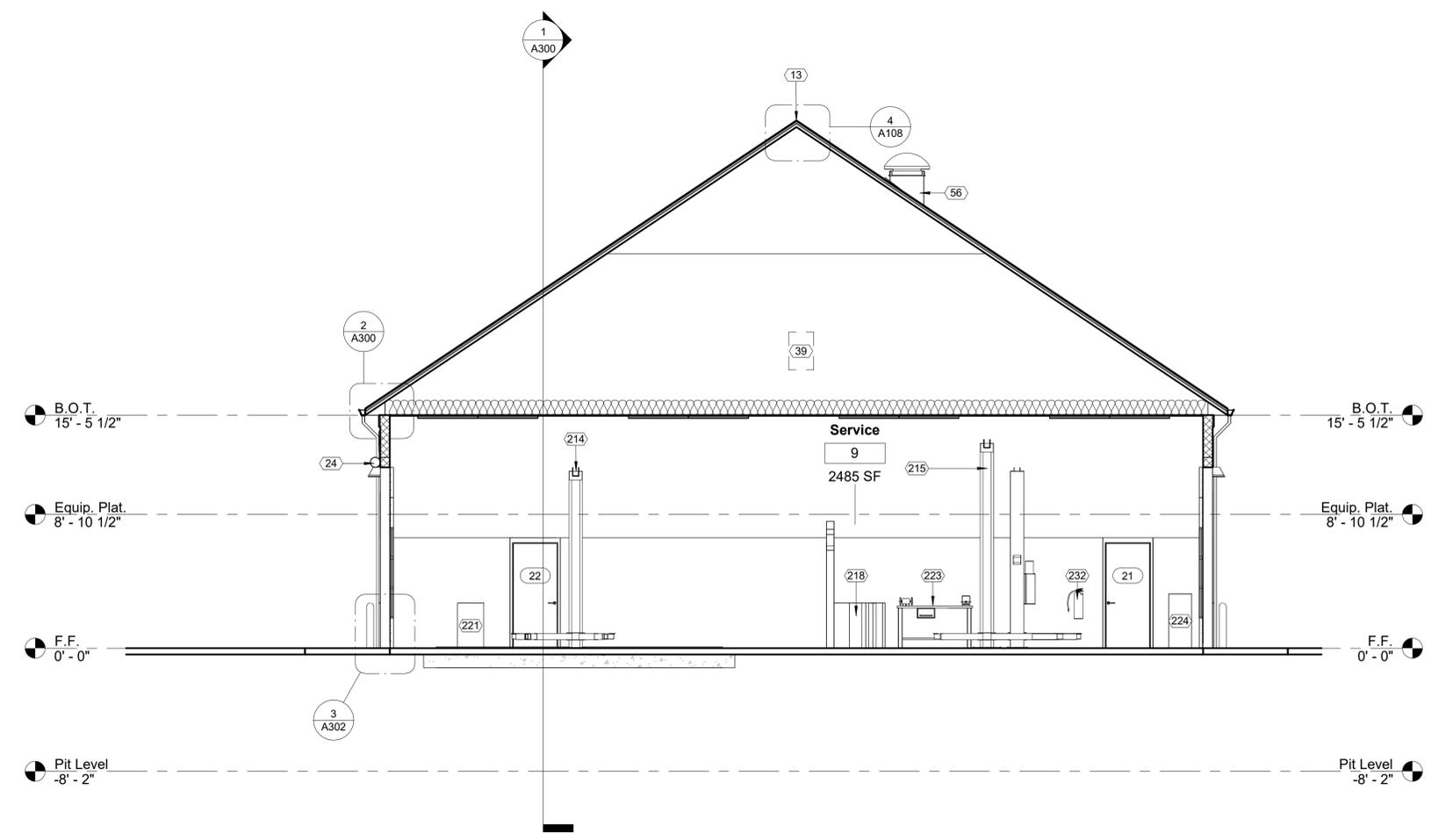
Keynote Schedule	
Tag	Text
12	Pre-finished metal downspout and boot piped to storm drainage system. See Civil for tie-in. See Specification 077100 Roof Specialties.
13	Pre-finished metal hip and ridge cap by metal roofing manufacturer. Provide concealed ridge venting if indicated. Color to match roof. See Specification 074113.16 Standing Seam Metal Roof Panels.
18	Unpainted structural half-highs. See Specification 042200 Concrete Unit Masonry.
19	Painted 8" split-face CMU (bond beam where indicated, see Structural). See Specification 042200 Concrete Unit Masonry.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details on sheet A101. See Specification 055000 Metal Fabrications.
24	Lightbar (By Others). Provide blocking as required. See Electrical.
39	Provide attic draftstop partition and access door per IBC. Wall shall read "Seal All Penetrations" every 25'-0" o.c. Attic "Floor" area within draftstop areas shall not exceed 3,000 s.f. Draftstop materials shall not be less than 1/2" gypsum board adequately supported. The integrity of draftstop shall be maintained. Provide 1 opening per partition, protected by a self-closing door constructed as required for the partition with automatic latch. Door shall not be less than 20"x30" which is required for attic access specified in Section 1209.2 of the IBC. Provided max. 3,000 s.f. area is not exceeded, draftstop locations shall align with structural supports.
44	Concrete apron. See Civil. Slope away from building.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
74	1/2" expansion joint with backer rod and sealant.
89	Concrete foundation. See Structural.
100	Concrete slab. See Structural.
109	Horizontal joint reinforcement at 16" o.c. vertical.
136	Pea gravel above aluminum through wall flashing.
137	Aluminum through wall flashing.
138	Drainable weeps at every third mortar joint.
139	10 mil vapor barrier. See Specification 072600 Vapor Retarders.
140	4" porous fill. See Geotechnical Report.
149	1/2" recess at scheduled door. See Structural.
170	Fill first course of CMU with grout.
194	Scheduled door. See plans for details.
214	10K Lift (By Others).
215	12K Lift (By Others).
218	Brake lathe (By Others).
221	Scissor lift alignment console (By Others). Provide conduit in slab as required. See alignment lift specifications (By Others).
223	Work bench (By Others).
224	Strut compressor (By Others).
232	Bracket mounted fire extinguisher. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details on Sheet A602.



2 DT_Sheet A302_Slab On Grade
1" = 1'-0"



3 DT_Sheet A302_Slab on Grade @ OH Door
1" = 1'-0"



1 Building Section 3
3/16" = 1'-0"

FINAL

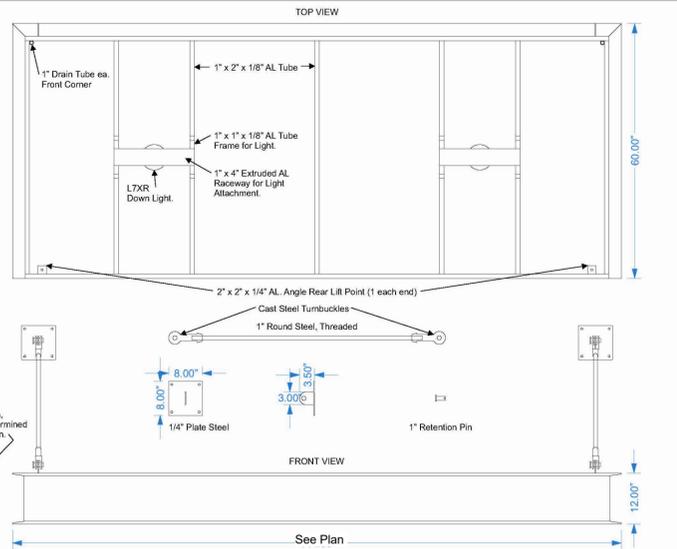
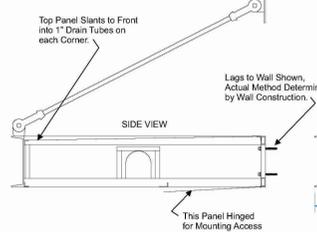
No.	Description	Date

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Building Sections	
Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A
A302	
Scale	As indicated

#EOC CA 5-12 (Std. Package) Materials Required.

- .090" AL Sheet - 120 Sq.
- 3" x 12" AL Channel - 24'
- 1" x 2" x 1/8" AL Tube - 54'
- 1" x 1" x 1/8" AL Angle - 68'
- 1" x 1" x 1/8" AL Tube - 12'
- 1" AL Round Tube - 2'
- 1" AL Plano Hinge - 12
- 1" x 2" x 1/8" AL Angle 12
- 1" x 4" Extruded Raceway - 3'
- L7XR or Eq. Recessed Fixture - 2 each
- 8DR36 LED Bulb - 2 each
- EMRL-1 Emergency Light - As Needed
- 1" Threaded Steel (54-1/2") - 2 each
- 1" Cast Turnbuckles - 2 each
- Right Hand Thread - 2 each
- Left Hand Thread - 2 each
- 1" Pins - 4 each



This drawing is generic. See elevations and plans for actual dimensions and features.

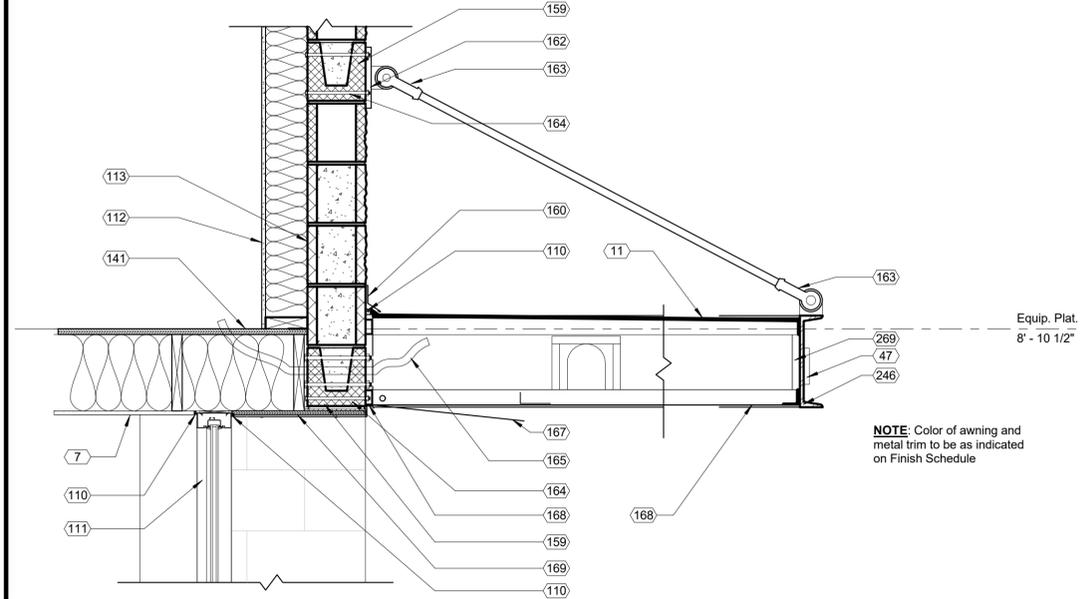
Delegated Designs: Engage a qualified, professional engineer to design canopy and attachment and provide sealed shop drawings.

#EOC CA 5-XX(EM)

Canvas Products of Dothan
209 Southgate Rd Dothan AL 36301
1-800-447-7068

EXPRESS OIL CHANGE / TIRE ENGINEERS
ENTRANCE CHANNEL AWNING WITH DOWN LIGHTS
XX is Length Dimension. EM is Emergency Light.

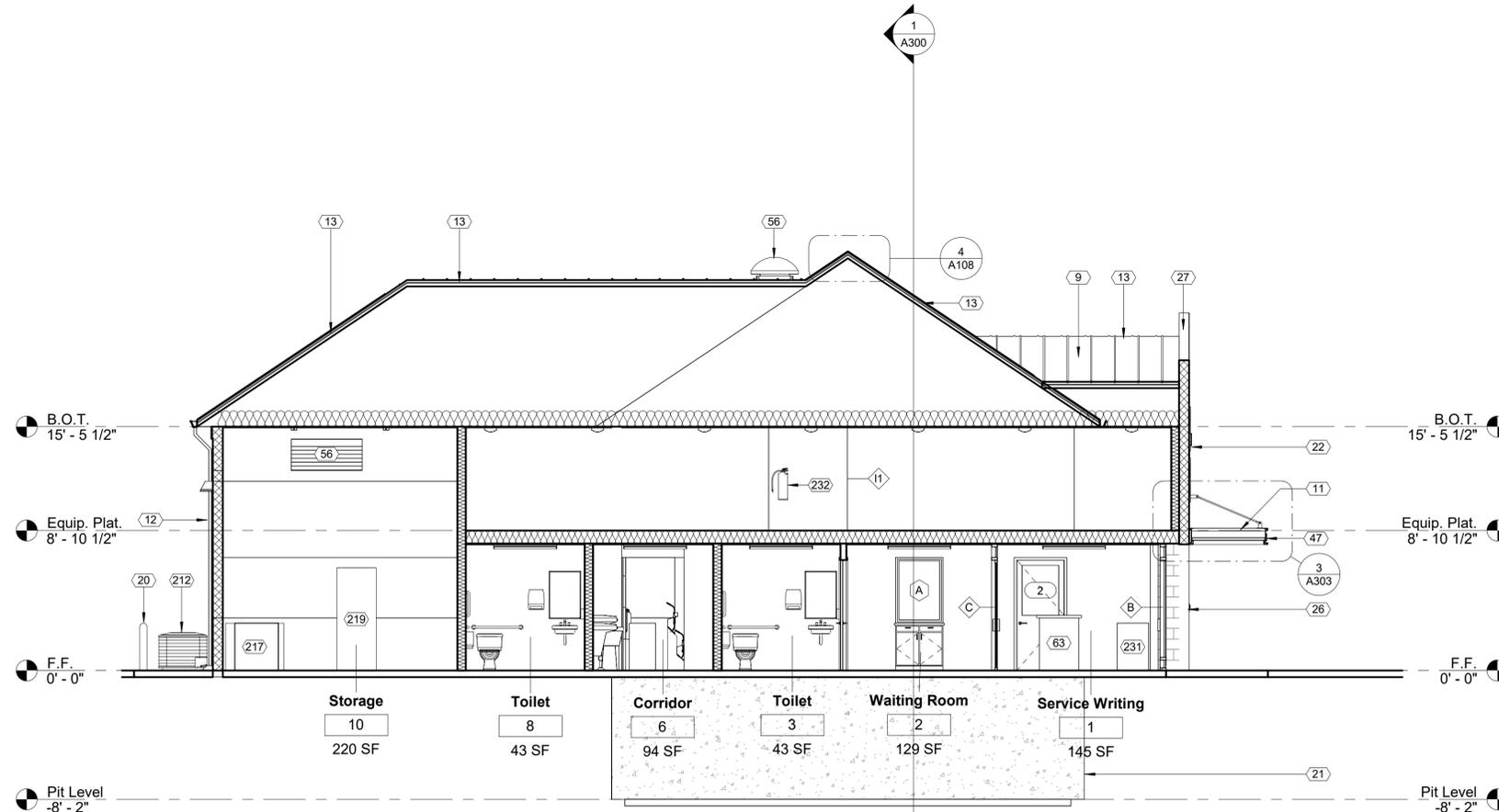
2 DT. Sheet A303_Awning Details
N.T.S.



3 DT. Sheet A303_Awning Section
1" = 1'-0"

Keynote Schedule

Tag	Text
7	Painted 1/2" gypsum board ceiling. 5/8" Type X where indicated.
9	Pre-finished standing seam metal roof system. See Specification 074113.16 Standing Seam Metal Roof Panels. See Finish Schedule for color.
11	Pre-finished metal canopy. See Details on sheet A303 (A302 for OC Building Only).
12	Pre-finished metal downspout and boot piped to storm drainage system. See Civil for tie-in. See Specification 077100 Roof Specialties.
13	Pre-finished metal hip and ridge cap by metal roofing manufacturer. Provide concealed ridge venting if indicated. Color to match roof. See Specification 074113.16 Standing Seam Metal Roof Panels.
20	4" diameter painted concrete-filled steel pipe bollard. Color as indicated on Finish Schedule. Paint embedded portion of bollard. Use primer and two finish coats. See Details on sheet A101. See Specification 055000 Metal Fabrications.
21	10' Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
22	Signage (By Others). Provide blocking as required. See Electrical.
26	Fire Department Lock Box. Locate as directed by the Local Fire Marshal or AHJ. See Specification 104413 Fire Department Lock Box.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking Slope to drain. Color to match roof.
47	Provide address identification as directed by the Local Fire Marshal or AHJ.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
63	Service Desk. See Details on sheet G301.
110	Sealant with backer rod.
111	Aluminum storefront with insulated glazing. See Details on sheet A620.
112	Painted 1/2" gypsum board on 2x6 wood studs at 16" o.c. with kraft-face R-20 batt insulation (kraft in contact with gypsum board). See Details on sheet A400.
113	Fluid applied vapor permeable air barrier. See Specification 072726 Fluid Applied Membrane Air Barrier.
141	3/4" tongue and groove plywood on wood joists. See Structural.
159	Painted smooth-face grout-filled CMU where canopy attaches to wall construction. See Structural.
160	Pre-finished aluminum flashing to match color of canopy. Turn out onto canopy.
162	Pre-finished 8"x8"x1/4" steel plate anchored to wall using through wall fasteners by Canopy manufacturer's designated design.
163	Pre-finished 1" cast steel turnbuckle with 1" threaded steel rod and 1" pins.
164	Anchor canopy to wall using through wall fasteners by Canopy manufacturer's designated design.
165	Provide a 1" flexible conduit extending 12" beyond the face of the wall for canopy lighting. See Electrical.
167	Pre-finished hinged panel for mounting access. Color to match canopy.
168	1"x2" aluminum tube. Typical.
169	Pre-finished metal over 1/2" pressure treated plywood. Terminate at aluminum storefront. Turn up pre-finished metal 1" at edge where metal meets canopy. Secure panel to plywood with fasteners compatible with type and color of metal being used.
212	HVAC condensing unit. See Mechanical.
217	Wheel balancer (By Others).
219	Air compressor (By Others).
231	Beverage refrigerator (By Others).
232	Bracket mounted fire extinguisher. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details on Sheet A602.
246	3"x12" aluminum channel.
269	1" drain tube beyond. Slope top panel of canopy toward the drain tube at the front of the canopy.



1 Building Section 4
3/16" = 1'-0"



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

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No.	Description	Date

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Building Sections

Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A

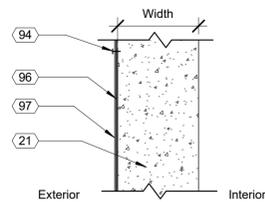
A303

Scale As indicated

E1

Refer to structural drawings for reinforcing and other information

Install all waterproofing per manufacturer's recommendations.

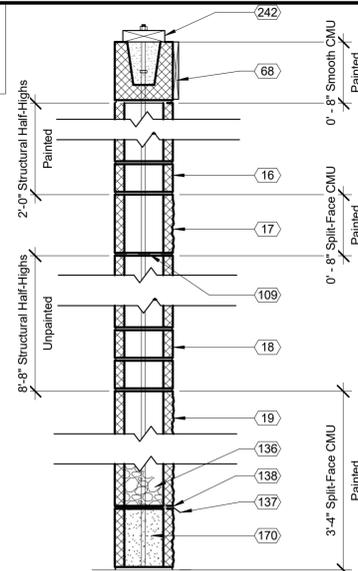


Wall Type No.	Description	Width	Ref Test
E1	As shown	10"	-

E2

Install siloxane on the exterior side of wall construction

Refer to structural drawings for reinforcing, grouting, and other information

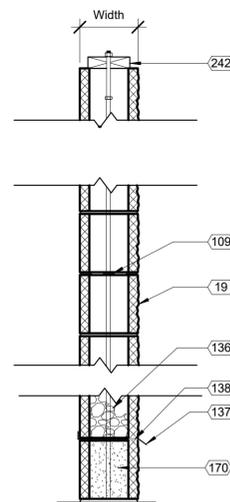


Wall Type No.	Description	Width	Ref Test
E2	As shown	7 5/8"	-

E3

Install siloxane on the exterior side of wall construction

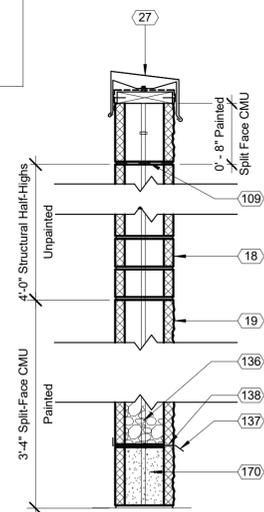
Refer to structural drawings for reinforcing and other information



Wall Type No.	Description	Width	Ref Test
E3	As shown	7 5/8"	-
E3a	As shown, except with 1x8 painted frieze board at top	7 5/8"	-

E5

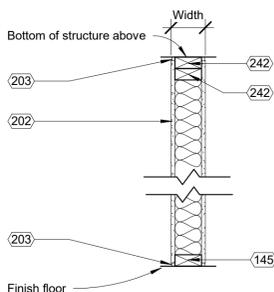
Refer to structural drawings for reinforcing, grouting, and other information



Wall Type No.	Description	Width
E5	As shown	7 5/8"
E5a	As shown, except without coping and painted structural half-highs to roof. See Elevations on A101.	7 5/8"

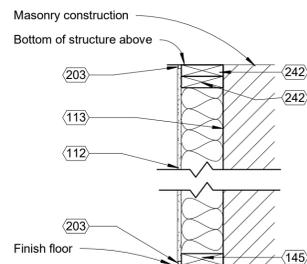
I1

Note: Stagger electrical outlet boxes, switches, etc. Seal around all penetrations in wall with acoustical sealant.



Wall Type No.	Description	Width	Ref Test
I1	As shown	4 1/2"	-

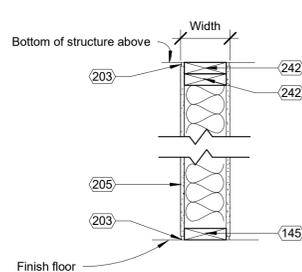
I2



Wall Type No.	Description	Width	Ref Test
I2	As shown	6"	-

I3

Note: Stagger electrical outlet boxes, switches, etc. Seal around all penetrations in wall with acoustical sealant.

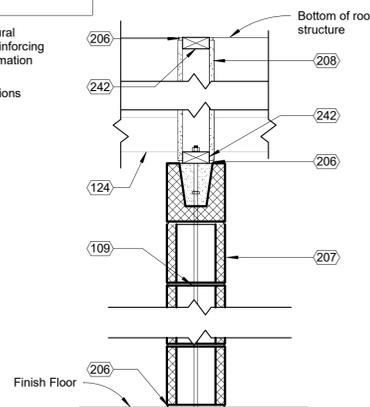


Wall Type No.	Description	Width	Ref Test
I3	As shown	6 1/2"	-

I4

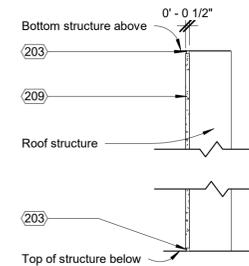
Refer to structural drawings for reinforcing and other information

Seal all penetrations with fire caulk



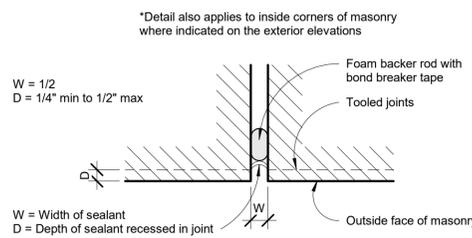
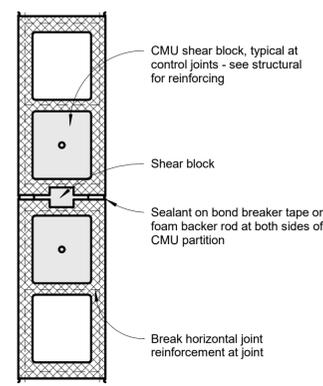
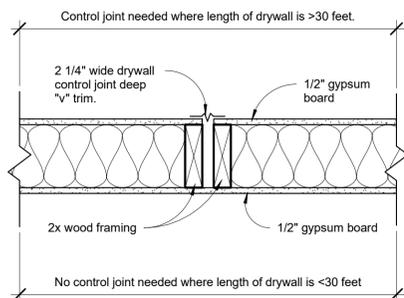
Wall Type No.	Description	Width	Ref Test
I4	As shown - Full Height	7 5/8"	U905/U305

Draftstopping



- Notes:
1. Wall shall read "Seal all penetrations" every 25'-0" o.c.
 2. The integrity of the draftstop shall be maintained.
 3. Provide one opening per partition, protected by a 20"x30" self-closing door with automatic latch.
 4. Coordinate draftstop with structural supports. Ensure Draftstopping/openings are coordinated with the truss design.

Wall Type No.	Description	Width	Ref Test
Draftstopping	As shown	1/2"	-



1 DT_Sheet A400_Gypsum Board Control Joint 1 1/2" = 1'-0"

2 DT_Sheet A400_Masonry Control Joint 1 1/2" = 1'-0"

3 DT_Sheet A400_Sealant Detail 6" = 1'-0"

Keynote Schedule

Tag	Text
16	Painted structural half-highs. See Specification 042200 Concrete Unit Masonry.
17	Painted 8" split-face CMU (bond beam where indicated, see Structural). As required, provide painted smooth-face, grout filled "U" block bond beam at lintels only. As required, paint CMU lintel above OH doors as indicated on finish schedule. See Structural. See Specification 042200 Concrete Unit Masonry.
18	Unpainted structural half-highs. See Specification 042200 Concrete Unit Masonry.
19	Painted 8" split-face CMU (bond beam where indicated, see Structural). See Specification 042200 Concrete Unit Masonry.
21	10' Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
27	Pre-finished metal coping at exposed tops only over self-adhered membrane flashing and pressure treated wood blocking Slope to drain. Color to match roof.
68	1x pressure treated painted frieze board, continuous.
94	Fasteners at 12" max o.c. for securing subdrainage to pit wall. Follow manufacturer's installation instructions.
96	CCW MiraClay woven geotextile against wall/slab.
97	CCW MiraDrain 6200.
109	Horizontal joint reinforcement at 16" o.c. vertical.

Keynote Schedule

Tag	Text
112	Painted 1/2" gypsum board on 2x6 wood studs at 16" o.c. with kraft-face R-20 batt insulation (kraft in contact with gypsum board). See Details on sheet A400.
113	Fluid applied vapor permeable air barrier. See Specification 072726 Fluid Applied Membrane Air Barrier.
124	Pre-engineered wood roof truss. See Structural.
136	Pea gravel above aluminum through wall flashing.
137	Aluminum through wall flashing.
138	Drainable weeps at every third mortar joint.
145	2x pressure treated wood sill plate.
170	Fill first course of CMU with grout.
202	1 layer of 1/2" painted gypsum board on both sides of 2"x4" wood studs at 16" o.c. Infill with kraft-face R-13 batt insulation. Kraft in contact with gypsum board.
203	Acoustical sealant and backer rod. See Specification 079219 Acoustical Joint Sealants.
205	1 layer of 1/2" painted gypsum board on both sides of 2"x6" wood studs at 16" o.c. Infill with kraft-faced R-20 batt insulation. Kraft in contact with gypsum board.
206	Fire caulk both sides. Typical. See Specification 078443 Joint Firestopping.
207	Painted 8" smooth face CMU.
208	5/8" Type X gypsum board each side of 2"x4" wood studs at 16" o.c. Typical.
209	1 layer of 1/2" gypsum board adequately attached to roof structure.
242	2x pressure treated wood top plate.

FINAL

No.	Description	Date

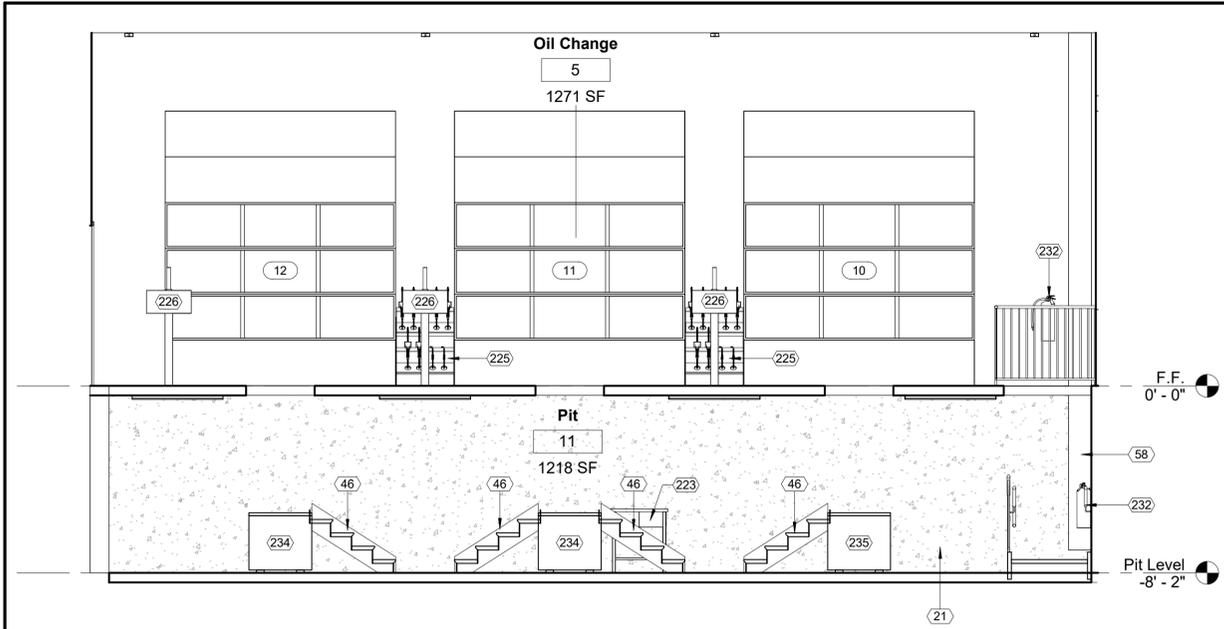
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Wall Types

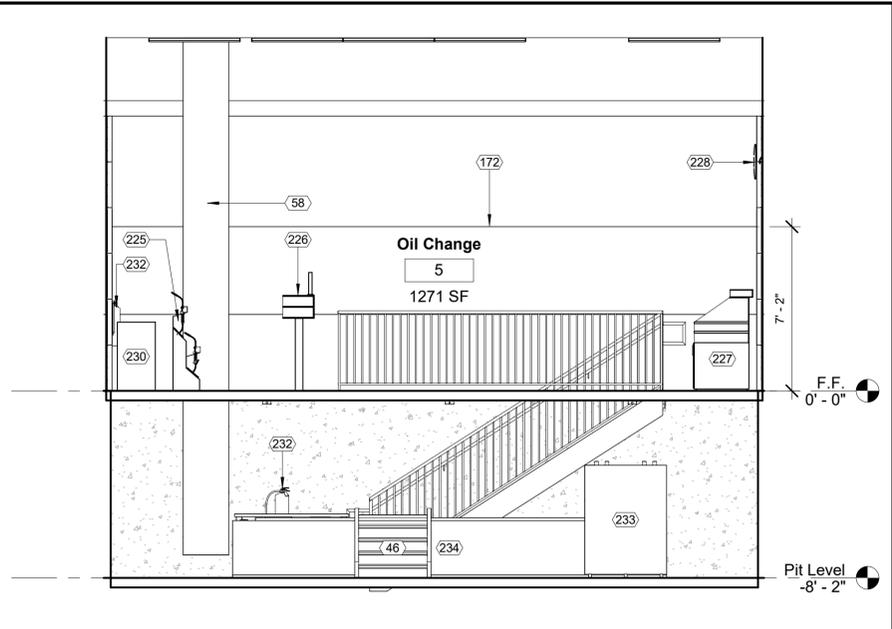
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Date	5/15/2024
Drawn by	ARC
Checked by	N/A

A400

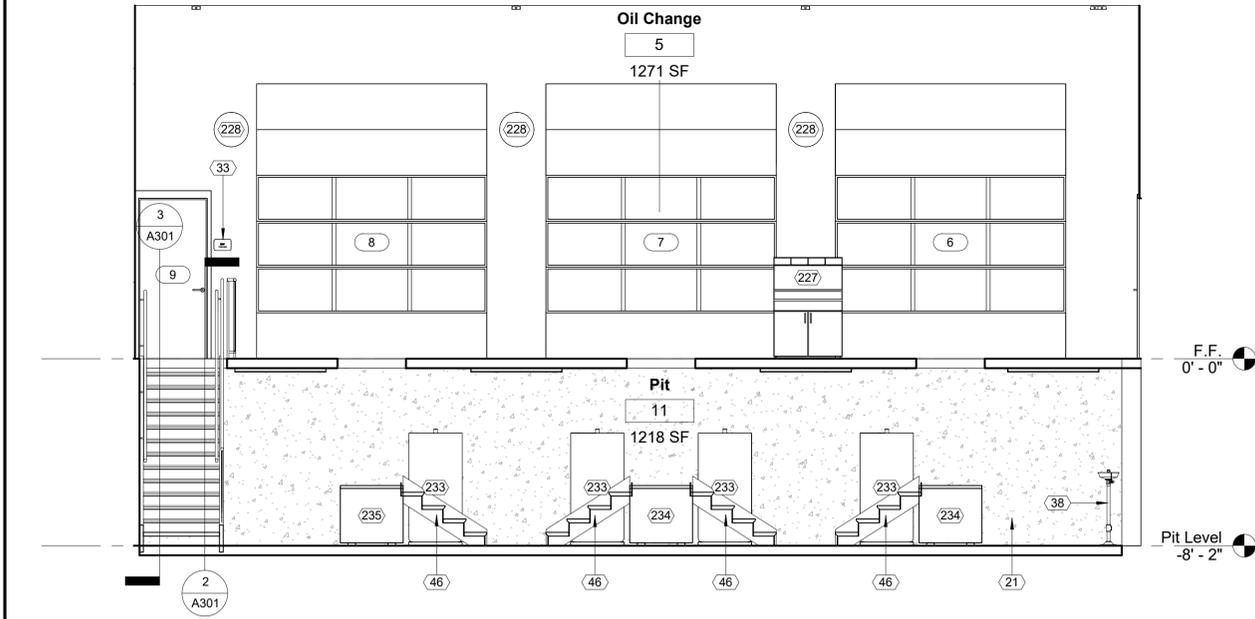
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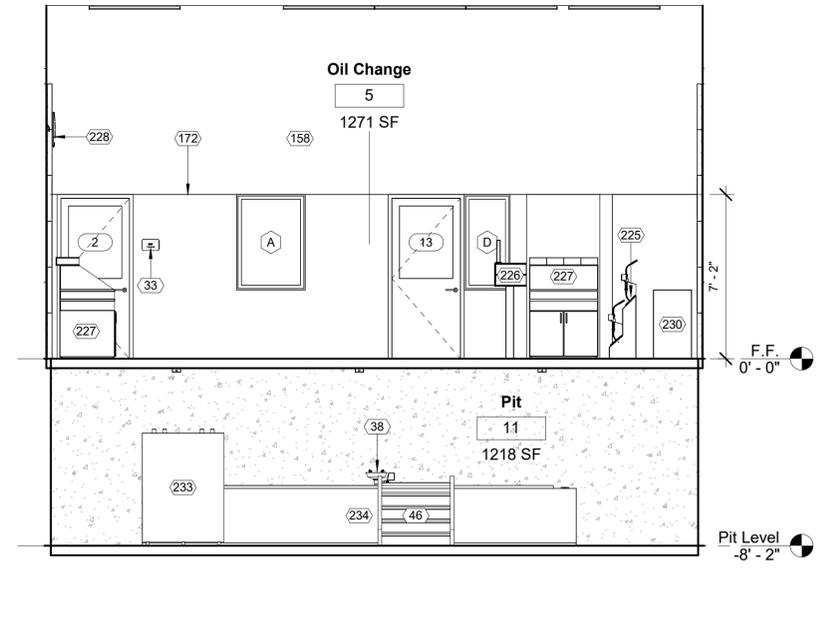
1 Oil Change Interior Elevation A
1/4" = 1'-0"



2 Oil Change Interior Elevation B
1/4" = 1'-0"



3 Oil Change Interior Elevation C
1/4" = 1'-0"



4 Oil Change Interior Elevation D
1/4" = 1'-0"

Tag	Text
21	10' Cast-in-place concrete wall. See Structural. Membrane waterproofing at perimeter of foundation wall as specified. See Specification 334600 Subdrainage.
33	ADA compliant room / exit sign. See Details on Sheet A602.
38	Eyewash station. See Plumbing.
46	Oil tank stairs (By Others).
58	Verify location and size of pit exhaust opening with Structural and Mechanical drawings.
158	Vinyl letters (By Others).
172	Ensure paint line occurs at top of door and window frames. Ensure all openings, alcoves and windows align with top of door frame. Typical in Oil and Service Bays.
223	Work bench (By Others).
225	Lube console (By Others).
226	Computer podium (By Others).
227	Cashier computer station (By Others).
228	Convex mirrors (By Others).
230	Tool cart (By Others).
232	Bracket mounted fire extinguisher. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details on Sheet A602.
233	275-gallon Class IIIB new oil tank (By Others).
234	928-gallon Class IIIB new oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.
235	928-gallon Class IIB waste oil tank (By Others). Provide a 2" concrete walkway cap with non-slip surface over (oil tank By Others). Coordinate with equipment supplier prior to installation.

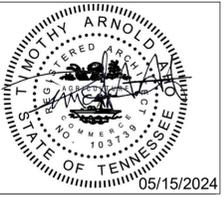


Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

FINAL		
No.	Description	Date

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Interior Elevations	
Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A
A600	
Scale	1/4" = 1'-0"



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

FINAL

No.	Description	Date

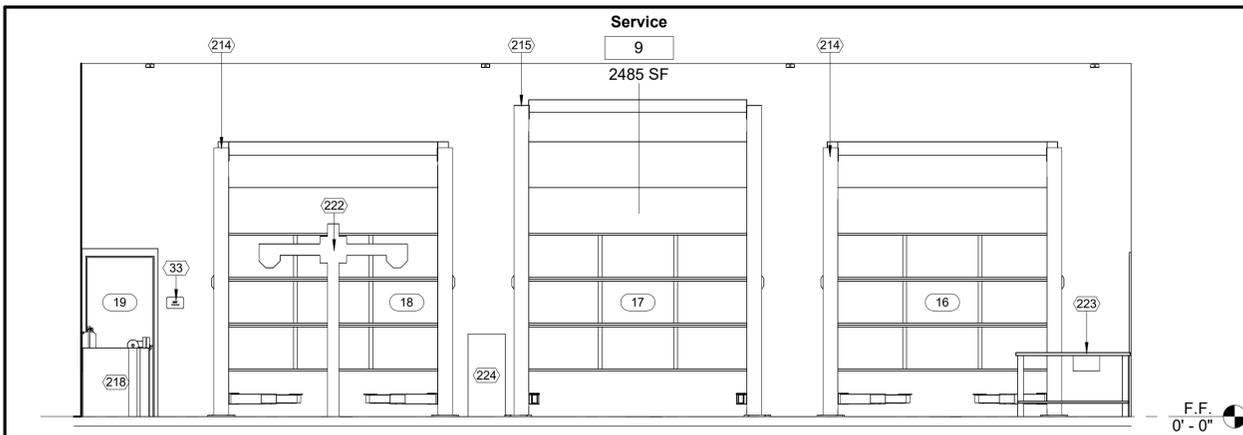
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Interior Elevations

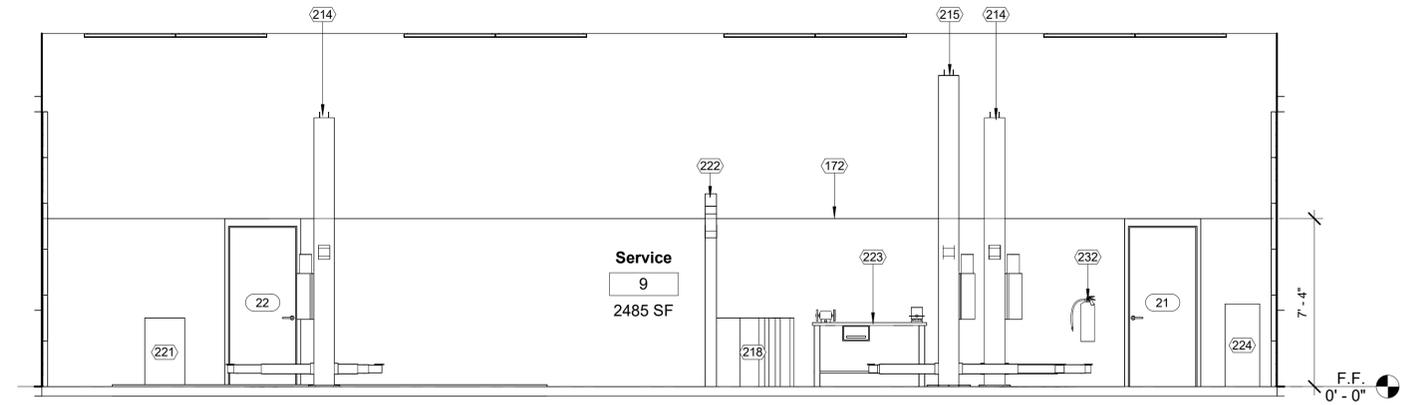
Project number 24005
Date 5/15/2024
Drawn by ARC
Checked by N/A

A601

Scale 1/4" = 1'-0"

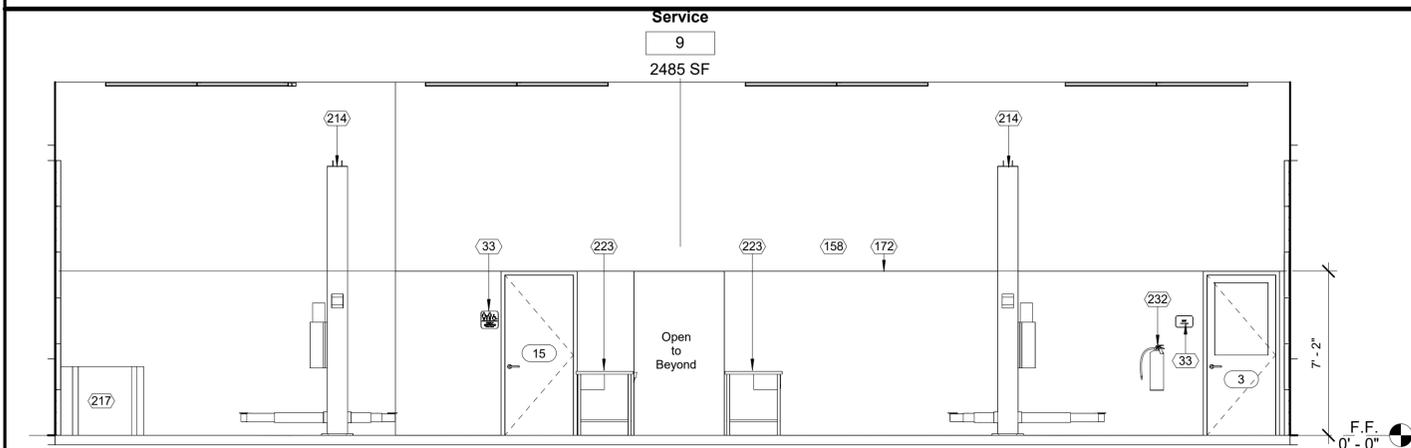


① Service Bay Interior Elevation A
1/4" = 1'-0"

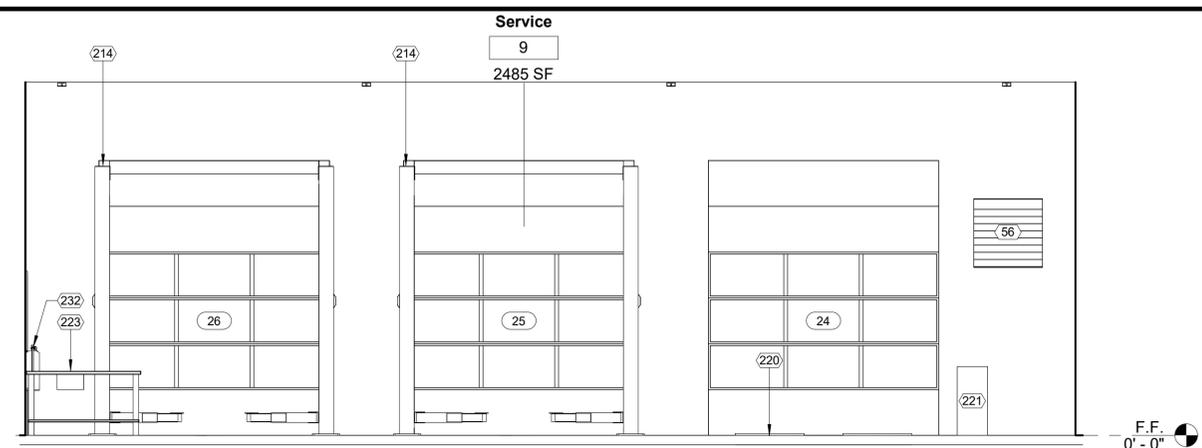


② Service Bay Interior Elevation D
1/4" = 1'-0"

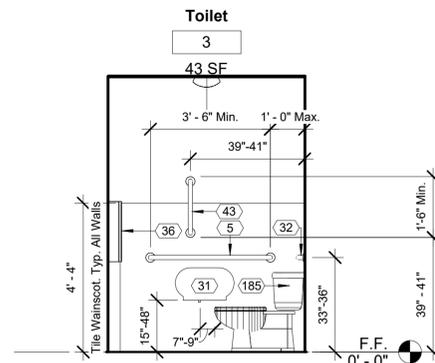
Tag	Text
33	ADA compliant room / exit sign. See Details on Sheet A602.
56	Metal louver or vent. Color to match adjacent surface. See Mechanical.
158	Vinyl letters (By Others).
172	Ensure paint line occurs at top of door and window frames. Ensure all openings, alcoves and windows align with top of door frame. Typical in Oil and Service Bays.
214	10K Lift (By Others).
215	12K Lift (By Others).
217	Wheel balancer (By Others).
218	Brake lathe (By Others).
220	Scissor lift alignment (By Others). Verify dimensions of alignment pit with Owner / Alignment Lift Manufacturer prior to rough-in.
221	Scissor lift alignment console (By Others). Provide conduit in slab as required. See alignment lift specifications (By Others).
222	Alignment scarecrow (By Others).
223	Work bench (By Others).
224	Strut compressor (By Others).
232	Bracket mounted fire extinguisher. Provide sign at all fire extinguisher locations which may be visually obstructed. See Details on Sheet A602.



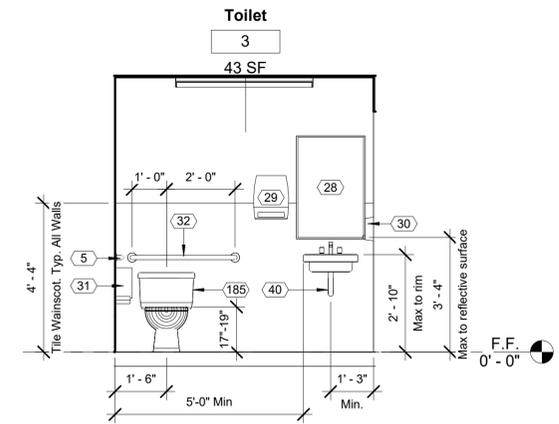
③ Service Bay Interior Elevation B
1/4" = 1'-0"



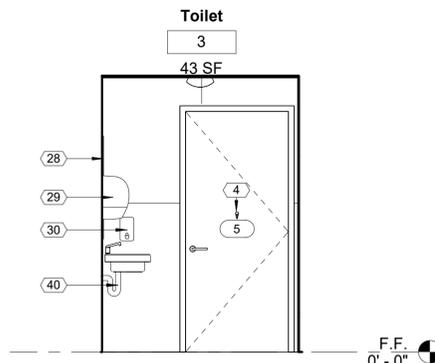
④ Service Bay Interior Elevation C
1/4" = 1'-0"



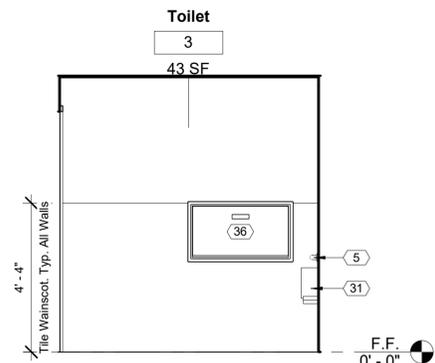
1 Toilet #3 Interior Elevation A
3/8" = 1'-0"



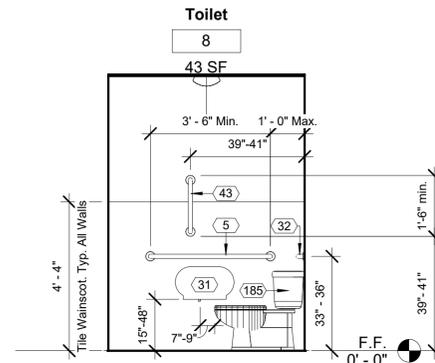
2 Toilet #3 Interior Elevation B
3/8" = 1'-0"



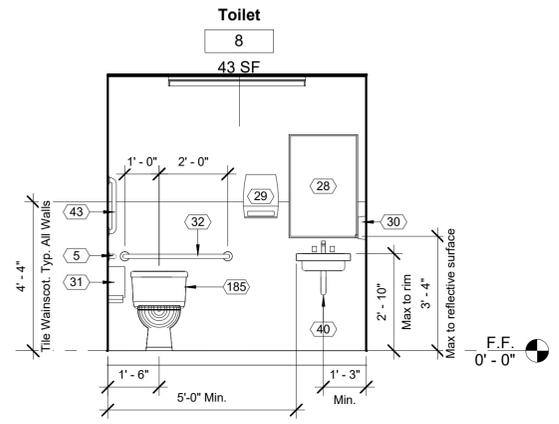
3 Toilet #3 Interior Elevation C
3/8" = 1'-0"



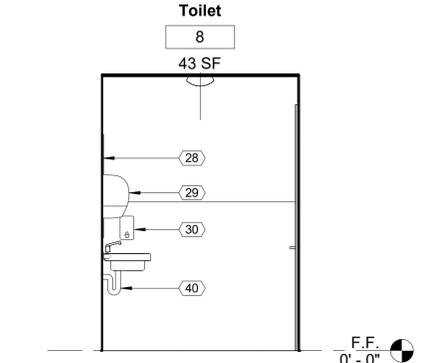
4 Toilet #3 Interior Elevation D
3/8" = 1'-0"



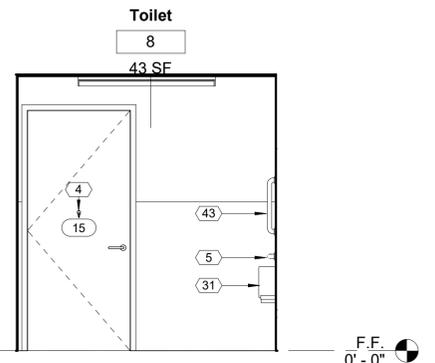
5 Toilet #8 Interior Elevation A
3/8" = 1'-0"



6 Toilet #8 Interior Elevation B
3/8" = 1'-0"

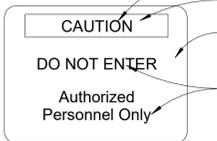
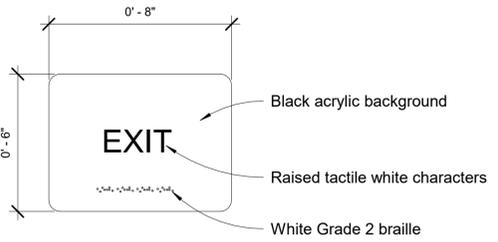
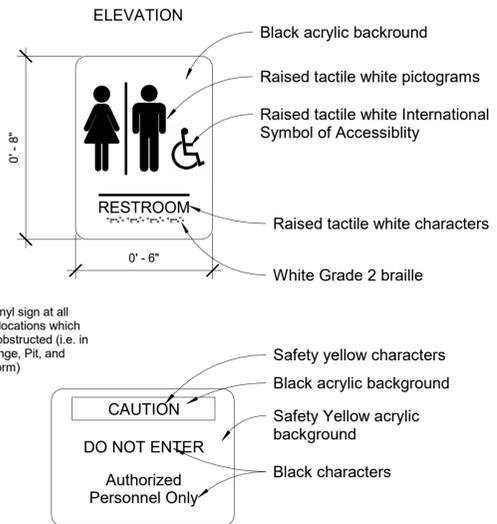
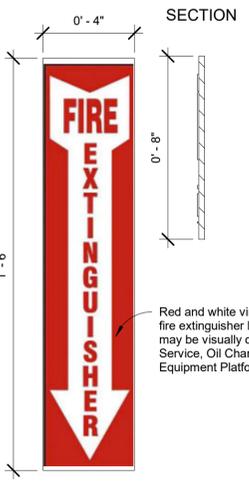


7 Toilet #8 Interior Elevation C
3/8" = 1'-0"



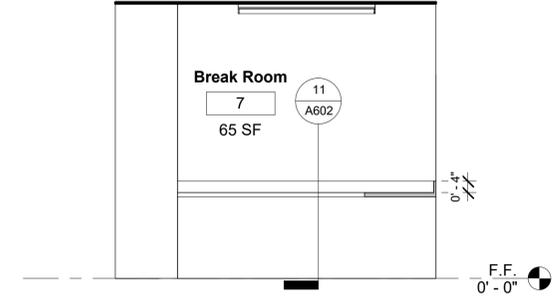
8 Toilet #8 Interior Elevation D
3/8" = 1'-0"

Keynote Schedule	
Tag	Text
4	Robe hook mounted at 48" A.F.F. See Specification 102800 Toilet, Bath, and Laundry Accessories.
5	42" grab bar with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
28	Framed mirror. See Specification 102800 Toilet, Bath, and Laundry Accessories.
29	Automatic Towel Dispenser (By others). Provide blocking in wall as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
30	Wall mounted soap dispenser (By Others). Provide blocking in wall as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
31	Jumbo Dual Roll Toilet Tissue dispenser (By Others). Provide blocking in wall as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
32	36" grab bar with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
36	Surface mounted baby changing station with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
40	Under lavatory guard. See Specification 102800 Toilet, Bath, and Laundry Accessories.
43	24" vertical grab bar with blocking in walls as required. See Specification 102800 Toilet, Bath, and Laundry Accessories.
179	Plastic laminate over 1x wood blocking. See Specification 123623.13 Plastic-Laminate-Clad Countertops. See Finish Schedule for color.
180	Plastic laminate over 3/4" plywood. See Specification 123623.13 Plastic-Laminate-Clad Countertops. See Finish Schedule for color.
181	1x wood blocking.
182	Concealed countertop bracket.
183	2x wood cleat.
184	Finish base. See Specification Section 096513 Resilient Base Accessories. See Finish Schedule for color.
185	Flush valve on transfer side of water closet.

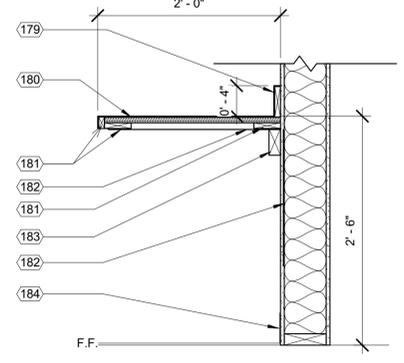


Signage shall comply with Section 703 of the 2017 ICC/ANSI A117.1

- Black acrylic background
- Raised tactile white pictograms
- Raised tactile white International Symbol of Accessibility
- Raised tactile white characters
- White Grade 2 braille
- Black acrylic background
- Raised tactile white characters
- White Grade 2 braille
- Safety yellow characters
- Black acrylic background
- Safety Yellow acrylic background
- Black characters



10 Break Room Interior Elevation
3/8" = 1'-0"



11 DT_Sheet A602_Counter Section
1" = 1'-0"

9 DT_Sheet A602_Signage @ OC Building
3" = 1'-0"

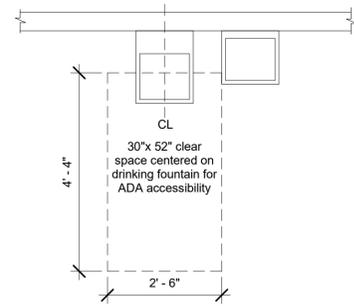


Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

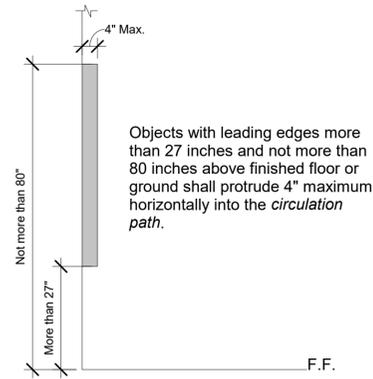
FINAL		
No.	Description	Date

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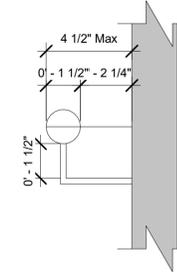
Interior Elevations	
Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A
A602	
Scale	As indicated



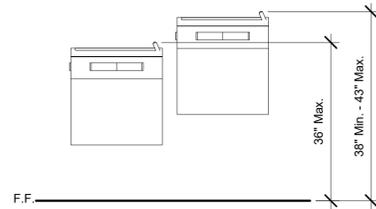
1 DT-Sheet A605_Drinking Fountain_Plan View
1/2" = 1'-0"



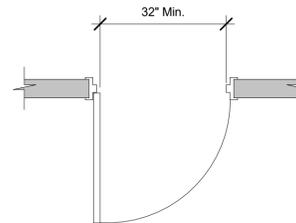
2 DT_Sheet A605_Limits of Protruding Objects
1/2" = 1'-0"



3 DT_Sheet A605_Handrail Detail
3" = 1'-0"

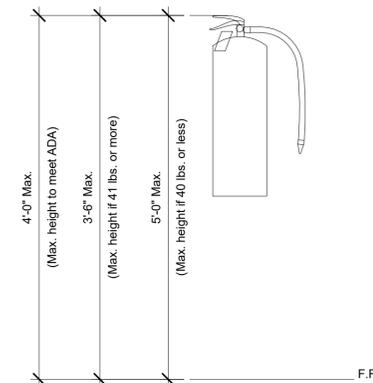


4 DT_Sheet A605_Drinking Fountain_Front View
1/2" = 1'-0"

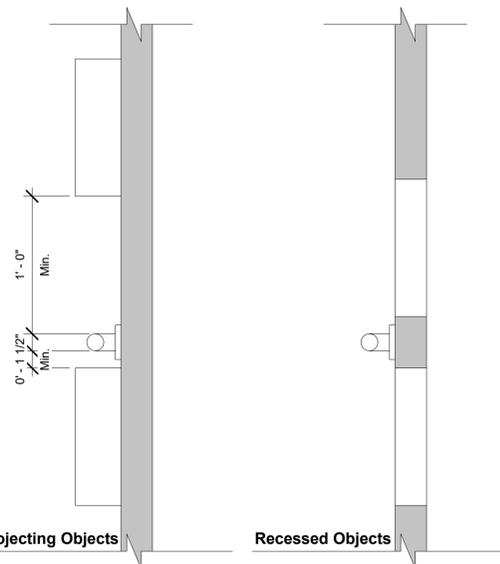


5 DT_Sheet A605_Clear Width @ Doorways
1/2" = 1'-0"

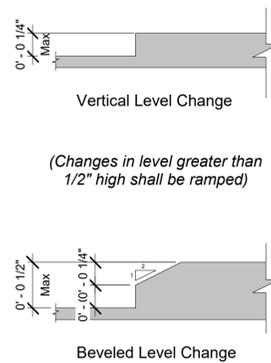
Mounting heights for portable fire extinguishers
(cabinet and bracket mounted) per
IBC Chapter 9)



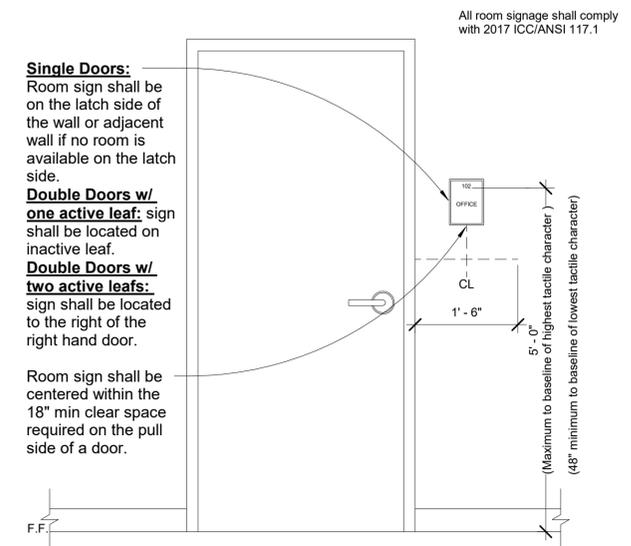
6 DT_Sheet A605_Fire Extinguisher Mounting Heights
1" = 1'-0"



7 DT_Sheet A605_Spacing of Grab Bars
1 1/2" = 1'-0"



8 DT_Sheet A605_Level Change
12" = 1'-0"



9 DT_Sheet A605_Signage Mounting Heights
3/4" = 1'-0"

FINAL

No.	Description	Date

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Interior
Dimensional Info.

Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A

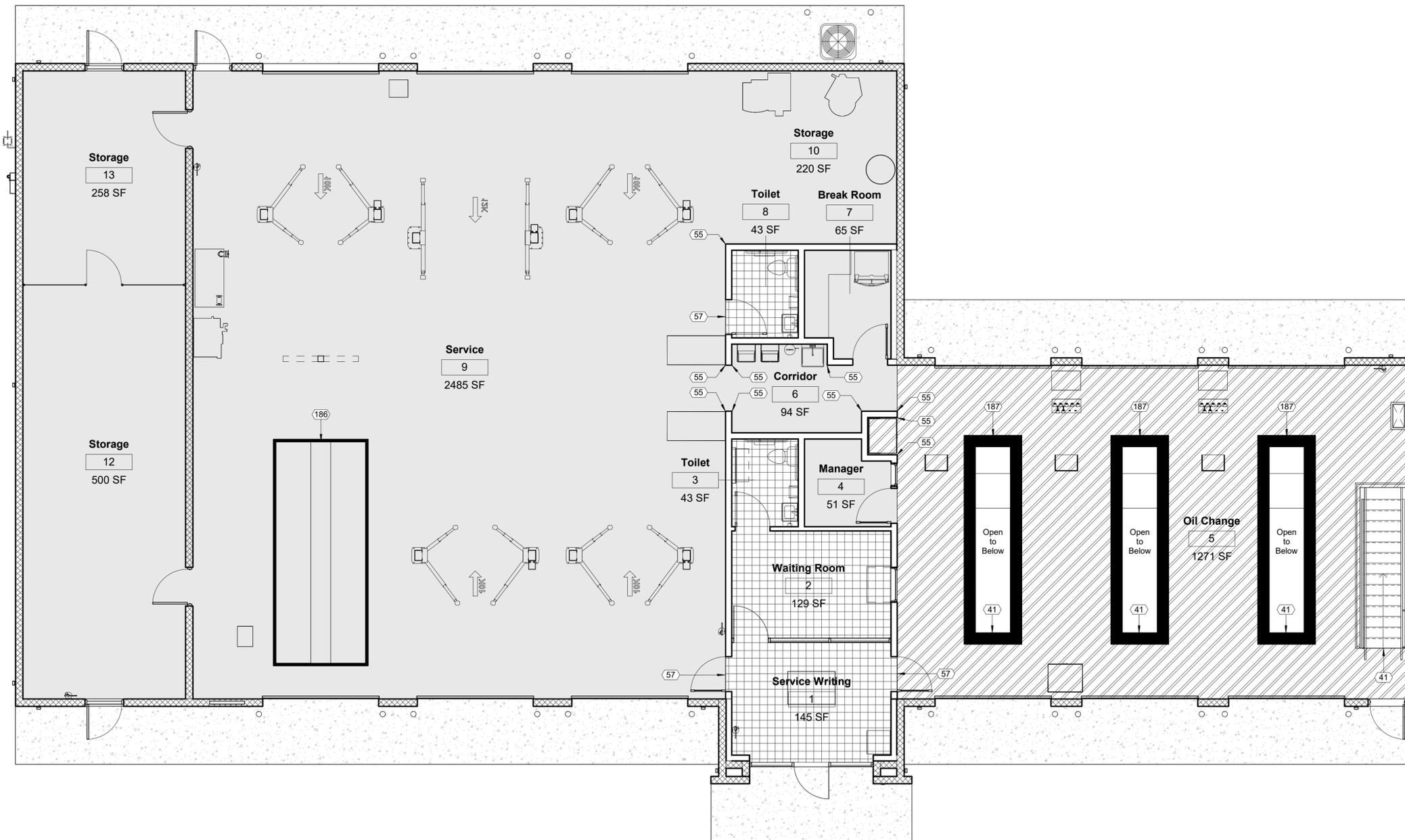
A605

Scale As indicated

FLOOR FINISH LEGEND

 Tile
 Sealed Concrete
 Stonhard Flooring (By Others)
 Safety Yellow Paint

Tag	Text
41	Paint structural steel at openings P-5 Safety Yellow. Typical for all pit and stairwell openings.
55	Stainless steel corner guard. See Specification 102600 Wall and Door Protection.
57	Transition strip. See Specification 093013 Ceramic Tiling.
186	Paint 3" P-5 Safety Yellow around alignment pit. Verify paint is compatible with floor finish.
187	Paint 12" P-5 Safety Yellow around pit openings. Verify paint is compatible with floor finish.




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STATE OF TENNESSEE
05/15/2024

Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Sevierville, Tennessee

FINAL

No.	Description	Date

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Floor Finishes - Main

Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A

A610

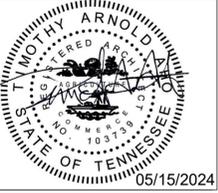
Scale As indicated





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Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

FINAL

No.	Description	Date

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Floor Finishes - Pit

Project number 24005
Date 5/15/2024
Drawn by ARC
Checked by N/A

A611

Scale As indicated

5/15/2024 1:36:51 PM

FLOOR FINISH LEGEND



Tile



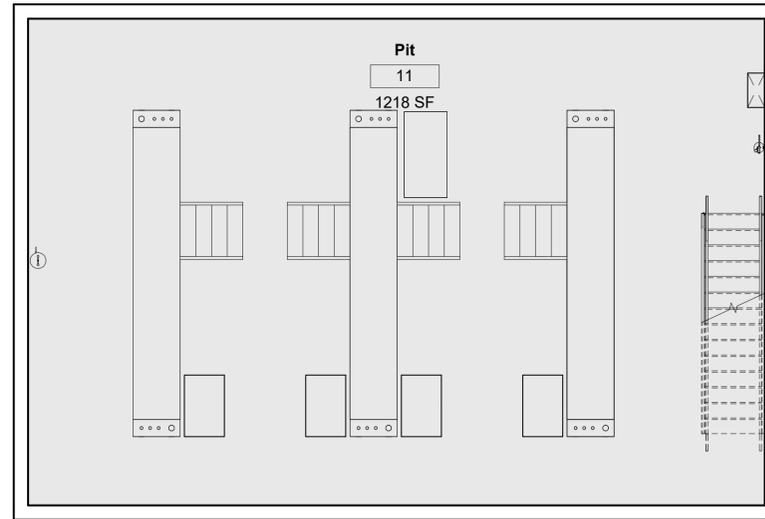
Sealed Concrete



Stonhard Flooring (By Others)



Safety Yellow Paint.

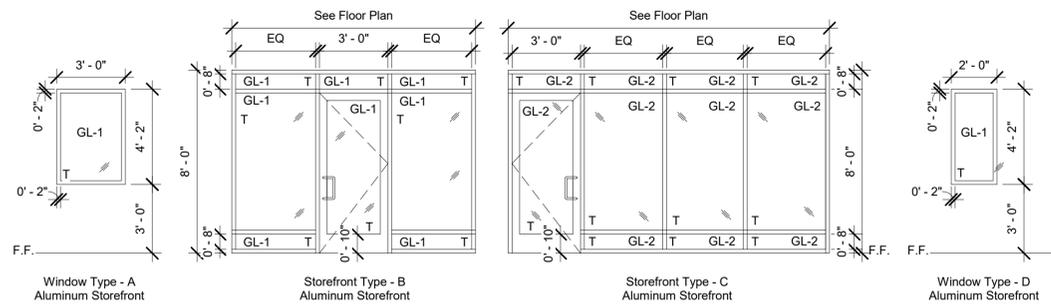


① 20_Floor Finish Plan_Pit
3/16" = 1'-0"

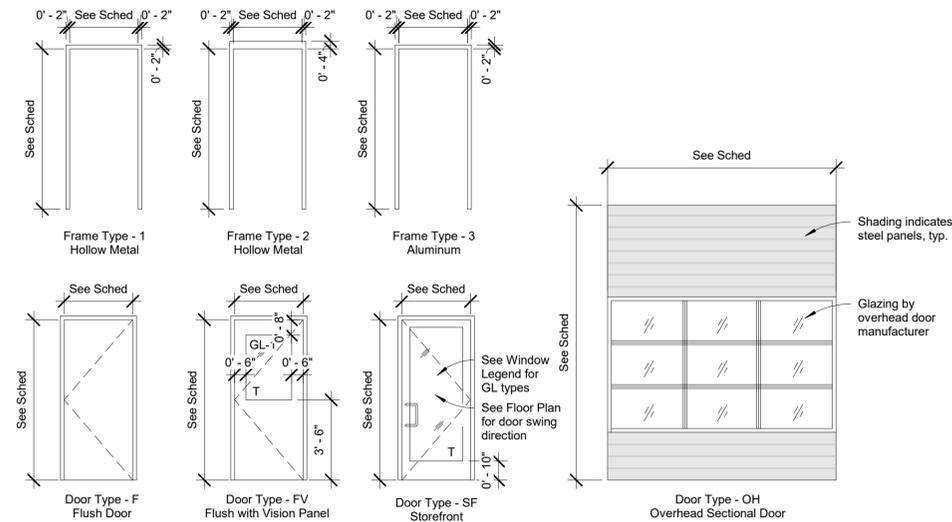


Door and Frame Schedule												
Number	Door						Frame			Glass	UL Label	Notes
	Width	Height	Thickness	Door Type	Door Material	Door Finish	Frame Type	Frame Material	Frame Finish			
1	3' - 0"	7' - 0"	0' - 1 3/4"	SF	Aluminum / Glass	Factory Finish	3	Aluminum	Factory Finish	Tempered		If required by the Fire Marshal or AHJ, add lettering that reads "This door must remain unlocked when business is occupied."
2	3' - 0"	7' - 0"	0' - 1 3/4"	FV	Wood / Glass	Painted	1	Hollow Metal	Painted	Tempered		
3	3' - 0"	7' - 0"	0' - 1 3/4"	FV	Wood / Glass	Painted	1	Hollow Metal	Painted	Tempered		
4	3' - 0"	7' - 0"	0' - 1 3/4"	SF	Aluminum / Glass	Factory Finish	3	Aluminum	Factory Finish	Tempered		
5	3' - 0"	7' - 0"	0' - 1 3/4"	F	Wood	Painted	1	Hollow Metal	Painted	N/A		
6	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
7	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
8	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
9	3' - 0"	7' - 0"	0' - 1 3/4"	F	Hollow Metal	Painted	2	Hollow Metal	Painted	N/A		
10	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
11	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
12	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
13	3' - 0"	7' - 0"	0' - 1 3/4"	FV	Wood / Glass	Painted	1	Hollow Metal	Painted	Tempered		
14	3' - 0"	7' - 0"	0' - 1 3/4"	FV	Wood / Glass	Painted	1	Hollow Metal	Painted	Tempered		
15	3' - 0"	7' - 0"	0' - 1 3/4"	F	Wood	Painted	1	Hollow Metal	Painted	N/A		
16	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
17	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
18	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
19	3' - 0"	7' - 0"	0' - 1 3/4"	F	Hollow Metal	Painted	2	Hollow Metal	Painted	N/A		
20	3' - 0"	7' - 0"	0' - 1 3/4"	F	Hollow Metal	Painted	2	Hollow Metal	Painted	N/A		
21	3' - 0"	7' - 0"	0' - 1 3/4"	F	Hollow Metal	Painted	2	Hollow Metal	Painted	N/A	45 Min.	Provide Fire Rated label on Door and Frame
22	3' - 0"	7' - 0"	0' - 1 3/4"	F	Hollow Metal	Painted	2	Hollow Metal	Painted	N/A	45 Min.	Provide Fire Rated label on Door and Frame
23	3' - 0"	7' - 0"	0' - 1 3/4"	F	Hollow Metal	Painted	2	Hollow Metal	Painted	N/A		
24	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
25	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		
26	10' - 0"	12' - 0"	0' - 2 1/8"	OH	Metal / Glass	Factory Finish	N/A	N/A	Factory Finish	Tempered		

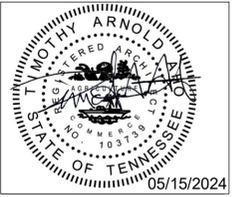
WINDOW LEGEND



DOOR AND FRAME LEGEND



Note: Refer to floor plan for direction of door swing.



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

FINAL

No.	Description	Date

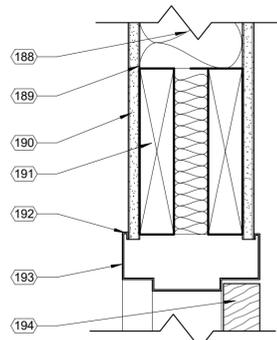
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Schedules

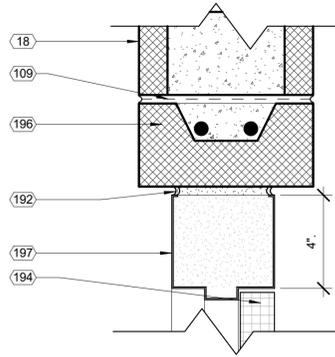
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Date	5/15/2024
Drawn by	ARC
Checked by	N/A

A620

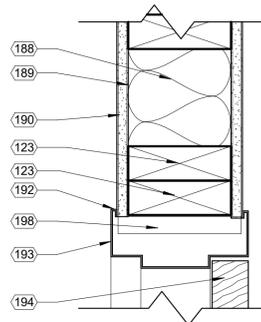
Scale 1/4" = 1'-0"



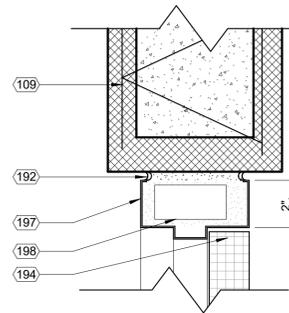
1 DT. Sheet A621 Door Head Detail Wood
3" = 1'-0"



2 DT. Sheet A621 Door Head Detail Masonry
3" = 1'-0"



3 DT. Sheet A621 Door Jamb Detail Wood
3" = 1'-0"



4 DT. Sheet A621 Door Jamb Detail Masonry
3" = 1'-0"

Keynote Schedule	
Tag	Text
18	Unpainted structural half-highs. See Specification 042200 Concrete Unit Masonry.
109	Horizontal joint reinforcement at 16" o.c. vertical.
123	Blocking. See Structural.
188	Kraft-faced batt insulation. Kraft in contact with gypsum board.
189	2x wood studs at 16" o.c.
190	1/2" painted gypsum board.
191	Double 2"x8" wood header.

Keynote Schedule	
Tag	Text
192	Caulk all around on both sides.
193	Painted hollow metal frame with returns. See Finish Schedule for color.
194	Scheduled door. See plans for details.
196	Closed bottom structural half-high bond beam. See Structural.
197	Painted hollow metal frame, grouted solid.
198	Jamb anchors. Provide 3 per jamb.

Material Schedule							
Abbreviation	Material Description	Manufacturer	Style Name or Number	Color (Description)	Size	Finish	Material Notes
CT	Ceramic Tile	Dal-Tile	Volume 1.0	VL72 Intensity Pebble	12"x12"	N/A	Use MAPEI 47 Epoxy Grout
P-1	Paint - Color 1	Sherwin Williams	See Paint Schedule on G202	SW6966 Blueblood	N/A	See Paint Schedule on G202	
P-2	Paint - Color 2	Sherwin Williams	See Paint Schedule on G202	Custom Color (Dover Gray)	N/A	See Paint Schedule on G202	
P-3	Paint - Color 3	Sherwin Williams	See Paint Schedule on G202	SW7669 Summit Gray	N/A	See Paint Schedule on G202	
P-4	Paint - Color 4	Sherwin Williams	See Paint Schedule on G202	SW6959 Bluechip	N/A	See Paint Schedule on G202	
P-5	Paint - Color 5	Sherwin Williams	See Paint Schedule on G202	Safety Yellow	N/A	See Paint Schedule on G202	
P-6	Paint - Color 6	Sherwin Williams	See Paint Schedule on G202	Safety Red	N/A	See Paint Schedule on G202	
P-7	Paint - Color 7	Sherwin Williams	See Paint Schedule on G202	SW7006 Extra White	N/A	See Paint Schedule on G202	
PL-1	Plastic Laminate - Color 1	Wilsonart	4880-38	Carbon Mesh	N/A	N/A	
RB	Rubber Base	Ropee	Pinnacle	175 Slate	4"	N/A	
SC	Sealed Concrete	Sherwin Williams	See Paint Schedule on G202	Haze Gray	N/A	See Paint Schedule on G202	Add SharkGrip for added slip resistance
SH	StonHard Flooring	StonHard	N/A	N/A	N/A	N/A	Provided and installed by (Others)

Finish Schedule for Additional Items					
1.	Doors & Frames: Paint P-3	8.	Stairs & Railings & Swing Gates (if required): P-5	15.	Coping Cap: Match roof color
2.	Bollards & Dumpster Posts: P-6	9.	Keynote 16 & 17: P-1	16.	Door Hardware: Satin Chrome
3.	Exterior Pole Sign: By others.	10.	Keynote 19: P-3	17.	Window Gaskets: Light Gray
4.	Downspouts/Gutters: Match Roof Color	11.	Keynote 15: P-1	18.	Exterior Aluminum Storefront & Door: Clear Anodized
5.	Electrical covers to be brushed aluminum	12.	Knox Box: Aluminum	19.	Abrasive Nosing: Safety Yellow
6.	Paint all louvers to match adjacent finish	13.	Roof: Royal Blue (Berridge)	20.	Overhead Door: White
7.	Epoxy Floor Grout used with CT: MAPEI 47 Charcoal	14.	Soffit: P-1	21.	Interior Aluminum Storefront & Door: Clear Anodized
		22.	Chair Rail: Stainless Steel by others	23.	Word Wall: P-3
		24.	Canopy: Pantone 425C	25.	Dumpster Gate / Frame: P-3
		26.	Frieze Board: P-1	27.	Lintel at OH Doors: P-1

Finish Schedule										
Number	Name	Area	Floor Finish	Base Finish	Walls				Ceiling Finish	Remarks
					Rear (North)	Right (East)	Front (South)	Left (West)		
1	Service Writing	145 SF	CT	CT	Storefront	P-1, P-2, P-3	Storefront & P-1, P-2, P-3	P-1, P-2, P-3	P-7	See G301 for paint patterns
2	Waiting Room	129 SF	CT	CT	P-3 & Vinyl Graphics (By Others)	P-1, P-2, P-3	Storefront	P-1, P-2, P-3	P-7	See G301 for paint patterns. Word Wall (with Vinyl Graphics (By Others)) to be painted P-3
3	Toilet	43 SF	CT	CT	CT & P-3	CT & P-3	CT & P-3	CT & P-3	P-7	Ceramic tile wainscot 4'-4" high.
4	Manager	51 SF	SC	RB	P-3	P-3	P-3	P-3	P-7	
5	Oil Change	1271 SF	SH	None / RB	P-3	P-1, P-4	P-3	P-1, P-4 & Vinyl Graphics (By Others)	P-7	Rubber base on gypsum board walls only. See G301 for paint patterns.
6	Corridor	94 SF	SC	RB	P-1	P-1	P-1	P-1	P-7	
7	Break Room	65 SF	SC	RB	P-3	P-3	P-3	P-3	P-7	
8	Toilet	43 SF	CT	CT	CT & P-3	CT & P-3	CT & P-3	CT & P-3	P-7	Ceramic tile wainscot 4'-4" high.
9	Service	2485 SF	SC	None / RB	P-3	P-1, P-4 & Vinyl Graphics (By Others)	P-3	P-1, P-4	P-7	Rubber base on gypsum board walls only. See G301 for paint patterns.
10	Storage	220 SF	SC	None / RB	P-3	P-1, P-4	P-1, P-4	None	P-7	
11	Pit	1218 SF	SC	None	None	None	None	None	N/A	Paint all structural steel in Pit P-5 Safety Yellow.
12	Storage	500 SF	SC	None	Fence	P-3	P-3	P-3	P-7	
13	Storage	258 SF	SC	None	P-3	P-3	Fence	P-3	P-7	



FINAL

No.	Description	Date

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Finish Schedules & Head, Jamb, and Sill Details

Project number 24005
Date 5/15/2024
Drawn by ARC
Checked by N/A

A621

Scale As indicated



1 02_3D View Front (South)

*See Civil for actual site conditions, including dumpster enclosure location.



2 03_3D View Rear (North)

*See Civil for actual site conditions, including dumpster enclosure location.

Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

FINAL

No.	Description	Date

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3D Views

Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A

R100

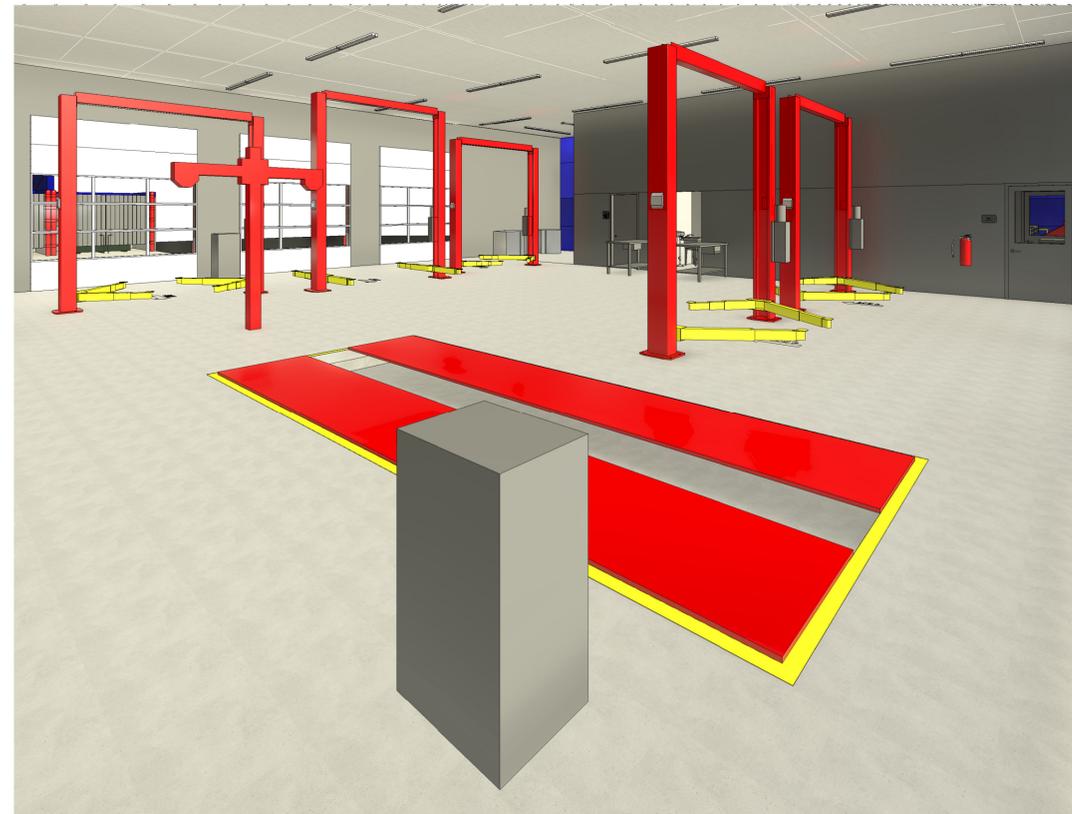
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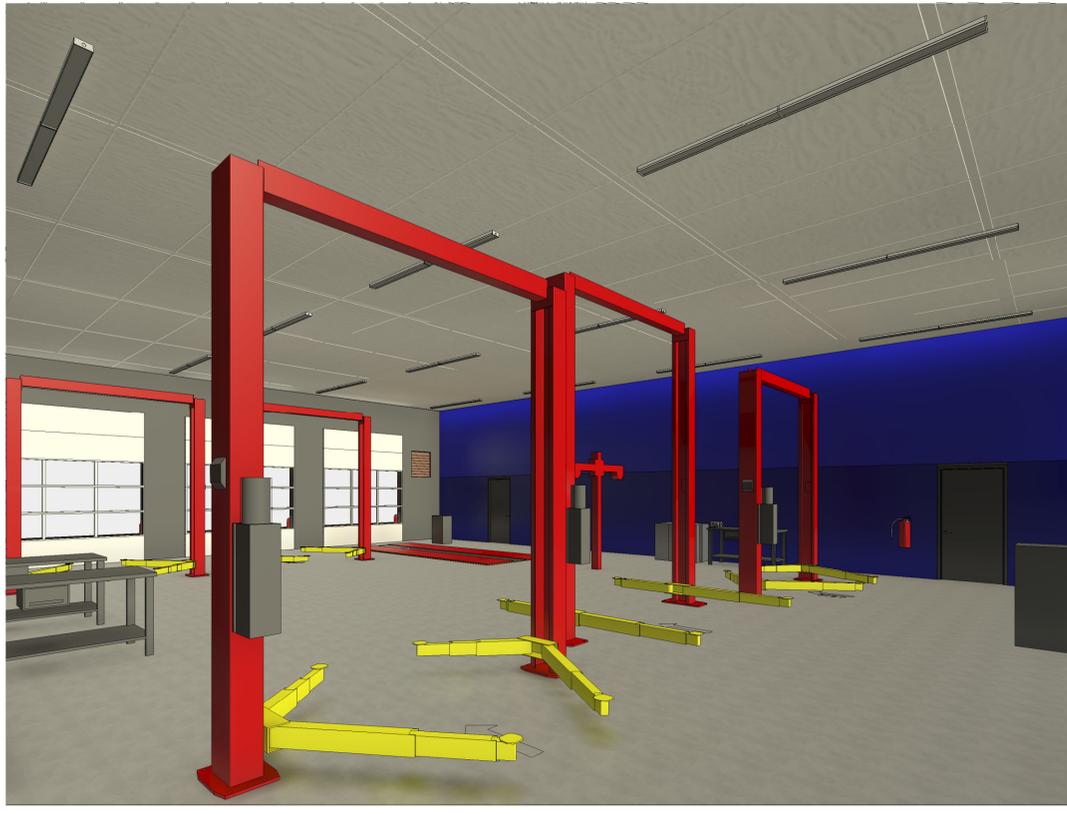
1 04_3D View_Oil Change A



2 05_3D View_Oil Change B



3 06_3D View_Service Bay A



4 07_3D View_Service Bay B

Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

FINAL

No.	Description	Date

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3D Views

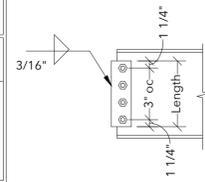
Project number	24005
Date	5/15/2024
Drawn by	ARC
Checked by	N/A

R101

Scale

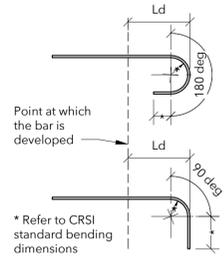
Shear Plate Connection Schedule

Length	# of bolts	End reaction	Min plate thickness
6"	2	8.2k	1/4"
9"	3	16.3k	1/4"
12"	4	26.1k	1/4"
15"	5	36.3k	1/4"
18"	6	46.3k	1/4"
21"	7	56.4k	1/4"



Reinforcing Steel Lap Splice & Development Length for Concrete Masonry

Bar Size	Bar in center of wall			Bar in each face of wall
	6" CMU	8" CMU	12" CMU	
#3	16"	16"	16"	16"
#4	21"	21"	21"	30"
#5	32"	26"	26"	46"
#6	61"	43"	40"	85"
#7	NA	60"	46"	115"
#8	NA	NA	61"	NA



- Notes:
- Lengths are for vertical splices in walls.
 - Bar length for center of wall are based on f'm of 1500 psi or greater.
 - Bar length for face of wall are based on f'm of 2000 psi or greater.
 - Refer to General Notes and details for masonry strength.

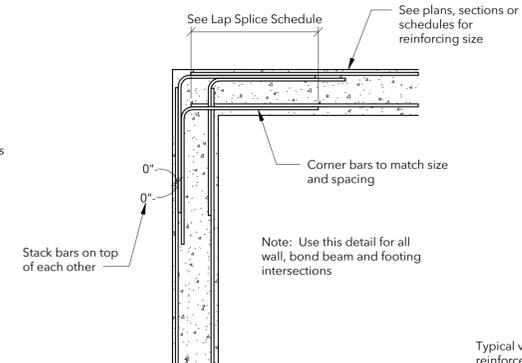
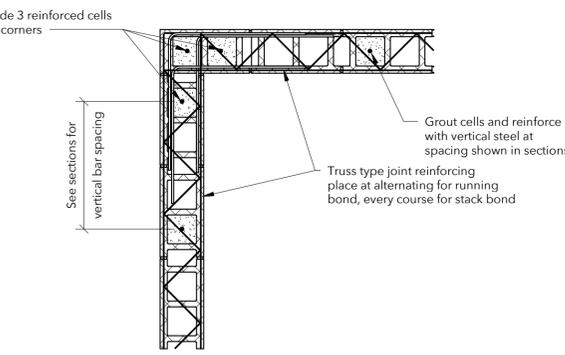
Components and Cladding Schedule a = 5.5'

Area(sf)	Zone 1, 2, 3 (+) (psf)	Zone 1 (-) (psf)	Zone 2, 3 (-) (psf)	Zone 4, 5 (+) (psf)	Zone 4 (-) (psf)	Zone 5 (-) (psf)
10	29.4	-32.1	-37.5	32.1	-34.8	-43.0
50	27.5	-28.3	-33.7	28.8	-31.5	-36.3
100	26.7	-26.7	-32.1	27.3	-30.0	-33.4

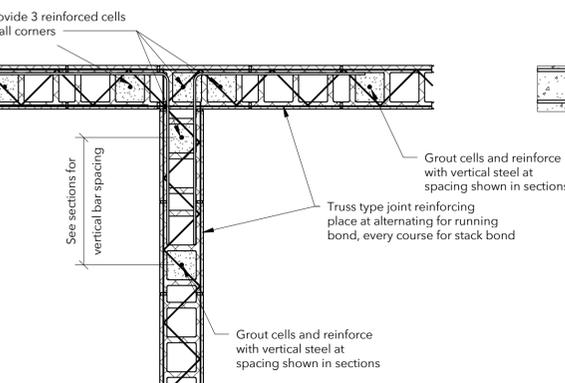
Reinforcing Steel Lap Splice Lengths

Bar Size	Column Splices	Bm, Ftg & Wall Splices	
		Top Bars	Other Bars
#3	12"	19"	15"
#4	15"	25"	19"
#5	19"	31"	24"
#6	23"	37"	29"
#7	26"	54"	42"
#8	30"	62"	48"
#9	34"	70"	54"
#10	38"	79"	61"
#11	42"	87"	67"

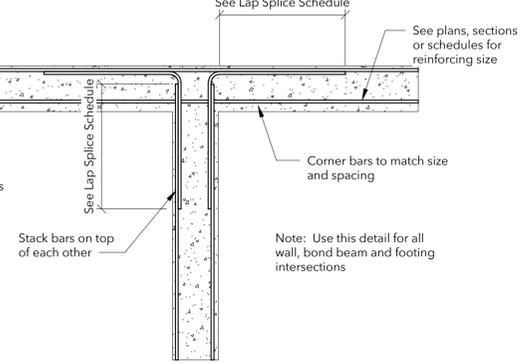
- Notes:
- Top bars are any horizontal reinforcing steel that has another layer of steel more than 2" below the bars or reinforcing steel that has more than 12" of concrete below the bars.
 - All horizontal reinforcing bars in walls may be detailed as "Other Bars".
 - All corner bars may be detailed as "Other Bars".



Typical Joint Reinforcing at Corner



Typical Beam, Wall or Footing Reinforcing at Intersections



Typical Joint Reinforcing at Intersection

Typical Beam, Wall or Footing Reinforcing at Intersections

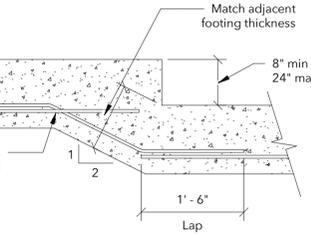
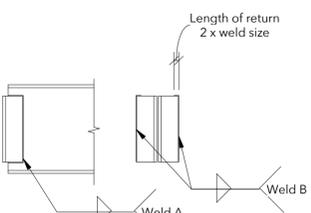
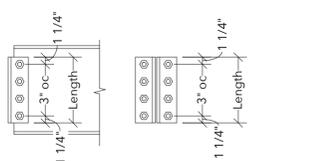
Frame Connection Schedule

Length	# of bolts	End reaction	Min angle thickness
5-1/2"	2	37.1k	5/16"
8-1/2"	3	55.3k	5/16"
11-1/2"	4	72.7k	5/16"
14-1/2"	5	88.7k	5/16"
17-1/2"	6	104.0k	5/16"

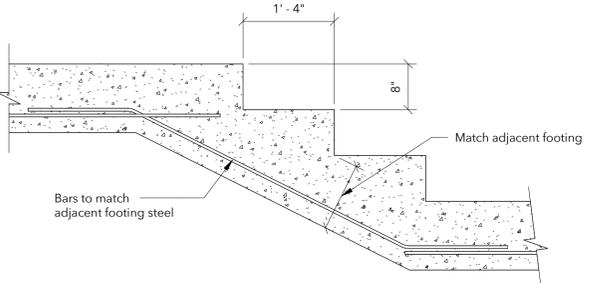
Length	Size of Weld A	End reaction	Min angle thickness
5-1/2"	3/16"	37.1k	5/16"
8-1/2"	3/16"	55.3k	5/16"
11-1/2"	3/16"	72.7k	5/16"
14-1/2"	3/16"	88.7k	5/16"
17-1/2"	3/16"	104.0k	5/16"

Length	Size of Weld B	End reaction	Min angle thickness
5-1/2"	1/4"	14.6k	5/16"
8-1/2"	1/4"	32.2k	5/16"
11-1/2"	1/4"	53.4k	5/16"
14-1/2"	1/4"	76.6k	5/16"
17-1/2"	1/4"	101.0k	5/16"

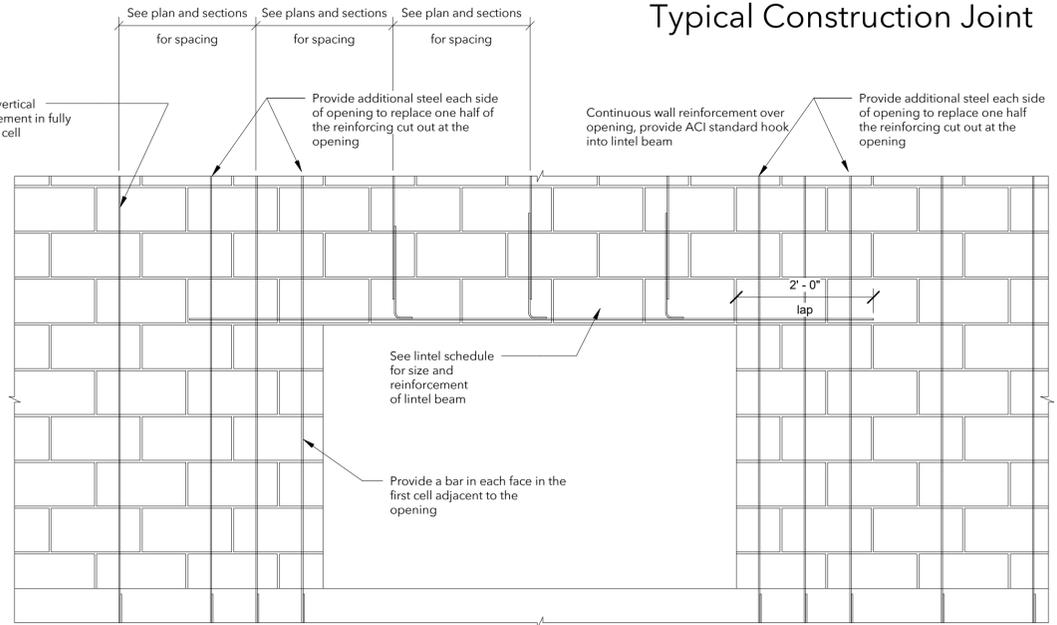
Depth of beam	Min length of angle	Depth of beam	Min Length of angle
W12	5-1/2"	W24	11-1/2"
W14	5-1/2"	W27	11-1/2"
W16	5-1/2"	W30	14-1/2"
W18	8-1/2"	W33	14-1/2"
W21	8-1/2"	W36	17-1/2"



Single Footing Step

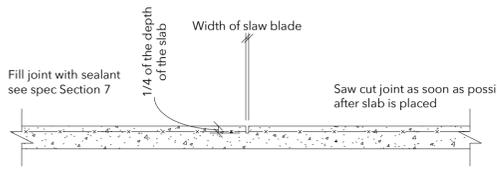


Multiple Footing Step

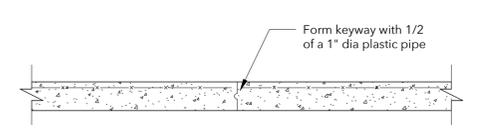


CMU Lintel Elevation

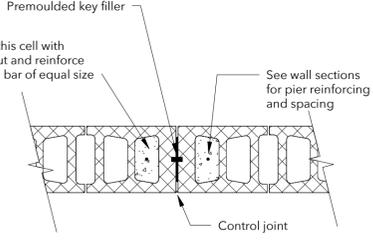
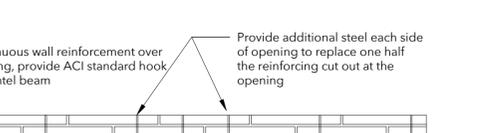
Typical Anchor Bolt Detail Typical Base Plate



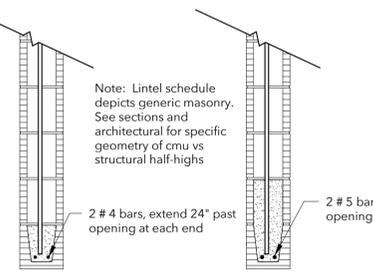
Typical Control Joint



Typical Construction Joint

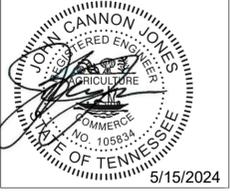


Typical Masonry Wall Control Joint



CMU Lintel Schedule

Less than 4'-0" Less than 8'-0"
 See sections on S5.1 for overhead door lintel

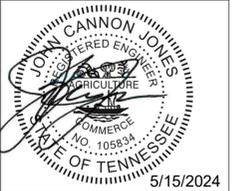


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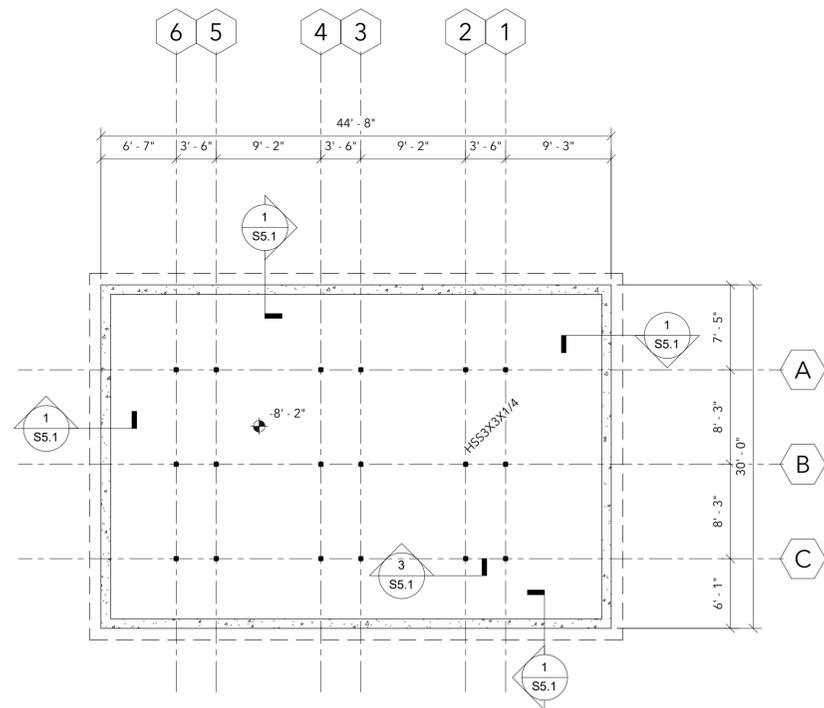
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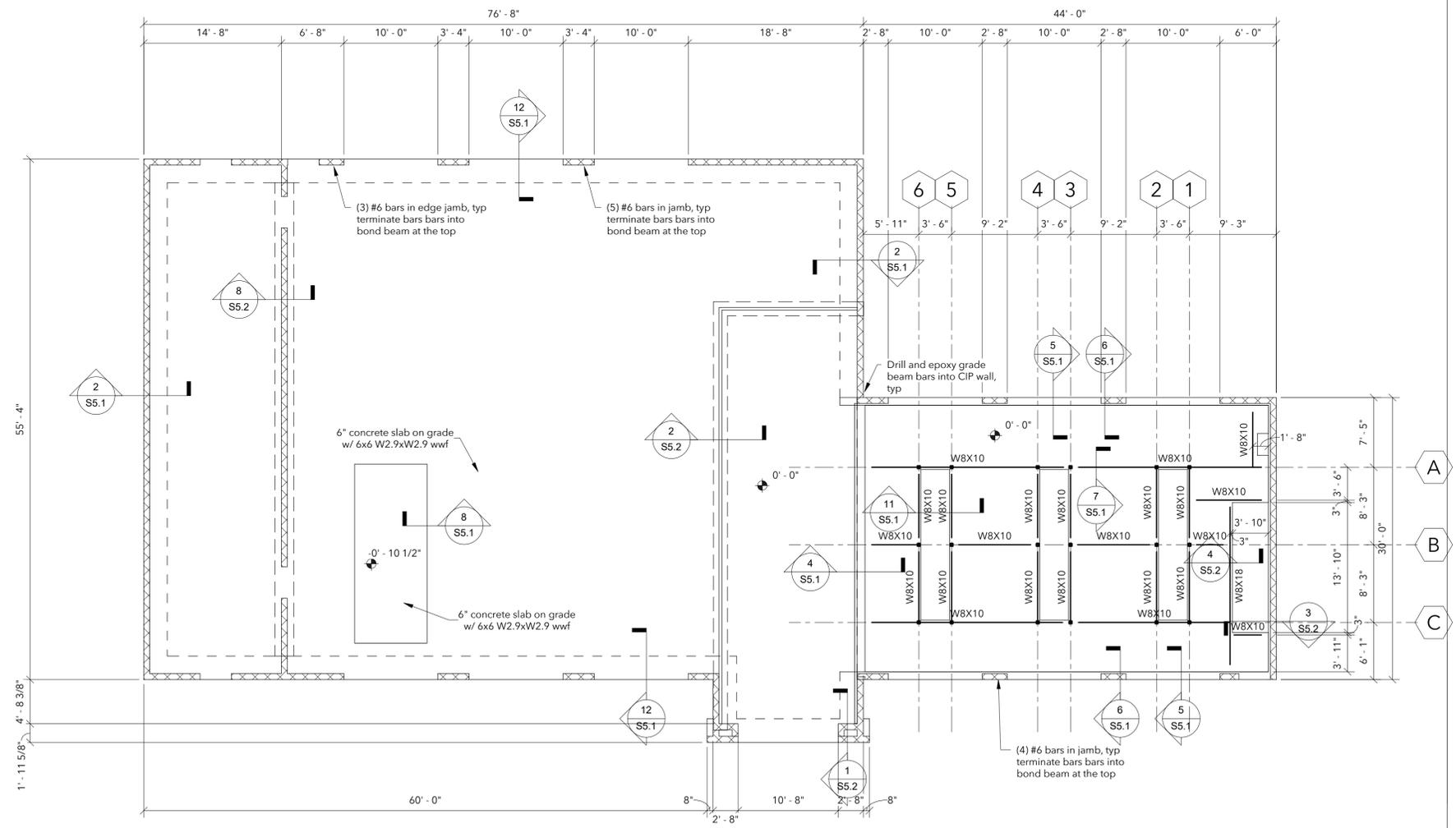
Typical Details	
Project number	24005
Date	5/15/2024
Drawn by	jcj
Checked by	jd
S0.2	
Scale	3/4" = 1'-0"



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PIT FOUNDATION PLAN
 1/8" = 1'-0"



FOUNDATION PLAN
 1/8" = 1'-0"

- Sheet Notes:**
- See Sheet No S0 for typical details and general notes.
 - Reference all elevations to finish floor elevation (+) 0'-0".
 - Floor construction 3" concrete slab with 6x6 W2.9xW2.9 wwf over 2" x 20 ga. galvanized composite metal deck. Total slab thickness = 5". Provide 5/8" dia puddle welds on 36/4 pattern w/ (3) #12 TEK screw sidelap fasteners per span.
 - All steel beam reactions shall be designed for 10 kips (ASD) unless noted otherwise.
 - Refer to architectural for all dimensions, slopes, elevations, etc. not illustrated on this plan. Coordinate all final dimensions and elevations with architectural.

FINAL

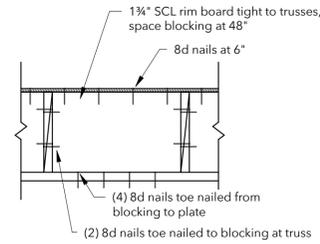
No.	Description	Date

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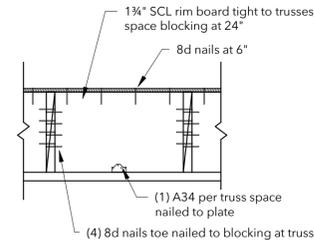
Foundation Plan	
Project number	24005
Date	5/15/2024
Drawn by	jcj
Checked by	jd
S1.1	
Scale	As indicated



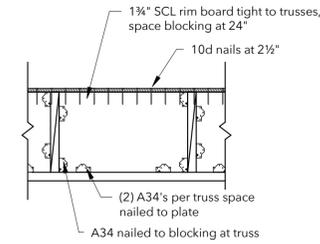
See roof plan for location/extents of blocking conditions



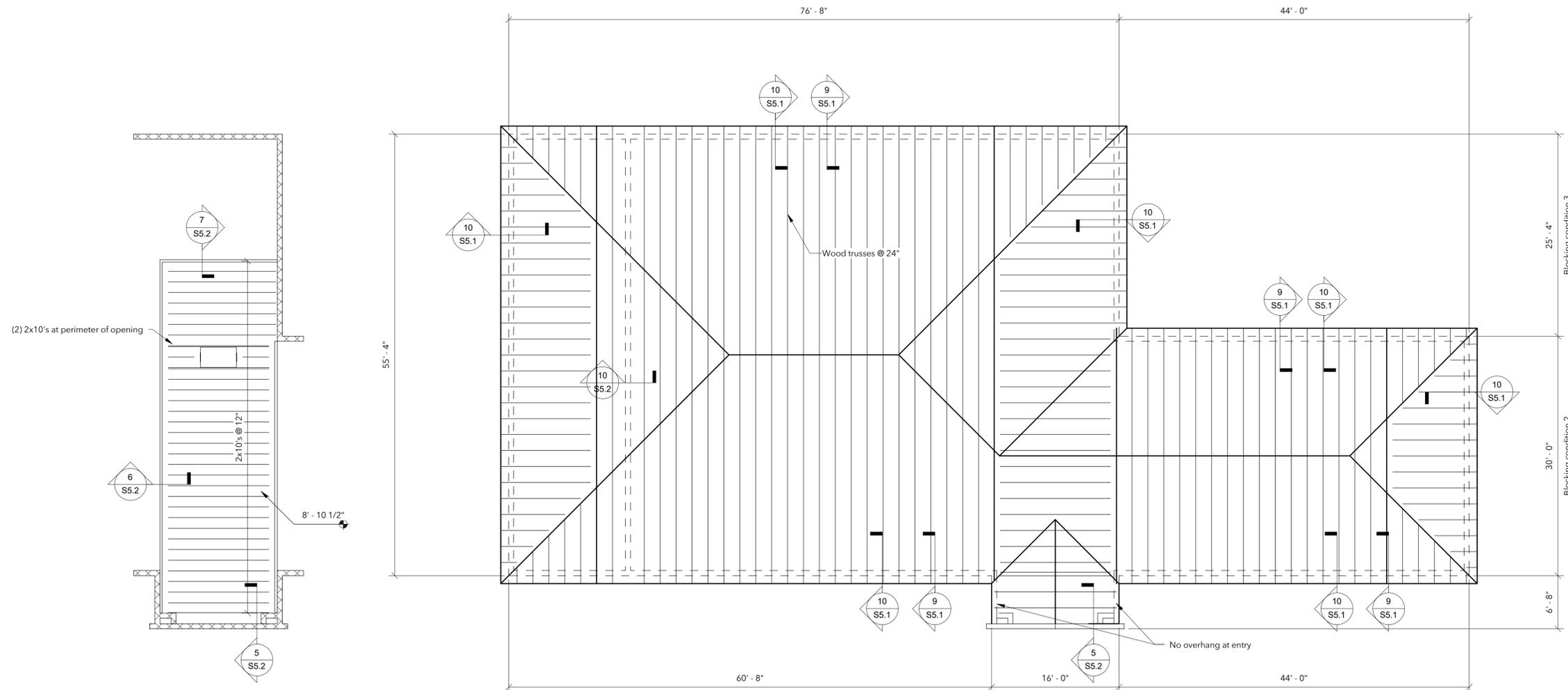
Condition 1
 Typical applies everywhere except where condition 2 and 3 are noted in plan



Condition 2



Condition 3



EQUIPMENT PLATFORM FRAMING PLAN
 1/8" = 1'-0"

ROOF FRAMING PLAN
 1/8" = 1'-0"

Sheet Notes:

1. See Sheet No S0.x for typical details and general notes.
2. Reference all elevations to finish floor elevation (+) 0'-0"
3. Truss bearing elevation = (+) 15'-5 1/2"
4. Roof slope = 8"/12", unless noted
5. Roof construction 5/8" plywood deck with H-clips. Attach with 8d nails @ 6" o.c..
6. Refer to architectural drawings for all dimensions, slopes, elevations, etc... not illustrated on this plan. Coordinate all final dimensions and elevations with architectural.
7. Truss loading: Top Chord Dead Load = 10 psf, Bottom Chord Dead Load = 10 psf, use Total dead load = 10psf for wind load calculations.
8. Truss requirements: (note that all of these requirements must be included in the truss submittal prior to receiving approval)
 - a) Furnish design calculations sealed by a Professional Engineer licensed in the state of that the project is located for all truss members.
 - b) Truss manufacturer shall specify and provide all truss to truss and truss bearing connections, and not contain mention of "by others" in relation to design.
 - c) Truss manufacturer shall be responsible for providing and illustrating all temporary and permanent bracing required.

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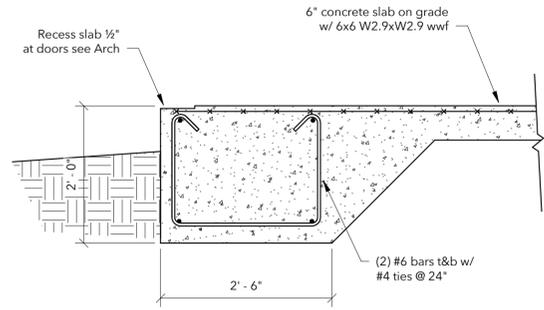
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Roof Framing Plan

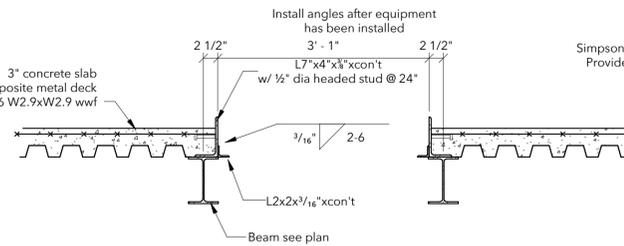
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Date	5/15/2024
Drawn by	jcj
Checked by	jd

S3.1

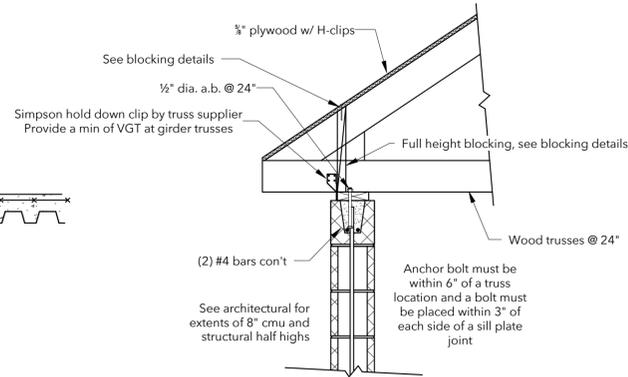
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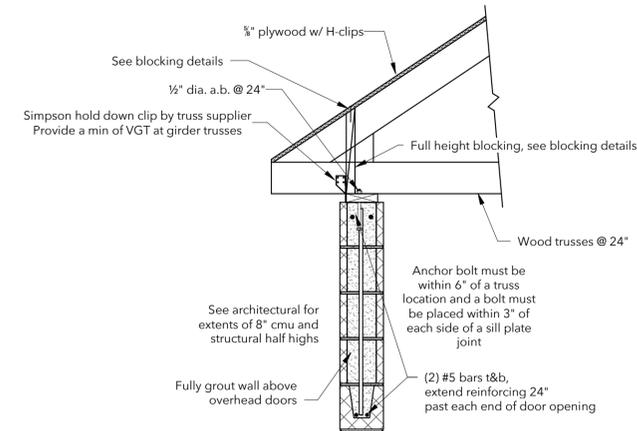
Section 12
3/4" = 1'-0"



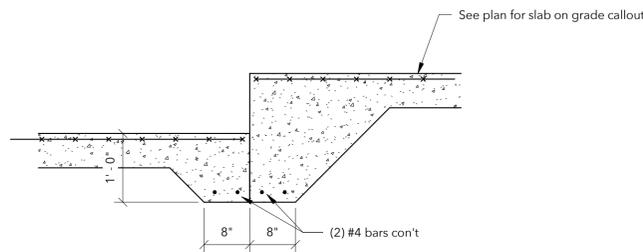
Section 11
3/4" = 1'-0"



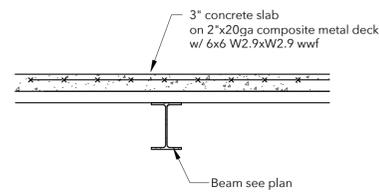
Section 10
3/4" = 1'-0"



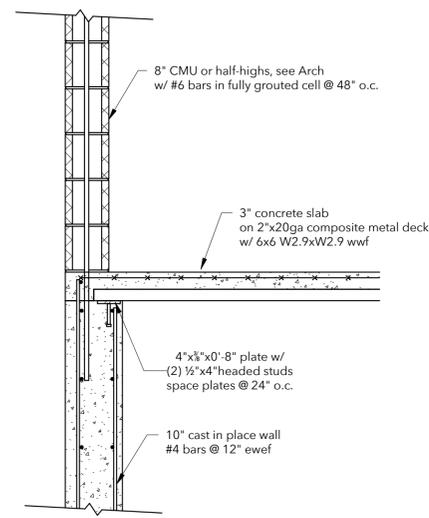
Section 9
3/4" = 1'-0"



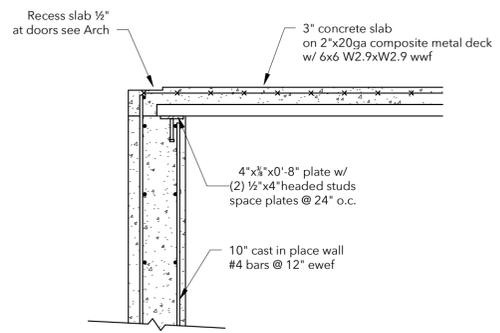
Section 8
3/4" = 1'-0"



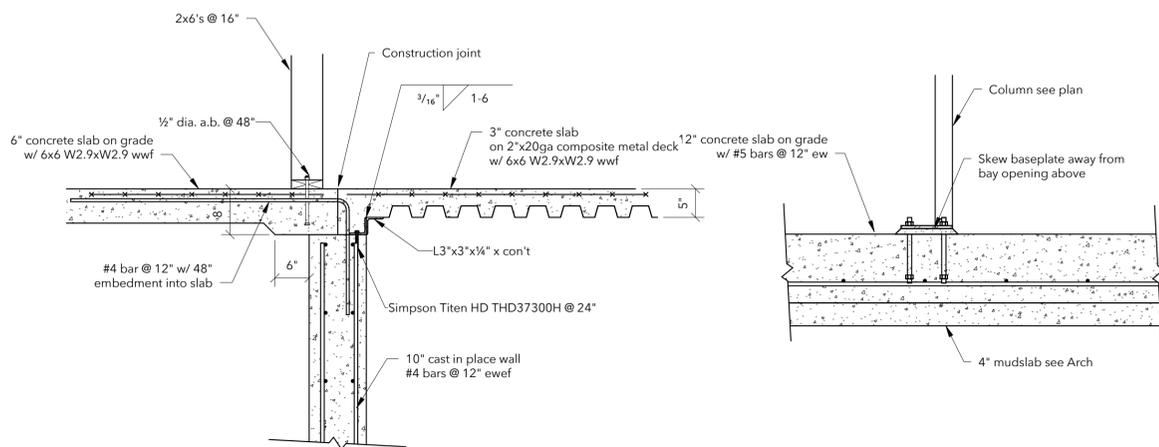
Section 7
3/4" = 1'-0"



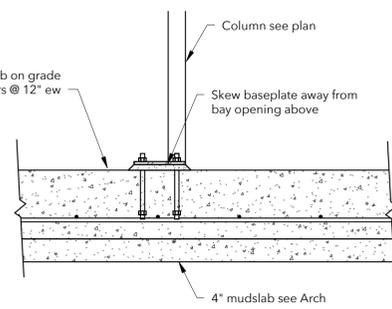
Section 6
3/4" = 1'-0"



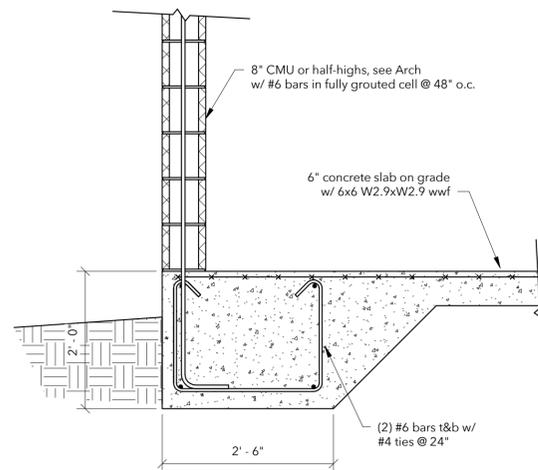
Section 5
3/4" = 1'-0"



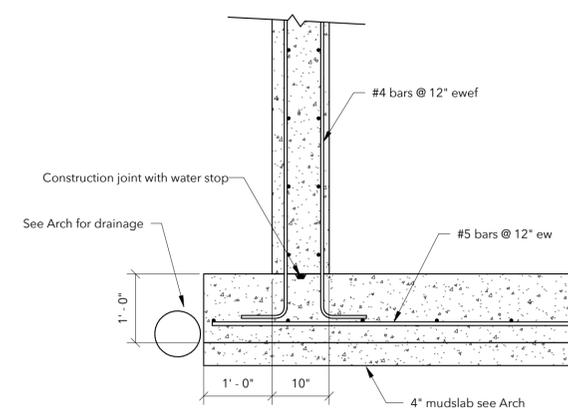
Section 4
3/4" = 1'-0"



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



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



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

Express Oil Change & Tire Engineers

Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage

Sevierville, Tennessee

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Sections and Details

Project number	24005
Date	5/15/2024
Drawn by	jcj
Checked by	jd

S5.1

Scale 3/4" = 1'-0"



Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Sevierville, Tennessee

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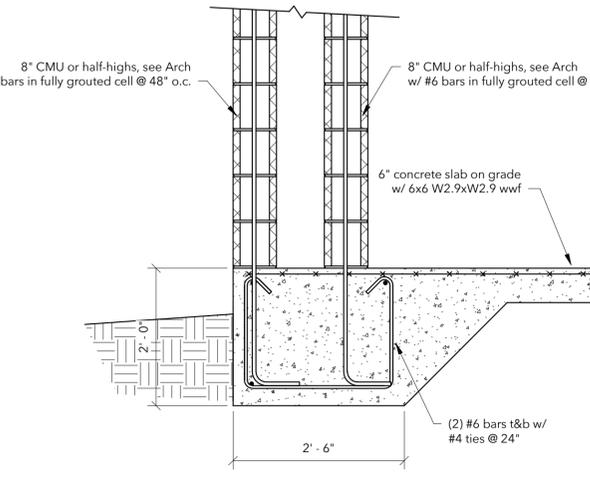
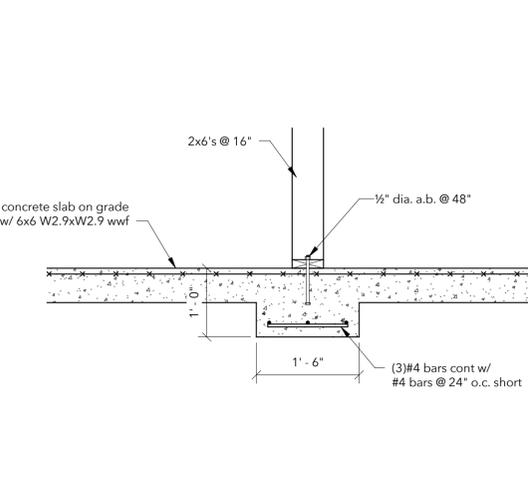
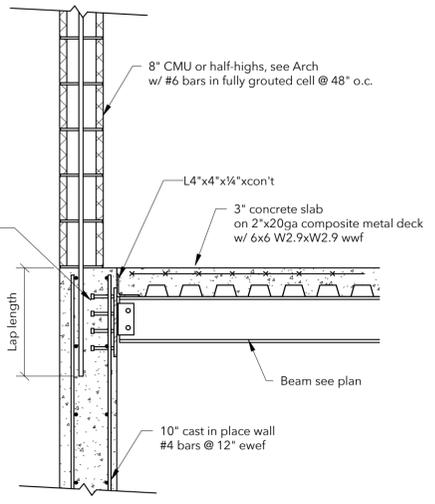
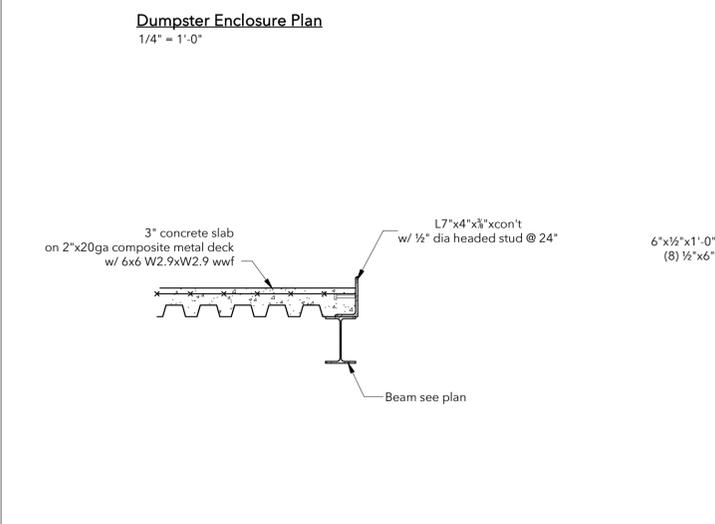
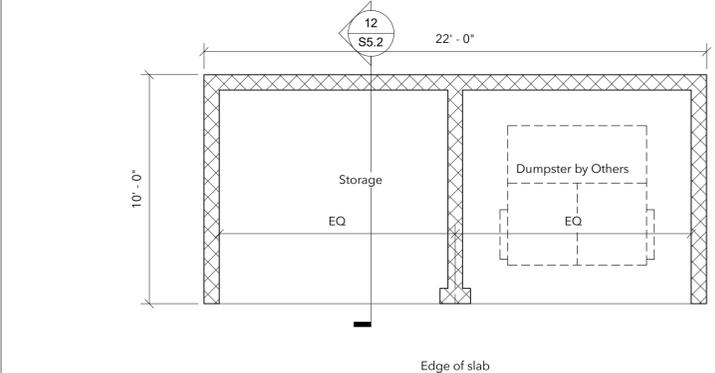
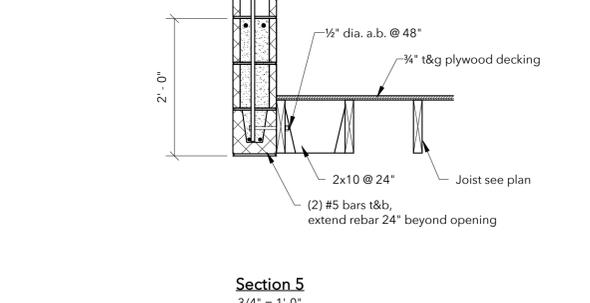
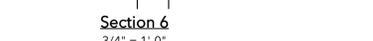
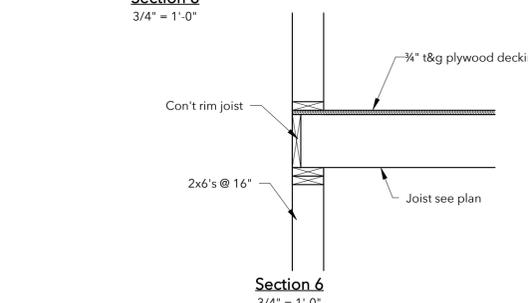
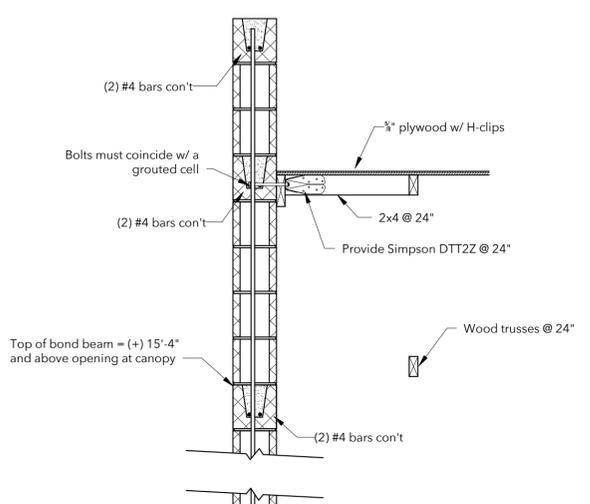
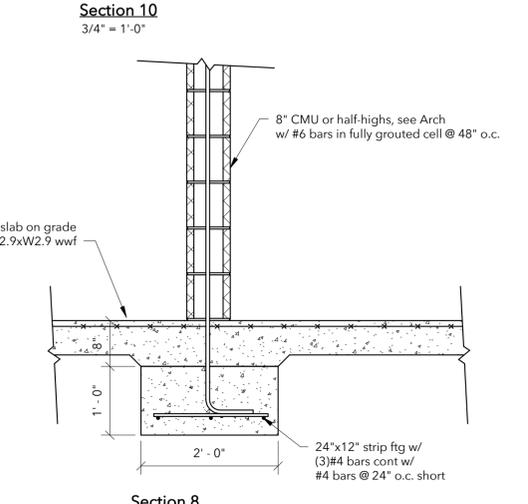
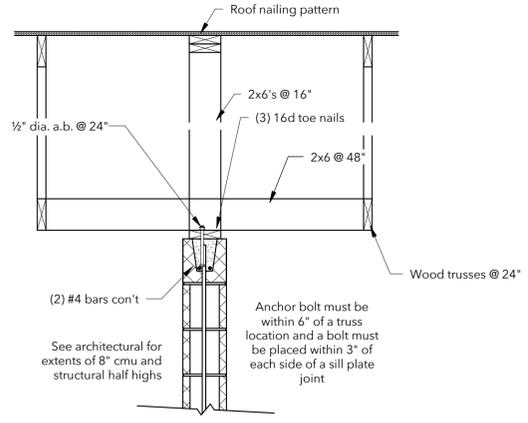
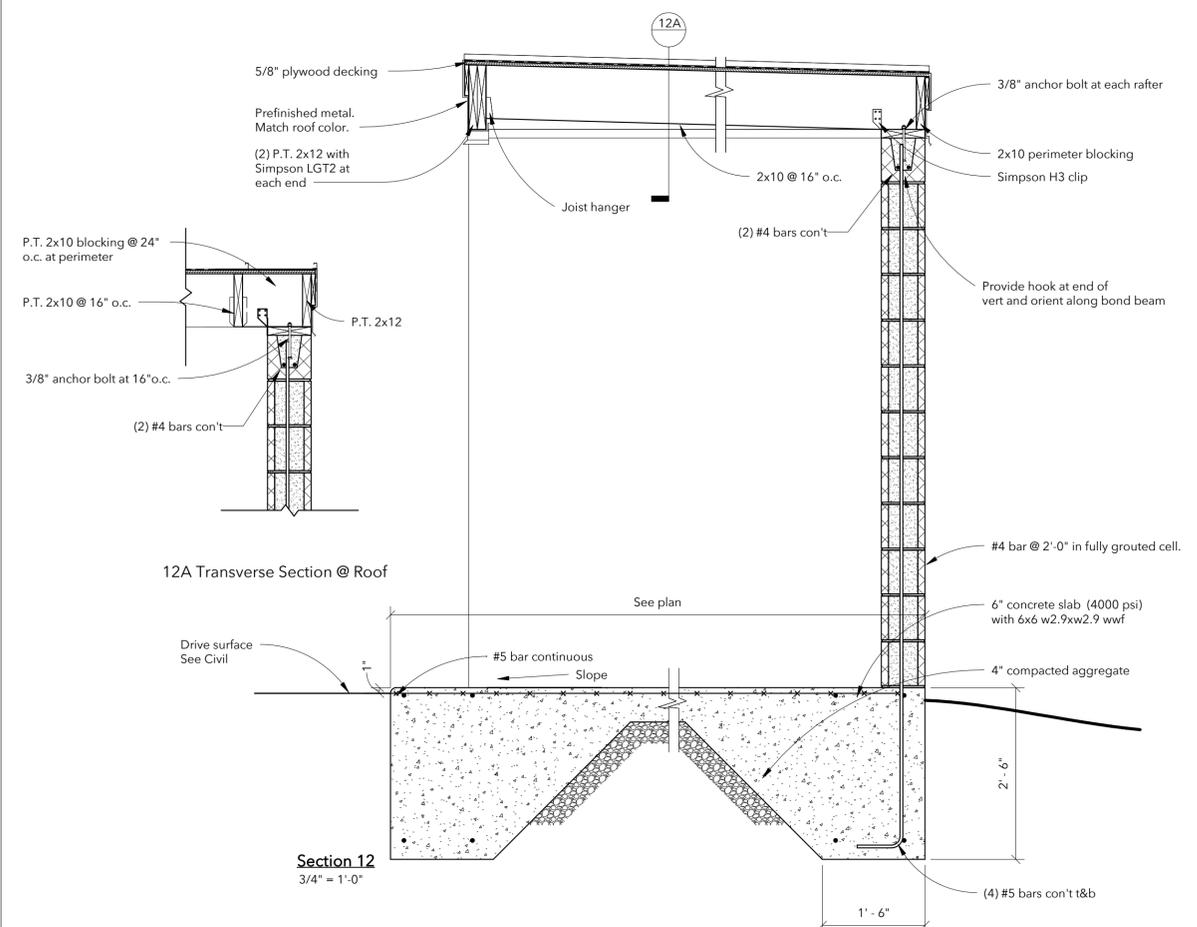
No.	Description	Date

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Sections and Details

Project number	24005
Date	5/15/2024
Drawn by	jcj
Checked by	jd

S5.2
 Scale As indicated



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

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

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

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

SECTION 15010 - MECHANICAL GENERAL

- A. PROVIDE EQUIPMENT, LABOR, MATERIAL, ETC., REQUIRED TO MAKE A COMPLETE WORKING INSTALLATION.
- B. INSTALL THE WORK IN ACCORDANCE WITH DRAWINGS, SPECIFICATIONS AND THE STANDARDS AND CODES (LATEST EDITION) THAT APPLY TO THIS WORK. IN THE EVENT OF A CONFLICT, THE LATEST WORK IN ACCORDANCE WITH THE MOST STRINGENT CODE REQUIREMENTS SHALL BE DEVELOPED BY THE ENGINEER.
- C. OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS INCLUDING: BUILDING PERMITS, HEALTH DEPARTMENT PERMITS AND SEWER TAP PERMITS. DELIVER TO ENGINEER CERTIFICATES OF INSPECTION AND APPROVAL ISSUED BY AUTHORITIES.
- D. ALL EQUIPMENT AND METHOD SHALL BE INSTALLED AND CONNECTED IN ACCORDANCE WITH THE BEST ENGINEERING PRACTICES AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- E. DISCONNECT, REMOVE AND RE-INSTALL MECHANICAL SERVICES LOCATED ON OR CROSSING THROUGH CONTACT LIMITS, ABOVE OR BELOW GRADE, OBSTRUCTING CONSTRUCTION OF PROJECT OR CONFLICTING WITH COMPLETED PROJECT OR ANY APPLICABLE CODES.
- F. DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY. WORK CALLED FOR BY ONE IS BINDING AS IF CALLED FOR BY BOTH.
- G. DRAWINGS ARE DRAIN TO A SMALL SCALE AND ARE DIAGRAMMATIC ONLY. THE DRAWINGS INDICATE SIZE AND GENERAL ARRANGEMENT OF EQUIPMENT. DO NOT SCALE DRAWINGS FOR EXACT LOCATIONS. FIELD MEASUREMENTS TAKE PRECEDENCE.
- H. PROVIDE NECESSARY OFFSETS, ELBOWS AND FITTINGS AS REQUIRED TO AVOID CONFLICT WITH EQUIPMENT OF OTHER DIVISIONS AND TO OBTAIN PROPER HEADROOM AND CLEAR PASSAGEWAYS. THIS SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
- I. WORK UNDER THIS DIVISION SHALL BE FIRST CLASS WITH EMPHASIS ON NEATNESS AND WORKMANSHIP. INSTALL WORK USING COMPETENT MECHANICS, UNDER SUPERVISION OF FOREMAN, ALL DULY CERTIFIED BY LOCAL AUTHORITIES.
- J. INSTALLATION SUBJECT TO ENGINEER'S OBSERVATION, FINAL APPROVAL, AND ACCEPTANCE. ENGINEER MAY REJECT UNSUITABLE WORK.
- K. ALL MATERIALS SHALL BE OF THE BEST ALL MATERIALS AND EQUIPMENT FOR WHICH A UL STANDARD, AN AGA APPROVAL, AN ANWIA STANDARD, FM LISTING OR ASME REQUIREMENTS IS ESTABLISHED. SHALL BE SO APPROVED AND LABELED OR STAMPED.
- L. THE DRAWINGS ARE BASED ON THE USE OF PRODUCTS SPECIFIED AND LISTED FIRST. IF ANY REVISION IN PIPING, CONDUIT WORK, FOUNDATIONS, ANCHOR BOLTS, CONNECTIONS, ETC., IS REQUIRED BY OTHER NAMED PRODUCTS OR APPROVED SUBSTITUTIONS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE SUCH REVISIONS AT NO ADDITIONAL EXPENSE TO THE OWNER.
- M. SUBMIT SIX (6) ORIGINAL COPIES AND COMPLETE SHOP DRAWINGS FOR ALL MATERIALS AND EQUIPMENT FURNISHED UNDER DIVISION 15 OF SPECIFICATIONS TO ENGINEER FOR REVIEW. SHOP DRAWINGS SHALL BEAR THE STAMP OF APPROVAL OF THE CONTRACTOR AS EVIDENCE THAT THE DRAWINGS HAVE BEEN CHECKED BY HIM. DRAWING SUBMITTED WITHOUT THIS STAMP OF APPROVAL WILL NOT BE CONSIDERED AND WILL BE RETURNED FOR PROPER RESUBMISSION.
- N. REVIEW OF SHOP DRAWINGS DOES NOT RELIEVE CONTRACTOR OF RESPONSIBILITY FOR ERRORS AND OMISSIONS IN SHOP DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS AND SIZES OF EQUIPMENT. INFORM ENGINEER IN WRITING OF EQUIPMENT DIFFERING FROM THAT SHOWN.
- O. PROVIDE MAINTENANCE AND OPERATING MANUALS BOUND IN 8-1/2" X 11" HARDBACK, THREE-POST BINDERS. MANUALS SHALL CONTAIN WRITTEN INSTRUCTIONS FOR EACH SYSTEM, SHOP DRAWINGS, SCHEMATIC DRAWINGS, EQUIPMENT CATALOG CUTS, MANUFACTURER'S INSTRUCTIONS, MANUFACTURER'S WARRANTIES, AND VALVE TAG LIST.
- P. PROVIDE AS-BUILT PRINTS AT THE COMPLETION OF JOB. KEEP ONE SET OF PRINTS ON JOB AND RECORD DAY TO DAY CHANGES TO CONTRACT DRAWINGS WITH RED PENCIL. INDICATE ACTUAL LOCATION OF PIPING, DUCTWORK, VALVES, DAMPERS, AND EQUIPMENT. TURN OVER PRINTS TO ENGINEER AT FINAL OBSERVATION.
- Q. FURNISH WARRANTY, STATING THAT IF WORKMANSHIP IS DEFECTIVE WITHIN 1 YEAR AFTER FINISH, WORK EXECUTED UNDER THIS DIVISION IS PROVEN DEFECTIVE WITHIN ONE (1) YEAR AFTER FINAL ACCEPTANCE, SUCH DEFECTS AND OTHER WORK DAMAGED WILL BE REPAIRED AND/OR REPLACED.

SECTION 15050 - BASIC MATERIALS AND METHODS

- A. CONCRETE HOUSEKEEPING PADS:
 1. PROVIDE CONCRETE HOUSEKEEPING PADS UNDER ALL FLOOR MOUNTED EQUIPMENT. PIPE SUPPORT AND DUCT SUPPORTS AND WHERE INDICATED. CONCRETE SHALL BE 3000 PSI AT 28 DAYS MINIMUM.
 2. PADS SHALL BE DOWELED TO FLOOR WITH NOT LESS THAN 4 NO. 4 BARS GROUDED IN PLACE AND EQUIPMENT SHALL BE ANCHORED TO PADS WITH 3/8" DIA. ANCHOR BOLTS. PADS SHALL BE REINFORCED WITH AT LEAST ONE NO. 4 BAR (STIRRUPS). PADS SHALL HAVE CHAMFERED EDGES AND A BROOM FINISH.
 3. HOUSEKEEPING PADS SHALL BE NOT LESS THAN 3-1/2 IN. THICK, SIZED AT LEAST 8 IN. LARGER THAN THE EQUIPMENT.
- B. ACCESS PANELS:
 1. ACCESS PANELS SHALL HAVE WELDED STEEL FRAME, ONE PIECE DOORS, AND SELF LATCHING DOOR LOCKS. LOCKS DRIVER OPERATED WITH CASE HARDENED STEEL CAM. PANELS SHALL BE MILCOR, CESCO, KARP OR EQUAL.
 2. PROVIDE ACCESS PANELS IN WALLS AND CEILINGS AS NEEDED TO ALLOW ACCESS TO VALVES, EQUIPMENT, SHOCK ABSORBERS, TRAP PRIMERS, ETC. AND WHERE NOTED.
- C. FIRESTOPPING AND SOUNDSTOPPING:
 1. PENETRATIONS THROUGH FLOORS AND FIRE RESISTANT WALLS SHALL BE SEALED TO THE RATED FIRE RESISTANCE EQUAL TO THE WALL. INSTALLATION SHALL BE DONE BY A QUALIFIED INSTALLER, APPROVED BY THE MANUFACTURER.
 2. PENETRATIONS THROUGH FLOORS AND FIRE RESISTANT WALLS SHALL BE SEALED AT THE END OF EACH WORKING DAY. THESE CLOSURES SHALL HAVE AN EQUAL FIRE RESISTANCE RATING TO THE FLOOR OR WALL.
- D. PIPING SEALS:
 1. PROVIDE MODULAR, RESILIENT SEALS AROUND PIPES PENETRATING ALL EXTERIOR WALLS, AND FLOORS BELOW GRADE. PIPING SEALS SHALL BE THUNDERLINE CORP. "LINK SEAL" LS SERIES.
- E. CUTTING AND PATCHING:
 1. CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING. CUT WALLS, FLOORS, CEILINGS, PARTITIONS, ETC., REQUIRED FOR THE INSTALLATION OF THIS WORK IN A NEAT AND CAREFUL MANNER. CORE DRILL FOR PIPE SLEEVES AND OTHER OPENINGS THROUGH FLOORS AND WALLS, SAWCUT LARGER OPENINGS. CUTTING SHALL BE KEPT TO A MINIMUM.
 2. REPLACE OR REPAIR DUCTWORK, CONDUIT, PIPING, ETC., THAT IS CUT. PATCH AROUND OPENING CUT BY THIS CONTRACTOR OR PROVIDED BY OTHERS FOR HIM. PATCHING SHALL BE DONE BY AN APPROVED QUALIFIED CONTRACTOR, BUT SHALL BE PAID FOR BY THIS CONTRACTOR. FINISHED PATCHING SHALL MEET THE SAME FIRE AND SMOKE RATINGS OF THE ASSEMBLY AND SHALL MATCH SURROUNDING FINISH.
- F. ANCHORS:
 1. MOUNT ALL EQUIPMENT, BRACKETS, HANGERS, ANCHORS, ETC. TO SAFELY RESIST THE VIBRATION OR THRUST FORCES AND SUPPORT THE WEIGHT.
 2. FLOOR MOUNTED ROTATING OR VIBRATING EQUIPMENT SHALL BE ANCHORED TO THE FLOOR USING GROUDED-IN-PLACE OR CAST-IN-PLACE ANCHOR BOLTS WITH THREE INCH HOOK AND SLEEVE. ANCHOR BOLTS SHALL BE OF THE SIZE RECOMMENDED BY THE MANUFACTURER.
 3. FLOOR MOUNTED STATIC EQUIPMENT, WALL AND CEILING MOUNTED EQUIPMENT, BRACKET AND HANGERS SHALL BE INSTALLED USING DRILLED ANCHORS. ANCHORS SHALL BE PHILLIPS DRILL COMPANY "RED HEAD" OR MULTI-SET II. SIZE ANCHORS FOR FOUR TIMES THE APPLIED LOAD. BOLTS USED OUTDOORS OR IN A WET ENVIRONMENT SHALL BE HOT DIP GALVANIZED.
- G. PIPE IDENTIFICATION:
 1. IDENTIFICATION SHALL BE IN ACCORDANCE WITH ANSI-A13.1. PIPE MARKERS SHALL BE SETON'S WEATHER-CODE OR EQUAL.
 2. PROVIDE PIPE MARKERS AND DIRECTIONAL ARROWS ON PIPES AT BOTH SIDES OF PARTITIONS AND FLOORS SLABS. AT BRANCH LINE TAKE-OFFS, AT VALVES, AT INTERMEDIATE INTERVALS NOT IN EXCESS OF 20 FT. AND AT CONNECTIONS TO EQUIPMENT.
 3. TAPE COLOR BAND IDENTIFYING MARKERS AND ARROWS ON EACH PIPE. BOTH INSULATED AND BARE PIPES. PIPE MARKERS AND ARROWS SHALL BE LOCATED WHERE READILY VISIBLE AND ON LOWER QUADRANTS OF OVERHEAD PIPES.
- H. VALVE TAG AND CHART:
 1. VALVE TAGS SHALL BE SETON M4506, BLACK FILLED LETTERS WITH BRASS JACK CHAIN. ONE VALVE NUMBER SHALL BE STAMPED ON EACH TAG. IDENTIFY EACH VALVE TAG FOR THE UTILITY IT SERVES, SUCH AS "CW" FOR COLD WATER, "HW" FOR HOT WATER, ETC. VALVE CHARTS SHALL BE SETON. ATTACH A NUMBERED VALVE TAG TO EACH VALVE.
 2. PROVIDE A TYPE WRITTEN CHART IN FRAME UNDER GLASS COVER, GIVING THE FULL LIST OF ALL VALVES INSTALLED UNDER THIS CONTRACT. CHART SHALL LIST VALVE NUMBER, TYPE OF UTILITY, AND LOCATION. MOUNT CHART WHERE DIRECTED BY OWNER. PROVIDE ONE ADDITIONAL COPY TO OWNER.
- I. EQUIPMENT IDENTIFICATION:
 1. IDENTIFY EACH PIECE OF EQUIPMENT WITH A 1/8 INCH THICK ENGRAVED MELAMINE PLASTIC LAMINATE NAMEPLATE. LETTERS SHALL BE 1/2 INCH HIGH STANDARD STYLE. NAMES, ABBREVIATIONS, AND NUMBERING SHALL AGREE WITH THE CORRESPONDING EQUIPMENT DESIGNATIONS SHOWN ON THE DRAWINGS. USE BLACK LETTERS CUT IN A WHITE BACKGROUND FOR ALL EQUIPMENT ON STANDARD ELECTRICAL POWER.
 2. FASTEN NAMEPLATES TO EQUIPMENT IN A CONSPICUOUS LOCATION USING SELF-TAPPING STAINLESS STEEL SCREWS. EXCEPT USE CONTACT EPOXY ADHESIVE WHERE SCREWS CANNOT OR SHOULD NOT PENETRATE SUBSTRATE.
- J. PIPE SLEEVES:
 1. PROVIDE PIPE SLEEVES WHERE PIPES PASS THROUGH FLOORS AND WALLS ABOVE OR BELOW CEILINGS. PROVIDE PIPE SLEEVES IN NEW WALLS AND FLOORS AS THE WORK PROGRESSES. PROVIDE SPLIT PIPE SLEEVES IN NEW WALLS BUILT UP AROUND EXISTING PIPES. TACK WELD SPLIT SLEEVES TOGETHER.
 2. SIZE PIPE SLEEVES TO ALLOW CONTINUOUS INSULATION, BUT NOT LESS THAN TWO PIPE SIZES LARGER THAN PIPE. SLEEVES IN WALLS SHALL BE FLUSH WITH WALL, SLEEVES IN FLOORS SHALL EXTEND 3/4 INCHES ABOVE FLOOR AND BE FLUSH WITH STRUCTURE BELOW.
 3. SLEEVES IN CONCRETE WALLS, FLOORS OR MASONRY SHALL BE SCH 40 STEEL PIPE, MACHINE CUT. SLEEVES IN GYPSUM BOARD OR PLASTER WALLS SHALL BE 1/4 GAUGE, ROLLED GALVANIZED SHEET METAL TACK WELDED ON THE LONGITUDINAL SEAM.
 4. PROVIDE PLATES AROUND PIPES EXTENDING INTO EXPOSED AREAS WHERE THEY PASS THROUGH WALLS, FLOORS AND CEILINGS. SIZE PLATES TO COMPLETELY COVER PIPE SLEEVES. PLATES SHALL BE BEATON AND CADWELL, KEENEY OR GRINNELL, NICKEL PLATED STEEL. SPLIT PLATES WITH SET SCREW. CONCRETE FLOOR PLATE SHALL BE GRINNELL FIGURE 400.
- K. FLASHING:
 1. PROVIDE FLASHING AT PIPING AND DUCT PENETRATIONS THROUGH ROOF AND ROOF MOUNTED STRUCTURES FURNISHED UNDER THIS DIVISION. FLASH IN ACCORDANCE WITH ROOFING MANUFACTURERS DETAILS. FLASHING MATERIALS SHALL BE IN ACCORDANCE WITH THE ROOFING MANUFACTURERS SYSTEM.
 2. PROVIDE FLASHING AT PIPES PASSING THROUGH FLOORS WITH WATERPROOF MEMBRANE. FLASHING SHALL BE IN ACCORDANCE WITH WATERPROOFING MANUFACTURERS DETAILS.

SECTION 15260 - HVAC INSULATION

- A. GENERAL:
 1. ALL INSULATION, JACKETING, AND ADHESIVE SHALL HAVE COMPOSITE SURFACE BURNING CHARACTERISTIC RATING AS TESTED BY ASTM E 84, UL 723, OR NFPA 255 NOT EXCEEDING A FLAME SPREAD OF 25 OR SMOKE DEVELOPED OF 50.
 2. SUBMITTALS SHALL USE PAGES FROM MIDWEST INSULATION CONTRACTORS ASSOCIATION - COMMERCIAL AND INDUSTRIAL INSULATION STANDARDS@ FOR DEFINING HOW INSULATION MATERIALS WILL BE APPLIED.
 3. ALL PIPE OR DUCT INSULATION SHALL BE CONTINUOUS THROUGH WALLS, CEILING OR FLOOR OPENINGS, OR SLEEVES; EXCEPT WHERE FIRESTOP OR FIRESAFING MATERIALS ARE REQUIRED.
 4. INSULATE ITEMS MOUNTED IN DUCTWORK WITH THE SAME THICKNESS OF INSULATION AS SPECIFIED FOR DUCTWORK. INCLUDING AIR MEASURING STATIONS, SMOKE DAMPERS, AND AUTOMATIC DAMPERS.
 5. REPAIR INSULATION DAMAGED BY WORK UNDER THIS CONTRACT TO MATCH EXISTING WORK OR REPLACE DAMAGED PORTION WITH INSULATION SPECIFIED FOR NEW WORK.
- B. ELASTOMERIC CLOSED CELL INSULATION:
 1. INSULATION SHALL BE RUBATEX OR ARMSTRONG. SECURE INSULATION WITH CONTACT ADHESIVE IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. EXPOSED OR EXTERIOR INSTALLATIONS SHALL BE PAINTED WITH TWO COATS OF WATER BASE LATEX ENAMEL.
 2. PROVIDE 1 IN. THICK INSULATION ON DX REFRIGERANT PIPING, COOLING COIL CONDENSATE PIPING, CHILLED WATER RUN-OUTS TO TERMINAL DEVICES, COVERS AND CAPS FOR ALL VALVE STEMS AND OPERATORS, GAUGE COCKS, THERMOMETER WELLS AND OTHER APPURTENANCES SUBJECT TO SWEATING.
- C. CONCEALED DUCTWORK:
 1. DUCT WRAP SHALL BE 2 IN. THICK, 1.0 PCF WITH ALUMINUM OR FRK FACING, HAVING A MAXIMUM VAPOR TRANSMISSION OF .02 PERMS. MINIMUM INSTALLED "R" VALUE SHALL BE 5.6 WITH 25% COMPRESSION. INSULATION SHALL BE 250 DEG. F RATED AS MANUFACTURED BY OWENS CORNING, MANVILLE, KNAUF, OR CERTAINTED.
 2. APPLY JACKETED DUCTWRAP TO ALL CONCEALED DUCTWORK PROVIDING CONDITIONED AIR, OR OUTSIDE AIR. ONLY INSULATE RETURN DUCTWORK IN NON-CONDITIONED SPACES AND IN CEILING SPACES BELOW A ROOF. PULL INSULATION SNUG, BUT DO NOT COMPRESS INSULATION MORE THAN 1/4 INCH.
 3. SECURE DUCTWRAP INSULATION TO DUCTWORK USING ADHESIVE. SECURE INSULATION ON BOTTOM ON SIDES OF HORIZONTAL DUCTWORK AND ALL SIDES OF VERTICAL DUCTWORK WITH INSULPINS WELDED TO DUCT ON 12 TO 18 INCH CENTERS AND WITH CLIPS SLIPPED OVER THE PINS. APPLY CLIPS WITHOUT COMPRESSING INSULATION. MAKE JOINTS BY LAPPING THE FACING A MINIMUM OF 2 INCH AND STAPLING WITH T-5 FLARED STAPLES. VAPOR - SEAL WITH CHILDERS CP-30 LOW ODOR AT ALL STAPLES, CLIP LOCATIONS AND OTHER PENETRATIONS. SEAL JOINTS WITH 3 INCH WIDE FSK TAPE.
 4. FOR DUCTWORK INSIDE THERMAL ENVELOPE, INSULATION SHALL BE 2 IN. THICK. FOR DUCTWORK OUTSIDE THE THERMAL ENVELOPE, ALL DUCTWORK EXCEPT EXHAUST SHALL BE 4 IN. THICK (2 LAYERS).
- D. EXPOSED DUCTWORK:
 1. INSULATION BOARD SHALL BE 2 IN. THICK 3 PCF WITH FRK FACING. MINIMUM INSTALLED "R" VALUE 6. INSULATION SHALL BE 250 DEG. F RATED AS MANUFACTURED BY OWENS CORNING, MANVILLE, KNAUF, OR CERTAINTED.
 2. APPLY 2 IN. THICK INSULATION BOARD WITH FRK FACING TO ALL EXPOSED DUCTWORK PROVIDING CONDITIONED AIR, OR OUTSIDE AIR. INSULATE RETURN DUCTWORK IN NON-CONDITIONED SPACES.
 3. SECURE INSULATION WITH INSULPINS (ALL SURFACES) WELDED TO DUCT ON 12 TO 18 IN. CENTERS. CAP OPEN ENDS OF INSTALLED PIPING UNTIL READY FOR FINAL CONNECTIONS. INSULATE WITH 3 IN. WIDE FSK TAPE. CORNERS AND EDGES OF DUCTWORK SHALL BE REINFORCED WITH ROLL-ON CORNER BEAD. SEAL ALL BREAK AND PUNCTURES WITH VAPOR BARRIER SEALANT AND FSK TAPE.
- E. PIPING FINISHES:
 1. METAL JACKETING SHALL BE SMOOTH 016 IN. THICK TYPE T 3003 ALUMINUM WITH LAMINATED MOISTURE BARRIER. JACKETING SHALL BE CHILDERS ALUMINUM ROLL JACKETING WITH POLYKRAFT MOISTURE BARRIER. COVER THE FOLLOWING INSULATED SYSTEMS WITH METAL JACKETING: PIPING INSTALLED OUTDOORS. METAL FINISHING COVERS SHALL BE TWO PIECE ALUMINUM. COVERS SHALL BE:
 1. CONCEALED PIPING FINISH COVERING SHALL BE THE ALL SERVICE JACKET. FITTINGS SHALL BE COVERED BY WRAPPING THE FITTING WITH FIBER REINFORCED TAPE, WITH A 5 PERCENT OVERLAP. FITTING COVERS SHALL BE ONE PIECE 20 ML PVC. COVERS SHALL BE CEEL-TITE 550 PVC-UVR BY CEEL-CO OR EQUALS.
- A. DUCTWORK FINISHES:
 1. INSULATED DUCTWORK INSTALLED OUTDOORS, INSULATED DUCTWORK WITHIN 8 FT. OF THE FINISHED FLOOR IN A MECHANICAL ROOM SHALL BE COVERED WITH 30 GAUGE GALVANIZED STEEL. COVERING SHALL BE HEMMED, AND FLANGED. SECURE WITH SELF-TAPPING SCREWS ON EIGHT INCH CENTERS. DO NOT PUNCTURE VAPOR BARRIER.

SECTION 15335 - REFRIGERANT PIPING SYSTEMS

- A. REFRIGERANT PIPING SHALL BE TYPE L, HARD DRAWN COPPER TUBING CONFORMING TO ASTM SPECIFICATION B-280, CLEANED AND CAPPED AND MARKED "ACR". FITTINGS FOR REFRIGERANT LINES SHALL AS WROUGHT COPPER OR FORGED BRASS CONFORMING TO ANSIAIME STANDARD B16.22. JOINTS IN REFRIGERANT LINES SHALL BE BRAZED IN ACCORDANCE WITH ANSI B9.1. KEEP REFRIGERATION PIPING SEALED UNTIL IT IS USED. CAP OPEN ENDS OF INSTALLED PIPING UNTIL READY FOR FINAL CONNECTIONS.
- B. THE REFRIGERATION SYSTEM PIPING AND ACCESSORIES SHALL BE INSTALLED IN ACCORDANCE WITH THE SAFETY CODE FOR MECHANICAL REFRIGERATION ANSIAISHRAE 15-92 AND THE REFRIGERATION PIPING CODE ANSIAIME B31.5. THE REFRIGERANT TUBE SIZES, AND INSTALLATION OF TUBING SHALL BE IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
- C. REFRIGERANT SUCTION LINE SIZE SHALL LIMIT THE TEMPERATURE RISE TO TWO DEGREES F AT FULL LOAD AND HOLD THE REFRIGERANT GAS VELOCITY TO NOT LESS THAN 500 FT. PER MIN. (FPM) IN THE HORIZONTAL NOR LESS THAN 1000 FPM IN THE VERTICAL AT MINIMUM LOAD. REFRIGERANT LIQUID LINE SIZE SHALL LIMIT THE PRESSURE DROP BETWEEN 4 AND 6 PSI AT FULL LOAD.
- D. PITCH HOT GAS LINES AND SUCTION LINES APPROXIMATELY 1/8 INCH PER 10 FT. HOT GAS LINES AND SUCTION LINES EXCEEDING 30 FT. VERTICAL LIFT SHALL BE TRAPPED EVERY 20 FT. VERTICAL REFRIGERANT LINES SHALL BE RUN PLUMBS. HORIZONTAL LINES SHALL RUN PARALLEL WITH BUILDING WALLS. REFRIGERANT LINES SHALL NOT CONTACT BUILDING STRUCTURE. ISOLATE PIPING WITH RESILIENT LINER IN PIPE SUPPORT OR ELASTOMERIC INSULATION.
- E. TEST FOR LEAKS WITH AN ELECTRONIC LEAK DETECTOR. REPAIR LEAKS, REFILL, REPRESSURIZE, AND RETEST. FOLLOW STANDARD CHARGING AND DEHYDRATION PROCEDURES. CHARGE THROUGH THE SYSTEM FILTER DRIER. CHANGE FILTER DRIERS AFTER 40 HOURS OF OPERATION.
- F. PROVIDE A LINE SIZE FILTER-DRIER IN EACH LIQUID REFRIGERANT LINE BETWEEN THE CONDENSER AND THE EXPANSION VALVE. FILTER-DRIER SHALL BE A HENRY VALVE CO., SPORLAN OR ALCO.
- G. SERVICE VALVES SHALL BE BACK SEATING TYPE, STEEL OR IRON BODY. PROVIDE SERVICE VALVES AT CONDENSING UNIT. SERVICE VALVES SHALL BE LINES SIZE. VALVES SHALL BE HENRY VALVE CO., COMPRESSOR VALVES, SPORLAN OR ALCO.
- H. PROVIDE ISOLATION VALVES AROUND THE FILTER-DRIER TO PERMIT SERVICING THE DRIER WITHOUT LOSS OF REFRIGERANT. ISOLATION VALVES SHALL BE HENRY VALVE CO., 900 SERIES BALL VALVES. SPORLAN AND ALCO ARE APPROVED EQUAL.
- I. THE FILTER DRIER SHALL BE INSTALLED IN EACH LIQUID REFRIGERANT LINE BETWEEN THE CONDENSER AND THE FILTER DRIER. CHARGING VALVE SHALL BE HENRY VALVE CO. TYPE 927 OR APPROVED EQUAL. SPORLAN AND ALCO ARE APPROVED EQUAL.
- J. SIGHT GLASS SHALL BE INSTALLED IN EACH LIQUID REFRIGERANT LINE AT THE EVAPORATOR COIL. SIGHT GLASS SHALL BE HENRY VALVE CO. MI 31 SERIES DOUBLE PORT STYLE WITH EXTENDED ENDS FOR SOLDERING FOR LINES 5/8 INCH OD OR LARGER. USE MI 30 SERIES SINGLE PORT SOLDERING FOR LINES 5/8 INCH OD OR LARGER. USE MI 30 SERIES SINGLE PORT FOR LINES 1/2 INCH OD AND SMALLER. SPORLAN AND ALCO ARE APPROVED EQUAL.
- K. PROVIDE BALANCED EXTERNALLY EQUALIZED THERMOSTATIC EXPANSION VALVE. DISTRIBUTORS SHALL BE MATCHED WITH THERMOSTATIC EXPANSION VALVES AND DIRECT EXPANSION COIL FOR PROPER PERFORMANCE. THERMOSTATIC EXPANSION VALVE (TXV) SHALL BE BALANCED EXTERNALLY EQUALIZED TYPE. DISTRIBUTIONS SHALL BE MATCHED WITH THERMOSTATIC EXPANSION VALVES AND DIRECT EXPANSION COIL FOR PROPER PERFORMANCE. DISTRIBUTORS SHALL BE ALCO OR APPROVED EQUAL. LOCATE BULB IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. CONNECT THE EQUALIZING LINE TO THE TXV DOWN STREAM OF THE BULB. PROVIDE TRAPPED DOUBLE SUCTION RISERS ON SYSTEMS WITH UNLOADING CAPABILITY, WHEN REQUIRED FOR PROPER OIL RETURN.
- L. PROVIDE FLEXIBLE CONNECTORS ON LIQUID LINE, AND SUCTION LINE AT THE CONDENSING UNIT. FLEXIBLE CONNECTORS SHALL BE BRAIDED BRONZE COVERING ON A BRONZE HOSE. END CONNECTORS SHALL BE FEMALE COPPER TUBE TYPE. UNITS SHALL BE RATED NOT LESS THAN 270 PSI AT 250 DEGREES F. UNITS SHALL BE SOUTHEASTERN HOSE, INC., SUPERIOR OR ANACONDA.

SECTION 15671 - AIR COOLED CONDENSING UNITS

- A. UNITS SHALL BE ASSEMBLED ON MINIMUM 10 GAUGE STEEL MOUNTING/LIFTING RAILS AND SHALL BE WEATHER PROOFED. UNIT SHALL INCLUDE HERMETIC OR SEMI-HERMETIC RECIPROCATING COMPRESSOR(S), PLATE FIN CONDENSER COIL, FANS AND MOTORS, CONTROLS AND HOLDING CHARGE OF R-22. UNITS SHALL BE UL LISTED, AND RATED IN ACCORDANCE WITH ARI STANDARD 240 AND 270.
- B. UNIT CASING SHALL BE MADE OF MINIMUM 18 GAUGE, G-90 HEAVY GALVANIZED STEEL. EXTERIOR SURFACES SHALL BE FINISHED WITH A WEATHER-RESISTANT BAKED ENAMEL FINISH. COATING SYSTEM SHALL HAVE BEEN TESTED 500 HOURS IN SALT SPRAY TEST (ASTM B117). UNITS SHALL HAVE REMOVABLE PANELS THAT ALLOW ACCESS TO ALL MAJOR COMPONENTS AND CONTROLS.
- C. SINGLE COMPRESSOR UNITS:
 1. COMPRESSOR SHALL BE HERMETICALLY SEALED AND MOUNTED ON RUBBER VIBRATION ISOLATORS. COMPRESSOR SHALL INCLUDE INTERNAL OVER TEMPERATURE AND PRESSURE PROTECTION, THERMOSTATICALLY CONTROLLED SUMP HEATER, AND INTERNAL SPRING MOUNTS. REFRIGERATION CIRCUIT SHALL INCLUDE SERVICE VALVE, LOW AMBIENT TEMPERATURE, LOW PRESSURE SWITCH, LIQUID LINE AND SUCTION LINE SERVICE VALVE WITH GAUGE PORT.
- D. CONDENSER SHALL BE INTERNALLY FINNED OR SMOOTH BORE 3/8 INCH COPPER TUBES MECHANICALLY BONDED TO CONFIGURED ALUMINUM PLATE FIN STANDARD. COIL SURFACE SHALL BE CLEAN AND LEAK TESTED TO 375 PSIG AIR PRESSURE. PROVIDE CONDENSER COIL GUARD CONSISTING OF METAL GRILLE WITH PVC COATING.
- E. CONDENSER FAN AND MOTOR(S) SHALL HAVE DIRECT-DRIVE, STATICALLY AND DYNAMICALLY BALANCED FAN(S) WITH ALUMINUM BLADES AND ELECTRO-COATED STEEL HUBS. FANS SHALL BE MOUNTED IN DRAW-THROUGH VERTICAL DISCHARGE POSITION. PERMANENTLY LUBRICATED TOTALLY ENCLOSED TYPE MOTORS SHALL BE PROVIDED AND SHALL HAVE BUILT IN CURRENT AND THERMAL OVERLOAD PROTECTION. MOTOR(S) SHALL BE BALL BEARING TYPE.
- F. UNITS SHALL BE COMPLETELY FACTORY WIRED WITH NECESSARY CONTROLS AND CONTACTOR WITH PRESSURE LUGS OR TERMINALS. CONTROL BLOCK FOR COMPRESSOR. CONTROL WIRING SHALL BE 24-VOLT CONTROL CIRCUIT WHICH INCLUDES FUSING AND CONTROL TRANSFORMER.
- G. DEFROST CONTROLS SHALL INCLUDE ELECTRONIC TIME INITIATED, TEMPERATURE TERMINATED DEFROST SYSTEM. TIME OVER-RIDE LIMITS DEFROST CYCLE TO 10 MINUTES.
- H. LOW AMBIENT HEAT SET POINT SHALL BE PROVIDED TO MODULATE THE RPM OF UNIT OUTDOOR FAN MOTOR IN RESPONSE TO OUTDOOR AMBIENT TEMPERATURES AND UNIT HEAD PRESSURE. PROVIDE UNIT COOLING OPERATION TO OUTDOOR TEMPERATURE 0 DEGREES F.
- I. PROVIDE ANTI-SHORT-CYCLE TIMER TO PREVENT RAPID ON-OFF COMPRESSOR CYCLING IN LIGHT LOAD CONDITIONS BY NOT ALLOWING COMPRESSOR TO OPERATE FOR 5-7 MINUTES UPON SHUTDOWN. TIMER SHALL CONSIST OF A SOLID STATE TIMING DEVICE, 24-VOLT, 60 CYCLE.
- J. WARRANTY:
 1. PROVIDE A WRITTEN WARRANTY AGREEING TO REPLACE COMPONENTS THAT FAIL IN MATERIALS AND WORKMANSHIP WITHIN THE SPECIFIED WARRANTY PERIOD, PROVIDED MANUFACTURER'S WRITTEN INSTRUCTION, OPERATION, AND MAINTENANCE HAVE BEEN FOLLOWED.
 2. WARRANTY PERIOD: MANUFACTURER'S STANDARD, BUT NOT LESS THAN FIVE (5) YEARS FROM DATE OF SUBSTANTIAL COMPLETION FOR COMPRESSOR(S) AND ONE (1) YEAR FOR ALL OTHER COMPONENTS.
- K. UNITS SHALL BE JOI, CARRIER OR APPROVED EQUAL. INSTALL UNIT IN ACCORDANCE WITH MANUFACTURER-S INSTRUCTIONS.

SECTION 15855 - SPLIT SYSTEM DX AIR HANDLING UNITS

- A. AIR HANDLING UNITS SHALL BE COMPLETELY FACTORY ASSEMBLED INCLUDING COIL, CONDENSATE DRAIN PAN, FAN MOTOR(S), FILTER AND CONTROLS. THE COIL SHALL BE APPLIED IN EITHER HORIZONTAL OR VERTICAL HORIZONTAL CONFIGURATION. UNITS SHALL BE RATED AND TESTED IN ACCORDANCE WITH ARI STANDARD. UNITS SHALL BE UL LISTED AND LABELED IN ACCORDANCE WITH UL 485 AND UL 1995 FOR INDOOR BLOWER COIL UNITS.
- B. UNIT CASING SHALL BE CONSTRUCTED OF ZINC COATED, MINIMUM 20 GAUGE, G-90 GALVANIZED STEEL. CASING SHALL BE COMPLETELY WEATHER RESISTANT. ODORLESS GLASS FIBER MATERIAL WITH R-VALUE NOT LESS THAN 4. KNOCKOUTS SHALL BE PROVIDED FOR UNIT ELECTRIC POWER AND REFRIGERANT PIPING CONNECTIONS. CAPTIVE SCREWS SHALL BE STANDARD ON ALL ACCESS PANELS.
- C. DIRECT EXPANSION COIL SHALL BE ALUMINUM FIN SURFACE MECHANICALLY BONDED TO 3/8 INCH INTERNALLY ENHANCED COPPER TUBE. COIL SHALL BE LEAK TESTED AT 975 PSIG.
- D. CONDENSATE DRAIN PAN SHALL BE ONE-PIECE, CORROSION RESISTANT, AND FULLY DRAINABLE. COIL SHALL BE MOUNTED ABOVE, NOT IN, THE DRAIN PAN TO ALLOW FULL INSPECTION OR CLEANING OF DRAIN PAN. UNIT SHALL CONTAIN CONDENSATE DRAIN PANS FOR BOTH HORIZONTAL AND VERTICAL APPLICATIONS. DRAIN PANS SHALL HAVE CONNECTIONS TO BOTH HORIZONTAL AND VERTICAL. DRAIN PAN SHALL BE INSTALLED FROM UNIT TO LOCATION INDICATED ON PLAN. DRAIN LINE SHALL BE INSTALLED WITH A SLOPE OF NOT LESS THAN 1/8 INCH PER FOOT DOWN IN THE DIRECTION OF FLOW.
- E. BLOWER FAN SHALL BE DOUBLE INLET, DOUBLE WIDTH, FORWARD CURVED, CENTRIFUGAL-TYPE FAN(S) WITH ADJUSTABLE SPEED AND THERMAL OVERLOAD PROTECTION SHALL BE STANDARD ON MOTOR. FAN AND MOTOR BEARINGS SHALL BE PERMANENTLY LUBRICATED.
- F. MAGNETIC MOTOR STARTER, LOW VOLTAGE TERMINAL STRIP, AND SINGLE POINT POWER ENTRY SHALL BE INCLUDED. ALL NECESSARY CONTROLS SHALL BE FACTORY-INSULATED AND WIRED. EVAPORATOR DEFROST CONTROL SHALL BE INCLUDED TO PREVENT COMPRESSOR SLUGGING BY TEMPORARILY INTERRUPTING COMPRESSOR OPERATION WHEN LOW EVAPORATOR COIL TEMPERATURES ARE ENCOUNTERED.
- G. FILTERS SHALL BE ONEINCH, THROW-AWAY TYPE FILTERS FILTERS SHALL BE ACCESSIBLE FROM EITHER SIDE THROUGH THE COIL ACCESS PANEL.
- H. PROVIDE UNIT MOUNTED ELECTRIC HEATERS AS SCHEDULED. ELECTRIC HEAT ASSEMBLY SHALL BE UL, ETL, AND CSA APPROVED FOR DIRECT INSTALLATION ON FAN DISCHARGE. HEATER ASSEMBLY SHALL HAVE SINGLE-POINT POWER WIRING AND INCLUDE CONTACTORS WITH 24 VOLT COILS. POWER WIRING, 24 VOLT CONTROL WIRING TERMINAL BLOCKS, AND A HINGED ACCESS PANEL. ELECTRIC HEATER ELEMENTS SHALL BE CONSTRUCTED OF HEAVY-DUTY NICKEL CHROMIUM ELEMENTS.
- I. UNITS SHALL BE YORK, CARRIER OR APPROVED EQUAL. INSTALL UNIT IN ACCORDANCE WITH MANUFACTURER-S INSTRUCTIONS.

SECTION 15930 - GAS FIRED RADIANT HEATERS

- A. HIGH-INTENSITY INFRARED HEATER (GAS-FIRED)
 1. GAS-FIRED HIGH-INTENSITY INFRARED HEATERS SHALL COMPLY WITH ANSI Z83.19, SECTION 2.10 RADIANT COEFFICIENT OF A SECONDARY RADIATING SURFACE OF EITHER RODS OR SCREEN. THE CERAMIC RADIANT SURFACE SHALL BE HORIZONTAL, WHEN HEATER IS INSTALLED AT 0 DEGREES. HEATERS SHALL BE CAPABLE OF ANGLE MOUNTING FROM 5 TO 30 DEGREES.
 2. WITHOUT THE USE OF AN ADDITIONAL REFLECTOR, HEATERS SHALL BE FULLY TESTED AND READY TO INSTALL. PIPES AND WIRE SHALL BE INSTALLED IN ACCORDANCE WITH PROPANE GAS. HEATERS SHALL BE DESIGNED TO SATISFACTORILY OPERATE AT A MINIMUM SUPPLY.
 3. INLET GAS PRESSURE OF 7 INCHES WATER COLUMN (W.C.) WHEN SPECIFIED FOR NATURAL GAS OR 11 INCHES W.C. WHEN SPECIFIED FOR LIQUID GAS. GAS SHALL BE MAXIMUM SUPPLY INLET GAS PRESSURE OF 14 INCHES W.C.F. HEATERS SHALL BE DESIGNED TO OPERATE WITHOUT ADJUSTMENTS WHEN BURNING NATURAL GAS HAVING A HEAT VALUE OF 1000 BTU PER CUBIC FOOT WITH A SPECIFIC GRAVITY OF .65.
 4. HEATERS SHALL BE EQUIPPED WITH ONE OF THE FOLLOWING CONTROLS: 1. SINGLE-STAGE, 120 VAC DIRECT SPARK IGNITION CONTROL HAVING 100% SAFETY SHUT OFF WITH FLAME MONITORING AND 10.8 VA MAXIMUM POWER CONSUMPTION. CONTROL SHALL OPERATE WITH NO EXTERNAL ELECTRICAL POWER, BUT INSTEAD USE MILLI-VOLTAGE GENERATED BY THE PILOT FLAME. THE HEATER'S CONTROLS SHALL BE EASILY ACCESSIBLE FROM EITHER SIDE OF THE HEATER. THE PIENUM CHAMBER SHALL BE TO RESIST BREAKAGE. THE HEATER IS FITTED WITH A GAS ORIFICE FOR EACH BURNER FOR PROPER AIR TO GAS MIXTURE FOR SEA LEVEL. HEATERS CAN BE ORDERED OR CONVERTED FOR USE AT HIGH ALTITUDES, OR WITH EITHER LIQUID PROPANE OR NATURAL GAS.
 5. THE HEATER SHALL BE OF METAL DESIGN EMPLOYING MULTIPLE BURNERS TO ACHIEVE THE SPECIFIED INPUT. THE BURNER(S) SHALL INCLUDE A CERAMIC COMBUSTION SURFACE, A PLENUM CHAMBER AND A VENTURI MIXER AND SHALL BE REMOVABLE WITH A SINGLE SCREWFOR CLEANING OR REPAIR. THE HEATER SHALL BE OF METAL DESIGN EMPLOYING MULTIPLE BURNERS TO ACHIEVE THE SPECIFIED INPUT. THE BURNER(S) SHALL INCLUDE A CERAMIC COMBUSTION SURFACE, A PLENUM CHAMBER AND A VENTURI MIXER AND SHALL BE REMOVABLE WITH A SINGLE SCREWFOR CLEANING OR REPAIR. THE HEATER SHALL BE OF METAL DESIGN EMPLOYING MULTIPLE BURNERS TO ACHIEVE THE SPECIFIED INPUT. THE BURNER(S) SHALL INCLUDE A CERAMIC COMBUSTION SURFACE, A PLENUM CHAMBER AND A VENTURI MIXER AND SHALL BE REMOVABLE WITH A SINGLE SCREWFOR CLEANING OR REPAIR. THE HEATER SHALL BE OF METAL DESIGN EMPLOYING MULTIPLE BURNERS TO ACHIEVE THE SPECIFIED INPUT. 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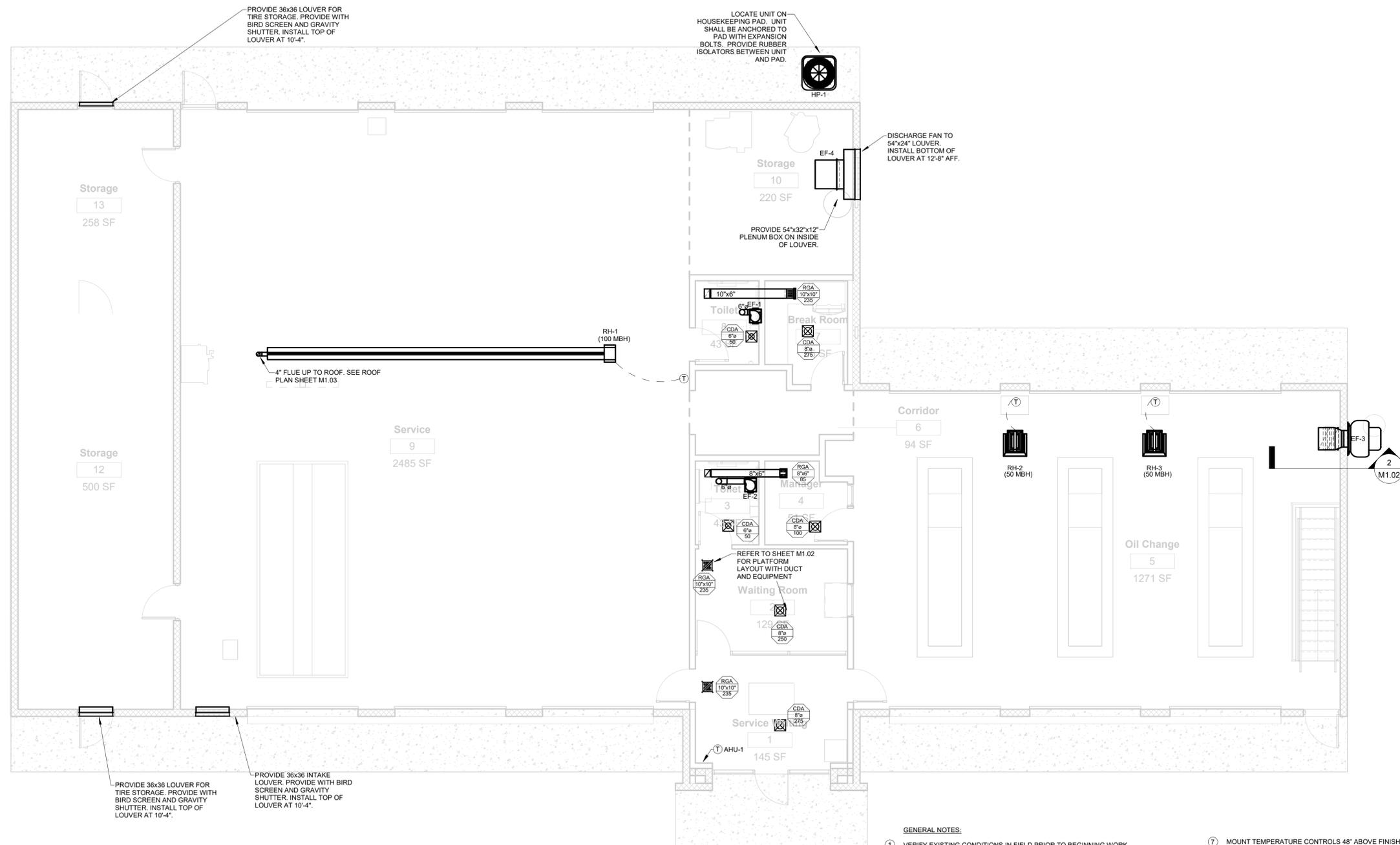
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 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Sevierville, Tennessee



MAIN FLOOR PLAN
 MECHANICAL
 3/16" = 1'-0"

GENERAL NOTES:

- VERIFY EXISTING CONDITIONS IN FIELD PRIOR TO BEGINNING WORK.
- SPACE ABOVE CEILING IS LIMITED. CAREFUL COORDINATION WITH LIGHTING, ELECTRICAL, PLUMBING, STRUCTURAL, AND ARCHITECTURAL WORK IS CRITICAL TO DUCTWORK INSTALLATION.
- PROVIDE NECESSARY OFFSETS IN PIPING, ELECTRICAL CONDUIT, AND DUCTWORK AS REQUIRED TO ACCOMMODATE NEW WORK. DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL DETAILS NOR CHANGES IN DUCTWORK ELEVATIONS NECESSARY FOR COMPLETE INSTALLATION.
- COORDINATE CEILING AIR DEVICE LOCATIONS WITH LIGHTING PLAN AND ARCHITECT'S REFLECTED CEILING PLAN.
- DUCTWORK SHALL BE RUN TIGHT TO STRUCTURE. AVOID CROSSING OVER LIGHTS AND OTHER DUCTS DUE TO TIGHT CLEARANCES.
- LOUVERS SHALL BE RUSKIN EFR375D OR APPROVED EQUAL. PROVIDE UNIT WITH BIRDSCREEN AND MILL ALUMINUM FINISH. COORDINATE EXACT HEIGHT AND COLOR OF LOUVER WITH ARCHITECT PRIOR TO ORDERING.
- MOUNT TEMPERATURE CONTROLS 48" ABOVE FINISHED FLOOR. COORDINATE EXACT LOCATION WITH ARCHITECT.
- SPILL CONDENSATE FROM AHUS INTO NEAREST FLOOR DRAIN.
- PROVIDE ENGRAVED PLASTIC LABEL AT TERMINATION OF EACH AUXILIARY CONDENSATE DRAIN LINE READING AS FOLLOWS:
 "AHU-### AUXILIARY DRAIN LINE."
 NOTIFY MAINTENANCE PERSONNEL WHEN WATER IS FLOWING
- CONNECT CONDENSATE DRAIN PIPING TO AIR HANDLING UNITS IN ACCORDANCE WITH DETAILS.
- OUTSIDE AIR VENTILATION INTAKES FOR OIL CHANGE AND SERVICE AREAS WILL BE PROVIDED BY OPEN ROLL-UP DOORS. DOORS SHALL BE OPEN WHILE VENTILATION SYSTEM IS ENABLED.

FINAL

No.	Description	Date

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Mechanical Floor Plan

Project number	24005
Date	5/15/2024
Drawn by	CA
Checked by	JB

M1.01
 Scale As indicated



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 Sevierville, Tennessee

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No.	Description	Date

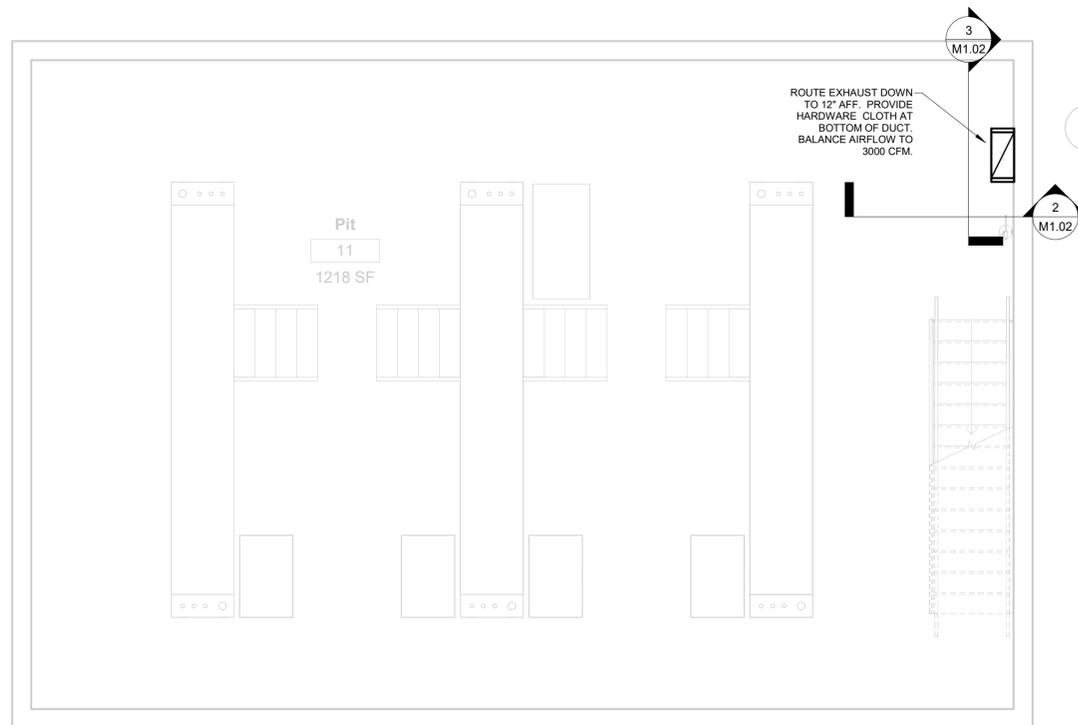
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Partial Mechanical Floor Plans - Pit and Platform

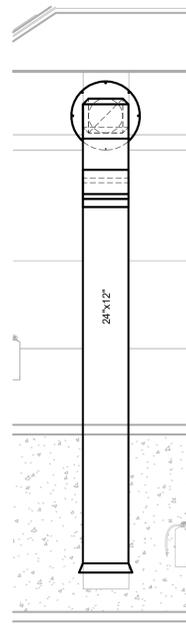
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Date	5/15/2024
Drawn by	CA
Checked by	JB

M1.02
 Scale As indicated

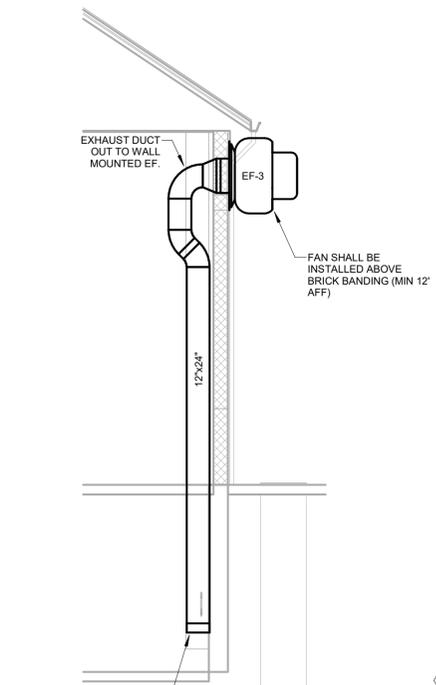
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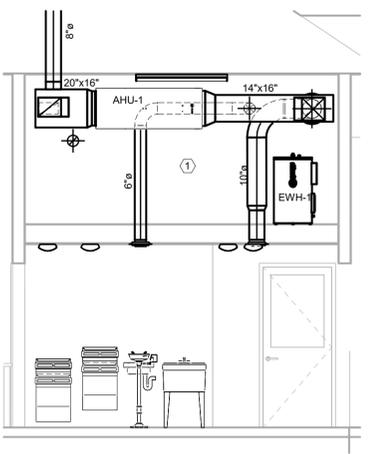
PIT FLOOR PLAN MECHANICAL
 NORTH 1/4" = 1'-0"



3 Section 2
 M1.02 1/4" = 1'-0"

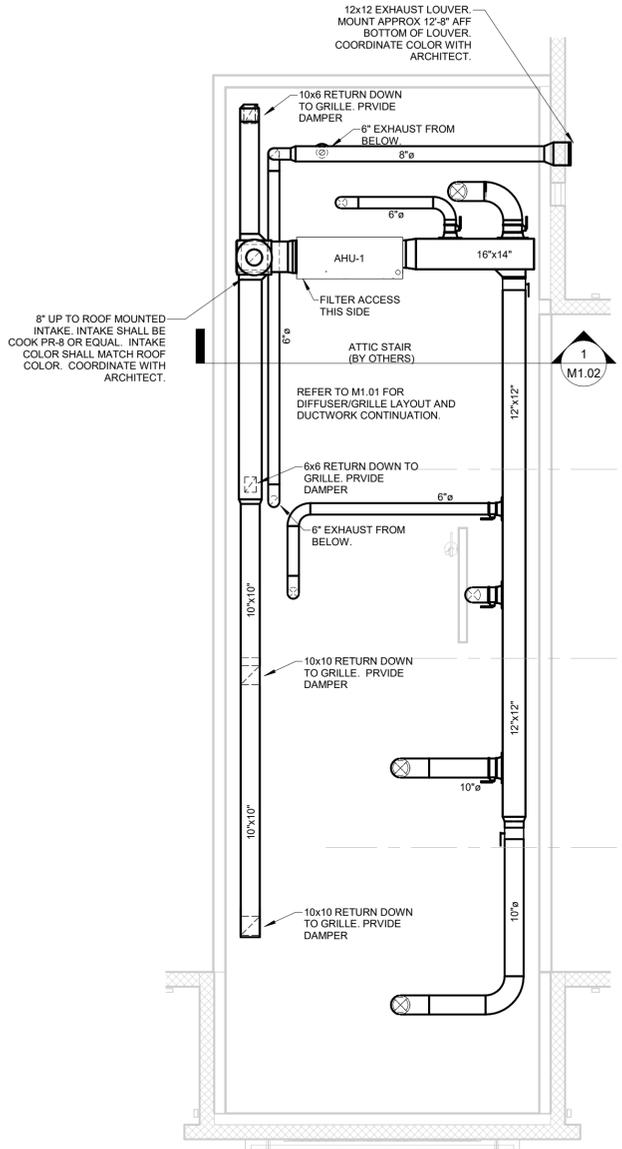


2 Section Through Pit Exhaust 1
 M1.02 1/4" = 1'-0"



1 Section 6
 M1.02 1/4" = 1'-0"

DRAWING NOTES:
 ① INSTALL DUCTWORK AND EQUIPMENT IN EQUIPMENT PLATFORM SPACE TO ALLOW FOR MAXIMUM USE OF FLOOR AREA. EQUIPMENT SHALL BE HUNG FROM STRUCTURE ABOVE AND DUCTS ROUTED DOWN VERTICALLY THROUGH FLOOR.



EQUIPMENT PLATFORM MECHANICAL
 NORTH 1/4" = 1'-0"

- GENERAL NOTES:**
- VERIFY EXISTING CONDITIONS IN FIELD PRIOR TO BEGINNING WORK.
 - SPACE ABOVE CEILING IS LIMITED. CAREFUL COORDINATION WITH LIGHTING, ELECTRICAL, PLUMBING, STRUCTURAL, AND ARCHITECTURAL WORK IS CRITICAL TO DUCTWORK INSTALLATION.
 - PROVIDE NECESSARY OFFSETS IN PIPING, ELECTRICAL CONDUIT, AND DUCTWORK AS REQUIRED TO ACCOMMODATE NEW WORK. DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL DETAILS NOR CHANGES IN DUCTWORK ELEVATIONS NECESSARY FOR COMPLETE INSTALLATION.
 - COORDINATE CEILING AIR DEVICE LOCATIONS WITH LIGHTING PLAN AND ARCHITECT'S REFLECTED CEILING PLAN.
 - DUCTWORK SHALL BE RUN TIGHT TO STRUCTURE. AVOID CROSSING OVER LIGHTS AND OTHER DUCTS DUE TO TIGHT CLEARANCES.
 - LOUVERS SHALL BE RUSKIN ELF63750 OR APPROVED EQUAL. PROVIDE UNIT WITH BIRDSCREEN AND MILL ALUMINUM FINISH. COORDINATE EXACT HEIGHT AND COLOR OF LOUVER WITH ARCHITECT PRIOR TO ORDERING.
 - MOUNT TEMPERATURE CONTROLS 48" ABOVE FINISHED FLOOR. COORDINATE EXACT LOCATION WITH ARCHITECT.
 - SPILL CONDENSATE FROM AHUS INTO NEAREST FLOOR DRAIN.
 - PROVIDE ENGRAVED PLASTIC LABEL AT TERMINATION OF EACH AUXILIARY CONDENSATE DRAIN LINE READING AS FOLLOWS:
 "AHU-## AUXILIARY DRAIN LINE."
 NOTIFY MAINTENANCE PERSONNEL WHEN WATER IS FLOWING
 - CONNECT CONDENSATE DRAIN PIPING TO AHU IN ACCORDANCE WITH DETAILS.



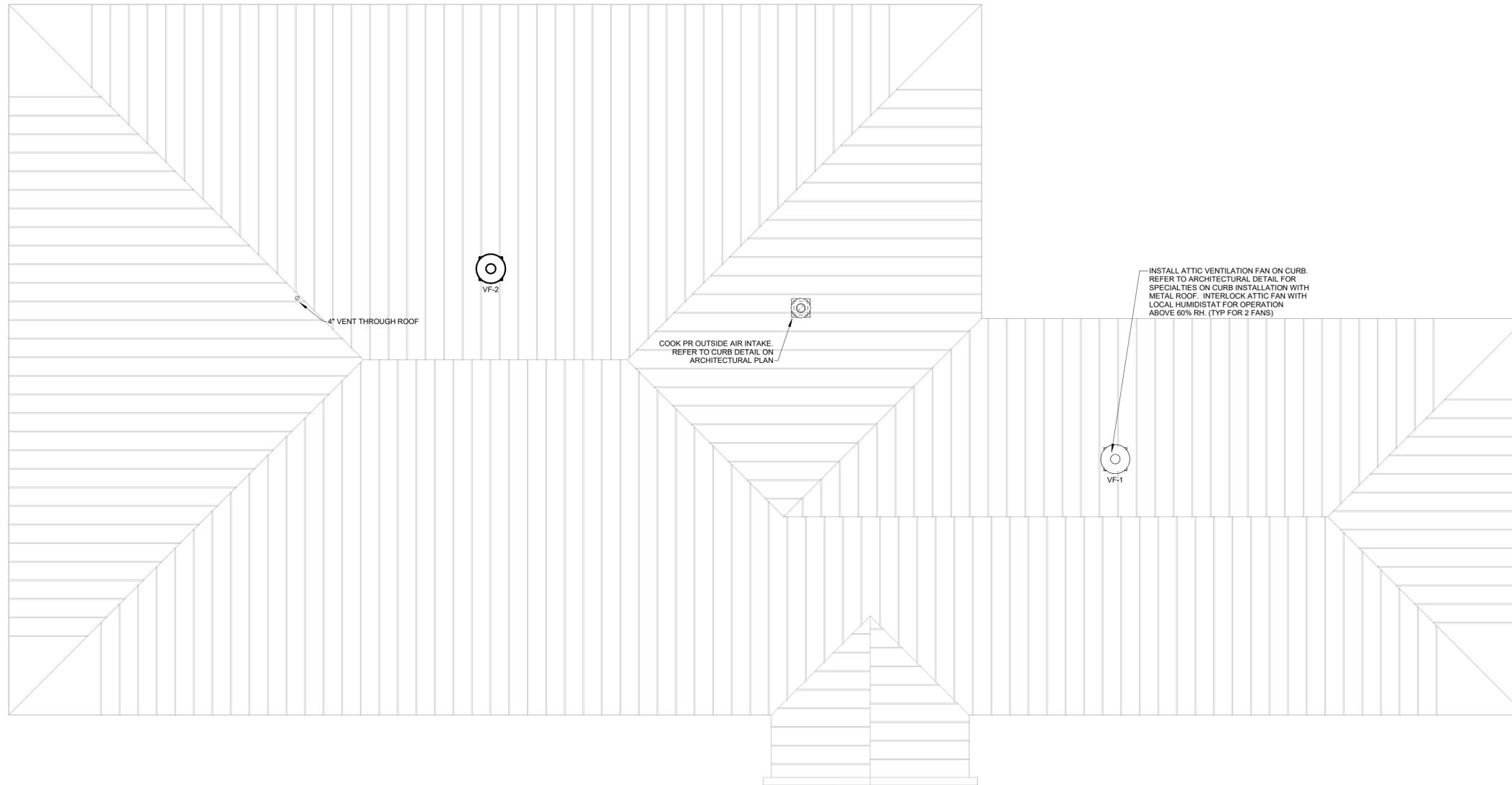
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5/15/24



MECHANICAL ROOF PLAN
 3/16" = 1'-0"

GENERAL NOTES:

- ① VERIFY EXISTING CONDITIONS IN FIELD PRIOR TO BEGINNING WORK.
- ② INTAKE FOR ATTIC VENTILATION TO BE PROVIDED AT SOFFIT. SEE ARCHITECTURAL PLANS.

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Mechanical Roof Plan

Project number 24005
 Date 5/15/2024
 Drawn by CRA
 Checked by JAB

M1.03

Scale As indicated

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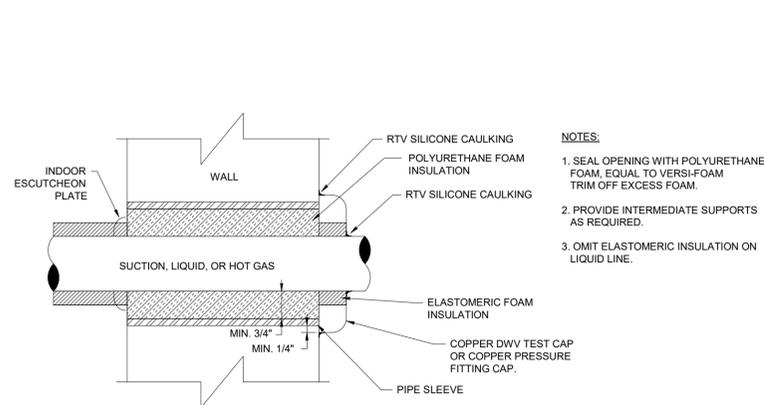
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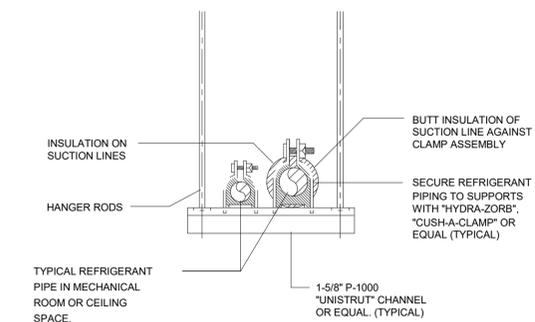


5/15/24

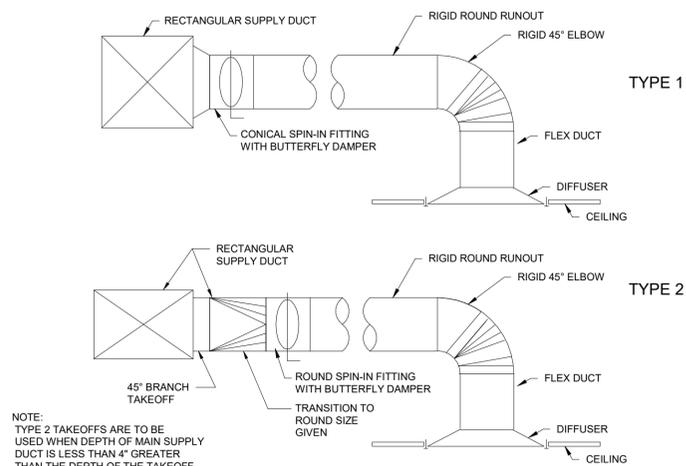


- NOTES:**
1. SEAL OPENING WITH POLYURETHANE FOAM, EQUAL TO VERSI-FOAM TRIM OFF EXCESS FOAM.
 2. PROVIDE INTERMEDIATE SUPPORTS AS REQUIRED.
 3. OMIT ELASTOMERIC INSULATION ON LIQUID LINE.

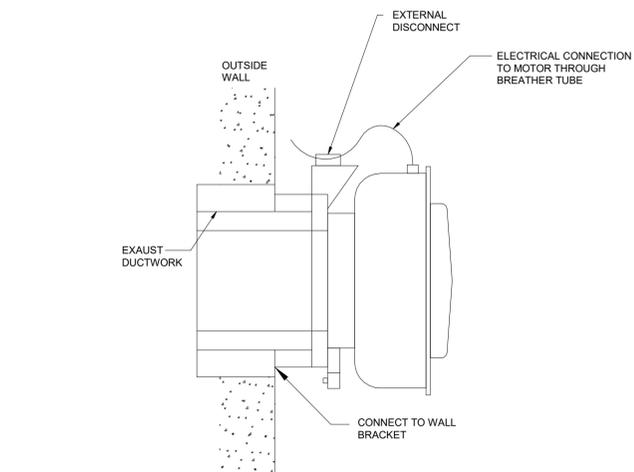
10 REFRIGERANT LINE - WALL PENETRATION DETAIL
M2.01 NO SCALE



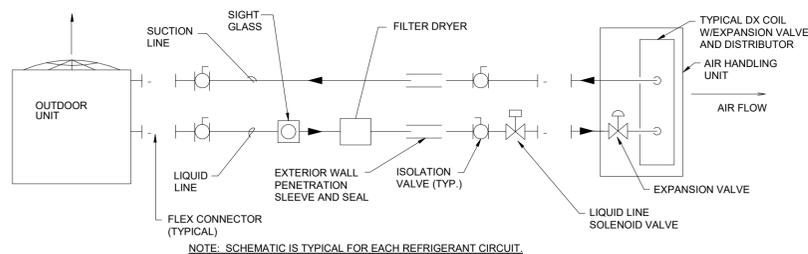
7 REFRIGERANT PIPING SUPPORT DETAIL
M2.01 TYPICAL FOR PIPING SUSPENDED FROM STRUCTURE
NO SCALE



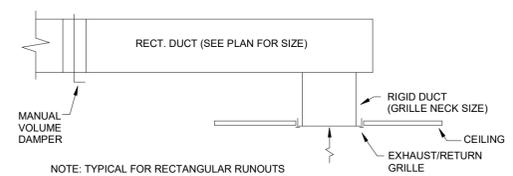
4 TYPICAL DIFFUSER RUN-OUT DETAIL
M2.01 NO SCALE



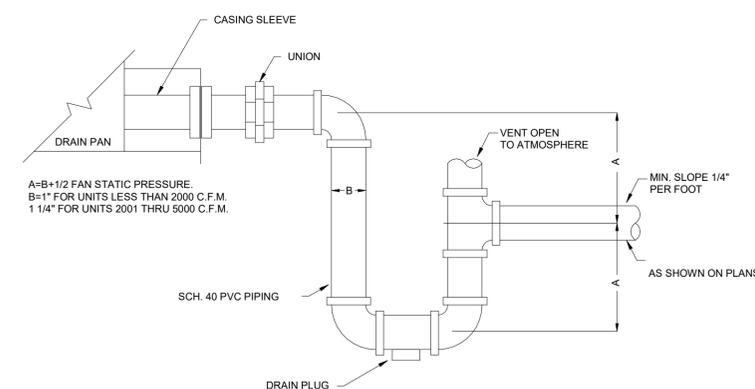
1 SIDEWALL EXHAUST FAN DETAIL
M2.01 NO SCALE



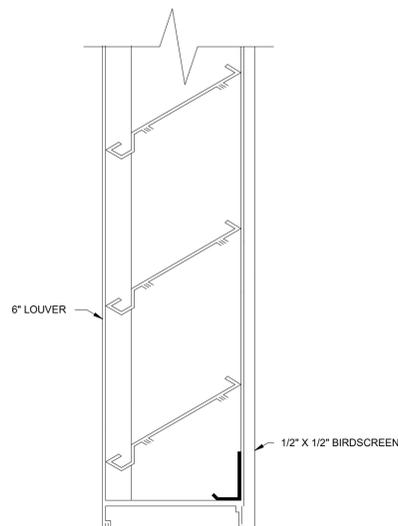
8 REFRIGERANT PIPING DETAIL
M2.01 NO SCALE



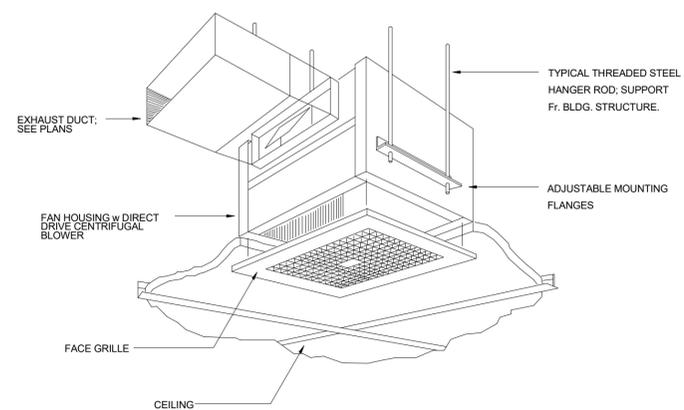
5 TYPICAL RETURN AND EXHAUST RUN-OUT DETAIL
M2.01 NO SCALE



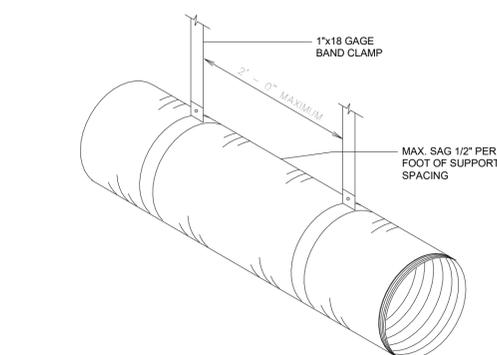
2 CONDENSATE DRAIN TRAP DETAIL
M2.01 NO SCALE



9 LOUVER DETAIL
M2.01 NO SCALE



6 EXHAUST FAN INSTALLATION DETAIL (CEILING)
M2.01 NO SCALE



3 FLEXIBLE DUCT SUPPORT DETAIL
M2.01 NO SCALE

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Sevierville, Tennessee

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Mechanical Details

Project number	24005
Date	5/15/2024
Drawn by	CA
Checked by	JB

M2.01

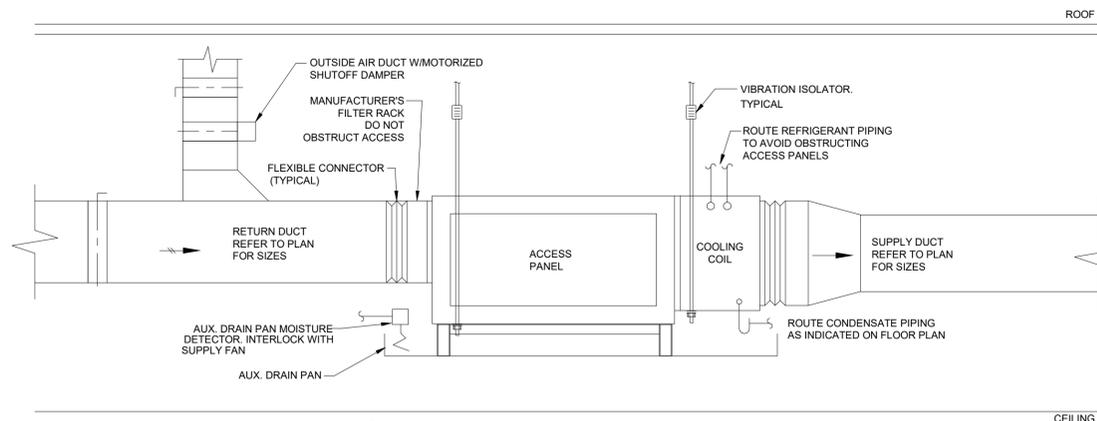
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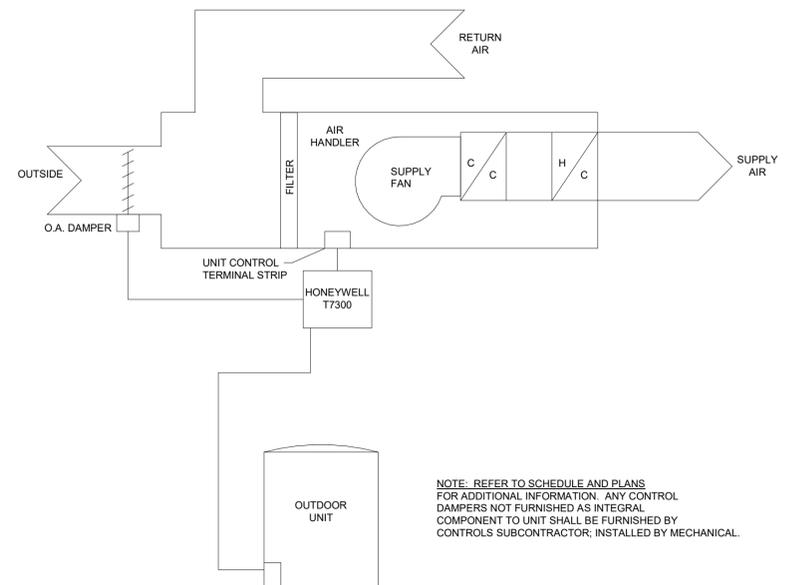
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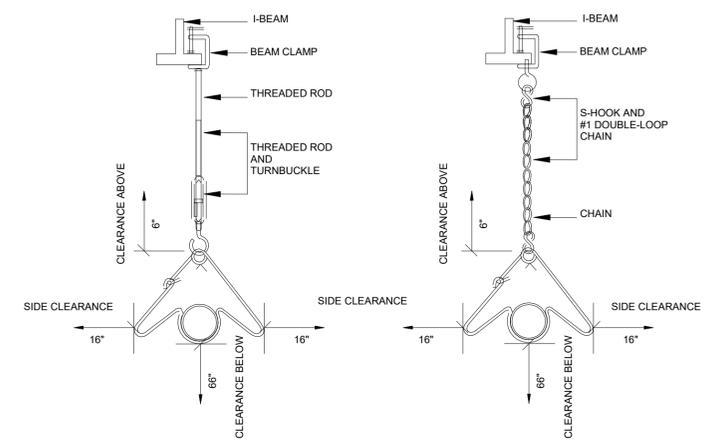


3 INDOOR AHU UNIT DETAIL
 M2.02 NO SCALE



1 HVAC CONTROL DIAGRAM
 M2.02 NO SCALE

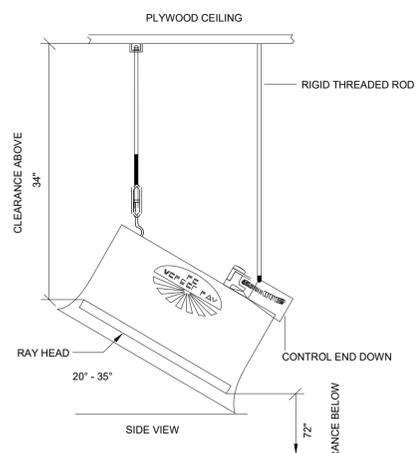
NOTE: REFER TO SCHEDULE AND PLANS FOR ADDITIONAL INFORMATION. ANY CONTROL DAMPERS NOT FURNISHED AS INTEGRAL COMPONENT TO UNIT SHALL BE FURNISHED BY CONTROLS SUBCONTRACTOR, INSTALLED BY MECHANICAL.



4 RADIANT HEATER HANGER DETAIL
 M2.02 NO SCALE

DISTANCE TO COMBUSTIBLES					
MODEL NO.	# OF SIDE SHIELDS	MOUNTING ANGLE	SIDES	TOP	BELOW
DX3L-30	2	0°	16"	6"	66"

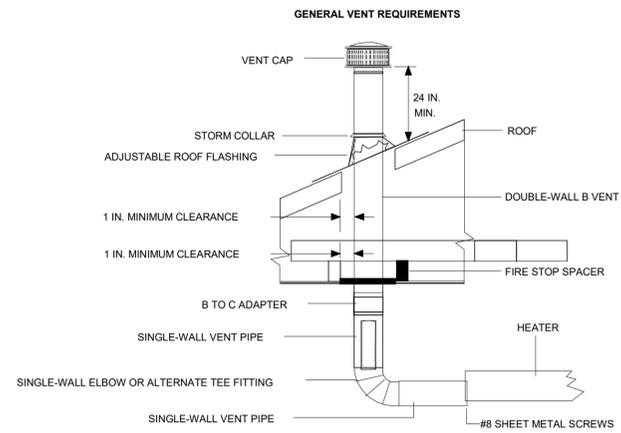
*MAINTAIN PER MANUFACTURER'S INSTALLATION REQUIREMENTS. DISTANCES MEASURED ABOVE/BELOW RAY HEAD SURFACE.



2 RADIANT HEATER MOUNTING DETAIL
 M2.02 NO SCALE

DISTANCE TO COMBUSTIBLES				
MODEL NO.	SIDES	BACK	TOP	BELOW/FRONT
DR 50	30	18	34	72

*MAINTAIN PER MANUFACTURER'S INSTALLATION REQUIREMENTS. DISTANCES MEASURED ABOVE/BELOW RAY HEAD SURFACE.



5 RADIANT HEATER VENTING DETAILS
 M2.02 NO SCALE

Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Sevierville, Tennessee

FINAL

No.	Description	Date

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Mechanical Details

Project number	24005
Date	5/15/2024
Drawn by	CA
Checked by	JB

M2.02

Scale 12" = 1'-0"

PLUMBING LEGEND, SYMBOLS AND ABBREVIATIONS

-----	DOMESTIC COLD WATER		BALL VALVE	ABV	ABOVE
-----	DOMESTIC HOT WATER		VALVE IN VERTICAL	AFF	ABOVE FINISHED FLOOR
-----	DOMESTIC HOT WATER RETURN		CAP ON END OF PIPE	INV	INVERT
-----	SANITARY VENT		CLEANOUT - FLOOR TYPE	BFF	BELOW FINISHED FLOOR
-----	SANITARY WASTE		CLEANOUT - WALL TYPE	CW	COLD WATER
			P-TRAP	DN	DOWN
			PIPE TURNING DOWN	EX	EXISTING
			PIPE TURNING UP	HW	HOT WATER
			TEE DOWN	WS	WASTE STACK
			TEE UP	VS	VENT STACK
			TIE NEW INTO EXISTING	AC	ABOVE CEILING
	P-1		PLUMBING FIXTURE NUMBER	WHA	WATER HAMMER ARRESTOR
			RISER NUMBER	BFG	BELOW FINISHED GRADE
			WATER HAMMER ARRESTOR	TMV	THERMOSTATIC MIXING VALVE
			PLUG TYPE CLEANOUT	TP	TRAP PRIMER
			BALANCING VALVE	DS	DOWNSPOUT
			CHECK VALVE	UG	UNDER GROUND
			GATE VALVE		
			REDUCED PRESSURE ZONE BFP		
			THERMOSTATIC MIXING VALVE		
			FLOOR SINK		
			FLOOR DRAIN		
			ROOF DRAIN/OVERFLOW DRAIN		
			FOOD SERVICE EQUIPMENT		



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 Job No.24125



PLUMBING FIXTURE CONNECTION SCHEDULE

Equipment No.	Description	Hot Water	Cold Water	Waste	Vent	Remarks
WC-1	WATER CLOSET - ADA COMPLIANT	1/2"	1/2"	4"	2"	PRESSURE ASSIST TANK TYPE
EW-1	EYEWASH	1/2"	1/2"	2"	1 1/2"	PROVIDE WITH MIXING VALVE
EW-1	ELECTRIC WATER COOLER	1/2"	1/2"	2"	1 1/2"	WALL MOUNT ADA WITH BOTTLE FILLER
HD-1	CONDENSATE FUNNEL HUB DRAIN			2"	1 1/2"	PRVIDE WITH TRAP GUARD
LAV-1	LAVATORY - ADA COMPLIANT	1/2"	1/2"	2"	1 1/2"	PROVIDE WITH TRAP WRAP AND MIXING VALVE
SK-1	SERVICE SINK	1/2"	1/2"	2"	1 1/2"	ROUTE TO INTERCEPTOR
WH-1	WALL HYDRANT - FREEZE PROOF		3/4"			

ELECTRIC WATER HEATER SCHEDULE

EQUIPMENT NO.	MANUFACTURER	MODEL	SERVICE	ENTERING WATER TEMP (F)	LEAVING WATER TEMP (F)	RECOVERY RATE (GPH)	STORAGE CAPACITY	TANK DIMENSIONS		ELECTRICAL		VOLTS/PH./HZ.	COMMENTS
								DIAMETER	HEIGHT	WATER HEATER WATTAGE	NUMBER OF ELEMENTS		
EWH-1	A. O. Smith	ECS-30X	BATHROOMS/EYEWASH	60 F	120 F	21	30.0 gal	1'-6"	3'-3"	4500 W	1	240/1/60	

INTERCEPTOR SCHEDULE

EQUIPMENT NO.	MANUFACTURER	MODEL	FLOW RATE - INT	LIQUID HOLD CAPACITY	INLET/OUTLET	VENT	LENGTH	WIDTH	DEPTH
OS-1	STRIEM	OS-25	25 GPM	21.0 gal	3	3"	2'-3"	1'-11"	1'-3"

NOTES:
 1. PROVIDE EXTRUSION TO MATCH GRADE.

PUMP SCHEDULE

MARK	MANUFACTURER	MODEL	SERVICE	PUMP TYPE	FLOW RATE	PUMP HEAD (FT)	RATED SPEED (RPM)	DISCONNECT	MOTOR STARTER	HP	VOLTAGE	COMMENTS
REC-1	TACO	2400-10S-3P	HW RETURN	In-Line	2 GPM	10	3450	BY ELEC	INTEGRAL	.01	120 V	1, 2

NOTES:
 1. PROVIDE WITH AQUASTAT FOR OPERATION WITH ASHRAE 90.1.
 2. PUMP SHALL BE STAINLESS STEEL BODY FOR DOMESTIC USE.

WATER METER SIZING	
TOTAL LOAD (FIXTURE UNITS)	GPM
16	18

Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Sevierville, Tennessee

FINAL

No.	Description	Date

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Plumbing Legend, Abbreviations, and Schedules

Project number	24005
Date	5/15/2024
Drawn by	CA
Checked by	JB

P0.01

Scale 1/2" = 1'-0"

SECTION 15011 - PLUMBING GENERAL

- A. PROVIDE EQUIPMENT, LABOR, MATERIAL, ETC., REQUIRED TO MAKE A COMPLETE WORKING INSTALLATION.
- B. INSTALL THE WORK IN ACCORDANCE WITH DRAWINGS, SPECIFICATIONS AND THE STANDARDS AND CODES (LATEST EDITION) THAT APPLY TO THIS WORK. IN THE EVENT OF A CONFLICT, INSTALL WORK IN ACCORDANCE WITH THE MOST STRINGENT CODE REQUIREMENTS DETERMINED BY THE ENGINEER.
- C. OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS INCLUDING: BUILDING PERMITS, HEALTH DEPARTMENT PERMITS AND SEWER TAP PERMITS. DELIVER TO ENGINEER CERTIFICATES OF INSPECTION AND APPROVAL ISSUED BY AUTHORITIES.
- D. ALL EQUIPMENT AND METHOD SHALL BE INSTALLED AND CONNECTED IN ACCORDANCE WITH THE BEST ENGINEERING PRACTICES AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- E. DISCONNECT, REMOVE AND ADDITIONAL PLUMBING SERVICES LOCATED ON OR CROSSING THROUGH CONTRACT LIMITS, ABOVE OR BELOW GRADE, OBSTRUCTING CONSTRUCTION OF PROJECT OR CONFLICTING WITH COMPLETED PROJECT OR ANY APPLICABLE CODES.
- F. PROVIDE CUTTING OF PAVEMENT, SIDEWALKS, DRIVEWAYS, ETC., EXCAVATING, TRENCHING, SHORING AND DE-WATERING, PRELIMINARY MATERIAL AND PERFORM BACKFILLING.
- G. RESTORE SITE TO ORIGINAL CONDITION OR NEW FINAL GRADES. PROVIDE PAVING, CONCRETE, SEED, OR SOD.
- H. DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY. WORK CALLED FOR BY ONE IS BINDING AS IF CALLED FOR BY BOTH.
- I. DRAWINGS ARE DRAWN TO A SMALL SCALE AND ARE DIAGRAMMATIC ONLY. THE DRAWINGS INDICATE SIZE AND GENERAL ARRANGEMENT OF EQUIPMENT. DO NOT SCALE DRAWINGS FOR EXACT LOCATIONS. FIELD MEASUREMENTS TAKE PRECEDENCE.
- J. PROVIDE NECESSARY OFFSETS, ELBOWS AND FITTINGS AS REQUIRED TO AVOID CONFLICT WITH EQUIPMENT OF OTHER DIVISIONS AND TO OBTAIN PROPER HEADROOM AND CLEAR PASSAGEWAYS. THIS SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
- K. WORK UNDER THIS DIVISION SHALL BE FIRST CLASS WITH EMPHASIS ON NEATNESS AND WORKMANSHIP. INSTALL WORK USING COMPETENT MECHANICS, UNDER SUPERVISION OF FOREMAN, ALL DULY CERTIFIED BY LOCAL AUTHORITIES.
- L. INSTALLATION SUBJECT TO ENGINEER'S OBSERVATION, FINAL APPROVAL, AND ACCEPTANCE. ENGINEER MAY REJECT UNSUITABLE WORK.
- M. ALL MATERIALS SHALL BE NEW. ALL MATERIALS AND EQUIPMENT FOR WHICH A UL STANDARD, AN AGA APPROVAL, AN AWWA STANDARD, FM LISTING OR ASME REQUIREMENTS IS ESTABLISHED, SHALL BE SO APPROVED AND LABELED OR STAMPED.
- N. THE DRAWINGS ARE BASED ON THE USE OF PRODUCTS SPECIFIED AND LISTED FIRST. IF ANY REVISION IN PIPING, CONDUIT WORK, FOUNDATIONS, ANCHOR BOLTS, CONNECTIONS, ETC., IS REQUIRED BY OTHER NAMED PRODUCTS OR APPROVED SUBSTITUTIONS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE SUCH REVISIONS AT NO ADDITIONAL CHARGE TO THE OWNER.
- O. SUBMIT SIX (6) ORIGINAL COPIES OF COMPLETE SHOP DRAWINGS FOR ALL MATERIALS AND EQUIPMENT FURNISHED UNDER DIVISION 15 OF SPECIFICATIONS TO ENGINEER FOR REVIEW. SHOP DRAWINGS SHALL BEAR THE STAMP OF APPROVAL OF THE CONTRACTOR AS EVIDENCE THAT THE DRAWINGS HAVE BEEN CHECKED BY HIM. DRAWING WITHOUT THIS STAMP OF APPROVAL WILL NOT BE CONSIDERED AND WILL BE RETURNED FOR PROPER RESUBMISSION.
- P. REVIEW OF SHOP DRAWINGS DOES NOT RELIEVE CONTRACTOR OF RESPONSIBILITY FOR ERRORS AND OMISSIONS IN SHOP DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS AND SIZES OF EQUIPMENT. INFORM ENGINEER IN WRITING OF EQUIPMENT DIMENSIONS FROM THE SHOWN.
- Q. PROVIDE MAINTENANCE AND OPERATING MANUALS BOUND IN 8-1/2" X 11" HARDBACK, THREE-POST BINDERS. MANUALS SHALL CONTAIN WRITTEN INSTRUCTIONS FOR EACH SYSTEM, SHOP DRAWINGS, SCHEMATIC DRAWINGS, EQUIPMENT CATALOG CUTS, MANUFACTURER'S INSTRUCTIONS, MANUFACTURER'S WARRANTIES, AND VALVE TAG LIST.
- R. PROVIDE AS-BUILT PRINTS AT THE COMPLETION OF JOB. KEEP ONE SET OF PRINTS ON JOB AND RECORD DAY TO DAY CHANGES TO CONTRACT DRAWINGS WITH RED PENCIL. INDICATE ACTUAL LOCATION OF PIPING, VALVES, AND EQUIPMENT. TURN OVER PRINTS TO ENGINEER AT FINAL OBSERVATION.
- S. FURNISH ENGINEER WARRANTY, STATING THAT IF WORKMANSHIP AND/OR MATERIALS EXECUTED UNDER THIS DIVISION IS PROVEN DEFECTIVE WITHIN ONE (1) YEAR AFTER FINAL ACCEPTANCE, SUCH DEFECTS AND OTHER WORK DAMAGED WILL BE REPAIRED AND/OR REPLACED.

SECTION 15051 - BASIC MATERIALS AND METHODS

- A. ACCESS PANELS:
 - 1. ACCESS PANELS SHALL HAVE WELDED STEEL FRAME, ONE PIECE DOORS, AND SELF LATCHING DOOR LOCKS. LOCKS SHALL BE SCREW DRIVER OPERATED WITH CASE HARDENED STEEL CAM. PANELS SHALL BE MILCOR, CESCO, KARP OR EQUAL.
 - 2. PROVIDE ACCESS PANELS IN WALLS AND CEILINGS AS NEEDED TO ALLOW ACCESS TO VALVES, EQUIPMENT, SHOCK ABSORBERS, TRAP PRIMERS, ETC. AND WHERE NOTED.
- B. FIRESTOPPING AND SOUNDSTOPPING:
 - 1. PENETRATIONS THROUGH FLOORS AND FIRE RESISTANT WALLS SHALL BE SEALED TO THE RATED FIRE RESISTANCE EQUAL TO THE WALL. INSTALLATION SHALL BE DONE BY A QUALIFIED INSTALLER APPROVED BY THE MANUFACTURER.
 - 2. PROVIDE SOUND PROOFING THROUGH NON-RATED WALLS.
- C. PIPING SEALS:
 - 1. PROVIDE MODULAR, RESILIENT SEALS AROUND PIPES PENETRATING ALL EXTERIOR WALLS, AND FLOORS BELOW GRADE. PIPING SEALS SHALL BE THUNDERLINE CORP. "LINK SEAL" LS SERIES.
- D. CUTTING AND PATCHING:
 - 1. CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING. CUT WALLS, FLOORS, CEILINGS, PARTITIONS, ETC., REQUIRED FOR THE INSTALLATION OF THIS WORK IN A NEAT AND CAREFUL MANNER. CORE DRILL FOR HOLES AND OTHER OPENINGS THROUGH FLOORS AND WALLS. SAWCUT LARGER OPENINGS. CUTTING SHALL BE KEPT TO A MINIMUM.
 - 2. REPLACE OR REPAIR DUCTWORK, CONDUIT, PIPING, ETC., THAT IS CUT. PATCH AROUND OPENING CUT BY THIS CONTRACTOR OR PROVIDED BY OTHERS FOR HIM. PATCHING SHALL BE DONE BY AN APPROVED QUALIFIED CONTRACTOR, BUT SHALL BE PAID FOR BY THIS CONTRACTOR. FINISHED PATCHING SHALL RETAIN FIRE AND SMOKE RATINGS OF THE ASSEMBLY AND SHALL MATCH SURROUNDING FINISH.
- E. ANCHORS:
 - 1. MOUNT ALL EQUIPMENT, BRACKETS, HANGERS, ANCHORS, ETC. TO SAFELY RESIST THE VIBRATION OR THRUST FORCES AND SUPPORT THE UNIT'S WEIGHT.
 - 2. FLOOR MOUNTED ROTATING OR VIBRATING EQUIPMENT SHALL BE ANCHORED TO THE FLOOR USING GROUDED-IN-PLACE OR CAST-IN-PLACE ANCHOR BOLTS WITH THREE INCH HOOD AND SLEEVE. ANCHOR BOLTS SHALL BE OF THE SIZE RECOMMENDED BY THE MANUFACTURER. FLOOR MOUNTED STATIC ITEMS, WALL AND CEILING MOUNTED EQUIPMENT BRACKET AND HANGERS SHALL BE INSTALLED USING DRILLED ANCHORS (OR CAST IN PLACE INSERTS). ANCHORS SHALL BE PHILLIPS DRILL COMPANY "RED HEAD" OR MULTI-SET II. SIZE ANCHORS (AND INSERTS) FOR FOUR TIMES THE APPLIED LOAD. BOLTS USED OUTDOORS OR IN A WET ENVIRONMENT SHALL BE HOT DIP GALVANIZED.
- A. PIPE IDENTIFICATION:
 - 1. IDENTIFICATION SHALL BE IN ACCORDANCE WITH ANSI-A13.1. PIPE MARKERS SHALL BE SETONS WEATHER-CODE OR EQUAL.
 - 2. PROVIDE PIPE MARKERS AND DIRECTIONAL ARROWS ON PIPES AT BOTH SIDES OF PARTITIONS AND FLOORS SLABS. AT BRANCH LINE TAKE-OFFS, AT VALVES, AT INTERMEDIATE INTERVALS NOT IN EXCESS OF 20 FT. AND AT CONNECTIONS TO EQUIPMENT.
 - 3. TAPE COLOR BAND IDENTIFYING MARKERS AND ARROWS ON EACH PIPE, BOTH INSULATED AND BARE PIPES. PIPE MARKERS AND ARROWS SHALL BE LOCATED WHERE READILY VISIBLE AND ON LOWER QUADRANTS OF OVERHEAD PIPES.
- B. VALVE TAG AND CHART:
 - 1. VALVE TAGS SHALL BE SETON M4506. BLACK FILLED LETTERS WITH BRASS JACK CHAIN. ONE VALVE NUMBER SHALL BE STAMPED ON EACH TAG. IDENTIFY EACH VALVE TAG FOR THE UTILITY IT SERVES, SUCH AS "CW" FOR COLD WATER, "HW" FOR HOT WATER, ETC. VALVE CHARTS SHALL BE SETON. ATTACH A NUMBERED VALVE TAG TO EACH VALVE.
 - 2. PROVIDE A TYPE WRITTEN CHART IN FRAME UNDER GLASS COVER, GIVING THE FULL LIST OF ALL VALVES INSTALLED UNDER THIS CONTRACT. CHART SHALL LIST VALVE NUMBER, TYPE OF UTILITY, AND LOCATION. MOUNT CHART WHERE DIRECTED BY OWNER. PROVIDE ONE ADDITIONAL COPY TO OWNER.
- A. EQUIPMENT IDENTIFICATION:
 - 1. IDENTIFY EACH PIECE OF EQUIPMENT WITH A 1/8 INCH THICK ENGRAVED MELAMINE PLASTIC LAMINATE NAMEPLATE. LETTERS SHALL BE 1/2 INCH HIGH STANDARD STYLE. NAMES, ABBREVIATIONS, AND NUMBERING SHALL AGREE WITH THE CORRESPONDING EQUIPMENT DESIGNATIONS SHOWN ON THE DRAWINGS. USE BLACK LETTERS CUT IN A WHITE BACKGROUND FOR ALL EQUIPMENT ON STANDARD ELECTRICAL POWER.
 - 2. FASTEN NAMEPLATES TO EQUIPMENT IN A CONSPICUOUS LOCATION USING SELF-TAPPING STAINLESS STEEL. EXCEPT USE CONTACT EPOXY ADHESIVE WHERE SCREWS CANNOT OR SHOULD NOT PENETRATE SUBSTRATE.
- B. PIPE SLEEVES:
 - 1. PROVIDE PIPE SLEEVES WHERE PIPES PASS THROUGH FLOORS AND WALLS ABOVE OR BELOW CEILINGS. PROVIDE PIPE SLEEVES IN NEW WALLS AND FLOORS AS THE WORK PROGRESSES. PROVIDE SPLIT PIPE SLEEVES IN NEW WALLS BUILT UP AROUND EXISTING PIPES. TACK WELD SPLIT SLEEVES TOGETHER.
 - 2. SIZE PIPE SLEEVES TO ALLOW CONTINUOUS INSULATION, BUT NOT LESS THAN TWO PIPE SIZES LARGER THAN PIPE. SLEEVES IN WALLS SHALL BE FLUSH WITH WALL. SLEEVES IN FLOORS SHALL EXTEND 3/4 INCHES ABOVE FLOOR AND BE FLUSH WITH STRUCTURE BELOW.
 - 3. SLEEVES IN CONCRETE WALLS, FLOORS OR MASONRY SHALL BE SCH 40 STEEL PIPE, MACHINE CUT. SLEEVES IN GYPSUM BOARD OR PLASTER WALLS SHALL BE 14 GAUGE, ROLLED GALVANIZED SHEET METAL TACK WELDED ON THE LONGITUDINAL SEAM.
 - 4. PROVIDE PLATES AROUND PIPES EXTENDING INTO EXPOSED AREAS WHERE THEY PASS THROUGH WALLS, FLOORS AND CEILINGS. SIZE PLATES TO COMPLETELY COVER PIPE SLEEVES. PLATES SHALL BE BEATON AND CADWELL, KEENEY OR GRINNELL. NICKEL PLATED STEEL, SPLIT PLATES WITH SET SCREW. CONCRETE FLOOR PLATE SHALL BE GRINNELL FIGURE 400.
- C. FLASHING:
 - 1. PROVIDE FLASHING AT PIPING AND DUCT PENETRATIONS THROUGH ROOF AND ROOF MOUNTED STRUCTURES FURNISHED UNDER THIS DIVISION. FLASH IN ACCORDANCE WITH ROOFING MANUFACTURERS DETAILS. FLASHING MATERIALS SHALL BE IN ACCORDANCE WITH THE ROOFING MANUFACTURERS SYSTEM.
 - 2. PROVIDE FLASHING AT PIPES PASSING THROUGH FLOORS WITH WATERPROOF MEMBRANE. FLASHING SHALL BE IN ACCORDANCE WITH WATERPROOFING MANUFACTURERS DETAILS.

SECTION 15261 - PLUMBING INSULATION

- A. GENERAL:
 - 1. ALL INSULATION, JACKETING, AND ADHESIVE SHALL HAVE COMPOSITE SURFACE BURNING CHARACTERISTIC RATINGS AS TESTED BY ASTM E 84, UL 723, OR NFPA 255 NOT EXCEEDING A FLAME SPREAD OF 25 OR SMOKE DEVELOPED OF 50.
 - 2. SUBMITTALS SHALL USE PAGES FROM MIDWEST INSULATION CONTRACTORS ASSOCIATION -- "COMMERCIAL AND INDUSTRIAL INSULATION STANDARDS" WHICH WILL BE APPLIED.
 - 3. ALL PIPE INSULATION SHALL BE CONTINUOUS THROUGH WALLS, CEILING OR FLOOR OPENINGS, OR SLEEVES, EXCEPT WHERE FIRESTOP OR FIRESEALING MATERIALS ARE REQUIRED.
 - 4. INSULATE ITEMS MOUNTED IN PIPING WITH THE SAME THICKNESS OF INSULATION AS SPECIFIED FOR PIPING.
 - 5. REPAIR INSULATION DAMAGED BY WORK UNDER THIS CONTRACT TO MATCH EXISTING WORK OR REPLACE DAMAGED PORTION WITH INSULATION SPECIFIED FOR NEW WORK.
 - 6. DOMESTIC WATER PIPING:
 - 1. INSULATION SHALL BE 800 DEG. F RATED AS MANUFACTURED BY OWENS CORNING, MANVILLE OR KNAUF. ROUTED OR MOLDED FITTING INSULATION SHALL BE HEMFAB.
 - 2. INSULATION SHALL HAVE FACTORY-APPLIED, REINFORCED, FLAME RETARDANT, VAPOR BARRIER JACKET EQUAL TO OWENS-CORNING ASJ WITH SELF-SEALING LAP. BUTT JOINTS SHALL BE TAPED WITH FIELD-APPLIED ASJ TAPE 3 IN. WIDE.
 - 3. INSULATION THICKNESSES SHALL BE IN ACCORDANCE WITH INTERNATIONAL ENERGY CONSERVATION CODE FOR PIPE SIZES NOTED ON PLAN.
 - 4. ALL FITTINGS AND VALVES SHALL BE INSULATED WITH PREFORMED FIBER GLASS FITTINGS OR MITERED SECTIONS OF PIPE INSULATION. INSULATION SHALL BE OF EQUAL THICKNESS TO THE ADJACENT PIPE INSULATION.
 - 5. METAL SHIELDS SHALL BE INSTALLED BETWEEN HANGERS OR SUPPORTS AND THE PIPING INSULATION. RIGID INSULATION INSERTS SHALL BE INSTALLED AS REQUIRED BETWEEN THE PIPE AND THE INSULATION SHIELDS. INSERTS SHALL BE OF EQUAL THICKNESS TO THE ADJACENT INSULATION AND SHALL BE VAPOR SEALED AS REQUIRED.
 - 7. ELASTOMERIC CLOSED CELL INSULATION:
 - 1. INSULATION SHALL BE RUBATEX OR ARMSTRONG. SECURE INSULATION WITH CONTACT ADHESIVE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. EXPOSED OR EXTERIOR INSTALLATIONS SHALL BE PAINTED WITH TWO COATS OF WATER BASE LAQUER ENAMEL.
 - 2. PROVIDE 1 IN. THICK INSULATION ON DX REFRIGERANT PIPING, COOLING COIL CONDENSATE PIPING, AND CAPS FOR ALL VALVE STEMS AND OPERATORS, GAUGE COCKS, THERMOMETER WELLS AND OTHER APPURTENANCES SUBJECT TO SWEATING.
 - 8. PIPING FINISHES:
 - 1. METAL JACKETING SHALL BE, SMOOTH 0.16 IN. THICK, TYPE T 3003 ALUMINUM WITH LAMINATED MOISTURE BARRIER. JACKETING SHALL BE CHILDRES, ALUMINUM ROLL JACKETING WITH POLYKRAFT MOISTURE BARRIER. COVER THE FOLLOWING INSULATED SYSTEMS WITH METAL JACKETING: PIPING INSTALLED OUTDOORS AND EXPOSED PIPING INDOORS WITHIN 8 FT. OF FINISHED FLOOR. METAL FITTING COVERS SHALL BE TWO PIECE ALUMINUM. COVERS SHALL BE ELL-JAC.
 - 2. CONCEALED PIPING FINISH COVERING SHALL BE THE ALL SERVICE JACKET. FITTINGS SHALL BE COVERED BY WRAPPING THE FITTING WITH FIBER REINFORCED TAPE, WITH A 5 PERCENT OVERLAP. FITTINGS SHALL BE ONE PIECE 20 MIL PVC. COVERS SHALL BE CEEL-TITE 550 PVC-UVR BY CEEL-CO OR EQUALS.

SECTION 15410 - PLUMBING PIPING

- A. THE WORK REQUIRED UNDER THIS SECTION INCLUDES ALL WORK NECESSARY FOR A COMPLETE INSTALLATION OF SANITARY WASTE PIPING, STORM PIPING AND DOMESTIC WATER PIPING INSIDE THE BUILDING TO 5 FEET OUTSIDE THE BUILDING. SUBMIT SCHEDULE OF PIPE AND FITTINGS FOR EACH SERVICE.
- B. DOMESTIC WATER PIPING: WATER PIPING WITHIN THE BUILDING SHALL BE COPPER TUBE, TYPE "L" HARD TEMPER, ASTM B-88. PIPING UNDER GROUND SHALL BE COPPER TUBE, TYPE "K" SOFT TEMPER, ASTM B-88. FITTINGS SHALL BE WROUGHT COPPER, SOLDER TYPE, ASTM B-75, ANSI B16.22. SOLDER UNIONS SHALL BE WROT COPPER, WITH COPPER GROUND JOINT. ASTM B75, ANSI B16.22. DI-ELECTRIC, EPSO, 250 LB. WOG. SOLDER METAL SHALL CONFORM TO ASTM B32. LEAD-FREE.
- C. STORM, SANITARY WASTE, AND VENT PIPING: ABOVE GROUND: SCHEDULE 40 PVC-DWV ASTM D-2685 USING SOLVENT CEMENT ASTM D02565. HORIZONTAL PIPING FOR FIXTURE ROUGH-INS MAY BE DWV COPPER, ASTM B-306. BELOW GROUND: SCHEDULE 40 PVC-DWV ASTM D-2685 USING SOLVENT CEMENT ASTM D-2564.
- D. STORM, SANITARY WASTE AND VENT FITTINGS: ABOVE GROUND: 1/10 HUB CAST IRON SOIL PIPE FITTINGS WITH COUPLING ASSEMBLY CISPI STANDARD 310.) SCHEDULE 40 PVC-DWV, ASTM D-2855 USING SOLVENT CEMENT ASTM D-2564. BELOW GROUND: SCHEDULE 40 PVC-DWV, ASTM D-2855 USING SOLVENT CEMENT ASTM D-2564.
- E. BALL VALVES: VALVES SHALL BE NIBCO T-585-70, FULL PORT BALL TYPE WITH BRONZE BODY, CHROME PLATED BALL AND BRONZE THREADED ENDS, 600 PSI WOG OR NIBCO S-585-70 IN COPPER LINES. HAMMOND, CRANE, APOLLO, MILWAUKEE, OR APPROVED EQUAL.
- F. ALL PIPING SHALL BE ROUTED TO CONSERVE BUILDING SPACE, BE COORDINATED WITH ITEMS INSTALLED BY OTHER TRADES AND NOT INTERFERE WITH ACCESS TO OR OPERATION OF THE FACILITY.
- G. PROVIDE ROOF FLASHINGS FOR PIPE PENETRATIONS THROUGH ROOF, TO BE INSTALLED BY ROOFING CONTRACTOR.
- H. WATER PIPING WITHIN BUILDING SHALL BE SIZE INDICATED ON PLANS AND RISERS. IN THE EVENT NO SIZE IS SHOWN, PIPE SIZE OR SIZE REQUIRED BY THE PLUMBING CODE. PIPING SHALL BE SLOPED TOWARD A SYSTEM DRAIN AND TOWARD OUTLETS, TO PROVIDE FOR SYSTEM DRAIN-DOWN. IF INSTALLED NEAR EXTERIOR WALLS, PIPING SHALL BE LOCATED ON THE INTERIOR SIDE OF INSULATION. INSTALL PIPING TO PREVENT DIRECT CONTACT BETWEEN FERROUS AND NON-FERROUS MATERIALS. ALLOW FLEXIBILITY FOR EXPANSION IN PIPING.
- I. DOMESTIC WATER PIPING SYSTEM SHALL BE TESTED WITH POTABLE WATER AT A PRESSURE OF 125 PSIG OR 25 PSIG ABOVE DESIGN WORKING PRESSURE, WHICHEVER IS GREATER FOR 12 HOURS. TEST SHALL BE CONDUCTED WITH PLUMBING INSPECTOR UNLESS APPROVED OTHERWISE IN WRITING.
- J. WATER DISTRIBUTION PIPING SHALL BE DISINFECTED PRIOR TO OCCUPANCY OR SYSTEM START-UP WITH A CHLORINE SOLUTION 50 PPM. ALLOW SYSTEM TO STAND FOR SIX HOURS MINIMUM, THEN EXERCISE ALL VALVES TO ENSURE TREATMENT OF ALL BRANCHES AND COMPONENTS. SYSTEM SHALL BE FLUSHED WITH POTABLE WATER AFTER DISINFECTION AND PRIOR TO PLACEMENT INTO SERVICE.
- K. STORM, SANITARY WASTE AND VENT PIPING SHALL BE TESTED IN ACCORDANCE WITH WATER TEST AS SPECIFIED IN THE INTERNATIONAL PLUMBING CODE. IN ADDITION TO ANY TESTS REQUIRED BY THE LOCAL PLUMBING OFFICIAL. (10 FEET OF HEAD WITH NO APPARENT LEAKS. HOLD FOR 30 MINUTES MINIMUM), FLUSH ALL GRAVITY PIPING INCLUDING FLOOR DRAINS AND ROOF DRAINS PRIOR TO TURNING OVER TO THE OWNER.
- L. ALL PIPE SHALL BE CUT SQUARE. REAM PIPE AND TUBE ENDS AND REMOVE BURRS. CLEAN THE ENDS OF PIPES TO REMOVE OIL, GREASE AND OXIDES. PREPARE PIPING CONNECTIONS TO EQUIPMENT WITH FLANGES OR UNIONS.
- M. ALL SOLDERED PIPING AND EQUIPMENT CONNECTIONS SHALL BE PROPERLY PREPARED IN ACCORDANCE WITH GOOD PIPING PRACTICE. APPLY A THIN LAYER OF FLUX TO ONLY THE MALE TUBING. ROTATE INTO THE FITTING WITH ONE OR TWO REVOLUTIONS.
- N. DOMESTIC WATER PIPING: ROUTE PIPING IN ORDERLY MANNER, PLUMB AND PARALLEL TO BUILDING STRUCTURE, AND MAINTAIN GRADIENT. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT. PROVIDE CLEARANCE FOR INSTALLATION OF INSULATION AND ACCESS TO VALVES AND FITTINGS. PROVIDE ACCESS WHERE VALVES AND FITTINGS ARE NOT EXPOSED. INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL. PROVIDE DRAIN VALVES AT LOW POINTS IN SYSTEMS. TEST WATER PIPING BEFORE BEING INSULATED OR CONCEALED IN WALLS OR CEILINGS.
- O. STORM, SANITARY WASTE, AND VENT PIPING: HORIZONTAL SOIL, WASTE AND DRAINAGE LINES WITHIN BUILDING SHALL HAVE A MINIMUM UNIFORM SLOPE OF 1/8 INCH PER FOOT ON 3 INCH AND LARGER, AND 1/4 INCH PER FOOT ON LINES 2 INCH AND SMALLER. TURNS IN SANITARY, SOIL, AND DRAIN PIPING SHALL BE MADE USING 45 DEGREE ELBOWS, WYES, QUARTER, EIGHTH, SIXTEENTH BENDS, OR OTHER BENDS APPROVED BY THE PLUMBING CODE. DO NOT USE SANITARY TEES OR CROSSES EXCEPT WHERE DISCHARGING FROM HORIZONTAL TO VERTICAL. MAKE CHANGES IN PIPE SIZES WITH REDUCING FITTINGS AND RECESSED REDUCERS. DO NOT REDUCE LINE SIZE IN DIRECTION OF FLOW. PROVIDE CLEANOUTS IN ALL HORIZONTAL TURNS IN WASTE PIPING GREATER THAN 45 DEGREES. PROVIDE DEEP SEAL TRAPS ON ALL FLOOR DRAINS, AND TRAP PRIMERS/SEAL WHERE REQUIRED BY CODE OR AS INDICATED ON DRAWINGS. INDIRECT WASTE LINES DUMPING INTO FLOOR OR HUB DRAINS SHALL MAINTAIN A 2-INCH AIR GAP BETWEEN THE END OF THE WASTE LINE AND THE RIM OF THE FLOOR OR HUB DRAIN.

SECTION 15416 - GAS PIPING SYSTEMS

- A. PROVIDE COMPLETE INSTALLATION OF GAS PIPING FROM THE "POINT OF DELIVERY" UP TO AND INCLUDING CONNECTION TO ALL GAS-FIRED EQUIPMENT. CONNECT EQUIPMENT ITEMS FURNISHED UNDER OTHER SECTIONS OF SPECIFICATIONS. TEST IN ACCORDANCE WITH A.G.A., STANDARD GAS CODE, N.F.P.A. 54, AND APPLICABLE STATE AND LOCAL CODES.
- B. ROUTE GAS SERVICE ENTRANCE PIPING INTO BUILDING TO AVOID INTERFERENCE AND DAMAGE. PROVIDE MANUAL SHUTOFF VALVE, GAS COCK AND GAUGE. VALVES SHALL BE LABELED.
- C. PROVIDE ACCESS PANELS FOR VALVES AND OTHER ITEMS REQUIRING MAINTENANCE IN ENCLOSED SPACES. AVOID INSTALLING GAS APPURTENANCES IN ENCLOSED SPACES WHERE POSSIBLE. INSTALL IN ENCLOSED SPACES ONLY AS ALLOWED BY APPLICABLE CODES.
- D. SUBMIT MANUFACTURER'S LITERATURE ON ALL MATERIALS AND EQUIPMENT INCLUDING: PIPE, PIPE COATING, ANODES, VALVES, FLEXIBLE CONNECTORS, FITTINGS, REGULATORS, RELIEF VALVES, GAUGES, GAS SERVICE:
 - 1. COORDINATE INSTALLATION OF GAS SERVICE LINE WITH LOCAL GAS COMPANY. PAY ALL FEES.
 - 2. PROVIDE 12 INCH ELEVATED METER MOUNTING PADS ON TOP OF A 4 INCH THICK CONCRETE PAD FOR SUPPORT OF GAS METER AND PIPING.
 - 3. PROVIDE (TWO) 8 INCH DIAMETER PIPE BOLLARDS FOR GAS METER PROTECTION. BOLLARDS SHALL BE SIX FEET LONG (3 FEET BELOW GRADE), MOUNTED IN A 24 INCH DIAMETER HOLE, FILLED WITH 3,000 PSI CONCRETE.
- F. INTERIOR PIPING: CONNECT TO ENTERING LINE AND DISTRIBUTE GAS TO EQUIPMENT ITEMS REQUIRING GAS AND AS INDICATED. PERFORM WORK IN ACCORD WITH APPLICABLE A.G.A., N.F.P.A. 54, STATE AND LOCAL CODES. INSTALL GAS STOP VALVES AND DRIP LEGS AT EACH EQUIPMENT ITEM. PIPING SHALL BE ADEQUATELY DRAINED WITH A MINIMUM SLOPE OF 1/4 INCH PER 15 FEET AND DRIP LEGS (FULL SIZE OF PIPE) INSTALLED AT ADDITIONAL POINTS WHERE CONDENSATE MAY COLLECT. INSTALL PRESSURE REDUCING VALVES AS REQUIRED TO PROVIDE PRESSURE WITHIN EQUIPMENT MANUFACTURER'S REQUIREMENTS.
- G. EXTERIOR PIPING: EXTERIOR PIPING SHALL BE SCHEDULE 40 CARBON STEEL. PIPING 2 INCH AND SMALLER MAY USE THREADED FITTINGS. PIPING 2 1/2 INCH AND LARGER SHALL USE WELDED FITTINGS AND FLANGED VALVES. EXTERIOR PIPING SHALL BE COATED WITH AN ALKYD ENAMEL PRIMER (MINIMUM DRY THICKNESS 3 MILS). EXTERIOR PIPING SHALL BE PROTECTED FROM CORROSION. PROVIDE COATED PIPING AND UNDERGROUND PIPING:
 - 1. UNDERGROUND PIPING SHALL BE CARBON STEEL - A53A106-WELDED OR POLYETHYLENE. UNDERGROUND STEEL PIPING SHALL HAVE AT LEAST 18 INCH OF PROPER BACKFILL COVER PROTECTED FROM CORROSION. UNDERGROUND PIPING SHALL BE PROTECTED FROM CORROSION. PROVIDE COATED PIPING AND FITTINGS. REPAIR DAMAGED COATING AT SELCTS. INSTALL SACRIFICIAL ANODES ON STEEL PIPING INTERVALS NOT EXCEEDING 100 FT.
 - 2. WHERE PIPES PENETRATE BASEMENT WALLS AND FOUNDATIONS INSTALL THUNDERLINE LINK SEAL.
 - 3. GAS LINES ROUTED UNDER A BUILDING SHALL BE STEEL AND SHALL BE ENCASED IN A SCH 40 OUTER CONDUIT (AT LEAST 3 PIPE SIZES LARGER THAN THE GAS LINE). CONDUIT SHALL BE SEAL WELDED TO THE GAS PIPE INSIDE THE BUILDING. CONDUIT SHALL BE VENTED TO OUTDOORS. CONDUIT SHALL BE PROTECTED FROM CORROSION SIMILARLY TO UNDERGROUND PIPING.
- I. PIPE/TUBING:
 - 1. STEEL PIPE: ASTM A53 GRADE A OR B, TYPE F, ERW OR SEAMLESS. SCHEDULE 40.
 - 2. ASTM A106 SEAMLESS, SCHEDULE 40.
 - 3. TUBING (STEEL) ASTM A539.
 - 4. PLASTIC PIPE ASTM D2513 POLYETHYLENE. DRISCO PIPE 6500 OR PRIOR APPROVED EQUAL.
- J. FITTINGS:
 - 1. WELDED (STEEL): WELDING FITTINGS SHALL BE CARBON STEEL BUTT WELDING TYPE CONFORMING TO ASTM-234. ELBOWS SHALL BE LONG RADIUS TYPE. WELDING TEES SHALL BE USED ON BRANCH CONNECTIONS EQUAL TO OR GREATER THAN 2 THE DIAMETER OF THE MAIN RUN. FITTINGS SHALL BE LADISH, TUBE-TURN OR WELDBOND. CARBON STEEL REINFORCED BRANCH, WELDING FITTINGS UP TO 3 INCHES, BUT NOT GREATER THAN 2 THE DIAMETER OF THE MAIN RUN MAY BE USED. FITTINGS SHALL BE BONNEY FORGE OR PHOENIX FORGING.
 - 2. THREADED (MALLEABLE, IRON): SCREWED FITTINGS SHALL BE MALLEABLE IRON ASTM A-197 CLASS 150 CONFORMING TO ANSI B16.3. DIMENSIONS CONFORMING TO FEDERAL SPEC WW-P-521. FITTINGS SHALL BE GRINNELL, FLAGG OR STOCKHAM.
 - 3. HEAT FUSION/COMPRESSION (POLYETHYLENE): SOCKET TYPE FUSION SHALL MEET THE REQUIREMENTS OF ASTM 2683. FITTINGS SHALL BE LISTED AND MARKED ASTM D2513. BUTT TYPE FUSION FITTING SHALL MEET THE REQUIREMENTS OF ASTM D361.
- K. UNIONS (DIELECTRIC): CLASS 250 MALLEABLE, SCREWED ASTM A-197.
- L. VALVES:
 - 1. 1 INCH AND SMALLER: BALL VALVE - CLASS 125 BRASS FULL PART, 2 PIECE BODY, CHROME PLATED BALL, BLOWOUT PROOF STEAM, THE SEATS.
 - 2. 2 INCHES AND SMALLER: PLUG COCK - CLASS 125 CAST IRON, SCREWED, FULL PORT AGA LISTED, ANSI B16.33 HOMESTEAD FIGURE 601.
 - 3. 2 1/2 INCHES AND LARGER: PLUG VALVE - CLASS 125 FLANGED CAST IRON ASTM A126 CONFORMING TO ANSI B16.1.
- M. PIPE COATING: X-TRU COAT OR PRIOR APPROVED EQUAL INCLUDING JOINTS AND FITTINGS.
- N. PRESSURE REGULATORS: CAST IRON OR ALUMINUM BODY AND SPRING CASE WITH STAINLESS STEEL VALVE STEAM, SEAT RING AND VALVE PLUG, PLATED STEEL SPRINGS, NEOPRENE DIAPHRAGM AND GASKETS AND TFE DISC. REGULATING VALVES SHALL BE SIZED FOR THE FLOW INDICATED AND FOR INLET AND OUTLET PRESSURES INDICATED. OUTLET PRESSURE SHALL BE MAINTAINED UNDER THE DESIGN FLOW CONDITION AND AT NO FLOW. REGULATING VALVES TWO PSI AND BELOW SHALL HAVE LEAK LIMITING DEVICES. REGULATING VALVES OVER TWO PSI SHALL BE VENTED FULL SIZE TO OUTSIDE OF THE BUILDING. OTHER REGULATING VALVES REQUIRING ACCESS TO THE ATMOSPHERE SHALL BE EQUIPPED WITH VENT PIPING LEADING TO OUTSIDE. PROVIDE A PRESSURE RELIEF VALVE IF THE REGULATOR CONNECTION SIZE EXCEEDS TWO INCHES. REGULATING VALVES SHALL BE FISHER, MAXITROL OR PRIOR APPROVED EQUAL MEETING ANSI Z21.18.
- O. PRESSURE GAGE: FOR MEDIUM PRESSURE GAS; 0-5 PSI RANGE. FOR LOW PRESSURE GAS; 0-30 INCH W.C. RANGE. USE LOW PRESSURE TYPE 2-1/2 INCH DIA. PRESSURE GAGE WITH APPROPRIATE RANGE, OCI MODEL CO 34, TREKICE, WERKLER OR APPROVED EQUAL.



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5/15/24

Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

FINAL		
No.	Description	Date

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Plumbing Specifications	
Project number	24005
Date	5/15/2024
Drawn by	CA
Checked by	JB
P0.02	
Scale	12" = 1'-0"



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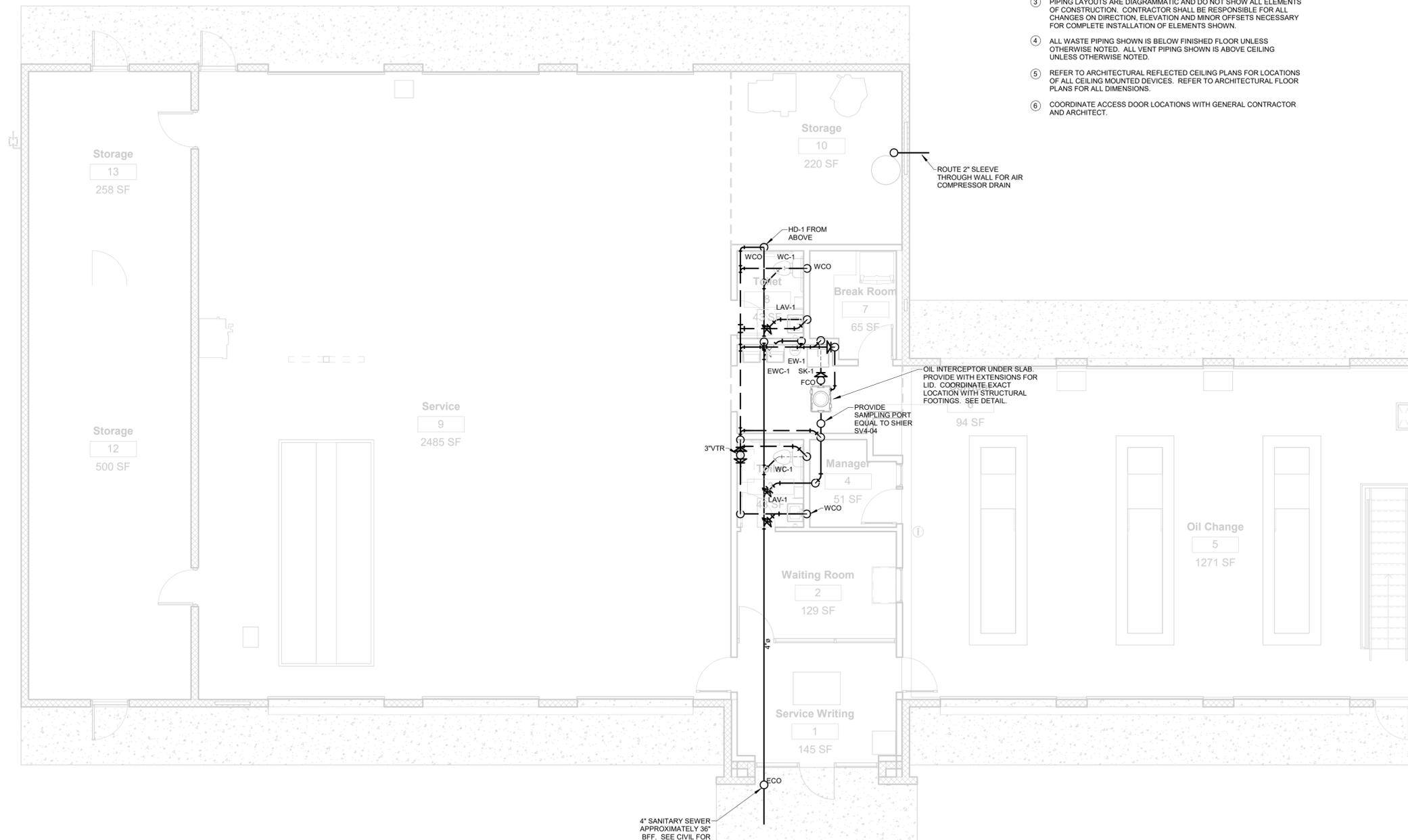


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GENERAL NOTES:

- ① CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD PRIOR TO BEGINNING WORK.
- ② SPACE ABOVE CEILING IS LIMITED. CAREFUL COORDINATION WITH LIGHTING, ELECTRICAL, MECHANICAL, FIRE PROTECTION, STRUCTURAL AND ARCHITECTURAL WORK IS CRITICAL FOR COMPLETE PIPING INSTALLATION. CONTRACTOR SHALL PROVIDE NECESSARY OFFSETS IN NEW AND EXISTING PIPING AND ELECTRICAL CONDUIT AS REQUIRED TO ACCOMMODATE NEW WORK. CONTRACTOR SHALL ALLOW FOR ANY CONFLICTS ENCOUNTERED.
- ③ PIPING LAYOUTS ARE DIAGRAMMATIC AND DO NOT SHOW ALL ELEMENTS OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES ON DIRECTION, ELEVATION AND MINOR OFFSETS NECESSARY FOR COMPLETE INSTALLATION OF ELEMENTS SHOWN.
- ④ ALL WASTE PIPING SHOWN IS BELOW FINISHED FLOOR UNLESS OTHERWISE NOTED. ALL VENT PIPING SHOWN IS ABOVE CEILING UNLESS OTHERWISE NOTED.
- ⑤ REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF ALL CEILING MOUNTED DEVICES. REFER TO ARCHITECTURAL FLOOR PLANS FOR ALL DIMENSIONS.
- ⑥ COORDINATE ACCESS DOOR LOCATIONS WITH GENERAL CONTRACTOR AND ARCHITECT.



4" SANITARY SEWER
 APPROXIMATELY 36"
 BFF. SEE CIVIL FOR
 CONTINUATION.

NORTH
 MAIN FLOOR PLAN
 PLUMBING - GRAVITY
 3/16" = 1'-0"

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 Sevierville, Tennessee

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Plumbing Floor Plan Gravity

Project number	24005
Date	5/15/2024
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P1.01
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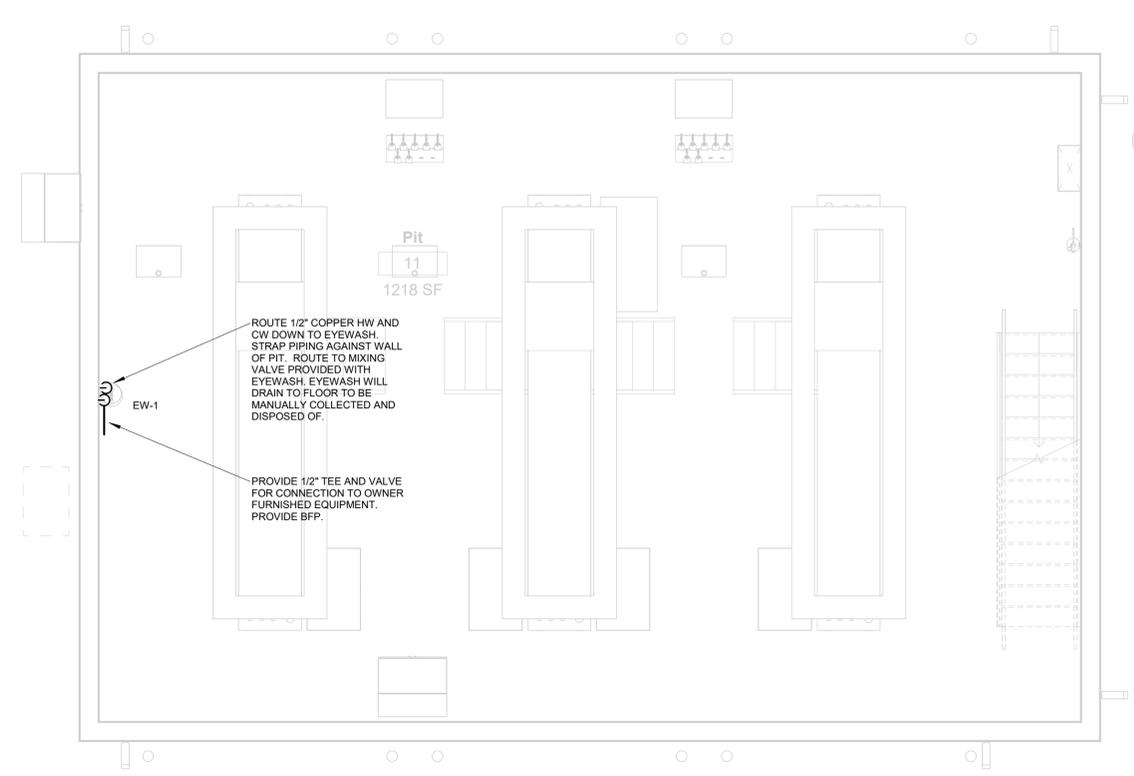
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**Partial Plumbing
 Floor Plans - Pit
 and Platform**

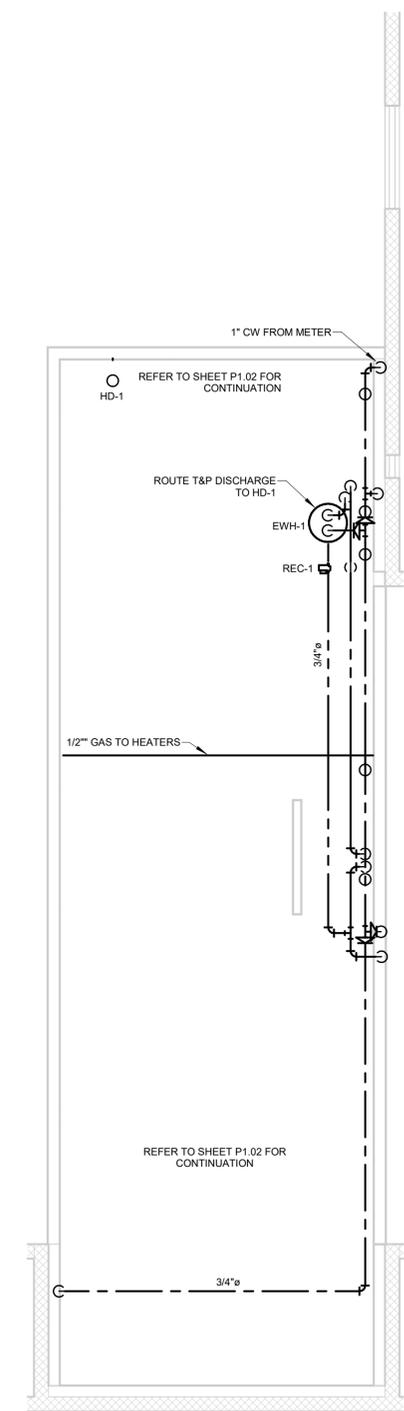
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Date	5/15/2024
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P1.03
 Scale As indicated

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PIT FLOOR PLAN PLUMBING
 1/4" = 1'-0"
 NORTH



EQUIPMENT PLATFORM -
 PLUMBING
 NORTH 1/4" = 1'-0"

GENERAL NOTES:

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- 2 SPACE ABOVE CEILING IS LIMITED. CAREFUL COORDINATION WITH LIGHTING, ELECTRICAL, MECHANICAL, FIRE PROTECTION, STRUCTURAL AND ARCHITECTURAL WORK IS CRITICAL FOR COMPLETE PIPING INSTALLATION. CONTRACTOR SHALL PROVIDE NECESSARY OFFSETS IN NEW AND EXISTING PIPING AND ELECTRICAL CONDUIT AS REQUIRED TO ACCOMMODATE NEW WORK. CONTRACTOR SHALL ALLOW FOR ANY CONFLICTS ENCOUNTERED.
- 3 PIPING LAYOUTS ARE DIAGRAMMATIC AND DO NOT SHOW ALL ELEMENTS OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES ON DIRECTION, ELEVATION AND MINOR OFFSETS NECESSARY FOR COMPLETE INSTALLATION OF ELEMENTS SHOWN.
- 4 ALL PRESSURE PIPING SHOWN IS ABOVE THE CEILING UNLESS OTHERWISE NOTED. ALL TRAP PRIMER LINES AND HOT WATER RETURN LINES SHALL BE 1/2" UNLESS OTHERWISE NOTED.
- 5 REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF ALL CEILING MOUNTED DEVICES. REFER TO ARCHITECTURAL FLOOR PLANS FOR ALL DIMENSIONS.
- 6 COORDINATE ACCESS DOOR LOCATIONS WITH GENERAL CONTRACTOR AND ARCHITECT.



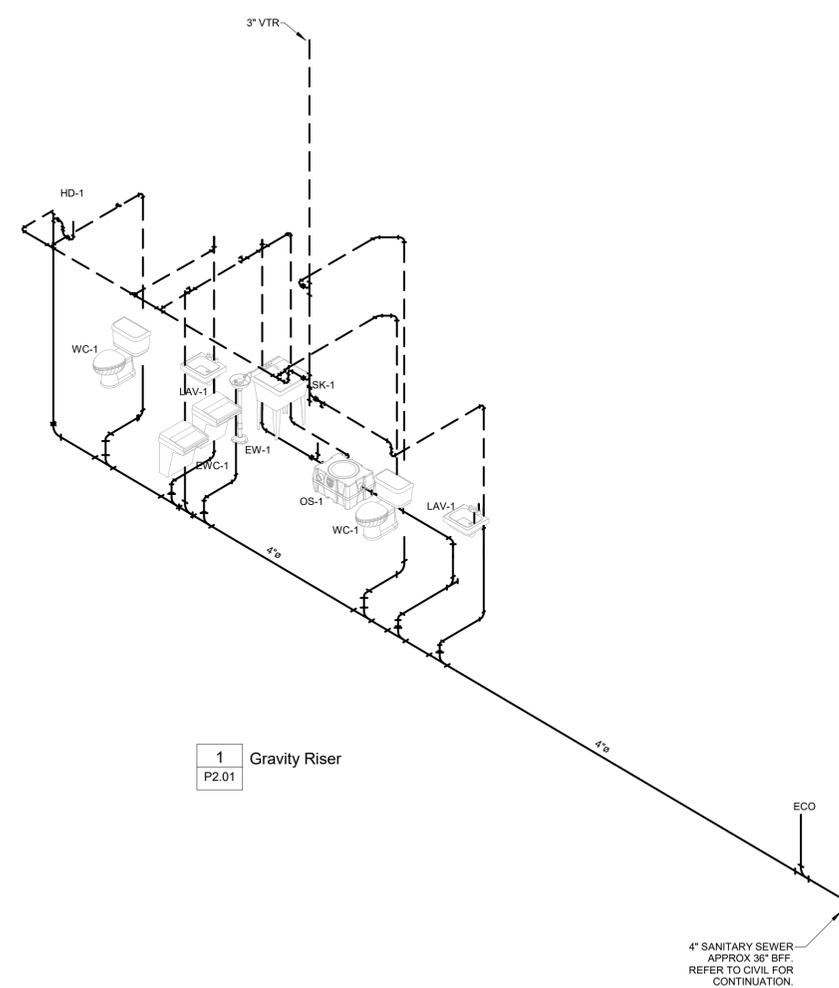
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5/15/24



1 Gravity Riser
 P2.01

4\"/>

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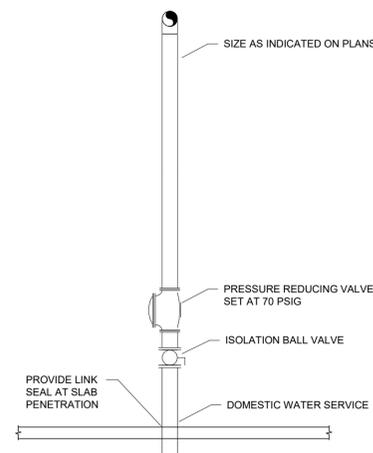
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Plumbing Riser - Gravity

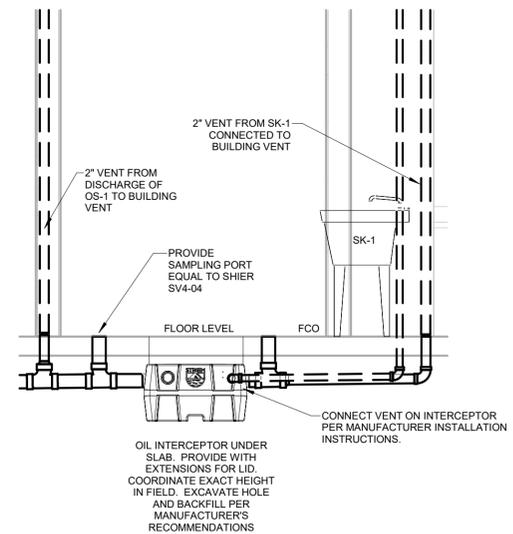
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Date	5/15/2024
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P2.01	
Scale	



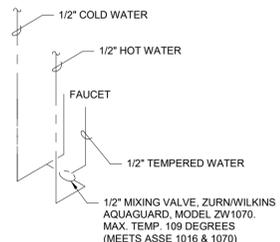
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6 DOMESTIC WATER ENTRANCE DETAIL
 P2.02 NO SCALE

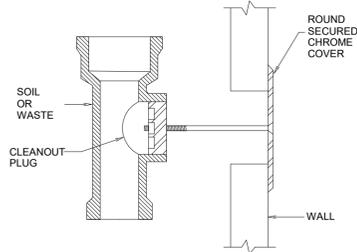


7 OIL INTERCEPTOR DETAIL
 P2.03 1/2" = 1'-0"

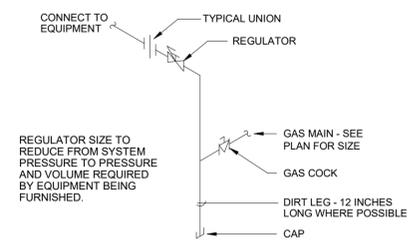


SINGLE

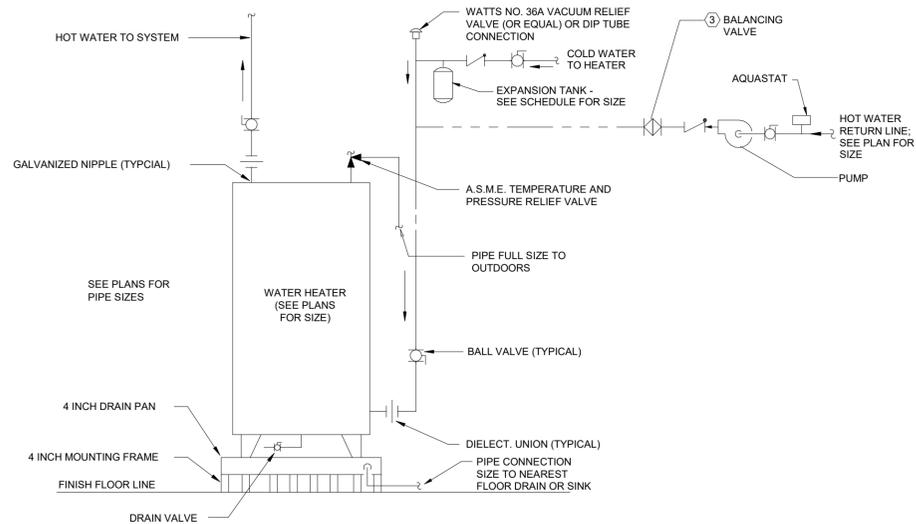
4 TYPICAL LAVATORY MIXING VALVE
 P2.02 SCALE: NONE



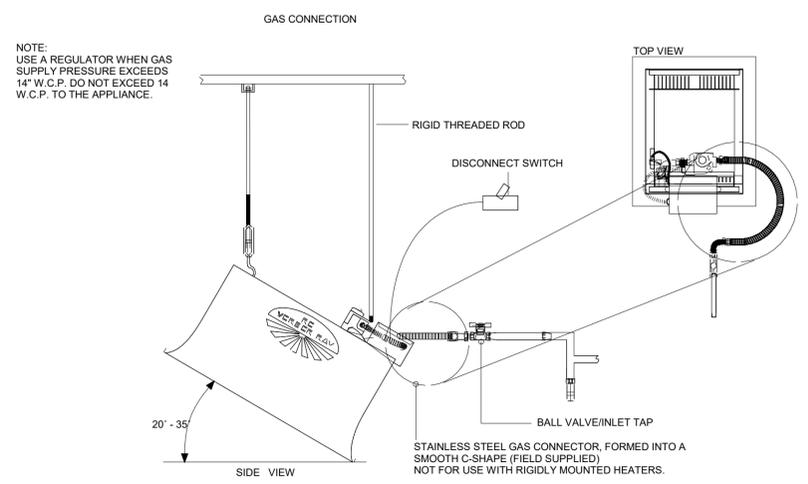
5 WALL CLEANOUT
 P2.02 NO SCALE



1 TYPICAL GAS CONNECTION
 P2.02 NO SCALE



2 ELECTRIC WATER HEATER (FLOOR MOUNTED)
 P2.02 NO SCALE



3 RADIANT HEATER GAS CONNECTION DETAIL
 P2.02 NO SCALE

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Plumbing Details

Project number	24005
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P2.03	
Scale	As indicated

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	LAMPS			MTG. TYPE	MTG. HT.	REC. DEPTH	DESCRIPTION
			QUANTITY	WATTS	TYPE				
L1	MAXLITE	(2)VT-4850U-40, VT-CONKIT, VT-ENDBRKT	28	100	LED	S	C	-	CONTINUOUS RUN OF (2) 4' LONG LINEAR LED FIXTURES WITH ALUMINUM VAPOR TIGHT HOUSING, 7600 LUMEN OUTPUT, 4000K COLOR TEMPERATURE. NOTE 1.
	APPROVED EQUAL								
L2	MAXLITE	VT-4850U-40, VT-CONKIT, VT-ENDBRKT	20	50	LED	S	C	-	4' LONG LINEAR LED FIXTURE WITH ALUMINUM VAPOR TIGHT HOUSING, 5700 LUMEN OUTPUT, 4000K COLOR TEMPERATURE. NOTE 1.
	APPROVED EQUAL								
L3	MAXLITE	LSU4U3540	8	35	LED	S	C	-	4' SURFACE MOUNTED LED WRAPAROUND FIXTURE WITH CURVED PRISMATIC LENS, STEEL HOUSING, 4000K COLOR TEMPERATURE, 4253 LUMEN OUTPUT.
	APPROVED EQUAL								
L3E	MAXLITE	LSU4U3540EM	9	35	LED	S	C	-	4' SURFACE MOUNTED LED WRAPAROUND FIXTURE WITH CURVED PRISMATIC LENS, STEEL HOUSING, 4000K COLOR TEMPERATURE, 4253 LUMEN OUTPUT, AND EMERGENCY BATTERY PACK.
	APPROVED EQUAL								
L4	MAXLITE	M40U4W-CSBWCR, MVCL40-55W	6	38	LED	W	12'AFF	-	FIXED WALL MOUNTED LED FIXTURE WITH BLACK FINISH, DIE-CAST ALUMINUM HOUSING, SELECTABLE COLOR TEMPERATURE, 3512 LUMEN OUTPUT, WIDE DISTRIBUTION. UL LISTED FOR WET LOCATION. NOTE 4.
	APPROVED EQUAL								
L4E	MAXLITE	M40U4W-CSBWCRO, MVCL40-55W	3	38	LED	W	12'AFF	-	FIXED WALL MOUNTED LED FIXTURE WITH BLACK FINISH, DIE-CAST ALUMINUM HOUSING, SELECTABLE COLOR TEMPERATURE, 3512 LUMEN OUTPUT, WIDE DISTRIBUTION, ELECTRONIC DRIVER, AND EMERGENCY BATTERY PACK. UL LISTED FOR WET LOCATION. NOTE 4.
	APPROVED EQUAL								
L5	PROVIDED BY GENERAL CONTRACTOR		FURNISHED WITH UNIT			R	C	-	RECESSED LED DOWNLIGHT WITH 4000K COLOR TEMPERATURE, 3000 LUMEN OUTPUT, AND EMERGENCY BATTERY PACK. UL LISTED FOR WET LOCATION. FIXTURES ARE PROVIDED BY GENERAL CONTRACTOR AS PART OF THE METAL AWNING SYSTEM.
	PROVIDED BY GENERAL CONTRACTOR								
	PROVIDED BY GENERAL CONTRACTOR								
S1	PROVIDED BY SIGN MANUFACTURER		FURNISHED WITH UNIT			W	NOTE 3	-	WALL MOUNTED LED SIGN LIGHTING FIXTURE. NOTE 2.
	PROVIDED BY SIGN MANUFACTURER								
	PROVIDED BY SIGN MANUFACTURER								
S2	PROVIDED BY SIGN MANUFACTURER		FURNISHED WITH UNIT			W	NOTE 3	-	WALL MOUNTED LED LIGHT FIXTURE. NOTE 2.
	PROVIDED BY SIGN MANUFACTURER								
	PROVIDED BY SIGN MANUFACTURER								
S3	PROVIDED BY SIGN MANUFACTURER		FURNISHED WITH UNIT			W	NOTE 3	-	LED LIGHT BAR. NOTE 2.
	PROVIDED BY SIGN MANUFACTURER								
	PROVIDED BY SIGN MANUFACTURER								
BL	LITHONIA	ELM6L	FURNISHED WITH UNIT			W	9'AFF	-	WALL MOUNTED TWO HEAD LED EMERGENCY FIXTURE WITH WHITE THERMOPLASTIC HOUSING, 1100 LUMEN OUTPUT, SELF DIAGNOSTICS, AND EMERGENCY BATTERY PACK.
	APPROVED EQUAL								
XL	MAXLITE	EX-GW	FURNISHED WITH UNIT			W	AD	-	WHITE THERMOPLASTIC LED EXIT SIGN WITH SINGLE FACE, GREEN LETTERS, UNIVERSAL MOUNTING, SELF DIAGNOSTICS, AND EMERGENCY BATTERY PACK.
	APPROVED EQUAL								

ABBREVIATIONS: LI-LAY-IN C-CEILING LG-LENS GASKETING GMF-INTERNAL SLOW BLOW FUSE FL-FLUORESCENT MH-METAL HALIDE HO-HIGH OUTPUT
 AFF-ABOVE FINISH FLOOR P-PENDANT FC-FROM CEILING R-RECESSED AM-ABOVE MIRROR W-WALL AD-ABOVE DOOR
 S-SURFACE DTT-DOUBLE TWIN TUBE FLUORESCENT CA-CANOPY TC-TOP OF METAL CANOPY AW-ABOVE WINDOW VA-VERIFY WITH ARCHITECT

LIGHTING FIXTURE SCHEDULE GENERAL NOTES:

- FIXTURE OUTLET BOX LOCATIONS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC AND APPROXIMATE IN LOCATION. EXACT POSITION OF THE OUTLET BOX SHALL DEPEND ON THE FIXTURE AND THE MOUNTING DETAIL.
- MOUNTING AND SUPPORT DETAILS FOR LIGHTING FIXTURES SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER BEFORE THE FIXTURES ARE INSTALLED. NO COMBUSTIBLE MATERIALS SHALL BE USED.
- WET LOCATION FIXTURES SHALL BE MOUNTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION SO AS TO ENSURE THE PREVENTION OF MOISTURE FROM ENTERING THE FIXTURE. IN ADDITION, EACH CONDUIT ENTRY WILL BE SEALED BY USE OF AN APPROVED SWEDGE FITTING WITH A NEOPRENE SEAL, AS MANUFACTURED BY JOHN REMKE COMPANY OR APPROVED EQUAL.
- OUTLET BOXES SERVING WET LOCATION FIXTURE SHALL BE CODE SIZE, WITH A WATERTIGHT SOLID CAST TOP. CONDUIT ENTRIES SHALL BE THREADED.
- FIXTURE MOUNTING HEIGHTS IN SCHEDULE ARE TYPICAL UNLESS NOTED OTHERWISE ON DRAWINGS.
- FOR LIGHTING PACKAGE PRICING, CONTACT THE FOLLOWING:

MIKE MCMAKEN
 REXEL ENERGY SOLUTIONS
 (M) 906-235-2979
 MIKE.MCMAKEN@REXELENERGY.COM

STEPHEN MITCHELL
 MAXLITE
 (M) 908-256-3115
 SMITCHELL@MAXLITE.COM

LIGHTING FIXTURE SCHEDULE NOTES:

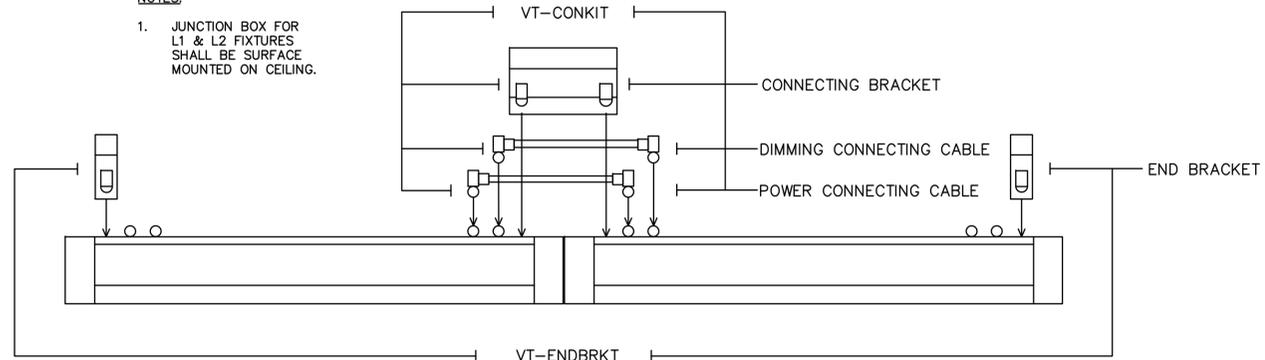
- SEE MOUNTING DETAIL ON THIS SHEET FOR MORE INFORMATION.
- INSTALLED BY SIGN COMPANY.
- VERIFY MOUNTING HEIGHT WITH SIGN COMPANY BEFORE ROUGHING IN.
- FIXTURE SHALL BE MOUNTED SO THAT THE TOP OF THE FIXTURE IS AT 12' AFF TO ALIGN WITH BANDING ON EXTERIOR OF BUILDING.

GENERAL NOTES:

- VERIFY ALL DOOR SWINGS WITH ARCHITECTURAL BEFORE ROUGHING IN LIGHT SWITCHES TO ENSURE PROPER SWITCH LOCATION. VERIFY ALL CASEWORK DETAILS TO ENSURE THAT ALL OUTLETS ABOVE CASEWORK ARE AT THE PROPER HEIGHT.
- SERVICE TO THE BUILDING SHALL BE 120/240 VOLTS, 1PHASE, 3WIRE.
- ALL CONDUIT SHALL BE RUN CONCEALED UNLESS SPECIFICALLY SHOWN EXPOSED, OR INSTALLED IN EXPOSED CEILING.
- THE CONTRACTOR SHALL CHECK ALL LIGHTING FIXTURES FOR EXACT TYPE MOUNTING AND SPACE REQUIRED BEFORE ROUGHING IN.
- THE CONTRACTOR SHALL WORK CLOSELY WITH THE GENERAL CONTRACTOR AND VERIFY EXACT TYPE OF EQUIPMENT TO BE INSTALLED AND THE DIMENSIONS WHICH MAY AFFECT THE EXACT PLACEMENT OF ELECTRICAL WORK.
- VERIFY THE EXACT LOCATION OF ALL MOTORS AND EQUIPMENT BEFORE ROUGHING IN. LIKEWISE APPRAISE ALL TRADES OF THE LOCATIONS OF ELECTRICAL WORK THAT AFFECTS WALL THICKNESS, PLUMBING, MECHANICAL, ETC.
- ALL CONDUIT STUBBED OUT FOR FUTURE SHALL BE CAPPED AND HAVE LOCATION MARKED WITH A 2" SQUARE, PAINTED RED, WITH CONDUIT NAME AND SIZE SHOWN IN WHITE.
- ALL BRANCH CIRCUITS AND FEEDERS SHALL HAVE AN INSULATED GROUND WIRE PULLED IN THE CONDUIT WITH CURRENT CONDUCTOR UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE GROUNDING CONDUCTOR SHALL BE SIZED ACCORDING TO TABLE 250-122 OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE UNLESS INDICATED TO BE LARGER IN THE SPECIFICATIONS OR PLANS.
- DO ALL WORK IN COMPLIANCE WITH ALL APPLICABLE CODES, LAWS AND ORDINANCES, THE NATIONAL ELECTRICAL CODE (HEREINAFTER REFERRED TO AS "CODE" OR "NEC"), THE AMERICANS WITH DISABILITIES ACT, AND THE REGULATIONS OF THE LOCAL AUTHORITIES HAVING JURISDICTION AND, WHERE APPLICABLE, UTILITY COMPANIES. OBTAIN AND PAY FOR ANY AND ALL REQUIRED PERMITS, INSPECTIONS, CERTIFICATES OF INSPECTIONS AND APPROVAL, AND THE LIKE, AND DELIVER SUCH CERTIFICATES TO THE OWNER.
- THE MAIN SERVICE SHALL HAVE THE GROUNDED CONDUCTOR (NEUTRAL) GROUNDED TO THE GROUNDING ELECTRODE SYSTEM AT THE SUPPLY SIDE OF THE SERVICE DISCONNECTING MEANS BY A GROUNDING ELECTRODE CONDUCTOR NOT SMALLER THAN THAT SHOWN IN TABLE 250-66 OF THE NEC. THE GROUNDED CONDUCTOR (NEUTRAL), THE GROUNDING ELECTRODE CONDUCTOR, AND THE EQUIPMENT GROUNDING CONDUCTOR CONNECTIONS SHALL BE MADE INSIDE THE SERVICE ENTRANCE EQUIPMENT.
- ALL CONDUCTORS SHALL BE COPPER, EXCEPT AS SHOWN ON DRAWINGS.
- MINIMUM CONDUCTOR SIZE SHALL BE #12.
- ALL CONDUIT INSTALLED INDOORS SHALL BE EMT, OTHERWISE SHALL BE IMC.
- SWITCH AND RECEPTACLE COVER PLATES SHALL BE STAINLESS STEEL.
- ALL DEVICES SHALL BE GRAY.
- ALL FUSES SHALL BE DUAL ELEMENT, TIME DELAY, RATED 100,000 AIC.
- ALL DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE.
- ALL CONDUCTORS SHALL BE DUAL RATED THHN/THWN TYPE INSULATION.
- GUTTERS (WIREWAYS) SHALL BE SIZED AS SHOWN OR AS REQUIRED BY CODE. ALL GUTTERS SHALL HAVE HINGED COVERS WITH APPROVED FASTENING DEVICES & SHALL BE A STANDARD MANUFACTURED ITEM WITH U.L. LABEL. GUTTERS FROM AC DUCT MATERIAL ARE NOT ACCEPTABLE. GUTTERS SHALL BE AS MANUFACTURED BY HOFFMAN, SQUARE "D", B & C OR APPROVED EQUAL. GUTTER TAPS SHALL BE ILSCO TYPE GTA OF PTA WITH GTC OR PTC INSULATING COVERS.
- IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR, PRIOR TO BID, TO REAFFIRM WITH THE UTILITY COMPANIES INVOLVED, THAT THE LOCATION, ARRANGEMENT (AND THE POWER COMPANY: VOLTAGE, PHASE & METERING REQUIRED) AND CONNECTIONS AT THE UTILITY SERVICE ARE IN ACCORDANCE WITH THEIR REGULATIONS & REQUIREMENTS. IF THEIR REQUIREMENTS ARE AT A VARIANCE WITH THESE DRAWINGS & SPECIFICATIONS, THE CONTRACT PRICE SHALL INCLUDE ANY ADDITIONAL COST NECESSARY TO MEET THOSE REQUIREMENTS WITHOUT EXTRA COST TO THE OWNER AFTER A CONTRACT HAS BEEN ENTERED INTO.
- ON MANY PROJECTS, THE UTILITY COMPANY MAY LEVY CHARGES DUE TO LOCATION, SIZE OR TYPE OF SERVICE INVOLVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THESE CHARGES, UNLESS SUCH CHARGES ARE NOT AVAILABLE PRIOR TO BID & CONTRACTOR SO DOCUMENTS AT BID OPENING. SHOULD THE THE COST NOT BE AVAILABLE, PRIOR TO BID, THE CONTRACTOR SHALL SUBMIT A LETTER SO STATING WITH HIS BID.
- ARRANGE WITH UTILITY COMPANIES FOR SUCH SERVICE AS SHOWN OR HEREIN SPECIFIED & INSTALLATION OF METER WHERE SHOWN. FURNISH WITH SHOP DRAWINGS, A SIGNED DOCUMENT FROM UTILITY COMPANIES DESCRIBING THE LOCATION & TYPE OF SERVICES TO BE FURNISHED AND ANY REQUIREMENTS THEY MAY HAVE. THIS DOCUMENT SHALL BE SIGNED FOR EACH UTILITY COMPANY BY A PERSON RESPONSIBLE FOR GRANTING SUCH SERVICES.
- PAY ALL CHARGES (IF ANY) IN CONNECTION THEREWITH, INCLUDING PERMANENT METER DEPOSIT. METER DEPOSIT WILL BE REFUNDED TO THE CONTRACTOR AT TIME OF OWNER'S ACCEPTANCE.
- FINAL EQUIPMENT CONNECTIONS - CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS REQUIRED TO MAKE FINAL ELECTRICAL CONNECTIONS TO ALL EQUIPMENT FURNISHED BY THIS CONTRACTOR AND/OR FURNISHED BY OTHERS. VERIFY ALL ELECTRICAL REQUIREMENTS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH IN.

NOTES:

- JUNCTION BOX FOR L1 & L2 FIXTURES SHALL BE SURFACE MOUNTED ON CEILING.



DETAIL
 FIXTURE "L1" & "L2" MOUNTING
 NOT TO SCALE

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Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Sevierville, Tennessee

FINAL

No.	Description	Date

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General Notes & Fixture Schedules

Project number 24005
 Date 5/15/2024

Drawn by TH
 Checked by GW

E100

Scale NO SCALE

GRAPHICAL ELECTRICAL SYMBOLS

BRANCH CIRCUIT SYMBOLS		
	BRANCH CIRCUIT	HOMERUN TO 20A, 1POLE CIRCUIT BREAKER IN PANELBOARD OR DEVICE NOTED. WIRE SIZE IS 2#12&1#12GRD-3/4\"C.
	BRANCH CIRCUIT	CONCEALED IN CEILING OR WALL.
	BRANCH CIRCUIT	CONCEALED IN FLOOR.
	BRANCH CIRCUIT	EXISTING CONDUIT BARS DENOTE NEW CONDUCTORS.
	BRANCH CIRCUIT	EXPOSED.
	BRANCH CIRCUIT	RISER UP.
	BRANCH CIRCUIT	RISER DOWN.

BRANCH CIRCUIT NOTES		
	BRANCH CIRCUIT	3#12&1#12GRD-3/4\"C
	BRANCH CIRCUIT	4#12&1#12GRD-3/4\"C
	BRANCH CIRCUIT	2#10&1#10GRD-3/4\"C
	BRANCH CIRCUIT	3#10&1#10GRD-3/4\"C

SIZE CONDUIT PER NEC FOR GREATER NUMBER OF CONDUCTORS OR AS NOTED. THE NUMBER IN THE CIRCUIT INDICATES AWG WIRE SIZE AND THE HASHMARKS INDICATE THE NUMBER OF WIRES REQUIRED. EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH NEC TABLE 250-122. THE NUMBER OF HASH MARKS DO NOT INCLUDE EQUIPMENT GROUNDING CONDUCTOR.

GENERAL SYMBOLS	
	JUNCTION BOX.
	WALL MOUNTED JUNCTION BOX.
	WALL MOUNTED JUNCTION BOX WITH FLEXIBLE CONNECTION TO EQUIPMENT.
	ONE GANG BOX WITH 3/4\"C. STUB UP ABOVE ACCESSIBLE CEILING WITH COAXIAL CABLE AND TV JACKS.
	MANUAL MOTOR STARTER WITH THERMAL PROTECTION.
	SAFETY SWITCH, NON-FUSED.
	SAFETY SWITCH, FUSED.
	CIRCUIT BREAKER MOUNTED IN NEMA 1 ENCLOSURE UNLESS NOTED OTHERWISE
	LIGHTING PANEL AND/OR RECEPTACLE PANEL.
	POWER PANEL.
	TRANSFORMER.
	GROUND.

GENERAL ABBREVIATIONS	
H	MOUNTING HEIGHT ABOVE FINISHED FLOOR.
AF	ABOVE FINISHED FLOOR.
WP	WEATHER PROOF - NEMA 3R
RT	RAIN TIGHT - NEMA 4.
EP	EXPLOSION PROOF.
TP	TAMPER PROOF.
A	MOUNT ABOVE COUNTER.
BC	MOUNT BELOW COUNTER.
F	FLUSH MOUNTED.
SLD	SEE SINGLE LINE DIAGRAM.
GFI	GROUND FAULT INTERRUPTING.
C	CONDUIT.
EC	EMPTY CONDUIT
CC	FLEXIBLE CONDUIT.
SFC	SEALTITE FLEXIBLE CONDUIT.
EMT	ELECTRICAL METALLIC TUBING.
IMC	INTERMEDIATE METALLIC CONDUIT.
RG	RIGID CONDUIT.
PVC	NONMETALLIC RIGID CONDUIT.
EX	EXISTING.
XR	EXISTING TO BE REMOVED
RL	EXISTING TO BE REMOVED AND RELOCATED.
RQ	EXISTING TO BE REMOVED. EXTEND CIRCUIT CONDUCTORS AS REQUIRED AND INSTALL FINISHED BLANK COVER.
RR	EXISTING TO BE REMOVED AND REPLACED WITH NEW.
RL'D	RELOCATED POSITION.
EM	EMERGENCY BATTERY PACK

LIGHTING FIXTURE & CONTROL SYMBOLS		
	CEILING OUTLET	FIXTURE TYPE "A" CIRCUIT #1.
	CEILING OUTLET	EXISTING.
	CEILING OUTLET	FLUORESCENT FIXTURE, SINGLE OR CONTINUOUS, LENGTHS AS SHOWN.
	CEILING OUTLET	FLUORESCENT STRIP.
	WALL OUTLET	BRACKET TYPE FIXTURE.
	WALL OUTLET	FLUORESCENT BRACKET TYPE FIXTURE.
	SWITCH OUTLET	A.C. TYPE, SINGLE POLE, 20A, 125/277V.
	SWITCH OUTLET	A.C. TYPE, THREE WAY, 20A, 125/277V.
	SWITCH OUTLET	A.C. TYPE, FOUR WAY, 20A, 125/277V.
	SWITCH OUTLET	180" DUAL TECH SENSOR LIGHTING MOTION DETECTOR, WALL MOUNTED. WATT STOPPER #DW-100.
	SWITCH OUTLET	LIGHTING MOTION DETECTOR POWER PACK. INSTALL ABOVE ACCESSIBLE CEILING.
	SWITCH OUTLET	LIGHTING MOTION DETECTOR, CEILING MOUNTED.

SWITCH OUTLET NOTES
 "a" "b" ETC. FIXTURE CORRESPONDS TO A SWITCH DENOTED WITH THE SAME LOWER CASE LETTER.

EXIT LIGHT SYMBOLS	
	WALL OR CEILING MOUNTED, SINGLE FACE, NO ARROW.
	CEILING MOUNTED, DOUBLE FACE, LEFT OR RIGHT ARROWS.
	WALL OR CEILING MOUNTED, SINGLE FACE, LEFT OR RIGHT ARROW.
	WALL OR CEILING MOUNTED, SINGLE FACE, LEFT AND RIGHT ARROWS.
	CEILING MOUNTED, DOUBLE FACE, LEFT AND RIGHT ARROWS.

RECEPTACLE OUTLET SYMBOLS		
	WALL OUTLET	DUPLEX RECEPTACLE, 20A, 125V, 3WIRE, NEMA 5-20R.
	WALL OUTLET	DOUBLE DUPLEX RECEPTACLE, 20A, 125V, 3WIRE, NEMA 5-20R, SINGLE PLATE.
	WALL OUTLET	DUPLEX RECEPTACLE, 20A, 125V, NEMA 5-20R, GFCI, WEATHER-RESISTANT, WITH EXTRA DUTY IN-USE WEATHERPROOF COVER. HUBBELL CATALOG #GFR5362SGGY/WP8M
	WALL OUTLET	SINGLE RECEPTACLE, 20A, 250V, 3WIRE, NEMA 6-20R.
	WALL OUTLET	SINGLE RECEPTACLE, 20A, 250V, 3WIRE, NEMA L6-20R.
	FLOOR OUTLET	FLUSH MOUNTED IN-GRADE WITH DOUBLE DUPLEX RECEPTACLE, 20A, 125V, 3WIRE, NEMA 5-20R, FOUR SPACES FOR KEYSTONE CONNECTORS, AND BRUSHED BRASS COVER LEGRAND RFB4E OR EQUAL.
	CEILING OUTLET	DUPLEX RECEPTACLE, 20A, 125V, 3WIRE, NEMA 5-20R.

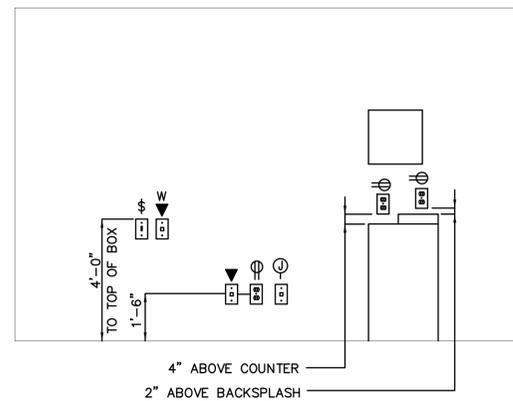
RECEPTACLE OUTLET NOTES
 "G" GROUND FAULT INTERRUPTER.
 "GA" GROUND FAULT INTERRUPTER, MOUNTED ABOVE COUNTER.
 "A" MOUNTED ABOVE COUNTER.
 "BC" MOUNTED BELOW COUNTER.
 "DF" FOR DRINKING FOUNTAIN.

VOICE/DATA OUTLET & CONDUIT SYMBOLS		
	VOICE/DATA OUTLET	WALL MOUNTED, WITH 3/4" CONDUIT HOMERUN TO NEAREST TELEPHONE CABINET OR BACKBOARD UNLESS NOTED OTHERWISE.
	VOICE/DATA OUTLET	TELEPHONE BACKBOARD - 3/4" PLYWOOD PAINTED WITH TWO COATS OF FIRE RETARDANT PAINT, 48"x96" HIGH, UNLESS SHOWN OTHERWISE.

VOICE/DATA OUTLET NOTES
 "A" MOUNTED ABOVE COUNTER.
 "BC" MOUNTED BELOW COUNTER.

NOTES:

- INDICATED MOUNTING HEIGHTS ARE FROM FINISHED FLOOR TO CENTERLINE OF OUTLET BOX, UNLESS OTHERWISE NOTED.
- REFER TO ARCHITECTURAL DETAILS FOR ADDITIONAL REQUIREMENTS.
- INSTALL OUTLETS THAT ARE IN CLOSE PROXIMITY ON THE SAME CENTERLINE.
- MOUNTING HEIGHTS SHOWN HERE ARE TYPICAL UNLESS NOTED OTHERWISE ON DRAWINGS.



DETAIL
 TYPICAL MOUNTING
 HEIGHTS
 NOT TO SCALE

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Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Sevierville, Tennessee

FINAL

No.	Description	Date

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Symbol Legends and Details

Project number 24005
 Date 5/15/2024

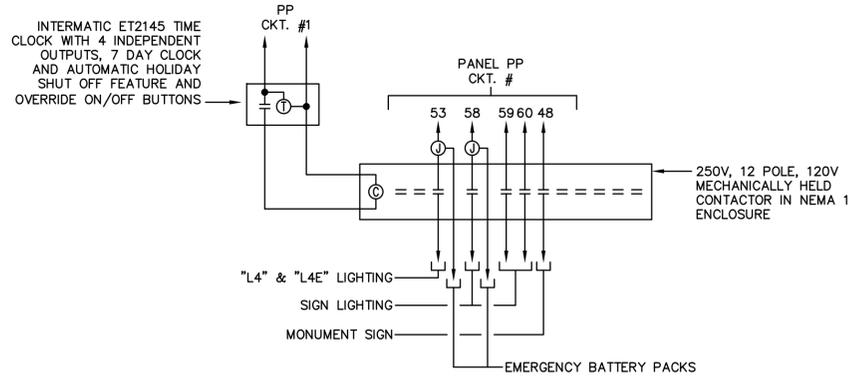
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 Checked by GW

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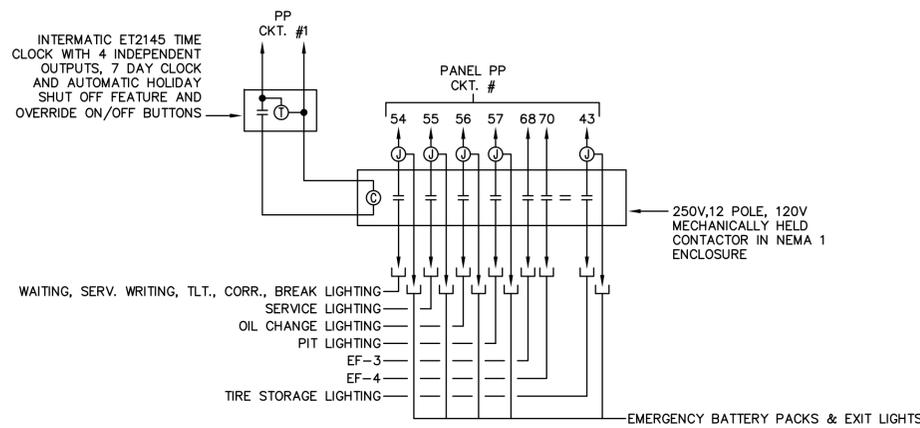
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DETAIL
ARC FLASH HAZARD WARNING LABEL
NOT TO SCALE



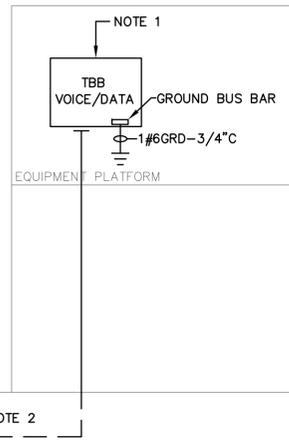
WIRING DIAGRAM
CONTACTOR C-2
NOT TO SCALE



WIRING DIAGRAM
CONTACTOR C-1
NOT TO SCALE

NOTES:

- 48"x48" FREE STANDING TELEPHONE BACKBOARD. PROVIDE ACCESS AND WORK SPACE CLEARANCE AS REQUIRED BY LOCAL TELECOM UTILITY COMPANY.
- CONDUIT ELBOWS SHALL BE SWEEPING WITH NO HARD ANGLES.



SINGLE LINE DIAGRAM
AUXILIARY
NOT TO SCALE

PANEL LOAD SUMMARY													
Equipment	LIGHT CONT.	RCPT	OM	CB SIZE	CIRCUIT #	PHASE A	PHASE B	CIRCUIT #	CB SIZE	LIGHT CONT.	RCPT	OM	Equipment
CONTACTOR C-1 & C-2			100	201/1	1	100		2	201/1				SPARE
OUTDOOR RECEPTACLE		200		201/1	3			4	201/1		600		SERVICE WRITING RECP.
WAITING ROOM RECP.	800			201/1	5	1600		6	201/1		800		MANAGER RECEPTACLE
TLTYCORR/BREAK RECP.	800			201/1	7		1000	8	201/1		200		BREAK RECEPTACLE
SERVICE RECEPTACLE	400			201/1	9	600		10	201/1		200		BREAK RECEPTACLE
SERVICE RECEPTACLE	400			201/1	11		600	12	201/1		200		BREAK FRIDGE RECEPTACLE
SPARE				201/1	13	400		14	201/1		400		SERVICE RECEPTACLE
SERVICE RECEPTACLE	400			201/1	15		400	16	201/1				SPARE
TIRE CHANGER		900		202/2	17	3900		18	302/2		3000		ALIGNMENT LIFT
10K LIFT		1440		202/2	21	2880		22	202/2		1440		10K LIFT
10K LIFT		1440		202/2	23	2880		24	202/2		1440		10K LIFT
12K LIFT		1440		202/2	27	2880		28	202/2		1440		10K LIFT
AIR COMPRESSOR		3360		602/2	33	3560		34	201/1		200		EQUIPMENT PLATFORM RECP.
IRRIGATION CONTROLLER	200			201/1	37	400		38	201/1		200		SERVICE DESK RECEPT.
OIL CHANGE RECEPTACLE	600			201/1	39		1200	40	201/1		600		BRAKE LATHE RECEPTACLE
PIT SUMP PUMP	200			201/1	41	400		42	201/1		200		OIL CHANGE RECEPTACLE
Sub-Total	0	4000	17260			19360		20060		0	4000	14160	Sub-Total

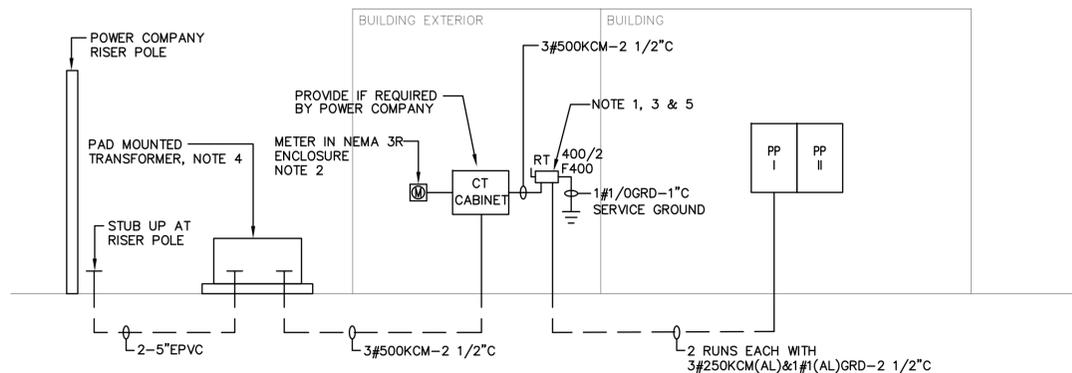
PANEL LOAD SUMMARY													
Equipment	LIGHT	RCPT	OM	CB SIZE	CIRCUIT #	PHASE A	PHASE B	CIRCUIT #	CB SIZE	LIGHT	RCPT	OM	Equipment
TIRE STORAGE LIGHTING	300			201/1	43	500		44	201/1		200		OIL CHANGE DESK RECP.
OIL CHANGE DESK RECP.		200		201/1	45		400	46	201/1		200		OIL CHANGE DESK RECP.
SPARE				201/1	47	100		48	201/1		100		MONUMENT SIGN
PIT RECEPTACLE		600		201/1	49		800	50	201/1		200		PIT RECEPTACLE
SPARE				201/1	51	400		52	201/1		400		TBB RECEPTACLE
EXTERIOR LIGHTING	150			201/1	53		470	54	201/1	320			EXTERIOR LIGHTING
SERVICE LIGHTING	1638			201/1	55	2366		56	201/1	728			OIL CHANGE LIGHTING
PIT LIGHTING	540			201/1	57		1890	58	201/1	1350			SIGN LIGHTING
SIGN LIGHTING	400			201/1	59	800		60	201/1	400			SIGN LIGHTING
FUTURE EV CHARGER				502/2	61		50	62	201/1		50		REC-1
SPARE				201/1	63	1680		64			1680		HP-1
SPARE				201/1	65		1680	66	252/2		1680		EF-3
SPARE				201/1	67	3900		68	201/1	1650			EF-4
SPARE				252/2	69		3900	70	201/1	1650			EXTERIOR RECEPTACLE
SPARE				201/1	71	947		72	201/1		200		EXTERIOR RECEPTACLE
SPARE				201/1	73		8784	74			8000		AHU-1
SPARE				201/1	75	8200		76			8000		8000
SPARE				201/1	77		728	78	201/1		200		LOT BELL
SPARE				201/1	79	528		80	201/1				SPARE
SPARE				201/1	81		600	82	201/1				SPARE
SPARE				201/1	83		84	201/1					SPARE
Sub-Total	3028	2200	7087			19421		19302		6198	1400	19410	Sub-Total

WIRE SIZE CALCULATIONS													
LOAD TYPE	Phase A	Phase B	DEMAND FACTOR	Phase A	Phase B	LARGEST PHASE DEMAND	NO. OF PHASES	DEMAND LOAD	DEMAND LOAD	DEMAND LOAD	DEMAND AMPS	DEMAND AMPS	DEMAND AMPS
LIGHTING & CONTINUOUS LOADS	5216.00	4010.00	1.25	6520.00	5012.50	6520.00	40.59	81.17	81.17	81.17	338.21	338.21	338.21
RECEPTACLES	5200.00	6400.00	*	5100.00	5700.00	5100.00	2.00	81.17	81.17	81.17	338.21	338.21	338.21
MOTORS/OTHER	28965.00	28962.00	1.00	28965.00	28962.00	28965.00	2.00	81.17	81.17	81.17	338.21	338.21	338.21
TOTAL	38381.00	38362.00		40585.00	38664.50	40585.00	2.00	81.17	81.17	81.17	338.21	338.21	338.21

EQUIPMENT ELECTRICAL REQUIREMENTS SCHEDULE									
EQUIPMENT	LOCATION	KW	HP	AMP	CIRCUIT BREAKER	DISCONNECT SWITCH/FUSE	CONDUCTORS & CONDUIT	VOLTAGE	CONNECTION
(4) 10K LIFT	SERVICE 9	-	2	12.0	20/2	-	2#12&1#12GRD-3/4"C	240V,1Ø	HARDWIRED
12K LIFT	SERVICE 9	-	2	12.0	20/2	-	2#12&1#12GRD-3/4"C	240V,1Ø	HARDWIRED
AIR COMPRESSOR	STORAGE 10	-	5	28.0	60/2	60/2, F40	2#8&1#10GRD-3/4"C	240V,1Ø	HARDWIRED
TIRE CHANGER	STORAGE 10	-	-	6.0	20/2	30/2	2#12&1#12GRD-3/4"C	240V,1Ø	HARDWIRED
WHEEL BALANCER	STORAGE 10	-	-	20.0	20/2	30/2	2#12&1#12GRD-3/4"C	240V,1Ø	HARDWIRED
BRAKE LATHE	SERVICE 9	-	1	15.0	20/1	-	2#12&1#12GRD-3/4"C	120V	NEMA 5-20R
ALIGNMENT LIFT	SERVICE 9	-	-	26.0	30/2	30/2, F30	2#10&1#10GRD-3/4"C	240V,1Ø	HARDWIRED

- NOTES:
- CONTRACTOR SHALL COORDINATE REQUIREMENTS SHOWN HERE WITH OWNER BEFORE ROUGHING IN. PROVIDE ELECTRICAL PER OWNER EQUIPMENT VENDOR REQUIREMENTS.

- GENERAL NOTES:
- COORDINATE SERVICE SECONDARY FROM UTILITY TRANSFORMER TO METER WITH POWER COMPANY BEFORE BID AND PRICING. PROVIDE PER POWER COMPANY REQUIREMENTS.
 - EQUIPMENT WITH ALUMINUM FEEDERS SHALL BE PROVIDED WITH DUAL RATED TERMINALS.
 - PROVIDE 2"x3" ENGRAVED LABEL WITH BLUE LETTERING INDICATING MAXIMUM AVAILABLE FAULT CURRENT AND DATE OF CALCULATION.
 - UTILITY PAD MOUNTED TRANSFORMER. FURNISH AND INSTALL CONCRETE PAD PER POWER COMPANY REQUIREMENTS. CONTACT UTILITY COMPANY FOR PAD SPECIFICATIONS AND REQUIRED TERMINATIONS AT TRANSFORMER BEFORE BID AND PRICING. INCLUDE COSTS IN BID, COORDINATE EXACT LOCATION OF TRANSFORMER, PROVIDE CLEARANCES AS REQUIRED BY POWER COMPANY.
 - SERVICE DISCONNECT SHALL BE MOUNTED SUCH THAT CENTER OF OPERATING HANDLE SHALL NOT BE LESS THAN 4' AND NOT MORE THAN 6'-7" ABOVE GRADE.



SINGLE LINE DIAGRAM
POWER
NOT TO SCALE



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

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No.	Description	Date

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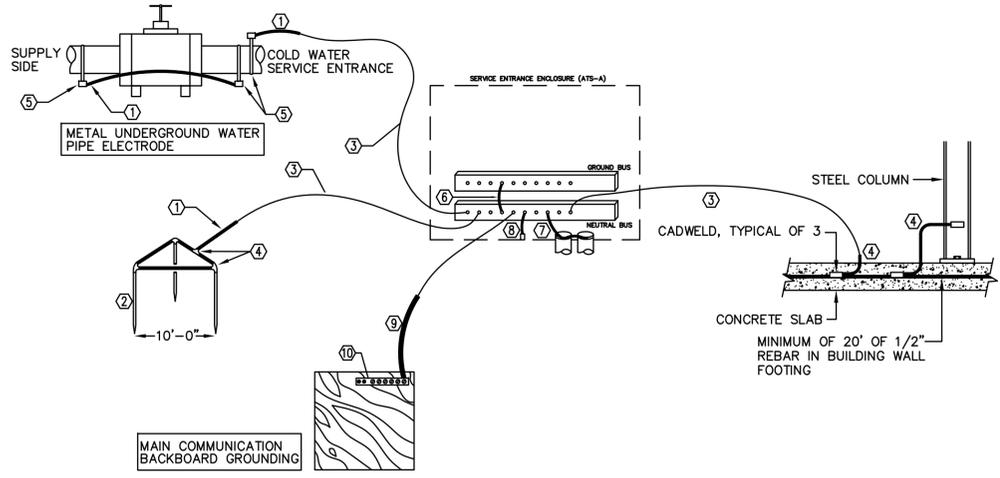
Single Line Diagram & Panelboard Schedules

Project number 24005
Date 5/15/2024
Drawn by TH
Checked by GW

E102

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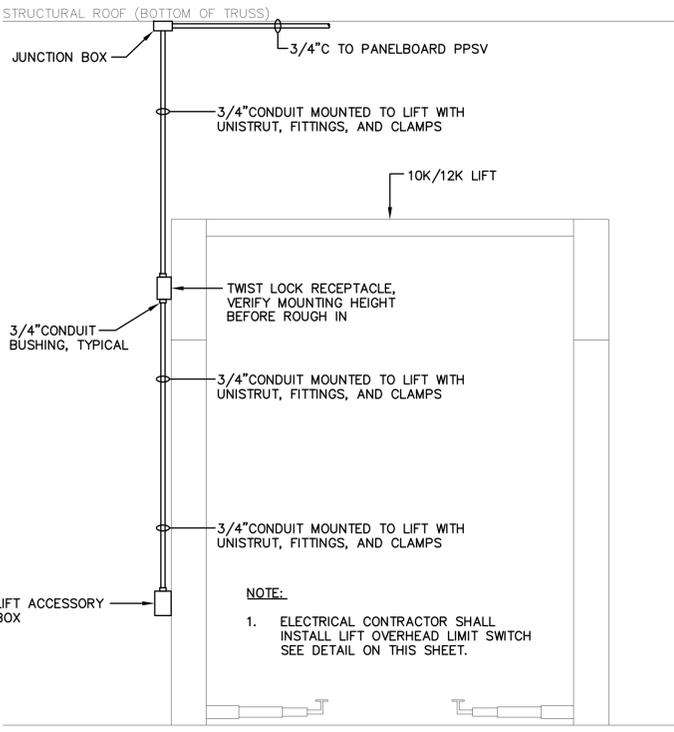
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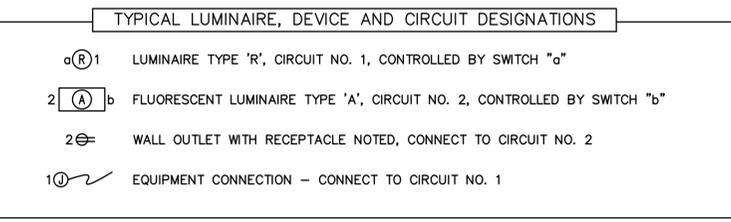
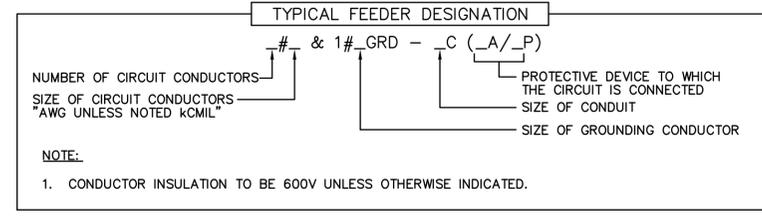
GROUNDING SYSTEM DETAIL
NOT TO SCALE

GROUNDING SYSTEM DETAIL – KEY NOTES

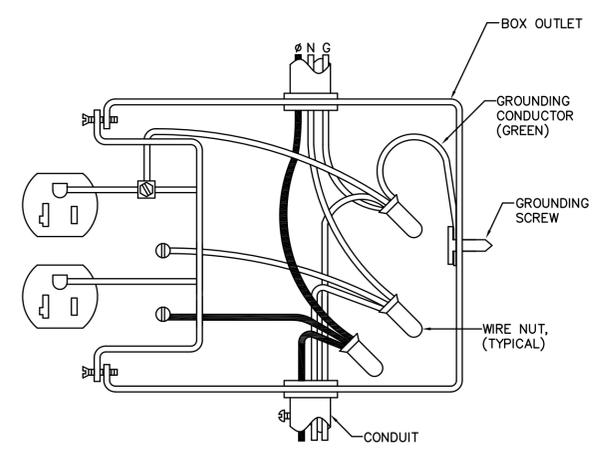
- ① 1/0 BARE GROUNDING ELCTRODE CONDUCTOR.
- ② 3/4"x10'-0" CLAD STEEL GROUND ROD, DRIVEN 24" BELOW GRADE, MINIMUM.
- ③ 1/0 BARE GROUNDING ELECTRODE CONDUCTOR IN 2"PVC-40.
- ④ EXOTHERMIC WELD CONNECTOR:
TWO CABLES TO GROUND ROD, CADWELD #GT OR #GY
CABLE TO CABLE TEE, CADWELD #TA
ONE CABLE TO GROUND ROD, CADWELD #GR
- ⑤ CAST BRONZE, UL LISTED GROUND CLAMP, O-Z/GEDNEY TYPE-G.
- ⑥ BONDING JUMPER, SIZED BY EQUIPMENT MANUFACTURER PER NEC 250-66.
- ⑦ BONDING JUMPER TO GROUNDING BUSHING. AND BONDING JUMPERS FROM CONDUIT TO CONDUIT. ALL CONDUIT CONNECTED TO THE SERVICE ENTRANCE ENCLOSURE SHALL BE BONDED, SIZED PER NEC 250.
- ⑧ MAIN BONDING JUMPER, SIZED BY MANUFACTURER PER 250-66.
- ⑨ 1/0 BARE BONDING JUMPER.
- ⑩ 6 CONDUCTOR GROUND BUS, COPPER OR ALUMINUM RATED, ILSCO #PDE.



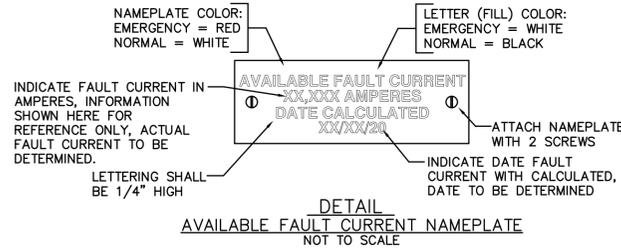
**ELEVATION
LIFT POWER DETAIL**
NOT TO SCALE



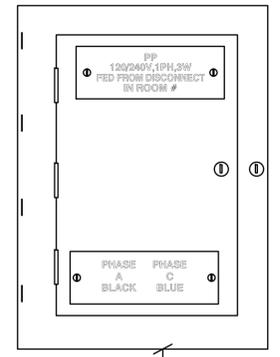
**DETAIL
WIRING DESIGNATION**
NOT TO SCALE



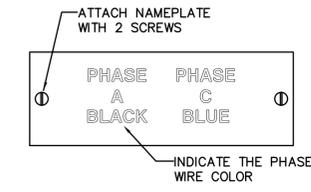
**DETAIL
RECEPTACLE INSTALLATION**
NOT TO SCALE



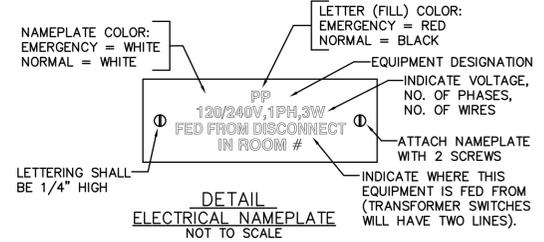
**DETAIL
AVAILABLE FAULT CURRENT NAMEPLATE**
NOT TO SCALE



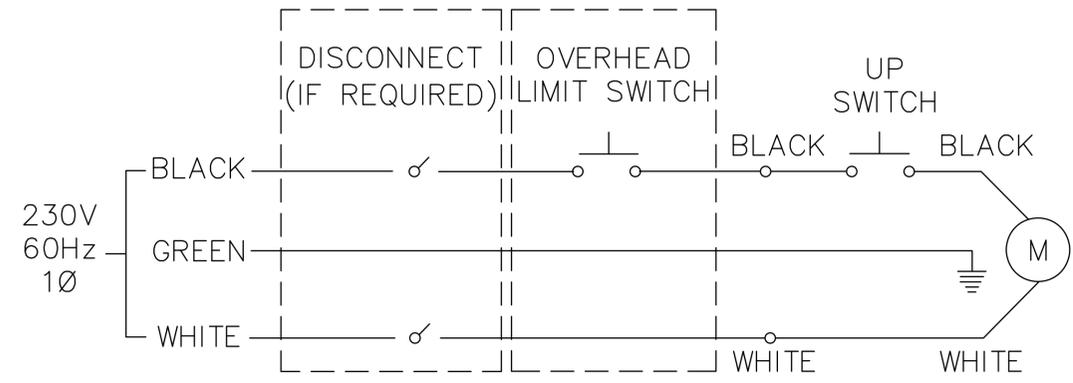
**DETAIL
120/240V PANELBOARD INSTALLATION
& NAMEPLATE DETAIL**
NOT TO SCALE



**DETAIL
120/240V PANELBOARD
ELECTRICAL NAMEPLATE**
NOT TO SCALE



**DETAIL
ELECTRICAL NAMEPLATE**
NOT TO SCALE



**LIFT LIMIT SWITCH
WIRING DETAIL**
NOT TO SCALE



Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Sevierville, Tennessee

FINAL

No.	Description	Date

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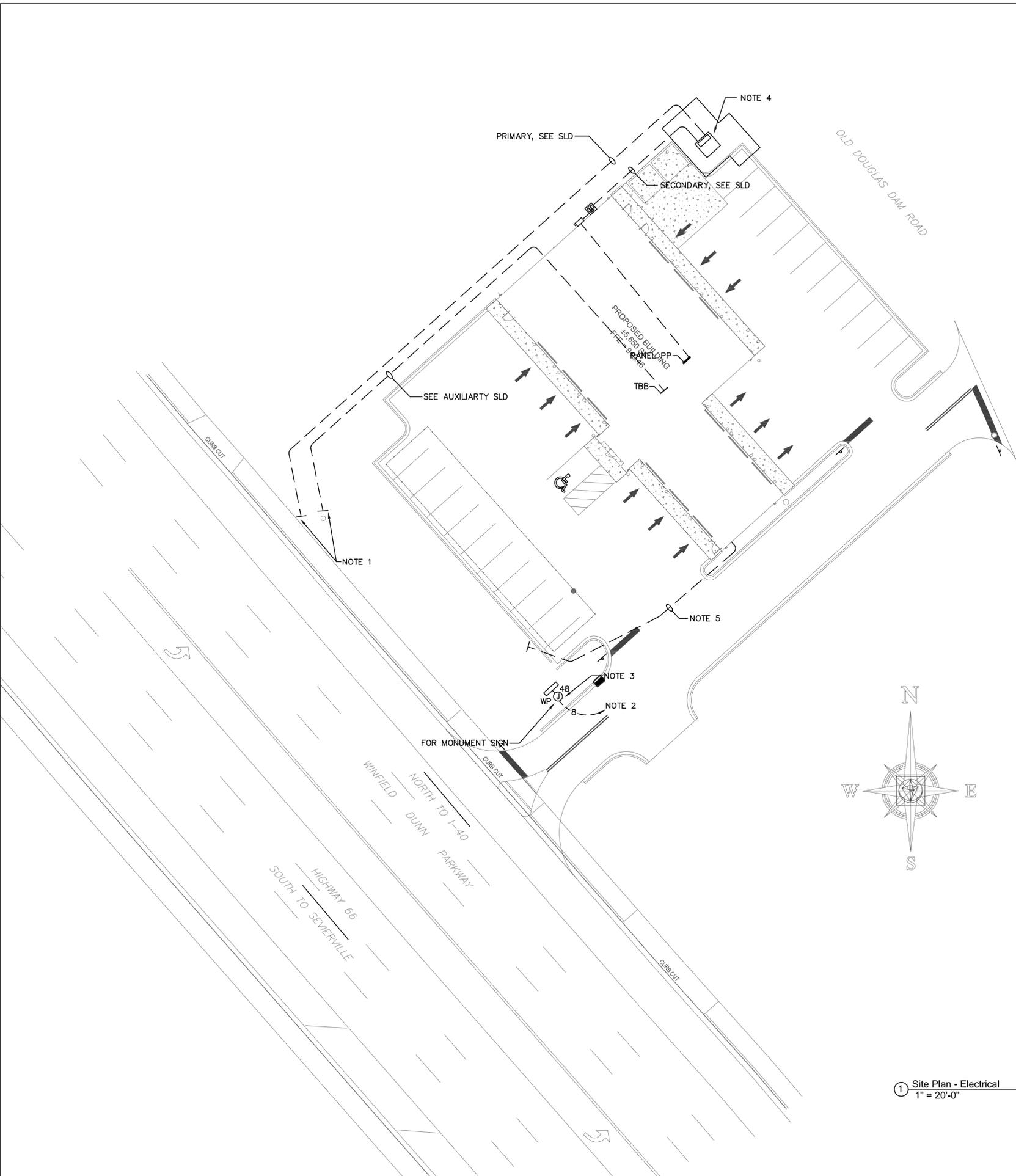
Details	
Project number	24005
Date	5/15/2024
Drawn by	TH
Checked by	GW
E103	
Scale	NO SCALE

GIDEON WAMAE, P.E.
 4120 OVERLOOK CIRCLE, TRUSSVILLE, AL 35173
 GWAMAE@GW-ENG.COM | 205.413.4112



NOTES:

1. VERIFY EXACT LOCATION OF STUB UP BEFORE ROUGH IN.
2. HOMERUN TO PANELBOARD PP THROUGH LIGHTING CONTACTOR C-2.
3. LOCATION OF MONUMENT SIGN SHOWN HERE IS FOR REFERENCE ONLY. VERIFY EXACT LOCATION OF MONUMENT SIGN WITH CIVIL PRIOR TO ROUGH IN.
4. UTILITY PAD MOUNTED TRANSFORMER. FURNISH AND INSTALL CONCRETE PAD PER POWER COMPANY REQUIREMENTS. CONTACT UTILITY COMPANY FOR PAD SPECIFICATIONS AND REQUIRED TERMINATIONS AT TRANSFORMER BEFORE BID AND PRICING. INCLUDE COST IN BID.
5. PROVIDE 1-1" EMPTY CONDUIT. HOMERUN TO PANEL PP FOR FUTURE EV CHARGING STATION. VERIFY EXACT LOCATION OF STUB UP WITH ARCHITECT AND CIVIL PRIOR TO INSTALLATION.



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Sevierville, Tennessee

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Site Plan - Electrical

Project number	24005
Date	5/15/2024
Drawn by	TH
Checked by	GW
E104	
Scale	1" = 20'-0"

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① Site Plan - Electrical
1" = 20'-0"



FINAL

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Main Level Plan - Lighting

Project number	24005
Date	5/15/2024
Drawn by	TH
Checked by	GW

E200

Scale 3/16" = 1'-0"

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GENERAL NOTES:

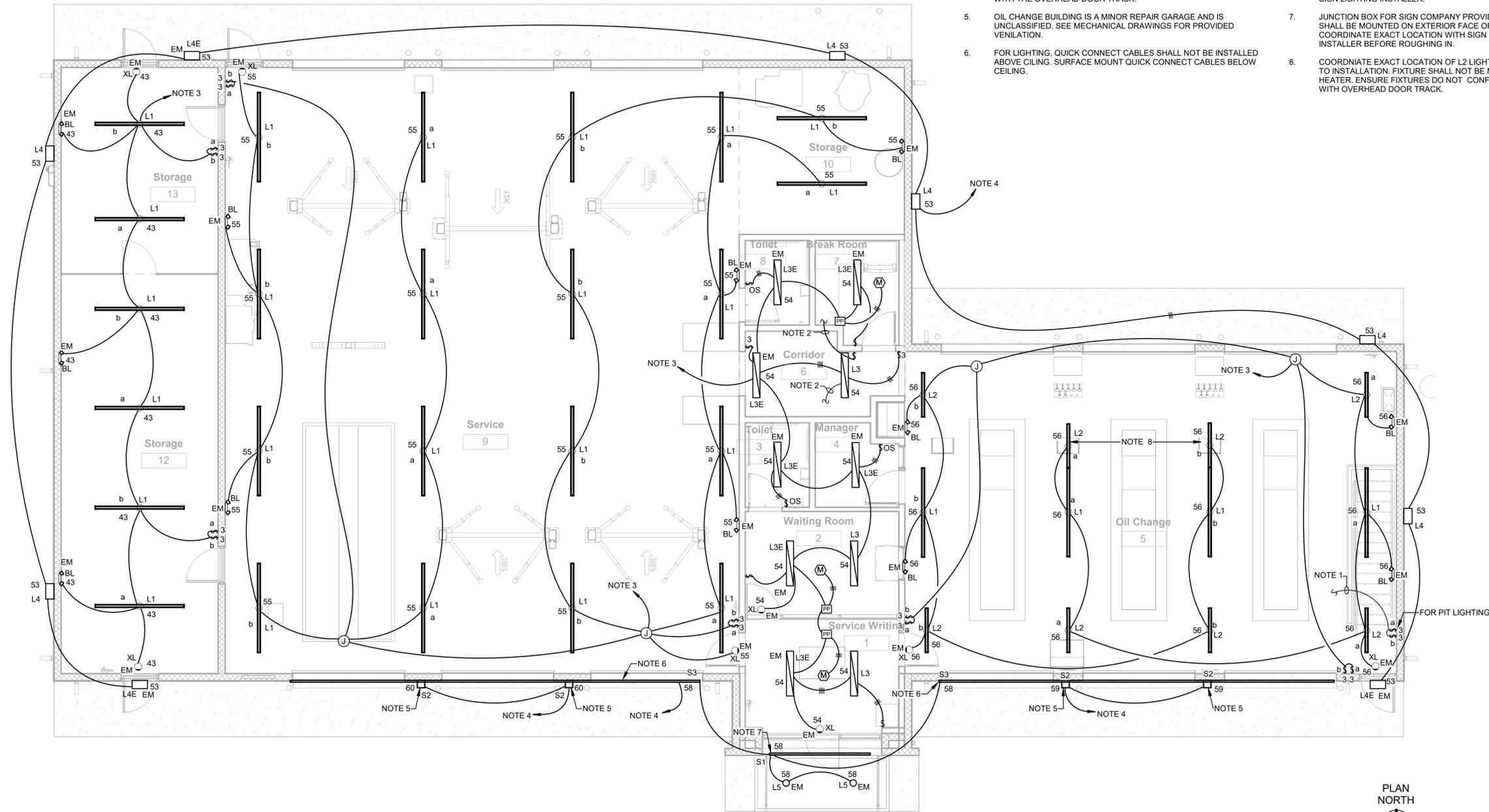
- CONNECT ALL "BL", "XL" AND EMERGENCY BATTERY PACKS IN FIXTURES MARKED "EM" TO UNSWITCHED HOT LEG OF CIRCUIT.
- ENSURE LIGHTING FIXTURES L1 AND L2 DO NOT CONFLICT WITH OVERHEAD DOORS.
- FOR THE LIGHTING PACKAGE PRICING CONTACT THE FOLLOWING:

MIKE MCMAKEN
REXEL ENERGY SOLUTIONS
(M) 906 - 235 - 2979
MIKE.MCMAKEN@REXELENERGY.COM

STEPHEN MITCHELL
MAXLITE
(M) 908-256-3115
SMITCHELL@MAXLITE.COM
- ALL CONDUIT CROSSING OVERHEAD DOORS SHALL BE MOUNTED AS TIGHT TO THE STRUCTURE AS POSSIBLE TO AVOID CONFLICT WITH THE OVERHEAD DOOR TRACK.
- OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENTILATION.
- FOR LIGHTING, QUICK CONNECT CABLES SHALL NOT BE INSTALLED ABOVE CEILING. SURFACE MOUNT QUICK CONNECT CABLES BELOW CEILING.

NOTES:

- CONNECT TO PIT LIGHTING. SEE SHEET E201 FOR CONTINUATION.
- CONNECT TO EQUIPMENT PLATFORM LIGHTING. SEE SHEET E202 FOR CONTINUATION.
- HOMERUN TO 20A, 1POLE CIRCUIT BREAKER IN PANELBOARD PP THROUGH LIGHTING CONTACTOR C-1. SEE DETAIL ON SHEET E102.
- HOMERUN TO 20A, 1POLE CIRCUIT BREAKER IN PANELBOARD PP THROUGH LIGHTING CONTACTOR C-2. SEE DETAIL ON SHEET E102.
- JUNCTION BOX FOR SIGN COMPANY PROVIDED FIXTURE SHALL BE MOUNTED FLUSH WITH EXTERIOR FACE OF WALL AT 60" ABOVE GRADE ON CENTER.
- JUNCTION BOX FOR DIMENSIONAL LETTERS/LIGHT BAR. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH SIGN LIGHTING INSTALLER.
- JUNCTION BOX FOR SIGN COMPANY PROVIDED FIXTURE SHALL BE MOUNTED ON EXTERIOR FACE OF WALL AT 17' AFF. COORDINATE EXACT LOCATION WITH SIGN LIGHTING INSTALLER BEFORE ROUGHING IN.
- COORDINATE EXACT LOCATION OF L2 LIGHT FIXTURES PRIOR TO INSTALLATION. FIXTURE SHALL NOT BE MOUNTED ABOVE HEATER. ENSURE FIXTURES DO NOT CONFLICT WITH OVERHEAD DOOR TRACK.



1 Main Level Plan - Lighting
3/16" = 1'-0"





Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
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Pit Level Plan - Lighting

Project number	24005
Date	5/15/2024
Drawn by	TH
Checked by	GW

E201

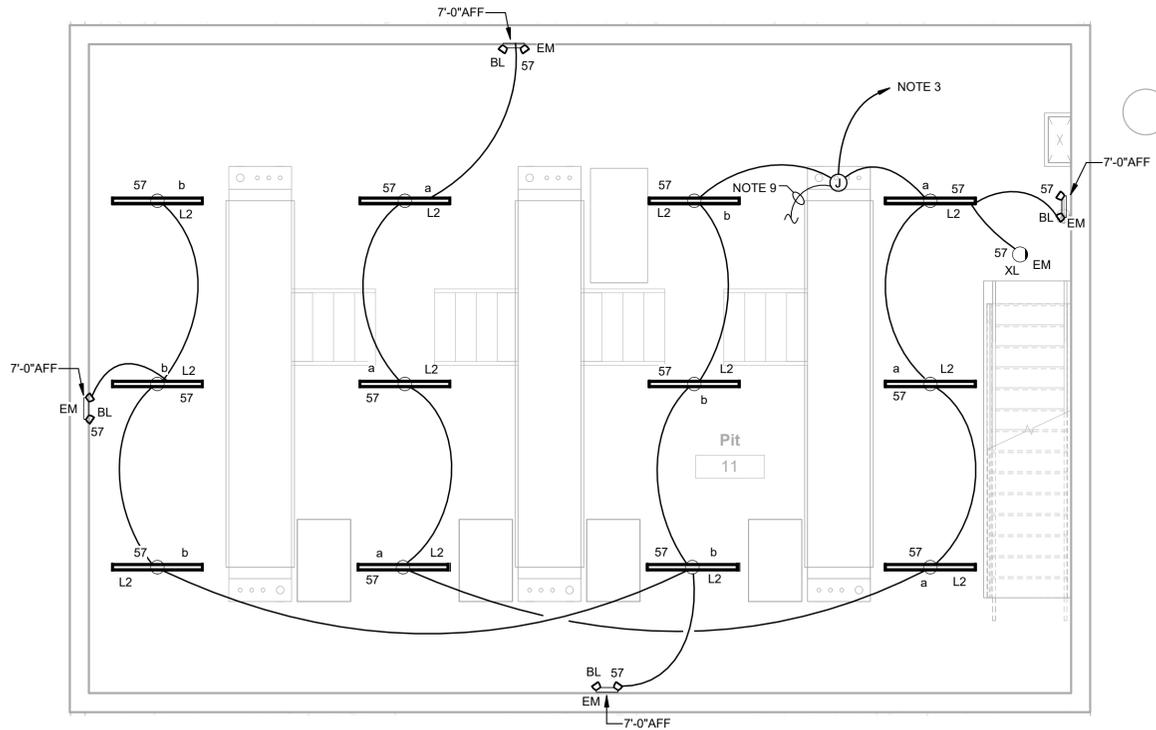
Scale 1/4" = 1'-0"

- GENERAL NOTES:**
- CONNECT ALL "BL", "XL" AND EMERGENCY BATTERY PACKS IN FIXTURES MARKED "EM" TO UNSWITCHED HOT LEG OF CIRCUIT.
 - FOR THE LIGHTING PACKAGE PRICING CONTACT THE FOLLOWING:

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MIKE.MCMAKEN@REXELENERGY.COM

STEPHEN MITCHELL
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SMITCHELL@MAXLITE.COM
 - OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENTILATION.
 - ADJUST LIGHT FIXTURES AS NEEDED TO AVOID CONFLICT WITH STRUCTURAL STEEL.

- NOTES:**
- CONNECT TO LIGHT SWITCH ON FIRST FLOOR. SEE SHEET E200 FOR CONTINUATION.
 - HOMERUN TO 20A, 1POLE CIRCUIT BREAKER IN PANELBOARD PP THROUGH LIGHTING CONTACTOR C-1.



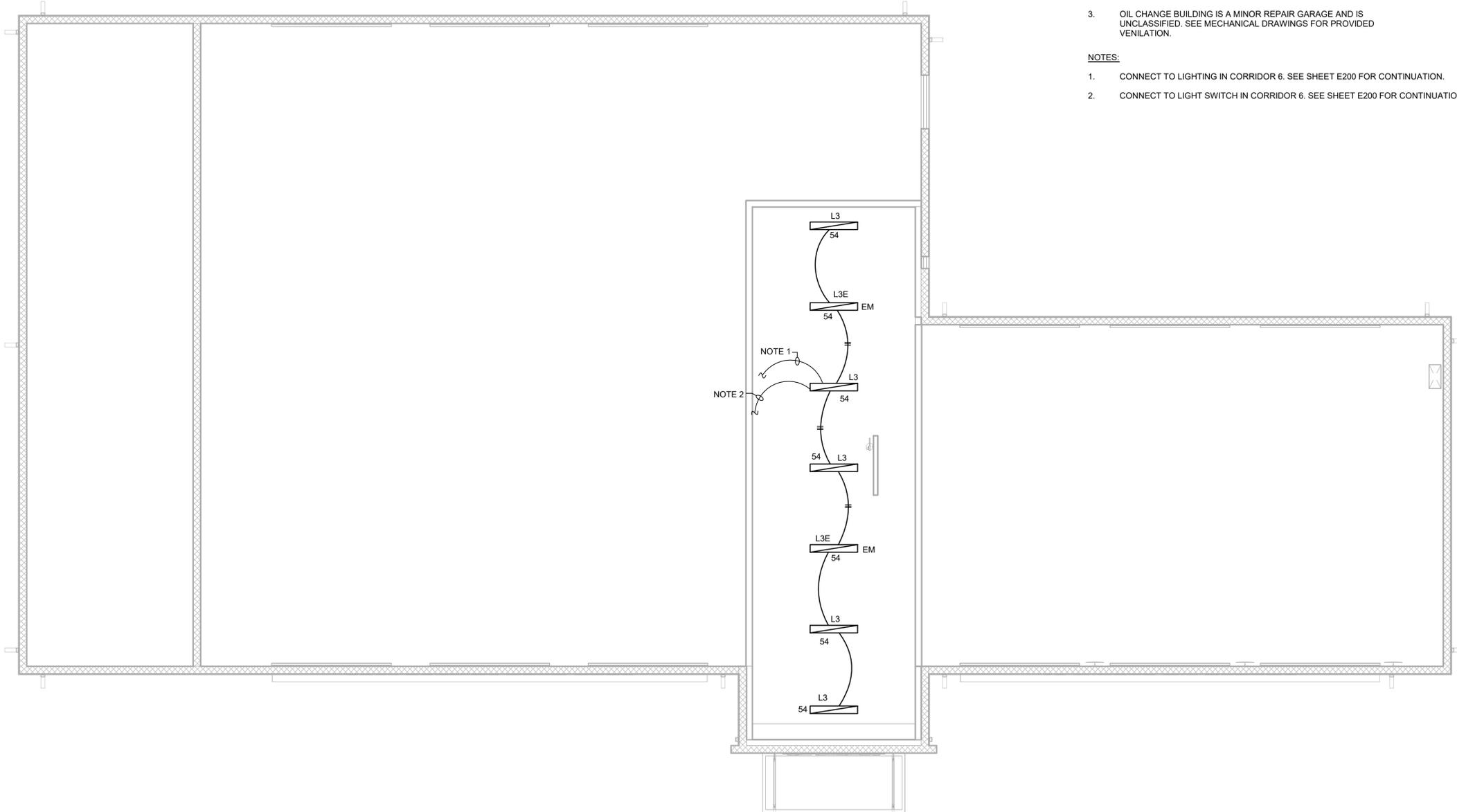
① Pit Level Plan - Lighting
1/4" = 1'-0"



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Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Sevierville, Tennessee



GENERAL NOTES:

- CONNECT ALL "BL", "XL" AND EMERGENCY BATTERY PACKS IN FIXTURES MARKED "EM" TO UNSWITCHED HOT LEG OF CIRCUIT.
- FOR THE LIGHTING PACKAGE PRICING CONTACT THE FOLLOWING:

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SMITCHELL@MAXLITE.COM

- OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENTILATION.

NOTES:

- CONNECT TO LIGHTING IN CORRIDOR 6. SEE SHEET E200 FOR CONTINUATION.
- CONNECT TO LIGHT SWITCH IN CORRIDOR 6. SEE SHEET E200 FOR CONTINUATION.

① Equipment Platform Plan - Lighting
3/16" = 1'-0"



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Equipment Platform Plan - Lighting

Project number 24005
Date 5/15/2024

Drawn by TH
Checked by GW

E202

Scale 3/16" = 1'-0"



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 Sevierville, Tennessee

FINAL

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Main Level Plan - Power & Voice/Data

Project number	24005
Date	5/15/2024
Drawn by	TH
Checked by	GW

E300

Scale 3/16" = 1'-0"

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5/13/2024 4:01:43 PM

GENERAL NOTES:

- CONTRACTOR SHALL VERIFY/COORDINATE LOCATION OF ALL POWER & DATA OUTLETS FOR EQUIPMENT. OBTAIN OWNER'S APPROVAL BEFORE ROUGH IN. NO EXCEPTIONS. NO ADDITIONAL COMPENSATION SHALL BE AWARDED FOR ANY ADDITIONAL WORK REQUIRED TO RELOCATE OUTLETS DUE TO CONTRACTOR'S FAILURE TO COORDINATE WITH OWNER.
- ALL HORIZONTAL CONDUIT RUNS SHALL BE A MINIMUM OF 8" ABOVE FINISHED FLOOR EXCEPT FOR DROPS. ENSURE CONDUIT DOES NOT CONFLICT WITH OVERHEAD DOOR.
- OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENTILATION.
- EXPRESS OIL CHANGE HAS OBTAINED EQUIPMENT AVAILABILITY AND SPECIAL VOLUME PRICING ON POWER EQUIPMENT AND LIGHTING CONTROL PACKAGES FROM REXEL. SEE CONTACTS BELOW FOR PRICING AND INFORMATION:

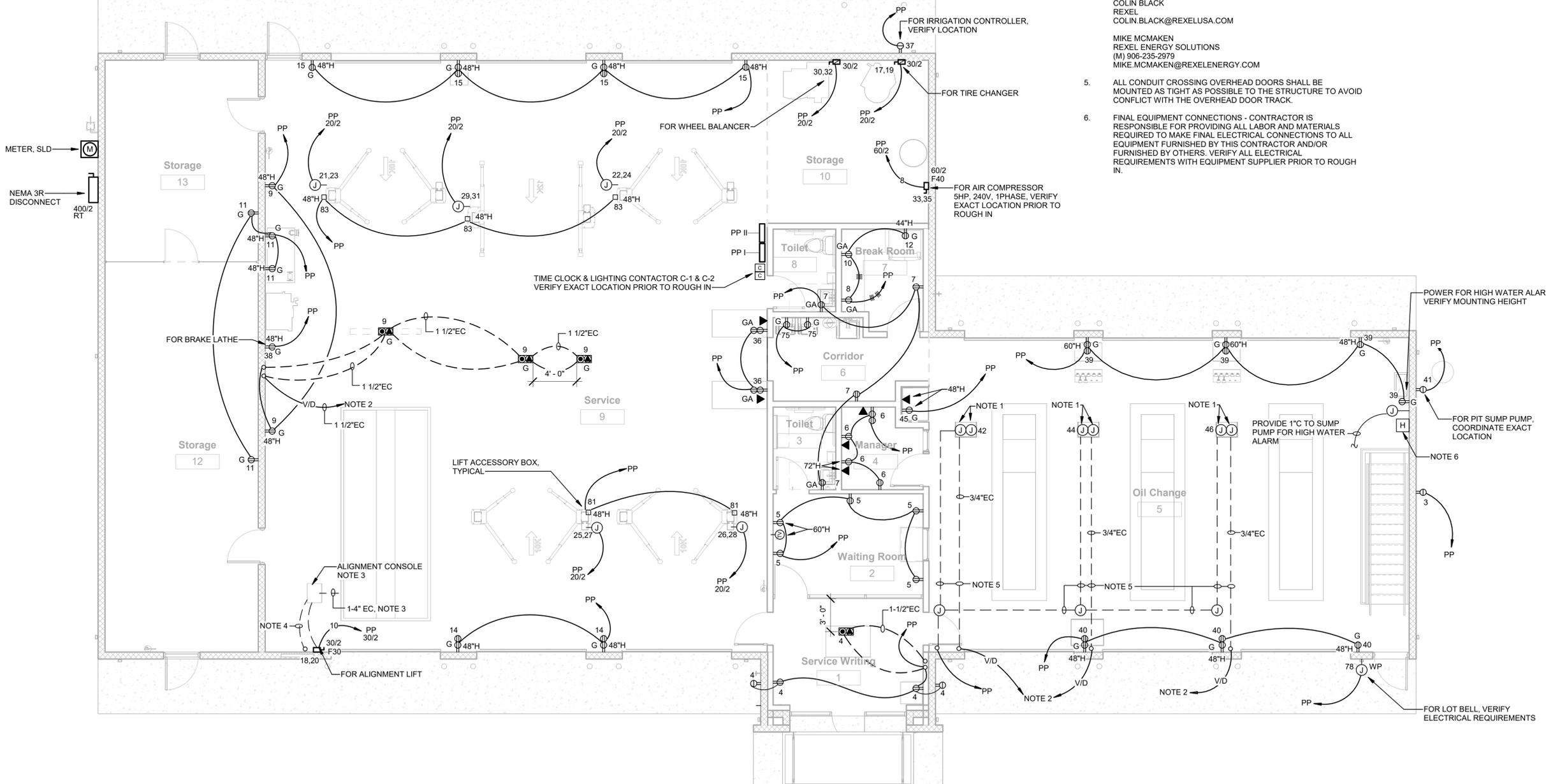
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 COLIN.BLACK@REXELUSA.COM

 MIKE MCMAKEN
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 (M) 906-235-2979
 MIKE.MCMAKEN@REXELENERGY.COM
- ALL CONDUIT CROSSING OVERHEAD DOORS SHALL BE MOUNTED AS TIGHT AS POSSIBLE TO THE STRUCTURE TO AVOID CONFLICT WITH THE OVERHEAD DOOR TRACK.
- FINAL EQUIPMENT CONNECTIONS - CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS REQUIRED TO MAKE FINAL ELECTRICAL CONNECTIONS TO ALL EQUIPMENT FURNISHED BY THIS CONTRACTOR AND/OR FURNISHED BY OTHERS. VERIFY ALL ELECTRICAL REQUIREMENTS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH IN.

NOTES:

- 3/4" CONDUIT STUBBED UP 18" INTO WORK PEDESTAL BASE POST. PROVIDE FLEXIBLE CONDUIT INTO WORK PEDESTAL CABINET. COORDINATE OUTLET REQUIREMENTS PRIOR TO ROUGH IN.
- HOMERUN 3/4" EC TO TELEPHONE BACKBOARD ON EQUIPMENT PLATFORM.
- LOCATIONS SHOWN HERE ARE APPROXIMATE. FIELD COORDINATE EXACT LOCATION OF CONSOLE & CONDUIT WITH OWNER & ALIGNMENT LIFT SHOP DRAWINGS BEFORE ROUGH-IN. CONDUIT FROM ALIGNMENT PIT TO CONSOLE SHALL BE 32" FROM EDGE OF PIT TO CENTERLINE OF CONDUIT.
- PROVIDE 1 1/2" EMPTY CONDUIT FROM CONSOLE, STUBBED 8" UP ON INSIDE FACE OF EXTERIOR WALL.
- CONDUIT FOR WORK PEDESTALS IN OIL CHANGE AREA SHALL BE MOUNTED/ROUTED ON THE CEILING OF THE PIT IN LIEU OF IN THE SLAB.
- ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ZOELLER - Z CONTROL APAK INDOOR ALARM WITH MECHANICAL FLOAT, MODEL # 10-4014. SEE MANUFACTURER INSTALLATION INSTRUCTIONS PRIOR TO ROUGH IN. PROVIDE BATTERIES.



① Main Level Plan - Power & Voice/Data
 3/16" = 1'-0"





Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

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Pit Level Plan - Power & Voice/Data

Project number 24005
Date 5/15/2024

Drawn by TH
Checked by GW

E301

Scale 1/4" = 1'-0"

GENERAL NOTES:

- OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENTILATION.
- EXPRESS OIL CHANGE HAS OBTAINED EQUIPMENT AVAILABILITY AND SPECIAL VOLUME PRICING ON POWER EQUIPMENT AND LIGHTING CONTROL PACKAGES FROM REXEL. SEE CONTACTS BELOW FOR PRICING AND INFORMATION:

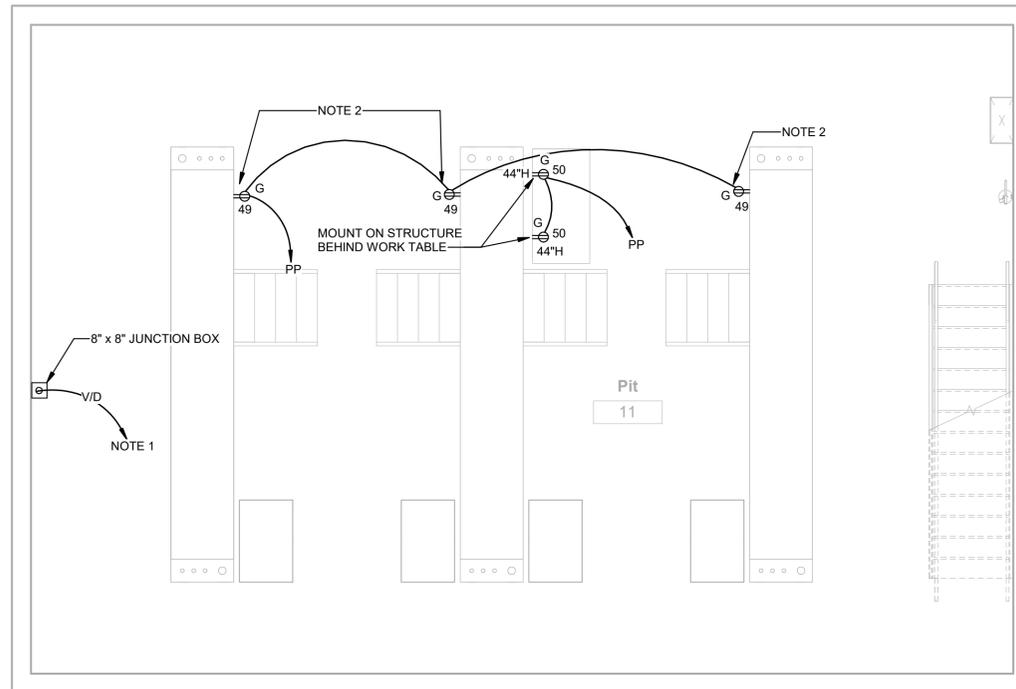
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NOTES:

- 2"EC HOMERUN TO TELEPHONE BACKBOARD ON EQUIPMENT PLATFORM.
- MOUNT RECEPTACLES ONTO STRUCTURAL COLUMN.



1 Pit Level Plan - Power & Voice/Data
1/4" = 1'-0"



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Equipment Platform Plan - Power & Voice/Data

Project number	24005
Date	5/15/2024
Drawn by	TH
Checked by	GW

E302

Scale 3/16" = 1'-0"

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GENERAL NOTES:

- OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENTILATION.
- EXPRESS OIL CHANGE HAS OBTAINED EQUIPMENT AVAILABILITY AND SPECIAL VOLUME PRICING ON POWER EQUIPMENT AND LIGHTING CONTROL PACKAGES FROM REXEL. SEE CONTACTS BELOW FOR PRICING AND INFORMATION:

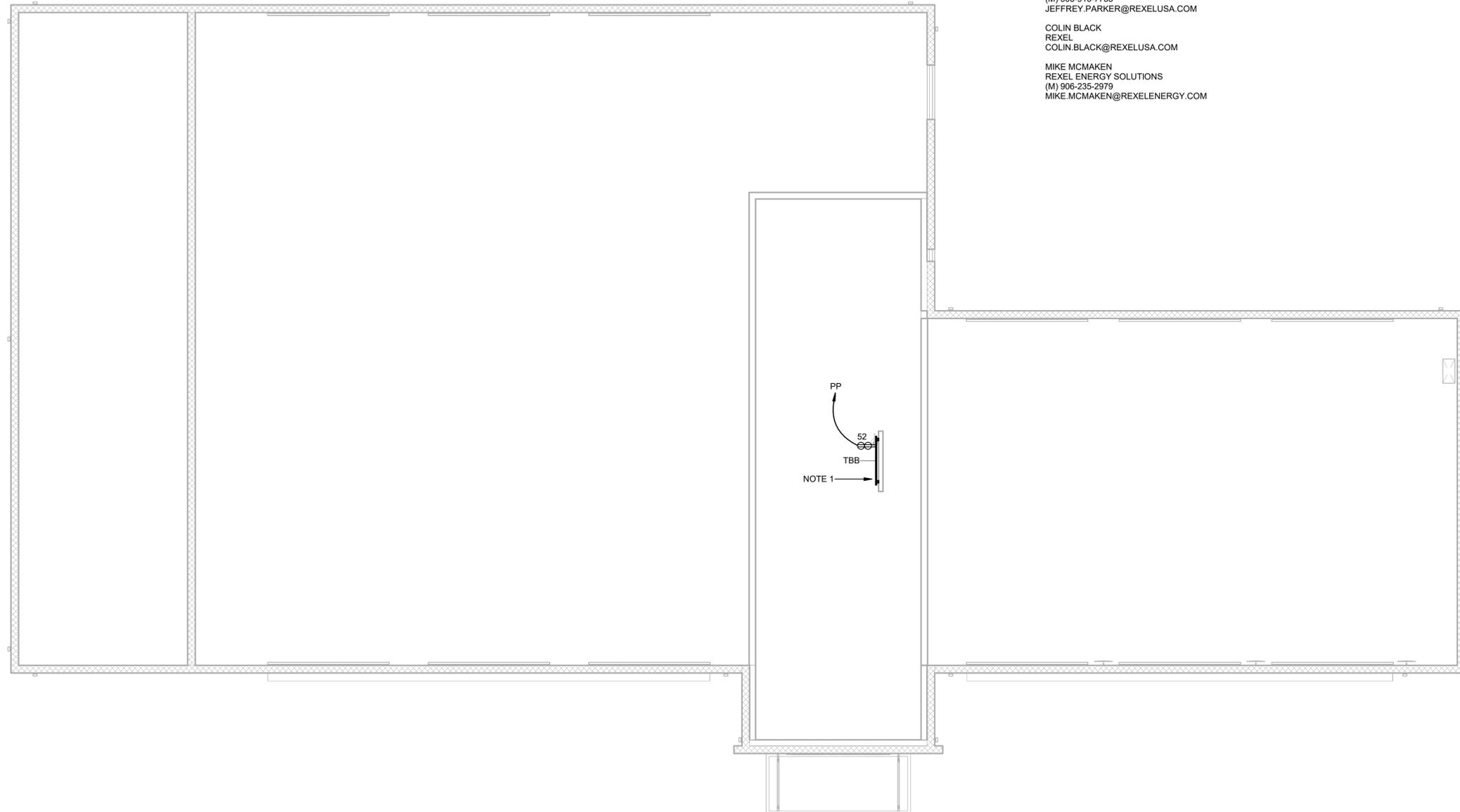
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NOTES:

- SEE AUXILIARY SINGLE LINE DIAGRAM ON SHEET E102 FOR MORE INFORMATION ON TELEPHONE BACKBOARD. COORDINATE LOCATION WITH DUCTWORK.



Equipment Platform Plan - Power & Voice/Data
3/16" = 1'-0"





Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

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No.	Description	Date

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Main Level Plan -
Elec. Conn. to
Mech.

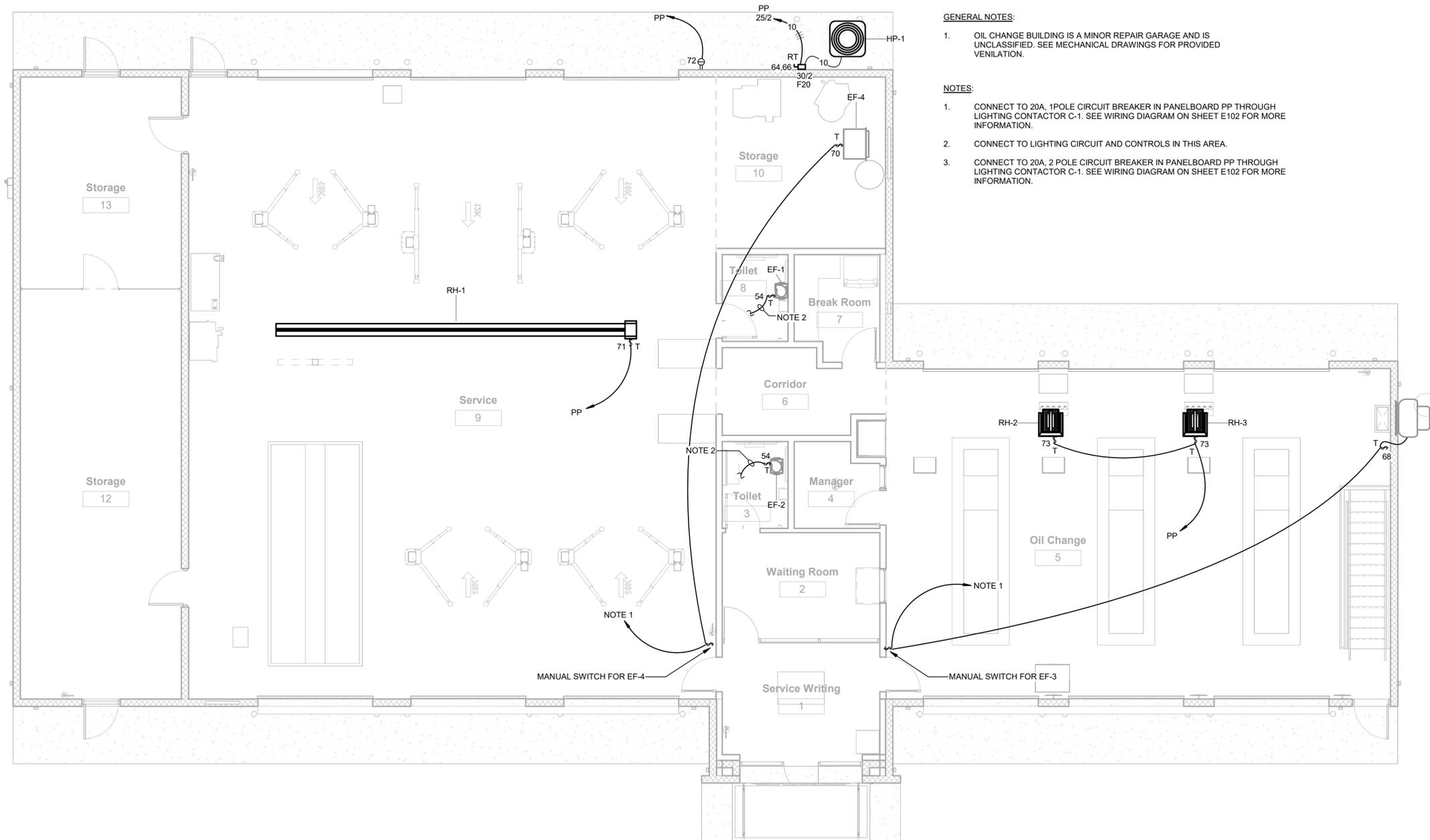
Project number 24005
Date 5/15/2024

Drawn by TH
Checked by GW

E400

Scale 3/16" = 1'-0"

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- GENERAL NOTES:**
- OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENTILATION.
- NOTES:**
- CONNECT TO 20A, 1-POLE CIRCUIT BREAKER IN PANELBOARD PP THROUGH LIGHTING CONTACTOR C-1. SEE WIRING DIAGRAM ON SHEET E102 FOR MORE INFORMATION.
 - CONNECT TO LIGHTING CIRCUIT AND CONTROLS IN THIS AREA.
 - CONNECT TO 20A, 2-POLE CIRCUIT BREAKER IN PANELBOARD PP THROUGH LIGHTING CONTACTOR C-1. SEE WIRING DIAGRAM ON SHEET E102 FOR MORE INFORMATION.

1 Main Level Plan - Electrical Connection to Mechanical
3/16" = 1'-0"





Express Oil Change & Tire Engineers
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Equipment Platform Plan - Elec. Conn. to Mech.

Project number 24005
Date 5/15/2024

Drawn by TH
Checked by GW

E401

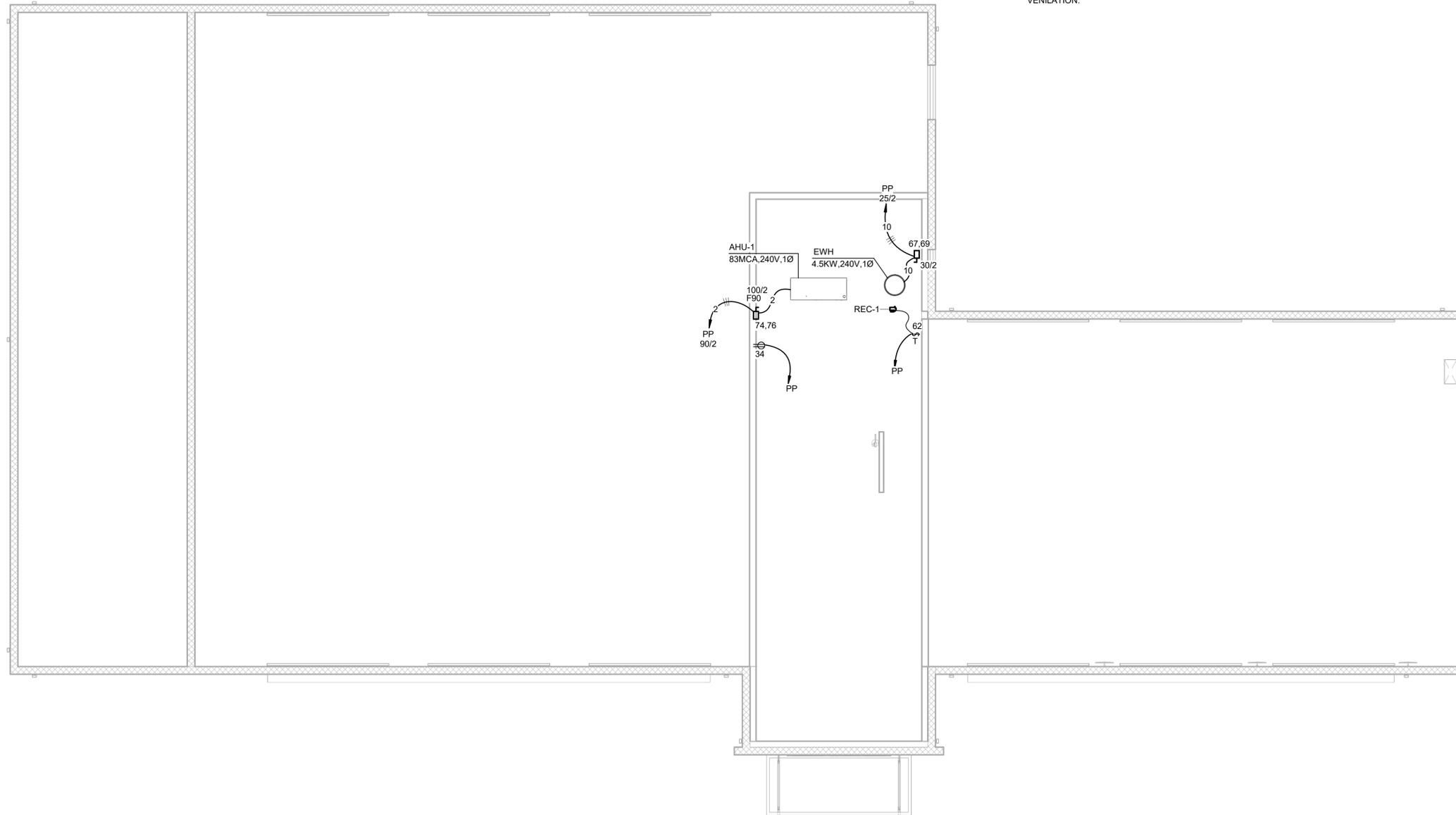
Scale 3/16" = 1'-0"

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GWAMAE@GW-ENG.COM | 205.413.4112

GENERAL NOTES:

- OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENTILATION.



① Equipment Platform Plan - Electrical
Connection to Mechanical
3/16" = 1'-0"





Express Oil Change & Tire Engineers
 Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
 Sevierville, Tennessee

FINAL

No.	Description	Date

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**Roof Plan -
Electrical
Connection to
Mechanical**

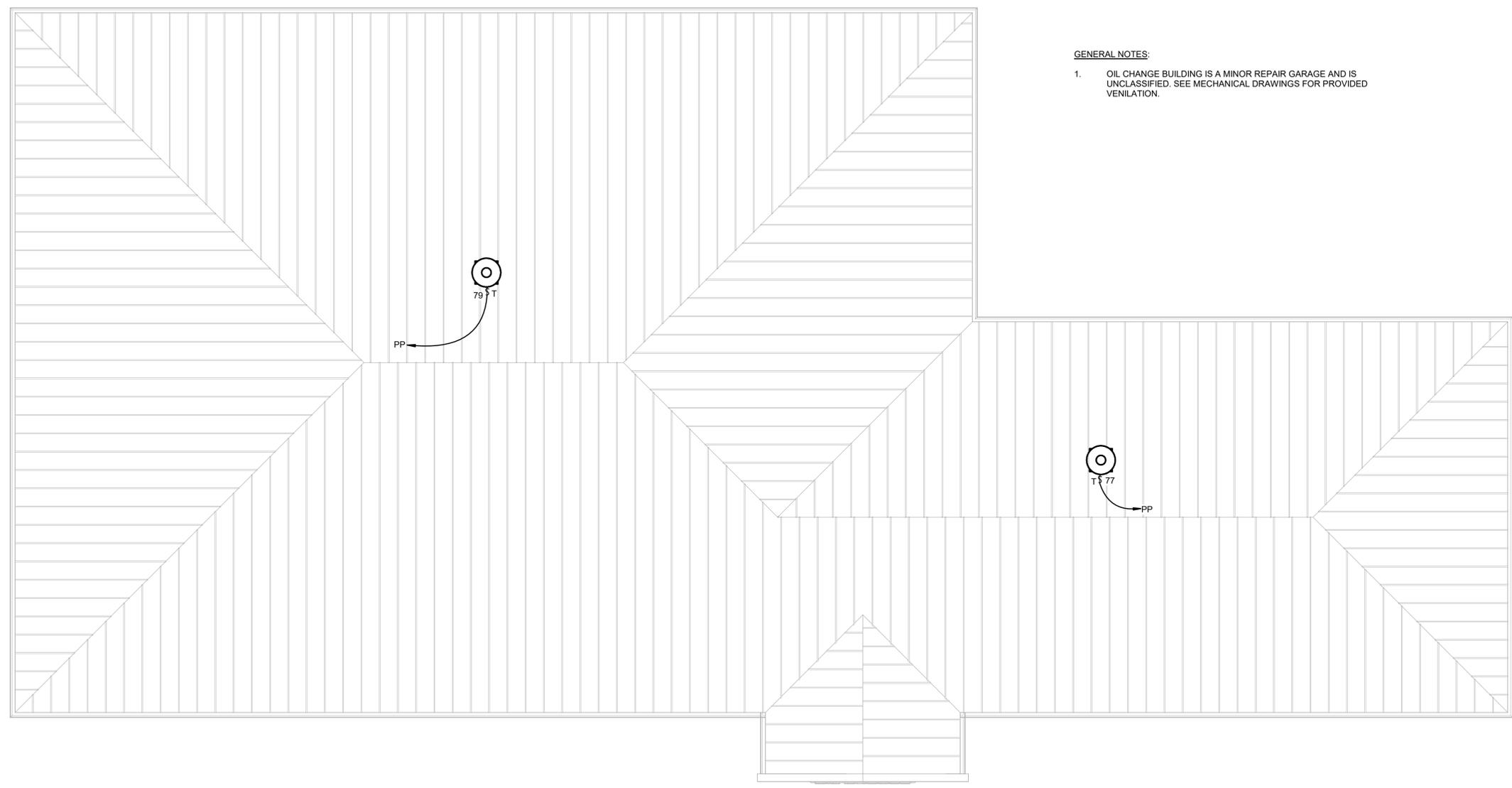
Project number 24005
Date 5/15/2024
Drawn by TH
Checked by GW

E402

Scale 3/16" = 1'-0"

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- GENERAL NOTES:**
- OIL CHANGE BUILDING IS A MINOR REPAIR GARAGE AND IS UNCLASSIFIED. SEE MECHANICAL DRAWINGS FOR PROVIDED VENTILATION.



① Roof Plan - Electrical Connection to Mechanical
3/16" = 1'-0"



GENERAL REQUIREMENTS

- A. Carefully examine General Conditions, other specification Sections, and other drawings (in addition to electrical), in order to be fully acquainted with their effect on electrical work.
- B. Do all work in compliance with laws and ordinances and local authorities having jurisdiction and, where applicable, utility companies. Obtain and pay for any and all required permits, inspections, certificates of inspections and approval, and the like, and deliver such certificates to the Architect.
- C. Cooperate with other trades and contractors at job. Perform work in such manner and at such times as not to delay work of other trades. Complete all work as soon as the condition of the structure and installation of equipment will permit. Patch, in a satisfactory manner and by the proper craft, any work damaged by electrical work.
- D. All equipment (wiring devices, light fixtures, panelboards, disconnect switches, conductors, raceways, boxes, cabinets, circuit breakers, low voltage equipment, auxiliary systems, motors, machines, etc.) used for this project shall be tested by Underwriter's Laboratories, Inc and have "UL" nameplate.
- E. Coordinate placement of equipment above ceiling to facilitate proper clearance for serving of equipments.
- F. Take finish dimensions at the job site in preference to scale dimensions.
- G. Obtain from manufacturer's data on all equipment, the dimensions of which may affect electrical work. Use this data to coordinate proper service characteristics, entry locations, etc., and to ensure minimum clearances are maintained.
- H. The electrical contractor shall have had experience of at least the same size and scope as this project, on at least two other projects, within the last 5 years in order to be qualified to bid this project. This qualification shall also apply to his subcontractors.
- I. Workmen shall be experienced in their respective trade. Workmanship of installed work shall be first class and will be so judged by the Architect/Engineer. Substandard work shall be removed and replaced.
- J. The Bidders shall visit the site to thoroughly familiarize themselves with existing conditions prior to submitting their bid. No allowances will be made for lack of knowledge of existing conditions.
- K. Provide one Year warranty of conformance with drawings and specifications. In addition to the foregoing warranty, Contractor shall and does hereby warrant all materials and equipment furnished under this Division of the Specifications to be free from defects and to function or operate satisfactorily for one year after final acceptance of the work, and that any items not meeting this requirement will be made good by him without cost to owner, provided such defects or failures are not due to abuse, neglect, or lack of reasonable and ordinary maintenance.
- L. Unless otherwise specified, provide only new, standard first grade materials throughout, conforming to standards established by Underwriter's Laboratories, Inc., and so marked and labeled, together with manufacturer's brand or trademark. All equipment subject to approval of Architect/Engineer before installation. All like items shall be of one manufacturer.
- M. Any equipment or materials shown on the drawings to be removed and reinstalled shall be cleaned and, if necessary repaired to like new condition prior to reinstallation.
- N. Where shown on the drawings or specified herein, furnish and install electrical equipment. Furnish all materials, hardware, equipment, labor and services required for the installation of complete and properly working installations as shown on the drawings and described herein.
- O. All work shall be executed in a workmanlike manner and shall present a neat and mechanical appearance upon completion. Care shall be exercised that all items are plumb, straight, level.
- P. Equipment grounding conductors shall be bonded at each enclosure and pole base. All equipment grounding conductors shall be connected to a common bus, bonded to the equipment enclosure.
- Q. An equipment grounding jumper shall be installed from the receptacle ground terminal to the outlet box.

CONDUITS

- A. Conduit: Rigid and IMC shall be galvanized outside and inside by hot dipping. EMT shall be Electro_Galvanized. Conduit shall be as manufactured by Republic, Wheatland, Triangle, Pittsburgh Standard, Youngstown, or Allied.
- B. Sealtight flexible metal conduit shall consist of flexible galvanized steel tubing with a liquidtight jacket of PVC. All flexible conduit shall have a copper bonding conductor wound into conduit body.
- C. Couplings and connectors on rigid and IMC shall be standard threaded type, galvanized outside and inside by hot dipping. Clamp type and threadless are not acceptable. Couplings and connectors, for rigid and IMC shall be as manufactured by Raco or Appleton.
- D. EMT connectors shall be steel, set screw unless required by code to be compression type, equipped with insulating throats. Connectors couplings shall be O-Z/Gedney 7000ST or 7000RST series, T & B 5123 - 5623 series, Midwest Electric series 1650, or equal series of Raco. Cast metal couplings will not be approved for any location.
- E. EMT couplings shall be steel, set screw unless required by code to be compression type. Couplings shall be O-Z/Gedney 6000S or 6000RS series, T & B 5120 - 5620 series, Midwest Electric series 660, or equal series of Raco. Cast metal connectors will not be approved for any location.
- F. Connectors raintight: Meyers or approved equal.
- G. Bushings on rigid and IMC shall be threaded malleable iron with integral noncombustible insulator. Rigid and IMC bushings shall be O-Z/Gedney "IBC" series, T & B BIM series, Midwest Electric series 1031 - 1043 or equal by Penn Union. Grounding bushings shall be O-Z/Gedney "IBC-L" series, T & B 3870 - 3999 series, Midwest Electric GLL series or equal by Penn Union.
- H. Watertight Flex Connectors: O-Z/Gedney, Raco, or Midwest Electric with insulating throat.
- I. EMT conduit with set screw shall be used for all branch circuits, power feeders, auxiliary, signaling and controls circuits in none hazardous dry locations for 2" and smaller. EMT may be used exposed where not subject to physical damage. EMT with compression fitting may be used in damp locations up to the 2" limit. Otherwise use rigid or intermediate hot dipped galvanized inside and out steel, threaded for screwed fitting only conduits unless specified on the drawings otherwise.
- J. Conduits shall be sized in accordance with the latest National Electrical Code except that conduits containing more than two conductors shall be sized based on 35% fill and 3/4" conduit shall contain no wire larger than #10 and no more than 6#12 or 4#10 wires. Conduit shall be sized larger than required above when so shown on the drawings or when required by local Code. Minimum size conduit shall be 3/4".
- K. Where conduit enters boxes, they shall be secured in place with approved insulating fittings.
- L. The use of running threads is absolutely prohibited. All conduit shall be jointed with approved conduit couplings. All couplings on IMC and rigid conduit shall be threaded.
- M. All conduits shall be supported within 3 feet of each coupling, fitting, outlet box, junction box, cabinet or equipment enclosure Conduit supports shall be independent of ducts, plumbing piping, ceiling supports, etc. Conduits shall not be supported by junction boxes, pull boxes, fixtures, etc.
- N. All exposed conduit threads, metal supports, etc., exposed to the elements or exterior of building shall be painted with rust preventive paint.

CONDUCTORS

- A. Conductors for general use, sized #10 and smaller, shall be solid copper. Conductors #8 and larger, and any size to motors or vibrating equipment shall be stranded copper.
- B. All conductor insulation shall be 600 volt THHN/THWN.
- C. Wire connections, #10 and smaller connections shall be made with insulated wire connectors with steel spring connector threads. Wire connectors shall be "Twister" Wire-Nut series as manufactured by Ideal Industries, Inc. or approved equal.
- D. On wire larger than #10, shall be made with approved solderless connectors and covered with Scotch #33 electrical tape so that the insulation is equal to conductor insulation.
- E. Connection of stranded conductors, #8 and larger, to bus bars in switchboards, panelboards, equipment enclosures, junction boxes, etc. shall be made with individual lugs, size as required by conductor, bolted to bus bar with full size bolts and nuts with lock washers.
- F. Conductors and conduits shall be continuous between outlets.
- G. No conductor shall be pulled until conduit is cleaned of all foreign matter.
- H. Where installed in panelboards, cabinets, wireways, switches and equipment wire and cable shall be neatly formed and tied.
- I. Conductors sized #10 AWG and below shall have permanently colored insulation. Conductors sized #8 AWG and above shall be color coded by either permanently colored insulation or by means of colored tape applied to the conductor within 12" of each termination and in each enclosure, junction box, etc.

JUNCTION BOXES

- A. Shall be standard type, with knockouts, made of hot dipped galvanized steel, Steel City, Raco, Appleton, or Bowers.
- B. Ceiling outlet boxes shall be 4" octagon 1-1/2" deep or larger as required due to number of wires.
- C. Boxes shall be provided with approved 3/8" fixture studs when required to support stem mounted light fixtures.
- D. Except when located in exposed concrete block, switch and receptacle boxes shall be 4" square with trim ring for single gang installation. Appropriate gang boxes shall be used for mounting ganged switches.
- E. When installed in exposed concrete block, switch and receptacle boxes shall be square type designed for exposed block installation.
- F. Outlet boxes shall be securely fastened to structural members and shall not be supported by dry wall, gypsum board, plaster, etc. The device or plate installed in conjunction with the outlet box shall not be used for support. There shall be no more knockouts opened in any outlet box than are required. Boxes shall be sealed during construction.
- G. Under no circumstances shall through-the-wall boxes be used. Back to back boxes shall be staggered at least 3 inches, except in fire rated partitions, in which case, back to back boxes shall be staggered at least 24 inches.
- H. Outlet boxes two gangs and wider shall not be supported by attachment clips or any means which supports the boxes from less than two opposite sides of the box. Such outlet boxes in stud walls shall be supported securely by support members spanning between studs.
- I. Outlet boxes installed in fire rated partitions shall be boxed in with wall board or other suitable fire rated material as required to maintain or restore the fire rating of the assembly.

WIRING DEVICES

- A. Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other Part 2 articles:
 - 1. Cooper Wiring Devices: a division of Cooper Industries, Inc. (Cooper).
 - 2. Hubbell Incorporated; Wiring Device-Kellems (Hubbell).
 - 3. Leviton Mfg. Company Inc. (Leviton).
 - 4. Pass & Seymour/Legrand; Wiring Devices & Accessories (Pass & Seymour).
- B. Convenience Receptacles, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 configuration 5-20R, and UL 489.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Cooper; 5351 (single), 5352 (duplex).
 - b. Hubbell; HBL5351 (single), CR5352 (duplex).
 - c. Leviton; 5891 (single), 5352 (duplex).
 - d. Pass & Seymour; 5381 (single), 5352 (duplex).
- C. Duplex GFCI Convenience Receptacles, 125 V, 20 A:
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Cooper; GF20.
 - b. Pass & Seymour; 2084.
- A. Switches, 120/277 V, 20 A:
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Cooper; 2221 (single pole), 2222 (two pole), 2223 (three way), 2224 (four way).
 - b. Hubbell; CS1221 (single pole), CS1222 (two pole), CS1223 (three way), CS1224 (four way).
 - c. Leviton; 1221-2 (single pole), 1222-2 (two pole), 1223-2 (three way), 1224-2 (four way).
 - d. Pass & Seymour; 20AC1 (single pole), 20AC2 (two pole), 20AC3 (three way), 20AC4 (four way).
- B. Single and combination plate types to match corresponding wiring devices.
 - 1. Plate-Securing Screws: Metal with head color to match plate finish.
 - 2. Material for Finished Spaces: stainless steel 302 0.04-inch- (1-mm-) thick.
 - 3. Material for Unfinished Spaces: Galvanized steel.
 - 4. Material for Damp Locations: Cast aluminum with spring-loaded lift cover, and listed and labeled for use in "wet locations."
- F. Wet-Location, Weatherproof Cover Plates: NEMA 250, complying with type 3R weather-resistant, extra duty, die-cast aluminum with lockable in-use cover.
- G. Color: Wiring device catalog numbers in Section Text do not designate device color.
 - 1. Wiring Devices Connected to Normal Power System: Gray unless otherwise indicated or required by NFPA 70 or device listing.
 - 2. Wiring Devices Connected to Emergency Power System: Red.
- H. Comply with NECA 1, including the mounting heights listed in that standard, unless otherwise noted.
- I. Coordination with Other Trades:
 - 1. Take steps to insure that devices and their boxes are protected. Do not place wall finish materials over device boxes and do not cut holes for boxes with routers that are guided by riding against outside of the boxes.
 - 2. Keep outlet boxes free of plaster, drywall joint compound, mortar, cement, concrete, dust, paint, and other material that may contaminate the raceway system, conductors, and cables.
 - 3. Install device boxes in brick or block walls so that the cover plate does not cross a joint unless the joint is troweled flush with the face of the wall.
 - 4. Install wiring devices after all wall preparation, including painting, is complete.
- J. Conductors:
 - 1. Do not strip insulation from conductors until just before they are spliced or terminated on devices.
 - 2. Strip insulation evenly around the conductor using tools designed for the purpose. Avoid scoring or nicking of solid wire or cutting strands from stranded wire.
 - 3. The length of free conductors at outlets for devices shall meet provisions of NFPA 70, Article 300, without pigtails.
 - 4. Existing Conductors:
 - a. Cut back and pigtail, or replace all damaged conductors.
 - b. Straighten conductors that remain and remove corrosion and foreign matter.
 - c. Pigtailing existing conductors is permitted provided the outlet box is large enough.
- K. Device Installation:
 - 1. Replace all devices that have been in temporary use during construction or that show signs that they were installed before building finishing operations were complete.
 - 2. Keep each wiring device in its package or otherwise protected until it is time to connect conductors.
 - 3. Do not remove surface protection, such as plastic film and smudge covers, until the last possible moment.
 - 4. Connect devices to branch circuits using pigtails that are not less than 6 inches (152 mm) in length.
 - 5. When there is a choice, use side wiring with binding-head screw terminals. Wrap solid conductor tightly clockwise, 2/3 to 3/4 of the way around terminal screw.
 - 6. Use a torque screwdriver when a torque is recommended or required by the manufacturer.
 - 7. When conductors larger than No. 12 AWG are installed on 15- or 20-A circuits, splice No. 12 AWG pigtails for device connections.
 - 8. Tighten unused terminal screws on the device.
 - 9. When mounting into metal boxes, remove the fiber or plastic washers used to hold device mounting screws in yokes, allowing metal-to-metal contact.

L. Receptacle Orientation:

- 10. Install ground pin of vertically mounted receptacles up, and on horizontally mounted receptacles to the right.
- 11. Install hospital-grade receptacles in patient-care areas with the ground pin or neutral blade at the top.

M. Device Plates: Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.

N. Dimmers:

- 1. Install dimmers within terms of their listing.
- 2. Verify that dimmers used for fan speed control are listed for that application.
- 3. Install unshared neutral conductors on line and load side of dimmers according to manufacturers' device listing conditions in the written instructions.

O. Arrangement of Devices: Unless otherwise indicated, mount flush, with long dimension vertical and with grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.

P. Adjust locations of floor service outlets and service poles to suit arrangement of partitions and furnishings.

PANELBOARDS

A. Product Data: For each type of panelboard, switching and overcurrent protective device, transient voltage suppression device, accessory, and component indicated. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, and finishes.

B. Source Limitations: Obtain panelboards, overcurrent protective devices, components, and accessories from single source from single manufacturer.

- 1. Comply with NEMA PB 1 including handling requirements.

D. Comply with NFPA 70.

E. Coordinate layout and installation of panelboards and components with other construction that penetrates walls or is supported by them, including electrical and other types of equipment, raceways, piping, encumbrances to workspace clearance requirements, and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

F. Enclosures: Flush-and surface-mounted cabinets as shown on drawings.

- 1. Rated for environmental conditions at installed location.
 - a. Outdoor Locations: NEMA 250, Type 4X (stainless steel).
 - b. Indoor location NEMA 1 with hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.
- 2. Finishes:
 - a. Back Boxes: Stainless Steel.
- 3. Directory Card: Inside panelboard door, mounted in transparent card holder.

G. Phase, Neutral, and Ground Buses:

- 1. Material: Hard-drawn copper, 98 percent conductivity.
- 2. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box.

H. Future Devices: Mounting brackets, bus connections, filler plates, and necessary appurtenances required for future installation of devices.

I. Panelboard Short-Circuit Current Rating: Fully rated to interrupt symmetrical short-circuit current available at terminals. See drawings for rating.

J. Manufacturers: Subject to compliance with requirements, provide products by either: Eaton, General Electric Company; Siemens, and Square D.

K. Branch Overcurrent Protective Devices for Circuit-Breaker Frame Sizes Larger Than 125 A: Bolt-on circuit breakers; plug-in circuit breakers where individual positive-locking device requires mechanical release for removal. Branch circuit breakers shall be HACR type. Molded-Case Circuit Breaker (MCCB); Comply with UL 489, with interrupting capacity to meet available fault currents.

L. Examine panelboards before installation. Reject panelboards that are damaged or rusted or have been subjected to water saturation.

M. Examine elements and surfaces to receive panelboards for compliance with installation tolerances and other conditions affecting performance of the Work.

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

O. Install panelboards and accessories according to NEMA PB 1.1.

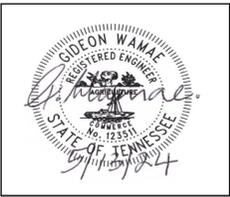
P. Mount panelboard cabinet plumb and rigid without distortion of box. Mount recessed panelboards with fronts uniformly flush with wall finish and mating with back box.

Q. Install filler plates in unused spaces.

R. Arrange conductors in gutters into groups and bundle and wrap with wire ties after completing load balancing.

TEMPORARY POWER

A. The electrical contractor shall provide temporary electrical wiring for construction. The temporary service shall be single phase, three wire, 120/240 volts fused at main disconnect. All receptacles on this temporary service shall be protected by ground fault interruptible circuit breakers.



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

FINAL

No.	Description	Date

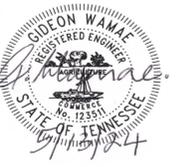
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Specifications	
Project number	24005
Date	5/15/2024
Drawn by	TH
Checked by	GW
E500	
Scale	NO SCALE

GIDEON WAMAE, P.E.
4120 OVERLOOK CIRCLE, TRUSSVILLE, AL 35173
GWAMAE@GW-ENG.COM | 205.413.4112



www.ahoarch.com



Express Oil Change & Tire Engineers
Single Building / Right Hand Oil Change / Front Enter / Side Tire Storage
Sevierville, Tennessee

COMcheck Software Version 4.1.5.5 Interior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: Express Oil Change & Tire Engineers
Project Type: New Construction

Construction Site: Sevierville, TN
Owner/Agent: Express Oil Change & Tire Engineers, Hoover, AL
Designer/Contractor: Gideon Wamae, GW Engineering, 4120 Overlook Circle, Trussville, AL 35173, 205-413-4112, gwamae@gw-eng.com

Additional Efficiency Package(s)

Credits: 1.0 Required, 1.0 Proposed, Reduced Lighting Power, 1.0 credit

A Area Category	B Floor Area (R2)	C Allowed Watts / R2	D Allowed Watts (B X C)
1-Automotive Facility	7229	0.64	4619
Total Allowed Watts =			4619

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Automotive Facility				
LED 4: Other:	1	28	100	2800
LED 5: Other:	1	20	50	1000
LED 6: Other:	1	17	35	595
Total Proposed Watts =				4395

Interior Lighting PASSES: Design 5% better than code

Interior Lighting Compliance Statement
Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Taylor Higginbotham
Name - Title
Signature
Date: 05/13/2024

Project Title: Express Oil Change & Tire Engineers
Data filename: C:\Users\taylorhigginbotham\OneDrive\Documents\GW Engineering\2024 - JHD - EDC Spanish Fort, AL\Project Files\08 - Lighting Calculations & Cutsheets\Comcheck - EDC Spanish Fort, AL.cck
Report date: 05/13/24
Page 1 of 7

COMcheck Software Version 4.1.5.5 Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: Express Oil Change & Tire Engineers
Project Type: New Construction
Exterior Lighting Zone: 2 (Residential mixed use area (LZZ))

Construction Site: Sevierville, TN
Owner/Agent: Express Oil Change & Tire Engineers, Hoover, AL
Designer/Contractor: Gideon Wamae, GW Engineering, 4120 Overlook Circle, Trussville, AL 35173, 205-413-4112, gwamae@gw-eng.com

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tractable Wattage	E Allowed Watts (B X C)
Entry canopy	9 R2	0.25	Yes	2
Illuminated area of facade wall or surface	1700 R2	0.07	No	128
Total Tractable Watts (a) =				2
Total Allowed Watts =				130
Total Allowed Supplemental Watts (b) =				400

(a) Wattage tradeoffs are only allowed between tractable areas/surfaces.
(b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tractable and tractable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Entry canopy (B R2), Tractable Wattage	1	5	28	140
LED 1: L&L&E: Other:	1	6	28	168
Illuminated area of facade wall or surface (1700 R2), Non-tractable Wattage	1	6	28	168
LED 2: L4: Other:	1	6	28	168
Total Tractable Proposed Watts =				140

Exterior Lighting PASSES: Design 51% better than code

Exterior Lighting Compliance Statement
Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Taylor Higginbotham
Name - Title
Signature
Date: 05/13/2024

Project Title: Express Oil Change & Tire Engineers
Data filename: C:\Users\taylorhigginbotham\OneDrive\Documents\GW Engineering\2024 - JHD - EDC Spanish Fort, AL\Project Files\08 - Lighting Calculations & Cutsheets\Comcheck - EDC Spanish Fort, AL.cck
Report date: 05/13/24
Page 2 of 7

FINAL

No.	Description	Date

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COMcheck

Project number: 24005
Date: 5/15/2024
Drawn by: TH
Checked by: GW

E600
Scale: NO SCALE

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