

# ALURA APARTMENTS - VILLAGE AT DISCOVERY PARK

## GARAGE G7 TYPE "A"



# ALURA APARTMENTS - VILLAGE AT DISCOVERY PARK

## GARAGE BUILDING "A"

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

### PROJECT INFORMATION

| SITE DATA                |                                                                |
|--------------------------|----------------------------------------------------------------|
| SITE ZONING:             | (SEE CIVIL)                                                    |
| SITE SIZE:               | (SEE CIVIL)                                                    |
| SITE DENSITY:            | (SEE CIVIL)                                                    |
| NO. OF PARKING SPACES:   | (SEE CIVIL)                                                    |
| CODES AND REGULATIONS    |                                                                |
| BLDG. & RELATED CODES:   | 2018 IBC, IPC, IMC & 2018 IECC                                 |
| ELECT. CODE:             | 2017 NEC                                                       |
| FIRE CODE:               | 2018 IFC                                                       |
| ACCESSIBILITY:           | ICC/ANSI A117.1- 2009                                          |
| MISC.:                   | ALL APPLICABLE FEDERAL, STATE & LOCAL CODES, LAWS & ORDINANCES |
| BUILDING CODE DATA       |                                                                |
| USE GROUP:               | U (PRIVATE GARAGES)                                            |
| CONSTRUCTION TYPE:       | VB                                                             |
| EXT. WALL CONSTRUCTION:  | NON-RATED                                                      |
| OTHER WALL CONSTRUCTION: | SEPARATION WALLS = NON-RATED                                   |
| TOTAL ALLOW. AREA:       | 5,500 SF/FLOOR                                                 |
| TOTAL ACTUAL AREA:       | 1,135 SF                                                       |
| ALLOW. HEIGHT & FLOORS:  | 40'-0" / 1 STORY                                               |
| ACTUAL HEIGHT & FLOORS:  | 19'-4" / 1 STORY                                               |
| HEIGHT/AREA ADJUSTMENTS: | NONE REQUIRED, NONE TAKEN                                      |
| SPRINKLER SYSTEM:        | N/A                                                            |

### INDEX TO DRAWINGS

| GARAGE BUILDING INDEX TO DRAWINGS                    |                                          |                  |                       |                              |  |
|------------------------------------------------------|------------------------------------------|------------------|-----------------------|------------------------------|--|
| Sheet Number                                         | Sheet Name                               | Sheet Issue Date | Current Revision Date | Current Revision Description |  |
| 1 - COVER SHEET                                      |                                          |                  |                       |                              |  |
| 0.0GA                                                | GARAGE BUILDING "A" COVER SHEET          | 15 APR 2025      | 15 APR 2025           | ISSUE SET                    |  |
| S01.0GA                                              | SPECIFICATIONS                           | 15 APR 2025      | 15 APR 2025           | ISSUE SET                    |  |
| S01.1GA                                              | SPECIFICATIONS                           | 15 APR 2025      | 15 APR 2025           | ISSUE SET                    |  |
| S01.2GA                                              | SPECIFICATIONS                           | 15 APR 2025      | 15 APR 2025           | ISSUE SET                    |  |
| 2 - STRUCTURAL (BY CROCKETT ENGINEERING CONSULTANTS) |                                          |                  |                       |                              |  |
| G0100                                                | GENERAL STRUCTURAL DATA                  | 15 APR 2025      | 15 APR 2025           | ISSUE SET                    |  |
| G0200                                                | FOUNDATION PLAN (BLDG. G1)               | 15 APR 2025      | 15 APR 2025           | ISSUE SET                    |  |
| G0200A                                               | FOUNDATION PLAN (BLDGs. G4, G6, G7 & G8) | 15 APR 2025      | 15 APR 2025           | ISSUE SET                    |  |
| G0200B                                               | FOUNDATION PLAN (BLDG. G10)              | 15 APR 2025      | 15 APR 2025           | ISSUE SET                    |  |
| G0210                                                | FOUNDATION DETAILS                       | 15 APR 2025      | 15 APR 2025           | ISSUE SET                    |  |
| G0211                                                | FOUNDATION DETAILS                       | 15 APR 2025      | 15 APR 2025           | ISSUE SET                    |  |
| G0300                                                | ROOF FRAMING PLAN                        | 15 APR 2025      | 15 APR 2025           | ISSUE SET                    |  |
| G0310                                                | ROOF FRAMING DETAILS                     | 15 APR 2025      | 15 APR 2025           | ISSUE SET                    |  |
| 3 - ARCHITECTURAL                                    |                                          |                  |                       |                              |  |
| A1.0GA                                               | GARAGE "A" BUILDING PLAN/FINISH PLAN     | 15 APR 2025      | 15 APR 2025           | ISSUE SET                    |  |
| A2.0GA                                               | GARAGE "A" ROOF PLAN                     | 15 APR 2025      | 15 APR 2025           | ISSUE SET                    |  |
| A3.0GA                                               | GARAGE "A" EXTERIOR ELEVATIONS           | 15 APR 2025      | 15 APR 2025           | ISSUE SET                    |  |
| A4.0GA                                               | WALL SECTIONS & DETAILS                  | 15 APR 2025      | 15 APR 2025           | ISSUE SET                    |  |
| 4 - MEP (BY J-SQUARED ENGINEERING)                   |                                          |                  |                       |                              |  |
| MEP1                                                 | ELECTRICAL PLAN COVER SHEET              | 15 APR 2025      | 15 APR 2025           | ISSUE SET                    |  |
| MEP2                                                 | SITE UTILITIES PLAN                      | 15 APR 2025      | 15 APR 2025           | ISSUE SET                    |  |
| E101                                                 | ELECTRICAL PLAN                          | 15 APR 2025      | 15 APR 2025           | ISSUE SET                    |  |

ARCHITECT'S JOB NO. 4938

### PROJECT LOCATION MAP



### SIGNATURE AREAS

NOTE: PROJECT CONSTRUCTION MUST BE IN COMPLIANCE WITH ALL APPLICABLE CODES, ORDINANCES, LAWS, AND REGULATIONS AS ENUMERATED ELSEWHERE IN THE PLANS AND SPECIFICATIONS.

ARCHITECT: WALLACE ARCHITECTS, L.L.C.  
302 CAMPUSVIEW DRIVE SUITE 208, COLUMBIA, MO 65201

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

OWNER: SPRINGBROOK PARK APARTMENTS, LLC  
3622 ENDEAVOR AVE., STE. 101, COLUMBIA, MO 65201

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

CONTRACTOR: INTRINSIC DEVELOPMENT, LLC  
3622 ENDEAVOR AVE., STE. 101, COLUMBIA, MO 65201

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

PM: RS DT: TY  
PC: CD QC: MK

PLAN SET NO. \_\_\_\_\_

ISSUE SET

ALURA APARTMENTS - VILLAGE AT DISCOVERY PARK  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

Wallace  
ARCHITECTS L.L.C.  
Columbia, MO  
P 573-258-7200

WALLACE ARCHITECTS, LLC  
MISSOURI STATE CERTIFICATE  
OF AUTHORITY: 2003019614

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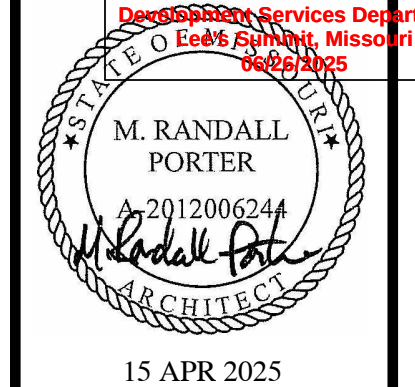
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15 APR 2025 ISSUE SET

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JOB NO.  
4938

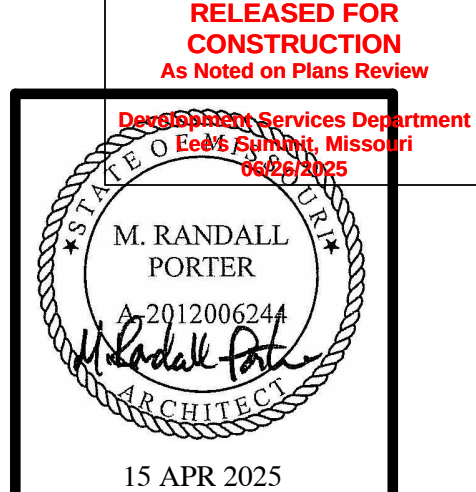
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15 APR 2025  
M. RANDALL PORTER  
ARCHITECT LICENSE#  
A-2012006244





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LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

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**DIVISION 03 - CONCRETE**

**SECTION 03 35 11 - CONCRETE FLOOR FINISHES**

**COATINGS**

Curing and Sealing Compound, Moisture Emission-Reducing, Membrane-Forming; Liquid, membrane-forming, clear sealer, for application to newly-placed concrete; capable of providing adequate bond for flooring adhesives, initially and over the long term; with sufficient moisture vapor impermeability to prevent deterioration of flooring adhesives due to moisture emission. Use this product to cure and seal all slabs to receive adhesively applied flooring. Comply with ASTM C309 and ASTM C1315 Type I Class A. VOC Content: Less than 100 g/L. Manufacturers: MasterKure CC 160 WB (formerly Kure-N-Seal) as manufactured by BASF Corp. Curing and Sealing Compound, Low Gloss: Liquid, membrane-forming, clear, non-yellowing acrylic, complying with ASTM C1315 Type I Class A. Application: Use at exposed slabs and toppings not scheduled to receive finish flooring. Vehicle: Water-based. VOC Content: OTC compliant. Manufacturers: Dayton Superior Corporation; Cure & Seal 1315 EF: www.daytonsuperior.com. Euclid Chemical Company; DIAMOND CLEAR VOX: www.euclidchemical.com.

**DIVISION 04 - MASONRY**

**SECTION 04 26 13 - MASONRY VENEER**

**BRICK UNITS**

Manufacturers: Belden Brick: www.beldenbrick.com. Endicott Clay Products Co: www.endicott.com. Meridian Brick LLC (formerly Boral USA): www.meridianbrick.com. Sioux City Brick and Tile Co: www.siouxcitybrick.com. Facing Brick: ASTM C216, Type FBS Smooth, Grade SW. Color and Texture: As selected by Owner.

**MORTAR MATERIALS**

Portland Cement: ASTM C150/C150M, Type I; color as required to produce approved color sample. Hydrated Lime: ASTM C207, Type S. Mortar Aggregate: ASTM C144. Pigments for Colored Mortar: Pure, concentrated mineral pigments specifically intended for mixing into mortar and complying with ASTM C979/C979M. Water: Clean and potable. Packaged Dry Material for Mortar for Unit Masonry: Premixed Portland cement, hydrated lime and sand; complying with ASTM C1714/C1714M and capable of producing mortar of the specified strength in accordance with ASTM C270 with the addition of water only. Type: Type N.

**REINFORCEMENT AND ANCHORAGE**

Reinforcing Steel: ASTM A615/A615M, Grade 40 (40,000 psi) yield strength, deformed billet bars; galvanized. Residential Wall Ties: Corrugated formed sheet metal, 7/8 inch wide by 0.05 inch thick, hot dip galvanized to ASTM A 153/A 153M, Class B, sized to extend at least 1-1/2 inches into the veneer with at least 5/8 inch of mortar coverage from masonry face.

**THRU-WALL FLASHINGS**

Metal Flashing Materials: Stainless Steel Flashing: ASTM A666, Type 304, soft temper; 26 gauge, 0.0187 inch thick; finish 2B to 2D. Flashing Sealant/Adhesives: VOC-compliant sealants and adhesives as supplied or recommended by flashing manufacturer.

**ACCESSORIES**

Preformed Control Joints: Neoprene material. Provide with corner and tee accessories, fused joint fillers. Joint Filler: Closed cell polyethylene; oversized 50 percent to joint width; self expanding; in maximum lengths available. Weeps: Type: Polyester mesh. Cleaning Solution: Non-acidic, not harmful to masonry work or adjacent materials. Penetrating Water Repellent: Penetrating, water-based silicone water repellent for concrete and masonry.

**LINTELS**

Prefabricated Steel Lintels, Galvanized: Install loose steel lintels over masonry openings where indicated on plans, or as required.

**MORTAR MIXING**

Mortar for Unit Masonry: ASTM C270, Proportion Specification. Colored Mortar: Proportion selected pigments and other ingredients to match Architect's sample, without exceeding manufacturer's recommended pigment-to-cement ratio.

**COURSING**

Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness. Brick Units: Bond: Running.

**DIVISION 05 - METALS**

**SECTION 05 50 00 - METAL FABRICATIONS**

**MATERIALS - STEEL**

Steel Sections: ASTM A36/A36M. Plates: ASTM A283/A283M. Pipe: ASTM A53/A53M, Grade B Schedule 40, black finish. Bolts, Nuts, and Washers: ASTM A307, Grade A, plain. Bolts, Nuts, and Washers: ASTM F3125/F3125M, Type 1, plain. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.

**FABRICATION**

Fit and shop assemble items in largest practical sections, for delivery to site. Fabricate items with joints tightly fitted and secured.

**FABRICATED ITEMS**

Ledge Angles and Lintels Not Attached to Structural Framing: For support of masonry, galvanized finish.

**FINISHES - STEEL**

Prime paint steel items.

**DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES**

**SECTION 06 20 00 - FINISH CARPENTRY**

**DELIVERY, STORAGE, AND HANDLING**

Protect from moisture damage. Store flat, on level area, to prevent warping.

**FINISH CARPENTRY ITEMS**

Surface Burning Characteristics: Provide materials having fire and smoke properties as required by applicable code. Exterior Finish Carpentry Items: Manufacturers: Acceptable manufacturers of cellular PVC moldings and trim: Azek Building Products: www.azek.com. Door and Window Casings and Moldings at Masonry Veneer: Molded Cellular PVC; suitable for paint finish, in profiles scheduled below: Door and Window trim: To match Azek Brick mould, 1-1/2 inch x 2 inch. Interior Finish Carpentry Items (Pool Building): Manufacturers: Acceptable millwork manufacturers of casings, molding and trim. Woodgrain Millwork: www.woodgrain.com. Trimco Millwork: www.trimcomillwork.com. Metrie Inc.: www.metrie.com. Moldings, Bases, Casings, and Miscellaneous Trim: Clear white pine, solid or finger jointed; primed for paint finish, in profiles as scheduled below: Door Trim: 1 1/16 inch x 2-1/4 inch Colonial Wood Casing. Baseboard Trim: 9/16 inch by 3-1/4 inch Colonial Wood Base. Window Sill: Furniture grade, 1 inch x 4 inch nominal, back primed with eased edges.

**LUMBER MATERIALS**

Softwood Lumber: Clear White Pine species, plain sawn, maximum moisture content of 6 percent; with vertical grain, of quality suitable for transparent finish.

**CELLULAR PVC MOLDINGS AND TRIM**

Cellular PVC Trim: Extruded, expanded PVC; UV-resistant, heat-stabilized, and rigid material. Density: 31 pounds per cubic foot, minimum. Flame Spread: ASTM E84, 75, maximum.

**PLASTIC LAMINATE MATERIALS**

**ACCESSORIES**

Primer: As specified in Section 09 91 23. Wood Filler: Solvent base, tinted to match surface finish color. Epoxy Filler: As recommended by composite resin manufacturer, to match color of window sills.

**HARDWARE**

Countertop Support Brackets: Fixed, L-shaped, corner reinforced, face-of-wall mounting. Material: Steel. Finish: Manufacturer's standard, factory-applied, textured powder coat. Color: Black. Support Length: 24 inches.

**FABRICATION**

Cap exposed plastic laminate finish edges with material of same finish and pattern. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.

**SECTION 06 66 00 - ORNAMENTAL SIMULATED WOODWORK**

**DELIVERY, STORAGE, AND HANDLING**

Deliver materials to site in manufacturer's original, unopened packaging, with labels clearly identifying product name and manufacturer. Store products on flat level surface to prevent warping.

**FIELD CONDITIONS**

Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Allow at least 24 hours for materials to adapt to conditions at project site prior to installation.

**MANUFACTURERS**

Gable Louvers: MidAmerica Components: www.midamericacomponents.com. Pypion LLC: www.pypion.com. Builders Edge/Tapco International Corp: www.buildersedge.com. Factory-Fabricated Cellular PVC Column Covers: Elite Trimworks Inc.; Tapered square series: www.elitetrimworks.com. Versatex Building Products LLC; Tapered Series: www.versatex.com. HB&G Building Products Inc.; PermaWrap Series: www.hbgcolumns.com.

**SIMULATED WOOD PRODUCTS**

Gable Louvers: Molded polyurethane foam with factory-applied UV resistant primer suitable for field applied paint finish. Style: As indicated on the Drawings. Factory-Fabricated Cellular PVC Column Covers: Premanufactured multi-piece, molded cellular PVC column cover, base and capital; UV stabilized, suitable for paint finish. Style: Square, tapered. Size: As indicated or required to accommodate structural wood post. Column Overall Height: As indicated on drawings. Column Wall Thickness: 1/2 inch. Shaft, Cap, and Base Construction: Two corner halves for field assembly.

**MATERIALS**

Cellular PVC, Extruded, expanded PVC; UV-resistant, heat-stabilized, and rigid material. Density: 31 pounds per cubic foot, minimum. Deflection/Warping: ASTM D648, Not less than 130 deg F. Polypropylene, Molded high-density, UV stabilized. Density: 4 pounds per cubic foot, minimum. Surface Burning Characteristics: Flame spread index of 75 maximum, smoke developed index of 450 or less, when tested in accordance with ASTM E84. Compressive Strength: Minimum 300 pounds per sq. inch.

**ACCESSORIES**

Fasteners: Manufacturer's standard concealed fasteners, galvanized steel. Adhesive: PVC plastic adhesive acceptable to manufacturer. Sealant (Urethane foam products): Urethane-based adhesive acceptable to manufacturer.

**DIVISION 07 - THERMAL AND MOISTURE PROTECTION**

**SECTION 07 21 00 - THERMAL INSULATION**

**FIELD CONDITIONS**

Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.

**FOAM BOARD INSULATION MATERIALS**

Extruded Polystyrene (XPS) Board Insulation: Comply with ASTM C578 with either natural skin or cut cell surfaces. Type: ASTM C578, Type IV. Type and Thermal Resistance, R-value: Type IV, 5.0 (0.88), minimum, per 1 inch thickness at 75 degrees F mean temperature. Products: DuPont de Nemours, Inc. Styrofoam Brand Highload 40: building.dupont.com. Kingspan Insulation LLC; GreenGuard XPS Type IV, 25 psi: www.kingspan.com. Owens Corning Corporation; FOAMULAR Extruded Polystyrene (XPS) Insulation: www.ocbuildingspec.com.

**GLASS FIBER BLANKET INSULATION MATERIALS**

Glass Fiber Batt Insulation: Flexible preformed batt or blanket, complying with ASTM C665; friction fit. Thermal Resistance at exterior walls: R-value of 20 minimum. Facing: Kraft paper. Products: CertainTeed Corporation: www.certainteed.com. Johns Manville: www.jm.com. Owens Corning Corporation: www.ocbuildingspec.com.

**FOAM INSULATION**

Single component polyurethane, low pressure foam sealant complying with ASTM E2178 for exterior wall penetrations. R-value: 1 inch of material at 72 degrees F: 4.7, minimum. Minimum Density: 1.0 pounds per cubic foot. Manufacturers: Dow Chemical Co.; Great Stuff: www.greatstuff.dow.com. FOMO Products Inc.; Handi Foam: www.fomo.com/handifoam. Touch 'n Seal Inc.; All Seasons: www.touch-n-seal.com. Single component polyurethane, low pressure, low pressure build, foam sealant complying with ASTM E2178 for windows and doors. R-value: 1 inch of material at 72 degrees F: 4.7, minimum. Minimum Density: 1.10 pounds per cubic foot. Manufacturers: Dow Chemical Co.; Great Stuff Window & Door: www.greatstuff.dow.com. FOMO Products Inc.; Handi Foam Window & Door: www.fomo.com/handifoam. Touch 'n Seal Inc.; No Warp: www.touch-n-seal.com.

**ACCESSORIES**

Tape: Reinforced polyethylene film with acrylic pressure sensitive adhesive. Insulation Fasteners: Lengths of unfinished, 13 gauge, 0.072 inch high carbon spring steel with chisel or mitered tips, held in place by tension, length to suit insulation thickness and substrate, capable of securely supporting insulation in place. Adhesive: Type recommended by insulation manufacturer for application.

**SECTION 07 21 26 - BLOWN INSULATION MATERIALS**

Refer to Specification/Selection Design sheets. Applications: Provide blown insulation in attic as indicated on drawings.

Loose Fill Insulation: ASTM C739, cellulose fiber type, bulk for pneumatic placement. Thermal Transmittance (U-value): 0.27 BTU/hr sq ft deg F, maximum. Total Thermal Resistance at Attic: Garage and Maintenance Buildings: R-value of 38 (deg F hr sq ft)/Btu, minimum.

**ACCESSORIES**

Roof Ventilation Baffles: Prefabricated ventilation channels for placement under roof sheathing with baffles to prevent wind-washing.

**SECTION 07 25 00 - WEATHER BARRIERS**

**WATER-RESISTIVE AIR BARRIERS**

Description: Materials installed behind exterior wall coverings; designed to prevent liquid water from further penetration into exterior wall assembly. Primary materials include mechanically applied sheets; accessory materials include flashings and seam tapes. Water-Resistive and Air Barrier, Multi-layers: Outer layers of nonwoven, spunbonded polypropylene with vapor permeable, watertight polymeric middle layer. Air Permeance: 0.004 cm/sq ft, maximum, when tested in accordance with ASTM E2178. Water Vapor Permeance: 54 perms, minimum, when tested in accordance with ASTM E96/E96M using Procedure A - Desiccant Method, at 73.4 degrees F. Products: DuPont Building Innovations; Tyvek Home Wrap with FlexWrap NF, StraightFlash, StraightFlash VF, Tyvek Wrap Caps, and Tyvek Tape: www.dupont.com. Kingspan Insulation LLC; GreenGuard HPW Building Wrap with GreenGuard Butyl Flashing and GreenGuard SuperStretch Flashing: www.trustgreenguard.com. National Shelter Products, Inc; DRYLine HP with Dryline Sheathing Tape, ATX Flashing, and ATX Flex Flashing: www.drylinewrap.com.

**ACCESSORIES**

Seal and Perimeter Tapes: As recommended by water-resistive barrier manufacturer. Flashings: As recommended by water-resistive barrier manufacturer for application. Flexible Flashing: Self-adhesive sheet flashing complying with ASTM D1970/D1970M, except slip resistance requirement is waived if not installed on a roof.

**SECTION 07 31 13 - ASPHALT SHINGLES**

**MANUFACTURERS**

Asphalt Shingles: CertainTeed Landmark Series: www.certainteed.com. GAF; Timberline American Harvest: www.gaf.com/sle. Owens Corning Corp; Oakridge: www.owenscorning.com.

**ASPHALT SHINGLES**

Asphalt Shingles: Asphalt-coated glass felt, mineral granule surfaced, complying with ASTM D3462/D3462M. Fire Resistance: Class A, complying with ASTM E108. Wind Resistance (Uplift): Class D, when tested in accordance with ASTM D7158/D7158M. Self-sealing type. Style: Laminated overlay.

**SHEET MATERIALS**

Smooth Surfaced Roll Roofing: Asphalt-coated organic felt, with smooth asphalt coating both sides, complying with ASTM D6380/D6380M, Class S, Type III, 51.1 lb/100 sq ft. Eave and Valley Protection Membrane: Self-adhering polymer-modified asphalt sheet complying with ASTM D1970/D1970M; 40 mil total thickness; with strippable treated release paper and polyethylene sheet top surface. Underlayment: Synthetic non-asphaltic sheet, intended by manufacturer for mechanically fastened roofing underlayment without sealed seams and meeting requirements of ASTM D226/D226M.

Type: Woven polypropylene with anti-slip polyolefin coating on both sides. Self Sealability: Passing nail sealability test specified in ASTM D1970/D1970M. Ultraviolet (UV) Resistance and Weatherability: Approved in writing by manufacturer for exposure to weather for minimum of two months. Low Temperature Flexibility: Passing test specified in ASTM D1970/D1970M. Water Vapor Permeance: Vapor retarder; maximum of 1 perm, when tested in accordance with ASTM E96/E96M Procedure A, desiccant method. Products: CertainTeed Roofing; DiamondDeck Underlayment: www.certainteed.com/#sle. Beacon Roofing Supply Inc; Tri-Built Synthetic Underlayment: www.becon.com. Underlayment: Asphalt-saturated organic roofing felt, unperforated, complying with ASTM D226/D226M, Type I, No. 15.

**ACCESSORIES**

Roofing Nails: Standard round wire shingle type, galvanized steel, minimum 3/8 inch head diameter, 12 gauge, 0.109 inch nail shank diameter, 1-1/2 inch long and complying with ASTM F1667. Cut Nails: Standard round wire shingle type, barbed shank, of electro-galvanized steel, 11 - 12 wire gage, 0.125 - 0.109 inch shank diameter, 3/8 inch head diameter, of sufficient length to penetrate through roof sheathing or 3/4 inch into roof sheathing or decking. Roof Vents: Aluminum construction with nailing flange and insect screen; equal to Model RVA 50 manufactured by Air Vent Inc. Free Vent Area (net): 50 square inches. Size of Roof Opening: 8 inch round.

**METAL FLASHINGS**

General: Provide prefinished aluminum sheet metal flashing at eave edge, gable edge, fascia, and gable face, color as selected by Owner/Architect. Drip Flashings: Pre-formed drip-edge strips, 28 gauge, 0.0149 inch, furnished in 10 foot lengths minimum. Profile: Equal to Amerimax profile # FHA. Manufacturers: Amerimax: www.amerimax.com. Or approved equal. Fascia and Gable Flashing: Pre-formed or site-fabricated sheet metal fascia and gable board cladding, 24 gauge, 0.0201 inch minimum thickness. Hem exposed edges of flashings minimum 1/4 inch on underside.

**SECTION 07 46 46 - FIBER-CEMENT SIDING**

**FIBER-CEMENT SIDING**

Lap Siding: Individual horizontal boards made of cement and cellulose fiber formed under high pressure with integral surface texture, in compliance with ASTM C1186, Type A, Grade II; with machined edges, for nail attachment. Style: Standard lap style. Texture: Simulated cedar grain. Length: 12 feet, nominal. Width (Height): 9-1/2 inches. Thickness: 7/16 inch, nominal. Finish: Factory applied primer. Warranty: 50 year limited; transferable. Products: Allura, a division of Plycem USA, Inc.: www.allurausa.com/#sle. James Hardie Building Products, Inc: www.jameshardie.com/#sle. Nichiha USA, Inc.: www.nichiha.com/#sle.

**ACCESSORIES**

Trim: Same material and texture as siding. Flashing: Aluminum; 26 gage, 0.0179 inch minimum base metal thickness.

Sealant: Elastomeric, polyurethane or silyl-terminated polyether/polyurethane, and capable of being painted.

**SECTION 07 54 00 - THERMOPLASTIC MEMBRANE ROOFING**

**DELIVERY, STORAGE, AND HANDLING**

Store materials in weather protected environment, clear of ground and moisture. Ensure storage and staging of materials does not exceed static and dynamic load-bearing capacities of roof decking.

**FIELD CONDITIONS**

Do not apply roofing membrane when ambient temperature is below 40 degrees F or above 90 degrees F. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.

**MANUFACTURERS**

Thermoplastic Polyolefin (TPO) Membrane Roofing Materials: Carlisle Roofing Systems, Inc; Sure-Weld TPO: www.carlisle-syntec.com. Firestone Building Products, LLC; UltraPly Platinum: www.firestonebpco.com. GAF; EverGuard Extreme TPO 60 mil: www.gaf.com. Johns Manville; JM TPO - 60 mil: www.jm.com. Insulation: BASF Corporation; BASF Neopor GPS: www.neopor.basf.us. Carlisle SynTec; SecurShield Insulation: www.carlisle-syntec.com. GAF; EnergyGuard Polyiso: www.gaf.com. Versico Roofing Systems; SecurShield Insulation: www.versico.com/#sle.

**ROOFING - UNBALLASTED APPLICATIONS**

Thermoplastic Membrane Roofing: One ply membrane, fully adhered, over vapor retarder and insulation. Roofing Assembly Requirements: Solar Reflectance Index (SRI): Minimum of 64 based on three-year aged value; if three-year aged data is not available, minimum of 82 initial value. Calculate SRI in accordance with ASTM E1980. Field applied coating may not be used to achieve specified SRI. Roof-Ceiling Fire Resistance Rating: Comply with UL (FRD) Assembly Design No. P566. Insulation Thermal Resistance (R-Value): 5 per inch, minimum; provide insulation of thickness required. Acceptable Insulation Types - Constant Thickness Application: Minimum 2 layers of polyisocyanurate board. Primer, Roof Coating: Water-based primer with high-tack finish that promotes adhesion for elastomeric roof coatings.

**MEMBRANE ROOFING AND ASSOCIATED MATERIALS**

Membrane Roofing Materials: TPO: Thermoplastic polyolefin (TPO) complying with ASTM D6878/D6878M, sheet contains reinforcing fabrics or scrim. Thickness: 60 mil, 0.060 inch, minimum. Color: White. Seaming Materials: As recommended by membrane manufacturer. Vapor Retarder: Material approved by roof manufacturer complying with requirements of fire rating classification; compatible with roofing and insulation materials. Flexible Flashing Material: Same material as membrane.

**COVER BOARDS**

Cover Boards: Glass-mat faced gypsum panels complying with ASTM C1177/C1177M. Thickness: 1/2 inch, fire-resistant. Products: Georgia-Pacific; DensDeck: www.densdeck.com.

**INSULATION**

Total Thermal Resistance: Provide a total R-value of 30 above all conditioned spaces. Polyisocyanurate (ISO) Board Insulation: Rigid cellular foam, complying with ASTM C1289. Classifications: Type I: Faced with either cellulosic facers or glass fiber mat facers on both major surfaces of the core foam. Class 1 - Faced with glass fiber reinforced cellulosic felt facers on both major surfaces of core foam. Board Thickness: 4.0 inches.

**ACCESSORIES**

Stack Boots: Prefabricated flexible boot and collar for pipe stacks through membrane; same material as membrane. Cant and Edge Strips: Wood fiberboard, compatible with roofing materials; cants formed to 45 degree angle. Insulation Joint Tape: Glass fiber reinforced type as recommended by insulation manufacturer, compatible with roofing materials; 6 inches wide; self adhering. Membrane Adhesive: As recommended by membrane manufacturer. Surface Conditioner for Adhesives: Compatible with membrane and adhesives. Thinners and Cleaners: As recommended by adhesive manufacturer, compatible with membrane. Insulation Adhesive: As recommended by insulation manufacturer.

**SECTION 07 62 00 - SHEET METAL FLASHING AND TRIM**

**DELIVERY, STORAGE, AND HANDLING**

Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage. Prevent contact with materials that could cause discoloration or staining.

**SHEET MATERIALS**

Pre-Finished Aluminum: ASTM B209 (ASTM B209M); 20 gauge, (0.032 inch) thick; plain finish shop pre-coated with modified silicone coating.

**FABRICATION**

General: Provide prefinished aluminum sheet metal flashing at changes in adjacent siding materials and other flashing indicated, color as selected by Owner/Architect. Form sections true to shape, accurate in size, square, and free from distortion or defects. Form pieces in longest possible lengths. Form material with flat lock seams, except where otherwise indicated; at moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.

**COLLECTOR BOXES AND DOWNSPOUT FABRICATION**

Collector Boxes: SMACNA (ASMM), Rectangular profile with visible overflow. Downspouts: Rectangular profile. Collector box and Downspouts: Size for rainfall intensity determined by a storm occurrence of 1 in 10 years in accordance with SMACNA (ASMM).

**EXTERIOR PENETRATION FLASHING PANELS**

Flashing Panels for Exterior Wall Penetrations: Premanufactured components and accessories as required to preserve integrity of building envelope; suitable for conduits and facade materials to be installed.

**ACCESSORIES**

Fasteners: Galvanized steel, with soft neoprene washers. Concealed Sealants: Non-curing butyl sealant. Exposed Sealants: ASTM C920, elastomeric sealant, with minimum movement capability as recommended by manufacturer for substrates to be sealed; color to match adjacent material.

**SECTION 07 71 23 - MANUFACTURED GUTTERS AND DOWNSPOUTS**

**DELIVERY, STORAGE, AND HANDLING**

Stack material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope to drain. Prevent contact with materials that could cause discoloration, staining, or damage.

**MATERIALS**

Pre-Finished Aluminum Sheet: ASTM B209 (ASTM B209M); 0.027 inch thick. Finish: Plain, shop pre-coated with acrylic coating.

**COMPONENTS**

Gutters: 6 inch K-style profile. Downspouts: 3 inch by 4 inch Rectangular profile, minimum. Anchors and Supports: Profiled to suit gutters and downspouts. Gutter Supports: Straps. Downspout Supports: Straps. Fasteners: Same material and finish as gutters and downspouts, with soft neoprene washers.

**FABRICATION**

Form gutters and downspouts of profiles and size indicated. Form sections square, true, and accurate in size, in maximum possible lengths, free of distortion or defects detrimental to appearance or performance. Allow for expansion at joints. Hem exposed edges of metal. Fabricate gutter and downspout accessories; seal watertight.

**FINISHES**

Acrylic polyester coating: Baked enamel system complying with AAMA 2603.

**ACCESSORIES**

Offset Downspout Adapters: PVC adapter for connecting 3 inch x 4 inch downspouts to 4 inch solid white or green drain tile.

**SECTION 07 92 00 - JOINT SEALANTS**

**MANUFACTURERS**

Non-Sag Sealants: Permits application in joints on vertical surfaces without sagging or slumping. BASF Construction Chemicals-Building Systems: www.buildingsystems.basf.com. Dow Chemical Company: www.dow.com. GE Silicones Inc.: www.ge.com. Pecora Corporation: www.pecora.com. Sikka Corporation: www.usa-sikka.com. Tremco Commercial Sealants & Waterproofing: www.tremcosealants.com/#sle.

**JOINT SEALANT APPLICATIONS**

Scope: Exterior Joints: Do not seal exterior joints unless indicated on drawings as sealed. Seal the following joints: Wall expansion and control joints. Joints between doors, windows, and other frames or adjacent construction. Joints between different exposed materials. Flashing and adjacent building materials. Vertical siding/masonry joints. Sleeves or pipes penetrating exterior walls. Sleeves or pipes penetrating masonry or concrete walls. Openings below ledge angles in masonry. Lap joints in and penetrations through weather barriers. Exterior Siding: Fiber-Cement Siding. Interior Joints: Do not seal interior joints indicated on drawings as not sealed. Do not seal gaps and openings in gypsum board and suspended ceilings. Seal the following joints: Joints between door frames and window frames and adjacent construction. Gypsum board to wood or masonry. Metal to gypsum board, wood, or masonry. Perimeter of counter tops and vanity tops. Perimeter of plumbing fixtures, shower surrounds, drains, or piping. Do not seal the following types of joints: Joints where sealant is specified to be furnished and installed by manufacturer of product to be sealed. Joints where sealant installation is specified in other sections. Additional Locations: In addition to locations listed or shown on the Drawings to receive continuous sealant materials, a continuous bead of sealant, appropriate to construction materials and locations, shall be provided/installed at: Horizontal joint between bottom of wood sill plate and top of foundation wall or slab on grade. Horizontal joint(s) between double/triple top plates. Vertical joint(s) between double/triple studs in general framing and at door/window rough openings. Stud cavities blocked at change in ceiling heights. Penetrations through top and bottom plates. Seam(s) in band joists. Gaps in exterior wall sheathing. Penetrations in exterior wall sheathing. Penetrations in gypsum board of insulated exterior walls.

Exterior Joints: Use non-sag polyurethane sealant, unless otherwise indicated. Masonry Expansion Joints: Two-part polyurethane. Metal to Masonry: Two-part polyurethane. Lap Joints in Sheet Metal Fabrications: Two-part polyurethane, non-curing. General Flashing and Flashing to Brick: One-part polyurethane. Sleeves in Walls: One-part polyurethane. Interior Joints: Use non-sag acrylic sealant, unless otherwise indicated. Gypsum Board or Plaster to Masonry or Wood: Acrylic. Metal to Gypsum Board, Plaster or Masonry: Acrylic. Metal to Brick: Two-part polyurethane. Joints between Fixtures in Wet Areas and Floors, Walls, and Ceilings: Mildew-resistant silicone sealant; white.

**JOINT SEALANTS - GENERAL**

Sealants and Primers: Provide products having lower volatile organic compound (VOC) content than indicated in SCAQMD 1168.

**ACCESSORIES**

Sealant Backing Rod, Closed-Cell Type: Cylindrical flexible sealant backings complying with ASTM C1330 Type C. Size: 25 to 50 percent larger in diameter than joint width. Products: Nomaco, Inc; HBR: www.nomaco.com/#sle.



DIVISION 08 - OPENINGS

SECTION 08 11 13 - HOLLOW METAL DOORS AND FRAMES

DELIVERY, STORAGE, AND HANDLING

Protect with resilient packaging; avoid humid build-up under coverings; prevent corrosion and adverse effects on factory applied painted finish.

MANUFACTURERS

Hollow Metal Doors and Frames:  
Fleming Door Products, an Assa Abloy Group company: www.assaabloydss.com.  
Republic Doors, an Allegion brand: www.republindo.com.  
Steelcraft, an Allegion brand: www.allegion.com.

PERFORMANCE REQUIREMENTS

Requirements for Hollow Metal Doors and Frames:  
Steel Sheet: Comply with one or more of the following requirements; galvanized steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) type B, for each.  
Accessibility: Comply with ICC A117.1 and ADA Standards.  
Typical Door Face Sheets: Embossed.  
Zinc Coating for Typical Interior and/or Exterior Locations: Provide metal components zinc-coated (galvanized) and/or zinc-iron alloy-coated (galvanized) by the hot-dip process in accordance with ASTM A653/A653M, with manufacturer's standard coating thickness, unless noted otherwise for specific hollow metal doors and frames.  
Based on SDI Standards: Provide at least A40/ZF120 (galvanized) and when necessary, coating not required for typical interior door applications, and at least A60/ZF180 (galvanized) for corrosive locations.

HOLLOW METAL DOORS

Fire-Rated Doors:  
Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).  
Level 1 - Standard-duty.  
Physical Performance Level C, 250,000 cycles; in accordance with ANSI/SDI A250.4.  
Edge Seam: Model 1 - Full Flush.  
Door Face Metal Thickness: 20 gauge, 0.032 inch, minimum.  
Fire Rating: 3/4 hour, tested in accordance with UL 10C and NFPA 252 ("positive pressure fire tests").  
Provide units listed and labeled by UL (DIR).  
Door Thickness: 1-3/4 inches, nominal.

HOLLOW METAL FRAMES

Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.  
Door Frames, Fire-Rated: Knock-down type.  
Fire Rating: Same as door, labeled.

FINISHES

Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

SECTION 08 11 20 - RESIDENTIAL STEEL ENTRY DOORS

DELIVERY, STORAGE, AND HANDLING

Package, deliver and store doors in accordance with specified quality standard.  
Protect doors with resilient packaging. Do not store in damp or wet areas, or in areas of direct sunlight.

MANUFACTURERS

Bayer Built Inc; Select Steel Series: www.bayerbuilt.com.  
Stanley Door Products; Sta-Tru Series: www.stanleydoors.com.

COMPONENTS

Garage Building Entry Door:  
Configuration: Single door.  
Pool Building Machine Room Doors:  
Configuration: Double doors.  
Frames: Provided and assembled by third party fabricators to manufacturer's specifications.  
Frame: Milled from 5/4 kiln-dried white pine, finger-jointed composite at bottom of frame, profiled 1/2 inch stops, and factory-clad with prefinished metal or vinyl. Provide 6 degree sill gain prep.  
Frame Depth: 4-9/16 inch, minimum.  
Thresholds: Refer to Section 08 71 00 - Door Hardware.  
Weatherstripping: Jacketed thermoset closed-cell foam, press-fit in kerfs at jamb stops in frames.  
Door Sweeps: Extruded thermoplastic elastomer, finned and chambered design, press-fit into bottom edge of doors.  
PERFORMANCE REQUIREMENTS  
Comply with AAMA/WDMA/CSA 101/1.S.2/A440 requirements in accordance with the following:  
Performance Class (PC): R.  
Design Pressure (DP): In accordance with applicable codes.  
Water Penetration Resistance: No uncontrolled leakage on interior face when tested in accordance with ASTM E547 at differential pressure of 15 percent of Performance Grade (PG).  
Air Leakage: Maximum of 0.30 cu ft/minute/sq ft at 1.57 psf differential pressure, when tested in accordance with ASTM E283.  
Thermal Transmittance: U-factor of 0.35, maximum, that includes window glazing, door and frame system based on average window size required for project and determined in accordance with NFRC 100.  
Forced Entry Resistance (FER): Tested to comply with ASTM F478 requirements having at least Grade 10 performance for each required swinging door assembly.

FABRICATION  
Fabricate doors in accordance with door quality standard specified.  
Cores constructed with stiles and rails:  
Provide solid blocks at look edge for hardware reinforcement.  
Provide solid blocking for other thru-bolts hardware where scheduled.  
Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.  
Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.

SECTION 08 36 13 - SECTIONAL OVERHEAD DOORS

SUBMITTALS

Product Data: Show component construction, anchorage method, and hardware.

MANUFACTURERS

Sectional Overhead Doors:  
Cloday Building Products; Value Plus Series, Classic Collection: www.clodaydoor.com.  
Overhead Door Corp.; Series 183, Traditional Collection: www.overheaddoor.com.  
Insulated Steel Patio Doors:  
Taylor Entrance Systems; Edgewood: www.taylordoor.com.  
Bayer Built Inc; Select Steel Series: www.bayerbuilt.com.  
Stanley Door Products; Sta-Tru Series: www.stanleydoors.com.

COMPONENTS  
Garage Building Entry Door:  
Configuration: Single door.  
Pool Building Machine Room Doors:  
Configuration: Double doors.  
Frames: Provided and assembled by third party fabricators to manufacturer's specifications.  
Frame: Milled from 5/4 kiln-dried white pine, finger-jointed composite at bottom of frame, profiled 1/2 inch stops, and factory-clad with prefinished metal or vinyl. Provide 6 degree sill gain prep.  
Frame Depth: 4-9/16 inch, minimum.  
Thresholds: Refer to Section 08 71 00 - Door Hardware.  
Weatherstripping: Jacketed thermoset closed-cell foam, press-fit in kerfs at jamb stops in frames.  
Door Sweeps: Extruded thermoplastic elastomer, finned and chambered design, press-fit into bottom edge of doors.  
PERFORMANCE REQUIREMENTS  
Comply with AAMA/WDMA/CSA 101/1.S.2/A440 requirements in accordance with the following:  
Performance Class (PC): R.  
Design Pressure (DP): In accordance with applicable codes.  
Water Penetration Resistance: No uncontrolled leakage on interior face when tested in accordance with ASTM E547 at differential pressure of 15 percent of Performance Grade (PG).  
Air Leakage: Maximum of 0.30 cu ft/minute/sq ft at 1.57 psf differential pressure, when tested in accordance with ASTM E283.  
Thermal Transmittance: U-factor of 0.35, maximum, that includes window glazing, door and frame system based on average window size required for project and determined in accordance with NFRC 100.  
Forced Entry Resistance (FER): Tested to comply with ASTM F478 requirements having at least Grade 10 performance for each required swinging door assembly.

FABRICATION  
Fabricate doors in accordance with door quality standard specified.  
Cores constructed with stiles and rails:  
Provide solid blocks at look edge for hardware reinforcement.  
Provide solid blocking for other thru-bolts hardware where scheduled.  
Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.  
Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.

SECTION 08 36 13 - SECTIONAL OVERHEAD DOORS

SUBMITTALS

Product Data: Show component construction, anchorage method, and hardware.

MANUFACTURERS

Sectional Overhead Doors:  
Cloday Building Products; Value Plus Series, Classic Collection: www.clodaydoor.com.  
Overhead Door Corp.; Series 183, Traditional Collection: www.overheaddoor.com.  
Aluminum-Framed Storefront: Factory fabricated, factory finished aluminum framing members with infill, and related flashings, anchorage and attachment devices.  
Glazing Rabbit: For 1 inch insulating glazing.  
Glazing Position: Centered (front to back).  
Finish: High performance organic coatings.  
Finish Color: Black.  
PERFORMANCE REQUIREMENTS  
Wind Loads: Design and size components to withstand the specified load requirements without damage or permanent set, when tested in accordance with ASTM E330/E330M, using loads 1.5 times the design wind loads and 10 second duration of maximum load.  
Air Leakage: 0.06 cfm/sq ft maximum leakage of storefront wall area when tested in accordance with ASTM E283/E283M at 1.57 psf pressure difference.  
COMPONENTS  
Aluminum Framing Members: Tubular aluminum sections, thermally broken with interior section insulated from exterior, drainage holes and internal weep drainage system.  
Glazing Stops: Flush.  
Cross-Section: 2 by 4.5 inch nominal dimension.  
Swing Doors: Glazed aluminum.  
Thickness: 1-3/4 inches.  
Top Rail: 4 inches wide.  
Vertical Stiles: 4-1/2 inches wide.  
Bottom Rail: 10 inches wide.  
Finish: Same as storefront.  
MATERIALS  
Extruded Aluminum: ASTM B221 (ASTM B221M).  
Fasteners: Stainless steel.  
Exposed Flashings: Aluminum sheet, 20 gauge, 0.032 inch minimum thickness; finish to match framing members.  
Sealant for Setting Thresholds: Non-curing butyl type.  
Glazing Gaskets: Type to suit application to achieve weather, moisture, and air infiltration requirements.  
FINISHES  
High Performance Organic Coating: AAMA 2604; multiple coats, thermally cured fluoropolymer system.  
Color: As selected by Owner from manufacturer's standard range.  
HARDWARE  
For each door, include weatherstripping, sill sweep strip, and threshold.  
Other Door Hardware: Storefront manufacturer's standard type to suit application.  
For each door, include butt hinges.

SECTION 08 53 13 - VINYL WINDOWS

DELIVERY, STORAGE, AND HANDLING

Protect finished surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond when exposed to sunlight or weather.

FIELD CONDITIONS

Do not install sealants when ambient temperature is less than 40 degrees F.

MANUFACTURERS

Vinyl Windows:  
Alside, Inc; Series 1700: www.alside.com.  
All Temp Windows Inc.; Series 1800: www.alltempwindows.com  
Jeld-Wen Inc.; Builders Vinyl Series: www.jeldwen.com.  
DESCRIPTION  
Vinyl Windows: Factory fabricated frame and sash members of extruded, hollow, ultra-violet-resistant, polyvinyl chloride (PVC) with integral color; with factory-installed glazing, hardware, related flashings, anchorage and attachment devices.  
Configuration: As indicated on drawings.  
Product Type: H - Hung window, vertically sliding; Single Hung.  
Product Type: FW - Fixed window.  
Egress Units: Window units installed in dwelling unit bedrooms shall meet or exceed minimum requirements for classification as emergency egress units per the currently adopted edition of the building code.  
Color: Black.  
Energy Star Rating: Provide windows eligible for Energy Star Rating.  
PERFORMANCE REQUIREMENTS  
Grade: AAMA/WDMA/CSA 101/1.S.2/A440 requirements for specific window type:  
Performance Class (PC): R.  
Performance Grade (PG): 15, with minimum design pressure (DP) of 15.04 psf.  
Air Leakage: Maximum of 0.30 cu ft/minute/sq ft at 1.57 psf differential pressure, when tested in accordance with ASTM E283.  
Thermal Transmittance: U-factor of 0.25, maximum, that includes window glazing and frame system based on average window size required for project and determined in accordance with AAMA 1505, ASTM E1423, or NFRC 100.  
Solar Heat Gain Coefficient (SHGC): SHGC value of 0.40 maximum.  
Visible Light Transmittance: value of 0.52 minimum.  
COMPONENTS  
Glazing: Insulated double pane, annealed glass, clear, low-E coated, argon filled, with glass thicknesses as recommended by manufacturer for specified wind conditions.  
Frame Depth: 4-1/2 inch minimum.  
Insect Screens: Aluminum, extruded or roll-formed frame with mitered and reinforced corners; apply screen mesh taut to frame; secure to window with hardware to allow easy removal.  
Frame Finish: Manufacturer's standard, color to match window frame and sash color.  
HARDWARE  
Vertical Sliding Sash: Concealed, heavy duty block and tackle balancers, provide two for each sash and jamb.  
Sash Lock: Lever handle and keeper with cam lock, provide at least one for each operating sash.  
Window Opening Control Devices: ASTM F2090-13 opening control devices that limit opening size to less than 4 inches maximum with release function to permit window to open fully.  
Required for all Dwelling Unit operable windows when sill is less than 36 inches above finish floor, and window unit is located greater than 72 inches above finish grade.  
Finish of Exposed Hardware: Baked enamel, match interior sash and frame color.

DESCRIPTION

DESCRIPTION  
Vinyl Windows: Factory fabricated frame and sash members of extruded, hollow, ultra-violet-resistant, polyvinyl chloride (PVC) with integral color; with factory-installed glazing, hardware, related flashings, anchorage and attachment devices.  
Configuration: As indicated on drawings.  
Product Type: H - Hung window, vertically sliding; Single Hung.  
Product Type: FW - Fixed window.  
Egress Units: Window units installed in dwelling unit bedrooms shall meet or exceed minimum requirements for classification as emergency egress units per the currently adopted edition of the building code.  
Color: Black.  
Energy Star Rating: Provide windows eligible for Energy Star Rating.  
PERFORMANCE REQUIREMENTS  
Grade: AAMA/WDMA/CSA 101/1.S.2/A440 requirements for specific window type:  
Performance Class (PC): R.  
Performance Grade (PG): 15, with minimum design pressure (DP) of 15.04 psf.  
Air Leakage: Maximum of 0.30 cu ft/minute/sq ft at 1.57 psf differential pressure, when tested in accordance with ASTM E283.  
Thermal Transmittance: U-factor of 0.25, maximum, that includes window glazing and frame system based on average window size required for project and determined in accordance with AAMA 1505, ASTM E1423, or NFRC 100.  
Solar Heat Gain Coefficient (SHGC): SHGC value of 0.40 maximum.  
Visible Light Transmittance: value of 0.52 minimum.  
COMPONENTS  
Glazing: Insulated double pane, annealed glass, clear, low-E coated, argon filled, with glass thicknesses as recommended by manufacturer for specified wind conditions.  
Frame Depth: 4-1/2 inch minimum.  
Insect Screens: Aluminum, extruded or roll-formed frame with mitered and reinforced corners; apply screen mesh taut to frame; secure to window with hardware to allow easy removal.  
Frame Finish: Manufacturer's standard, color to match window frame and sash color.  
HARDWARE  
Vertical Sliding Sash: Concealed, heavy duty block and tackle balancers, provide two for each sash and jamb.  
Sash Lock: Lever handle and keeper with cam lock, provide at least one for each operating sash.  
Window Opening Control Devices: ASTM F2090-13 opening control devices that limit opening size to less than 4 inches maximum with release function to permit window to open fully.  
Required for all Dwelling Unit operable windows when sill is less than 36 inches above finish floor, and window unit is located greater than 72 inches above finish grade.  
Finish of Exposed Hardware: Baked enamel, match interior sash and frame color.

COMPONENTS

Glazing: Insulated double pane, annealed glass, clear, low-E coated, argon filled, with glass thicknesses as recommended by manufacturer for specified wind conditions.  
Frame Depth: 4-1/2 inch minimum.  
Insect Screens: Aluminum, extruded or roll-formed frame with mitered and reinforced corners; apply screen mesh taut to frame; secure to window with hardware to allow easy removal.  
Frame Finish: Manufacturer's standard, color to match window frame and sash color.  
HARDWARE  
Vertical Sliding Sash: Concealed, heavy duty block and tackle balancers, provide two for each sash and jamb.  
Sash Lock: Lever handle and keeper with cam lock, provide at least one for each operating sash.  
Window Opening Control Devices: ASTM F2090-13 opening control devices that limit opening size to less than 4 inches maximum with release function to permit window to open fully.  
Required for all Dwelling Unit operable windows when sill is less than 36 inches above finish floor, and window unit is located greater than 72 inches above finish grade.  
Finish of Exposed Hardware: Baked enamel, match interior sash and frame color.

SECTION 08 71 00 - DOOR HARDWARE

DESIGN AND PERFORMANCE CRITERIA

Provide specified door hardware as required to make doors fully functional, compliant with applicable codes, and secure to extent indicated.  
Provide door hardware products that comply with the following requirements:  
Applicable provisions of federal, state, and local codes.  
Accessibility: UFAS, ADA Standards, and ICC A117.1 as applicable.  
Fire-Rated Doors: NFPA 80, listed and labeled by qualified testing agency for fire protection ratings indicated, based on testing at positive pressure in accordance with NFPA 252 or UL 10C.

Hardware on Fire-Rated Doors: Listed and classified by UL (DIR) as suitable for application indicated.

HINGES

Hinges: Comply with BHMA A156.1, Grade 3.  
Provide hinges on every swinging door.  
Provide ball-bearing hinges at each door with closer.  
Provide non-removable pins on exterior outswinging doors.

FLUSH BOLTS

Flush Bolts: Comply with BHMA A156.16, Grade 3.  
Flush Bolt Throw: 3/4 inch, minimum.  
Provides extension bolts in leading edge of door, one bolt into floor, one bolt into top of frame.  
Pairs of Swing Doors: At inactive leaves, provide flush bolts of type as required to comply with code.

EXIT DEVICES

Manufacturers:  
Corbin Russwin, Sargent, or Yale; an Assa Abloy Group company: www.assaabloydss.com.  
Hager Companies: www.hagerco.com.  
Von Duprin, an Allegion brand: www.allegion.com/us.  
Exit Devices: Comply with BHMA A156.3, Grade 3.  
Leverset design to match lockset trim.  
Provide cylinder with cylinder dogging or locking trim.  
Provide exit devices properly sized for door width and height.  
Provide strike as recommended by manufacturer for application indicated.

CYLINDRICAL LOCKS

Manufacturers:  
Basis of Design: Schlage 'Eian'.  
Schlage, an Allegion brand: www.allegion.com/us.  
Cylindrical Locks (Bored): Comply with BHMA A156.2, Grade 3.  
Bored Hole: 2-1/8 inch diameter.  
Latchbolt Throw: 1/2 inch, minimum.  
Backset: 2-3/4 inch unless otherwise indicated.

AUXILIARY LOCKS (DEADLOCKS)

Manufacturers:  
Basis of Design: Schlage 'B60' & 'B680'.  
Yale; an Assa Abloy Group company: www.assaabloydss.com.  
Hager Companies: www.hagerco.com.  
Schlage, an Allegion brand: www.allegion.com/us.  
Auxiliary Locks (Deadlocks): Comply with BHMA A156.36, Grade 3.  
Type: Bored (cylindrical).

CLOSERS

Manufacturers:  
Basis of Design: Falcon SC93/94; Jamb top.  
BEST, dormakaba Group; EHD9000: www.bestaccess.com.  
Sargent, Yale, or AdamsRite; an Assa Abloy Group company: www.assaabloydss.com.  
Falcon or LCN, an Allegion brand: www.allegion.com/us.  
Closers: Comply with BHMA A156.4, Grade 3.  
Type: Surface mounted to door.  
Provide door closer on each exterior door of the common areas.  
At outswinging exterior doors, mount closer on interior side of door.  
Provide adapter plate where required.

WALL STOPS

Manufacturers:  
Basis of Design: Trimco 1270 Series.  
Rockwood; an Assa Abloy Group company: www.assaabloydss.com.  
Hiawatha, Inc, division of Activar Construction Products Group, Inc: www.activarcpg.com/hiawatha.  
Trimco: www.trimcohardware.com.  
Wall Stops: Comply with BHMA A156.16, Grade 3 and Resilient Material Retention Test as described in this standard.

ASTRAGALS

Manufacturers:  
Pemko; an Assa Abloy Group company: www.assaabloydss.com.  
National Guard Products, Inc: www.ngpinc.com.  
Standard Metal Hardware Manufacturing Ltd; Astragals: www.smhardware.com.  
Astragals: Comply with BHMA A156.22.  
Provide surface mounted astragal to cover or fill space for full door height between pair of doors or door and adjacent jamb.  
Type: Split, two parts, and with sealing gasket.  
Material: Aluminum, with neoprene weatherstripping.

THRESHOLDS

Manufacturers:  
Pemko; an Assa Abloy Group company: www.assaabloydss.com.  
Hager Companies: www.hagerco.com.  
National Guard Products, Inc: www.ngpinc.com.  
Thresholds: Comply with BHMA A156.21.  
Provide threshold at each exterior door, unless otherwise indicated.  
Type: Low Profile.  
Thresholds at outswinging exterior doors may be rabbeted with door stop type; 1/4 inch vertical rise, 1/2 inch total height; maximum 1-2 bevel.  
Material: Aluminum.

KEY CONTROL SYSTEMS

Key Control Systems: Comply with guidelines of BHMA A156.28.

FIRE DEPARTMENT LOCK BOX

Manufacturers:  
Knox Company; Knox-Box Rapid Entry System, 3200 Series: www.knoxbox.com.  
Fire Department Lock Box:  
Heavy-duty, surface mounted, solid stainless-steel box with hinged door and interior gasket seal; single drill resistant lock with dust covers.

FINISHES

Finishes: Provide door hardware of same finish, unless otherwise indicated.  
Primary Finish: 619; satin nickel plated, clear coated, with brass or bronze base material; BHMA A156.18.

HARDWARE SETS

Group No 01: Garage Building "B" Entry door.  
3 EA Hinges - 3-1/2 inch x 3-1/2 inch  
1 EA Dead latch - single cylinder with thumb turn  
1 EA Locking Leverset  
1 EA Accessible Threshold  
Group No 02: Pool Building Paired Entry doors.  
Provide for each leaf in pair.  
3 EA Hinges - 3-1/2 inch x 3-1/2 inch  
1 EA Exit Device with outside locking lever trimset  
1 EA Head and floor extension rods; concealed  
1 EA Closer  
1 EA Accessible Threshold  
Group No 03: Pool Building Exterior Door to Toilets  
3 EA Hinges - 3-1/2 inch x 3-1/2 inch  
1 EA Dead latch - Double cylinder  
1 PR Locking leverset  
1 EA Accessible Threshold  
Group No 04: Pool Building Machine Room Double Doors  
Provide for each leaf in pair.  
3 EA Hinges - 3-1/2 inch x 3-1/2 inch  
1 EA Dead latch - single cylinder with thumb turn - active leaf  
1 EA Passage Leverset - active leaf  
1 PR Flush Bolts; head/ floor - inactive leaf  
1 Astragal  
1 EA Threshold  
Group No 05: Pool Building Machine Room Interior Door - 45 Min Fire-rated  
Provide Fire-rated hardware.  
3 EA Hinges - 3-1/2 inch x 3-1/2 inch  
1 EA Dead latch - single cylinder with thumb turn  
1 EA Locking Leverset  
1 EA Closer  
Group No 06: Pool Building Toilet Room Doors  
3 EA Hinges - 3-1/2 inch x 3-1/2 inch  
1 EA Privacy Leverset w/ push-button latching  
1 EA Wall-mounted Stop  
Group No 07: Pool Building secure Interior Doors  
3 EA Hinges - 3-1/2 inch x 3-1/2 inch  
1 EA Locking Leverset  
1 EA Wall-mounted Stop  
Group No 08: Pool Building Other Interior Doors  
3 EA Hinges - 3-1/2 inch x 3-1/2 inch  
1 EA Passage Leverset  
1 EA Wall-mounted Stop

DIVISION 09 - FINISHES

SECTION 09 21 16 - GYPSUM BOARD ASSEMBLIES

GYPSUM BOARD ASSEMBLIES

Provide completed assemblies complying with ASTM C840 and GA-216.  
Fire-Rated Assemblies: Provide completed assemblies with the following characteristics:  
Fire-Rated Partitions: UL listed assembly No. U305; One (1) hour rating.  
Fire-Rated Roof/Ceiling Assemblies: UL listed assembly No. P556; one (1) hour rating.

METAL FRAMING MATERIALS

Steel Sheet: ASTM A1003/A1003M, subject to the ductility limitations indicated in AISI S220 or equivalent.  
Non-structural Framing System Components: ASTM C845; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/120 at 5 psf.  
Resilient Framing Channels: Single or double leg configuration; 1/2 inch channel depth.

BOARD MATERIALS

Manufacturers - Gypsum-Based Board:  
American Gypsum Company: www.americangypsum.com.  
Georgia-Pacific Gypsum: www.gpgypsum.com.  
National Gypsum Company: www.nationalgypsum.com.  
USG Corporation: www.usg.com.  
Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.  
Application: Use for vertical surfaces and ceilings, unless otherwise indicated.  
Glass mat faced gypsum panels, as defined in ASTM C1658/C1658M, suitable for paint finish of the same core type shall be used in tub/shower alcoves.  
Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.  
Mold resistant board is required at all damp locations.  
Thickness:  
Vertical Surfaces: 5/8 inch, or as indicated.  
Ceilings: 5/8 inch.

Paper-Faced Products:  
Mold-Resistant, Paper-Faced Products:  
Finishing Accessories: ASTM C1047, galvanized steel or rolled zinc, unless noted otherwise.  
Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.  
Joint Compound: Drying type, vinyl-based, ready-mixed.  
Screws for Fastening of Gypsum Panel Products in Cold-Formed Steel Studs Less than 0.033 inches in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion-resistant.

GYPSUM BOARD ACCESSORIES

Finishing Accessories: ASTM C1047, galvanized steel or rolled zinc, unless noted otherwise.  
Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.  
Joint Compound: Drying type, vinyl-based, ready-mixed.  
Screws for Fastening of Gypsum Panel Products in Cold-Formed Steel Studs Less than 0.033 inches in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion-resistant.

SECTION 09 30 00 - TILING

DELIVERY, STORAGE, AND HANDLING

Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

TILE

Manufacturers: All products of each type by the same manufacturer.  
American Clean Corporation: www.americanclean.com.  
Dai-Tile Corporation: www.daitile.com.  
Cressville Inc: www.cressvilleinc.com.  
Porcelain Tile: ANSI A137.1, standard grade.  
Size: 6 by 6 inch, nominal.

Thickness: 1/4 inch.  
Edges: Square.  
Surface Finish: Non-slip.  
Color(s): To be selected by Owner from manufacturer's standard range.

TRIM AND ACCESSORIES

Non-Ceramic Trim: Satin natural anodized extruded aluminum, style and dimensions to suit application, for setting using tile mortar or adhesive.

SETTING MATERIALS

Latex-Portland Cement Mortar Bond Coat: ANSI A118.4.  
Applications: Use this type of bond coat where indicated, and where no other type of bond coat is indicated.

GROUTS

Standard Grout: ANSI A118.6 standard cement grout.  
Applications: Use this type of grout where indicated and where no other type of grout is indicated.

MAINTENANCE MATERIALS

Grout Sealer: Liquid-applied, moisture and stain protection for existing or new Portland cement grout.  
Composition: Water-based colorless silicone.

ACCESSORY MATERIALS

Waterproofing Membrane at Floors: Specifically designed for bonding to cementitious substrate under thick mortar bed or thin-set tile; complying with ANSI A118.10.

SECTION 09 65 00 - RESILIENT FLOORING

DELIVERY, STORAGE, AND HANDLING

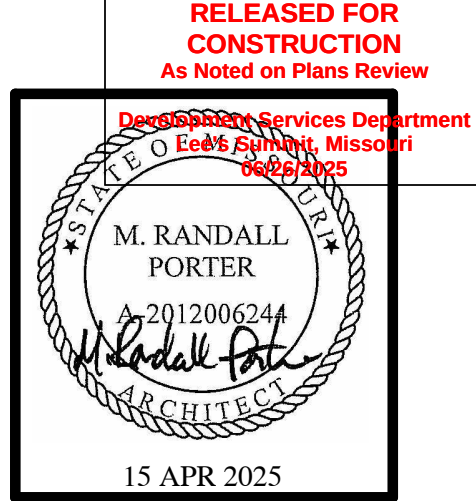
Store all materials off of the floor in an acclimatized, weather-tight space.  
Maintain temperature in storage area between 65 degrees F and 90 degrees F.

TILE FLOORING

Vinyl Plank: Printed film type, with transparent or translucent wear layer, floating floor.  
Manufacturers:  
Mannington Commercial; ADURA Flex: www.manningtoncommercial.com.  
Metrolfloor Corporation; Aspecta Five LVT: www.aspectaflooring.com.  
Shannon Specialty Floors, Inc; Tuf Stuf Woodland Path: www.shannonspecialtyfloors.com.  
Minimum Requirements: Comply with ASTM F1700, of Class corresponding to type specified.  
Mold and Microbial Resistance: Highly resistant when tested in accordance with ASTM D6329; certified in accordance with UL 2824.  
VOC Content Limits: As specified in Section 01 61 16.  
Plank Tile Size: 6 by 36 inch.  
Wear Layer Thickness: 0.012 inch.  
Total Thickness: 0.177 inch.  
Color: To be selected by Owner from manufacturer's full range.

RESILIENT BASE

Resilient Base: ASTM F1861, Type TV, vinyl, thermoplastic; top set Style B, Cove.  
Manufacturers:  
Armstrong World Industries, Inc: www.armstrong.com.  
Johnsontite, a Tarkett Company: www.johnsontite.com.  
Roppe Corporation: www.roppe.com.  
Height: 4 inches.  
Thickness: 0.125 inch.  
Finish: Satin.



M. RANDALL PORTER  
ARCHITECT LICENSE#  
A-2012006244

ALURA APARTMENTS - VILLAGE AT DISCOVERY PARK  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



WALLACE ARCHITECTS, LLC  
MISSOURI STATE CERTIFICATE  
OF AUTHORITY: 2003019614

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1ST ISSUE  
15 APR 2025

ISSUE/REVISIONS  
15 APR 2025 ISSUE SET

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ISSUE SET







# Alura Village Garage Building Type "A"

## Lee's Summit, Jackson County, Missouri

### GENERAL NOTES

ELEVATION DATUM  
SEE ARCHITECTURAL DRAWINGS OR SITE PLAN FOR FINISH FLOOR ELEVATIONS

DESIGN SPECIFICATIONS  
2018 INTERNATIONAL BUILDING CODE

EARTHWORK  
EARTHWORK OPERATIONS SHALL BE PERFORMED UNDER THE DIRECTION OF A PROFESSIONAL TESTING AGENCY TO ASSURE COMPLIANCE WITH THE RECOMMENDATIONS OF THE SOILS REPORT PREPARED BY OLSSON, INC. DATED AUGUST 22, 2019.

### CONCRETE

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS, ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 305 SPECIFICATIONS FOR HOT WATER CONCRETE, AND ACI 306 SPECIFICATIONS FOR COLD WEATHER CONCRETE, WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:

- CONCRETE SHALL DEVELOP THE FOLLOWING 28-DAY MINIMUM COMPRESSIVE STRENGTH:

|                                 |           |
|---------------------------------|-----------|
| FOUNDATIONS                     | 3,000 PSI |
| CAST-IN-PLACE WALLS             | 3,500 PSI |
| FLOOR SLAB                      | 4,000 PSI |
| EXTERIOR SLABS, WALLS AND CURBS | 4,000 PSI |
- ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR ENGINEERED FILL.
- CHLORIDE-BASED ADMIXTURES ARE PROHIBITED IN ALL REINFORCED CONCRETE.
- REINFORCING STEEL SHALL CONFORM TO ASTM A615, A616, OR A617, GRADE 60.
- ALL CONTINUOUS REINFORCING STEEL THAT MEETS AT A CORNER SHALL BE TIED TOGETHER WITH A CORNER BAR THAT HAS SUFFICIENT LAP DISTANCE IN EACH DIRECTION.
- CONTINUOUS REINFORCING BARS LAP LENGTH SHALL BE A MINIMUM OF 48 BAR DIAMETERS UNLESS NOTED OTHERWISE.
- CONCRETE SLUMP SHALL BE A MAXIMUM OF 4" +/- 1" (ASTM C-143) AS DELIVERED IN THE FIELD. CONTRACTOR MAY USE CHEMICAL ADMIXTURES TO ATTAIN A MAXIMUM SLUMP OF 8" FOR WORKABILITY. NO WATER MAY BE ADDED TO THE CONCRETE MIX ON SITE UNLESS WATER IS WITHHELD AT THE BATCHING FACILITY. IF WATER IS WITHHELD AT THE BATCHING FACILITY IT SHOULD BE REFLECTED ON THE LOAD TICKET. THE TOTAL AMOUNT OF WATER IN THE MIX SHALL NOT EXCEED WHAT IS NOTED ON THE APPROVED MIXED. THIS SHALL BE NOTED IN THE SPECIAL INSPECTOR'S RECORDS.
- CONCRETE EXPOSED TO WEATHER, VEHICLES, AND/OR DEICING CHEMICALS SHALL BE AIR-ENTRAINED WITH 6% (+/-) 1.5% ENTRAINED AIR BY VOLUME AT POINT OF DISCHARGE. DO NOT ALLOW AIR CONTENT OF TROWELED FINISHED FLOORS TO EXCEED 3%.
- SUBMIT CONCRETE MIX PROPORTIONS PRIOR TO START OF WORK. DO NOT BEGIN CONCRETE PRODUCTION UNTIL MIXES HAVE BEEN REVIEWED AND ARE ACCEPTABLE TO THE ENGINEER.
- READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94.
- CONCRETE WORK EXECUTION
  - CONSTRUCT FORMS TO CORRECT SIZE, SHAPE, ALIGNMENT, ELEVATION AND POSITION; AND TO SUPPORT VERTICAL AND LATERAL LOADS.
  - POSITION, SUPPORT, AND SECURE REINFORCEMENT AGAINST DISPLACEMENT. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE, UNLESS NOTED OTHERWISE ON THE DRAWINGS:

|                                                      |              |
|------------------------------------------------------|--------------|
| CAST AGAINST AND EXPOSED TO EARTH.....               | 3 INCHES     |
| EXPOSED TO EARTH OR WEATHER.....                     | 2 INCHES     |
| NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH..... | 1 1/2 INCHES |
  - PROVIDE CONTROL JOINTS IN SLABS-ON-GRADE AT NOT GREATER THAN 15 FEET ON CENTER IN EACH DIRECTION. SAW CUT CONTROL JOINTS MINIMUM 1/4 OF SLAB DEPTH, AS SOON AFTER SLAB FINISHING WITHOUT DISLODGING AGGREGATE.
  - STEEL TROWEL FINISH ALL INTERIOR CONCRETE SLABS, BROOM FINISH ALL EXTERIOR CONCRETE SLABS.
  - CURE ALL CONCRETE IN COMPLIANCE WITH ACI 301, USING A LIQUID TYPE MEMBRANE, NON-RESIDUAL, CURING COMPOUND COMPLYING WITH ASTM C309. ASSURE COMPATIBILITY WITH FINISH FLOOR COVERING.

### TIMBER

TIMBER WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ANSI/AWC NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION WITH 2018 NDS SUPPLEMENT FOR WOOD CONSTRUCTION, WITH THE FOLLOWING SUPPLEMENTAL REQUIREMENTS:

- FOR COMMON MEMBER SIZES, THE SPECIES AND GRADES SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

|    |      |               |
|----|------|---------------|
| A. | 2X4  | SPF No.1/No.2 |
| B. | 2X6  | SPF No.1/No.2 |
| C. | 2X8  | DF-L No.2     |
| D. | 2X10 | DF-L S.S.     |
| E. | 2X12 | DF-L S.S.     |

EQUIVALENT (OR BETTER) GRADES & SPECIES MAY BE SUBMITTED FOR THE ENGINEER'S APPROVAL.

- SIZES SHOWN FOR LUMBER ARE NOMINAL SIZES.
- TIMBER EXPOSED TO WEATHER OR GROUND, OR IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-IMPREGNATED BY AN APPROVED PROCESS AND PRESERVATIVE.
- SPLICING OF JOISTS, STUDS, OR HEADERS IS PROHIBITED EXCEPT AS SHOWN.
- BOLTS SHALL CONFORM TO ASTM A307. HOLES SHALL BE DRILLED PER SECTION 12.1.3 OF THE 2018 ANSI/AWC NDS FOR WOOD CONSTRUCTION NDS SUPPLEMENT.
- LAG SCREWS AND WOOD SCREWS SHALL BE INSTALLED PER SECTIONS 12.1.4 & 12.1.5 RESPECTIVELY, OF THE 2018 ANSI/AWC NDS FOR WOOD CONSTRUCTION WITH 2018 NDS SUPPLEMENT.
- COMMON NAILS SHALL BE USED, UNLESS NOTED OTHERWISE. IN ADDITION, NAILS SHALL BE GALVANIZED, IF EXPOSED TO WEATHER OR MOISTURE. TOE-NAILS SHALL BE DRIVEN PER SECTION 12.1.6.3 OF THE 2018 ANSI/AWC NDS FOR WOOD CONSTRUCTION WITH 2018 NDS SUPPLEMENT.
- FASTENING SHALL BE PER THE IBC MINIMUM FASTENING SCHEDULE, TABLE 2304.10.1, UNLESS NOTED OTHERWISE.
- CONNECTIONS/CONNECTORS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

### POST-INSTALLED ANCHORS

- ALL POST-INSTALLED ANCHORS SHALL MEET THE REQUIREMENTS OF THE CODE-CITED EDITION OF ACI 318, APPENDIX 17, AND SHALL BE ACCEPTABLE FOR BOTH CRACKED AND UNCRACKED CONCRETE.
- EXPANSION ANCHORS HAVE BEEN DESIGNED AS HILTI KWIK BOLT TZ ANCHORS, UNLESS NOTED OTHERWISE.
- ADHESIVE ANCHORS HAVE BEEN DESIGNED TO USE HILTI HIT HY 200 ADHESIVE IN CONCRETE OR SOLID MASONRY, UNLESS NOTED OTHERWISE.
- EQUIVALENT ANCHORS MAY BE SUBMITTED FOR THE ENGINEER'S APPROVAL. SUBMITTALS ARE THE CONTRACTOR'S RESPONSIBILITY AND MUST INCLUDE ICC ES EVALUATION REPORTS FROM THE INTERNATIONAL CODE COUNCIL (ICC).
- EMBEDMENT DEPTH IS DEFINED AS THE DISTANCE FROM THE SURFACE OF THE LOAD-BEARING BASE MATERIAL TO THE DEEPEST PART OF THE ANCHOR AFTER THE ANCHOR HAS BEEN DRIVEN INTO THE HOLE BUT NOT YET EXPANDED.
- ADHESIVE ANCHORS SHALL BE ACCEPTABLE FOR LONG-TERM LOADING. WHEN BASE MATERIAL TEMPERATURES ARE BELOW 40 DEG F, ONLY NON-EPOXY-BASED ADHESIVES SHALL BE USED.
- POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER PRIOR TO USING POST-INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST-IN-PLANE ANCHORS. CARE SHALL BE TAKEN TO AVOID CONFLICTS WITH EXISTING REINFORCING BARS. HOLES SHALL BE DRILLED AND CLEANED PER ANCHOR MANUFACTURER'S SPECIFICATIONS.
- STAINLESS STEEL ANCHORS ARE REQUIRED AT ALL PERMANENTLY EXPOSED WEATHER CONDITIONS.

### PREFABRICATED WOOD TRUSSES

- FLOOR & ROOF TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE TRUSS PLATE INSTITUTE (TPI) DESIGN SPECIFICATION FOR METAL PLATE CONNECTED WOOD TRUSSES, AND THE ANSI/AWC NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION.
- PROVIDE TEMPORARY AND PERMANENT BRACING ON ALL TRUSSES, AS REQUIRED TO PROVIDE MEMBER AND TRUSS STABILITY.
- FLOOR & ROOF TRUSSES SHALL BE DESIGNED AND CONSTRUCTED FOR A MAXIMUM TOTAL LOAD DEFLECTION OF L/360 AND TO SAFELY SUPPORT THE FOLLOWING LOADS:
  - DEAD, LIVE, SNOW, WIND, EARTHQUAKE: SEE PROJECT DESIGN DATA ON COVER SHEET.
  - MECHANICAL PIPE LOAD: TRUSSES SHALL BE DESIGNED FOR A CONCENTRATED LOAD OF 250 LBS HUNG ANYWHERE ALONG THE BOTTOM CHORD.
  - OVER-FRAMING LOAD: TRUSSES SHALL ALSO BE DESIGNED TO SUPPORT ADDITIONAL OVERBUILD FRAMING, SUCH AS THAT WHICH FORMS VALLEYS AND HIPS ON ROOFS.
  - DRIFTED SNOW LOAD: TRUSSES SHALL BE DESIGNED TO SUPPORT DRIFTED SNOW LOADS IN ACCORDANCE WITH THE APPROPRIATE BUILDING CODE.
  - IN-PLANE LATERAL LOADS: TRUSSES SHALL BE DESIGNED TO SUPPORT ANY LATERAL LOADS CARRIED AXIALLY IN THE PLANE OF THE TRUSS, AS SHOWN ON THE PLANS.
- CABLED END TRUSSES SHALL HAVE VERTICAL MEMBERS SPACED AT 16" O.C. MAXIMUM.
- SUBMITTALS SHALL INCLUDE THE FOLLOWING:
  - SHOP DRAWINGS PREPARED UNDER THE SUPERVISION OF, AND SIGNED AND SEALED BY, A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS BUILT. THESE DRAWINGS SHALL INDICATE SPECIES, GRADE, AND SIZES OF LUMBER TO BE USED; PITCH, SPAN, CAMBER, CONFIGURATION, AND SPACING FOR EACH TYPE OF TRUSS REQUIRED; TYPE, SIZE, MATERIAL, FINISH, AND LOCATION OF METAL CONNECTOR PLATES; AND BEARING DETAILS. SHOW TRUSS LAYOUT AND ALL REQUIRED TEMPORARY AND PERMANENT BRACING AFFECTING THE STRUCTURAL CAPACITY OF THE TRUSSES.

PROVIDE COMPLETE ENGINEERING DESIGN CALCULATIONS THAT INCLUDE DESIGN VALUES, DESIGN ANALYSIS INDICATING LOADING, ASSUMED ALLOWABLE STRESSES, STRESS DIAGRAM, AND CALCULATIONS, AND ANY OTHER INFORMATION NEEDED FOR REVIEW. THE CALCULATIONS SHALL HAVE BEEN SIGNED AND SEALED BY A QUALIFIED PROFESSIONAL ENGINEER WHO IS REGISTERED IN THE STATE WHERE THE PROJECT IS BUILT AND WHO IS RESPONSIBLE FOR PREPARATION OF THE CALCULATIONS.

### SPECIAL INSPECTIONS

THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE.

- CONCRETE GROUT DESIGN MIX (PERIODIC)
- PLACING OF CONCRETE AND REINFORCING STEEL (CONTINUOUS OF CONCRETE SAMPLING / PERIODIC OF REINFORCING)
- POST INSTALLED ANCHORS IN CONCRETE (CONTINUOUS)
- IN-SITU SOILS, EXCAVATIONS, FILLING & COMPACTION (PERIODIC)
- WOOD FRAMING:
  - SHEAR WALLS; WALL SIZE, CONFIGURATION, BLOCKING, PANEL GRADE, PANEL THICKNESS, AND FASTENING. (PERIODIC)
  - DIAPHRAGMS (FLOOR AND ROOF SHEATHING); SIZE, CONFIGURATION, BLOCKING, PANEL GRADE, PANEL THICKNESS, AND FASTENING. (PERIODIC)
  - FRAMING MEMBERS AND DETAILS (PERIODIC)
  - MATERIAL GRADE (PERIODIC)
  - CONNECTIONS; HANGERS, HOLD DOWNS, BUILT-UP COLUMNS, BUILT-UP BEAMS (PERIODIC)
  - PRE-ENGINEERED TRUSSES; FRAMING, CONNECTIONS, BRIDGING (PERIODIC)

THE CONTRACTOR SHALL REQUEST SPECIAL INSPECTION OF THE ITEMS LISTED ABOVE PRIOR TO THOSE ITEMS BECOMING INACCESSIBLE AND UNOBSERVABLE DUE TO PROGRESSION OF THE WORK.

| DESIGN DATA                                                                                                                        |                         |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| 2018 INTERNATIONAL BUILDING CODE / ASCE 7-16                                                                                       |                         |
| BUILDING OCCUPANCY CATEGORY                                                                                                        | II                      |
| ROOF LOAD DATA                                                                                                                     |                         |
| LIVE LOAD                                                                                                                          | 20                      |
| ASPHALT SHINGLES + FELT                                                                                                            | 40                      |
| 5/8" OSB ROOF SHEATHING                                                                                                            | 2.5                     |
| PRE-ENGINEERED WOOD TRUSSES @ 2'-0" O.C.                                                                                           | 40                      |
| INSULATION (BLOWN)                                                                                                                 | 15                      |
| MECHANICAL ALLOWANCE                                                                                                               | 50                      |
| 5/8" GYP. CEILING                                                                                                                  | 30                      |
| SOLAR                                                                                                                              | 50                      |
| TOTAL TO TRUSSES                                                                                                                   | 45 lbs/sqft             |
| RAIN LOADING DATA                                                                                                                  |                         |
| 15 MINUTE RAIN INTENSITY                                                                                                           | 7.49 in/hr              |
| 60 MINUTE RAIN INTENSITY                                                                                                           | 3.52 in/hr              |
| ROOF SNOW LOAD DATA: (*UNBALANCED & DRIFTING SNOW TO BE DETERMINED IN ADDITION TO UNIFORM LOAD, WHERE APPLICABLE)                  |                         |
| $P_g$ =                                                                                                                            | 20 lbs/sqft             |
| $C_g$ =                                                                                                                            | 10                      |
| $I_s$ =                                                                                                                            | 10                      |
| $C_r$ =                                                                                                                            | 10                      |
| $P_f$ =                                                                                                                            | 1400 lbs/sqft           |
| WIND DESIGN DATA                                                                                                                   |                         |
| $V_{50}$ =                                                                                                                         | 109 MPH (3-SECOND GUST) |
| RISK CATEGORY                                                                                                                      | II                      |
| EXPOSURE                                                                                                                           | B                       |
| INTERNAL PRESSURE COEFFICIENT =                                                                                                    | +/-0.18                 |
| MAXIMUM COMPONENTS & CLADDING WIND                                                                                                 | +/-24.97 lbs/sqft       |
| EARTHQUAKE DESIGN DATA                                                                                                             |                         |
| RISK CATEGORY                                                                                                                      | II                      |
| $I_E$ =                                                                                                                            | 10                      |
| $S_{DS}$ =                                                                                                                         | 0.01                    |
| $S_1$ =                                                                                                                            | 0.068                   |
| SITE CLASS                                                                                                                         | C                       |
| $S_{MS}$ =                                                                                                                         | 0.086                   |
| $S_{M1}$ =                                                                                                                         | 0.068                   |
| SEISMIC DESIGN CATEGORY                                                                                                            | B                       |
| BASIC SEISMIC-FORCE-RESISTING SYSTEM =<br>LIGHT-FRAME (WOOD) WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE |                         |
| $R$ =                                                                                                                              | 6.5                     |
| $\Omega_o$ =                                                                                                                       | 3.0                     |
| $C_d$ =                                                                                                                            | 4.0                     |
| DESIGN BASE SHEAR                                                                                                                  | $V = 0.018 W$           |
| EQUIVALENT LATERAL FORCE PROCEDURE                                                                                                 |                         |
| NET ALLOWABLE SOIL BEARING                                                                                                         | 2500 lbs/sqft**         |
| (**PER GEOTECHNICAL REPORT BY OLSSON, INC. DATED AUGUST 22, 2019)                                                                  |                         |

| INDEX OF SHEETS                 |              |
|---------------------------------|--------------|
| COVER / GENERAL STRUCTURAL DATA | GS100        |
| FOUNDATION PLAN                 | GS200-GS200B |
| FOUNDATION DETAILS              | GS210-GS211  |
| ROOF FRAMING PLAN               | GS300        |
| ROOF FRAMING DETAILS            | GS310        |

| REVISIONS: |            |
|------------|------------|
| No.        | Date       |
| ISSUE SET  | 04/15/2024 |
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|            |            |

THIS SHEET HAS BEEN SIGNED,  
SEALED AND DATED ELECTRONICALLY



STRUCTURAL ENGINEER:  
**CROCKETT**  
ENGINEERING CONSULTANTS  
10000 W. Nibbrig Blvd., Suite 1  
Columbia, Missouri 65203  
(573) 447-0592  
www.crockettengineering.com  
Crockett Engineering Consultants, LLC  
Missouri Certificate of Authority  
#200310301

CLIENT:  
**INTRINSIC**  
DEVELOPMENT  
3632 ENDEAVOR AVE.  
COLUMBIA, MISSOURI

Alura Village Garage Building Type "A"

Lee's Summit, Jackson County, Missouri

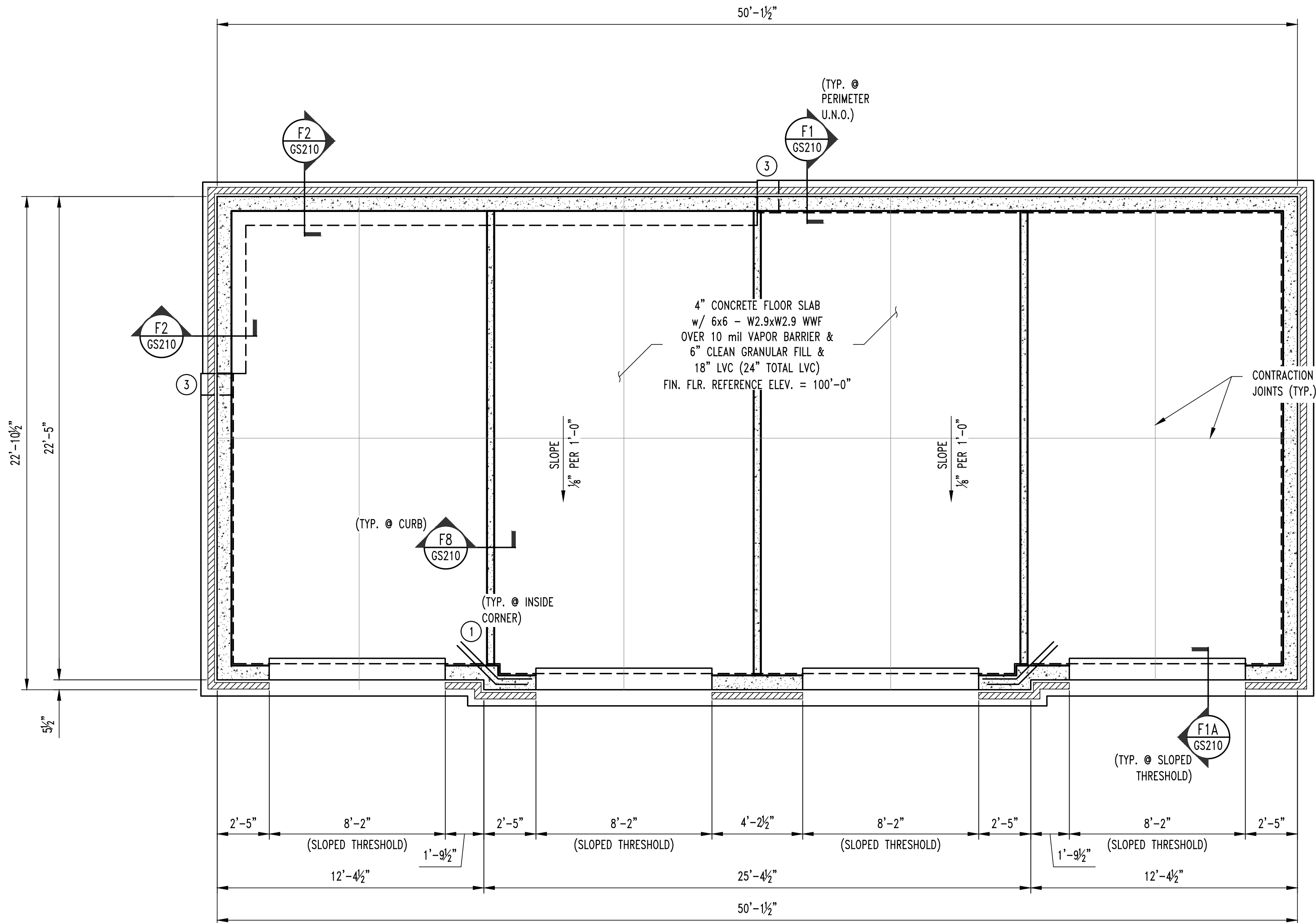
DRAWING INCLUDES:

GENERAL  
STRUCTURAL DATA

|              |        |
|--------------|--------|
| DESIGNED:    | JWV    |
| DRAWN:       | SEH    |
| PROJECT NO.: | 230286 |
| SHEET:       | GS100  |



NOTE:  
ALL DIMENSIONS ARE FROM FACE OF FOUNDATION WALL OR FRAMING;  
EDGE OF SLAB OR TRUSS/RAFTER; OR CENTERLINE  
OF COLUMN, BEAM, OR JOIST UNLESS NOTED OTHERWISE.

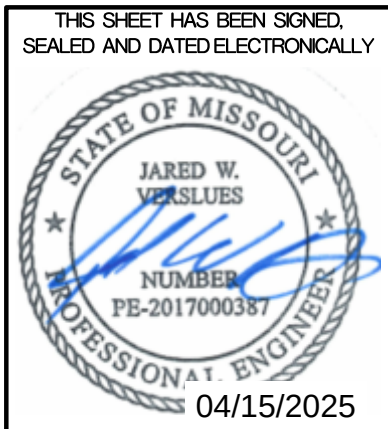


1 GS200 GARAGE BUILDING TYPE "A" (BLDG. "G1") FOUNDATION PLAN  
SCALE: 1/4" = 1'-0"  
PLAN NORTH

FOUNDATION NOTES

- REINTRANT CORNER BARS, REFER TO TYPICAL CRACK CONTROL REINFORCING DETAIL ON SHEET GS210.
- FOOTING STEP, REFER TO DETAIL FS1/GS211.
- FOOTING STEP, REFER TO DETAIL FS2/GS211.
- FOOTING STEP, REFER TO DETAIL FS3/GS211.

| REVISIONS: |            |
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| No.        | Date       |
| ISSUE SET  | 04/15/2024 |
|            |            |
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|            |            |
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STRUCTURAL ENGINEER:  
**CROCKETT**  
ENGINEERING CONSULTANTS  
1000 W. Nifong Blvd., Suite 1  
Columbia, Missouri 65203  
(573) 447-0992  
www.crockettengineering.com  
Crockett Engineering Consultants, LLC  
Missouri Certificate of Authority  
#2000131001

CLIENT:  
**INTRINSIC DEVELOPMENT**  
3622 ENDENAVOR AVE.  
COLUMBIA, MISSOURI

**Alura Village Garage Building Type "A"**  
Lee's Summit, Jackson County, Missouri

DRAWING INCLUDES:  
FOUNDATION PLAN

DESIGNED: JWV

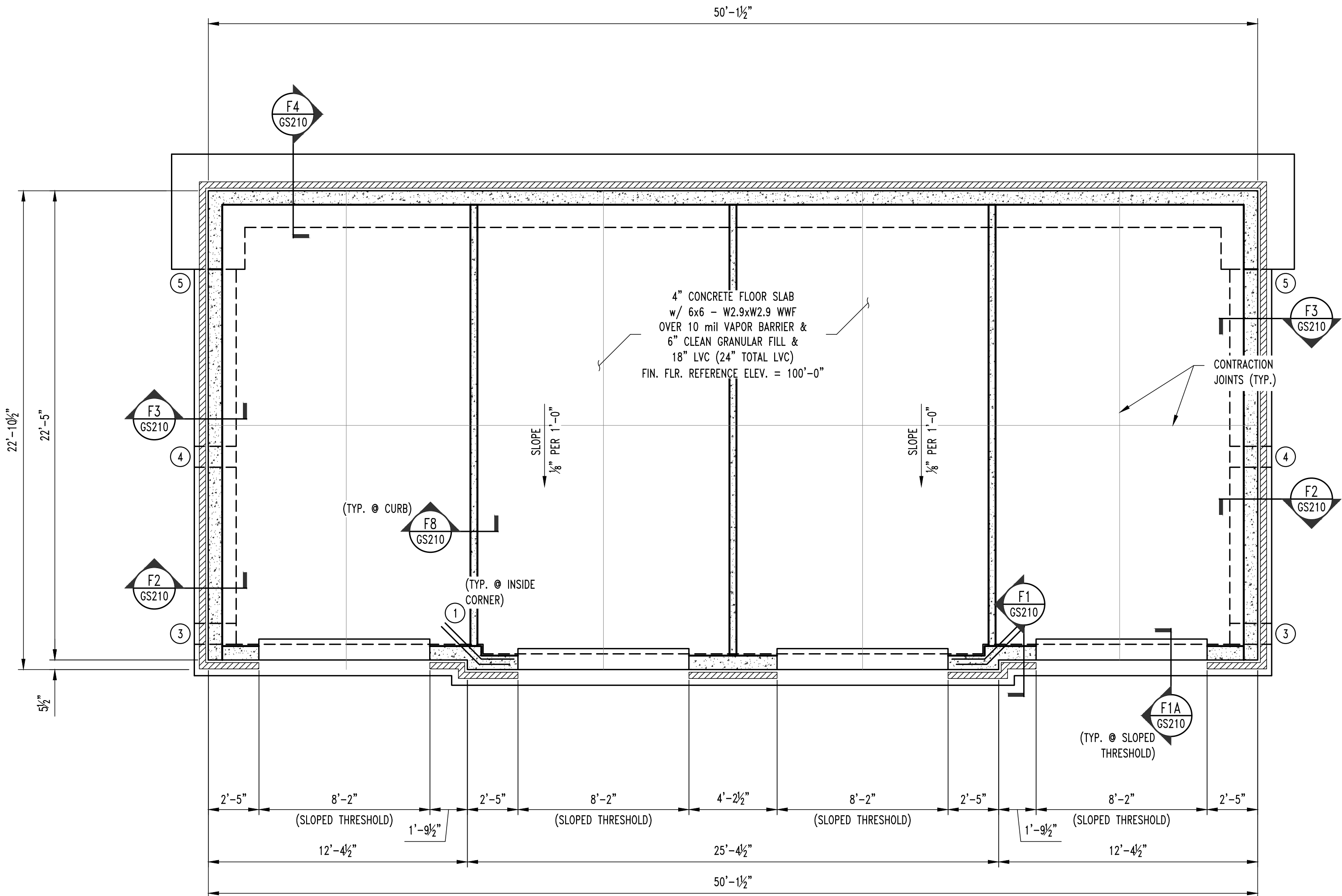
DRAWN: SEH

PROJECT NO.: 230286

SHEET: GS200



NOTE:  
ALL DIMENSIONS ARE FROM FACE OF FOUNDATION WALL OR FRAMING;  
EDGE OF SLAB OR TRUSS/RAFTER; OR CENTERLINE  
OF COLUMN, BEAM, OR JOIST UNLESS NOTED OTHERWISE.



1  
GS200A

**GARAGE BUILDING TYPE "A" (BLDG. "G4,G6,G7,G8") FOUNDATION PLAN**

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

PLAN  
NORTH

#### FOUNDATION NOTES

- REINTRANT CORNER BARS, REFER TO TYPICAL CRACK CONTROL REINFORCING DETAIL ON SHEET GS210.
- FOOTING STEP, REFER TO DETAIL FS1/GS211.
- FOOTING STEP, REFER TO DETAIL FS2/GS211.
- FOOTING STEP, REFER TO DETAIL FS3/GS211.
- TOP OF WALL STEPS 1'-6". REFER TO DETAILS F3 & F4 ON SHEET GS210.

#### REVISIONS:

| No.       | Date       |
|-----------|------------|
| ISSUE SET | 04/15/2024 |
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STRUCTURAL ENGINEER:  
**CROCKETT**  
ENGINEERING CONSULTANTS  
1000 W. Nifong Blvd., Suite 1  
Columbia, Missouri 65203  
(573) 447-0993  
www.crockettengineering.com  
Crockett Engineering Consultants, LLC  
Missouri Certificate of Authority  
#2000131001

CLIENT:  
**INTRINSIC  
DEVELOPMENT**  
3627 ENDENAVOR AVE.  
COLUMBIA, MISSOURI

**Aura Village Garage Building Type "A"**  
Lee's Summit, Jackson County, Missouri

#### DRAWING INCLUDES:

FOUNDATION  
PLAN

DESIGNED: JWV

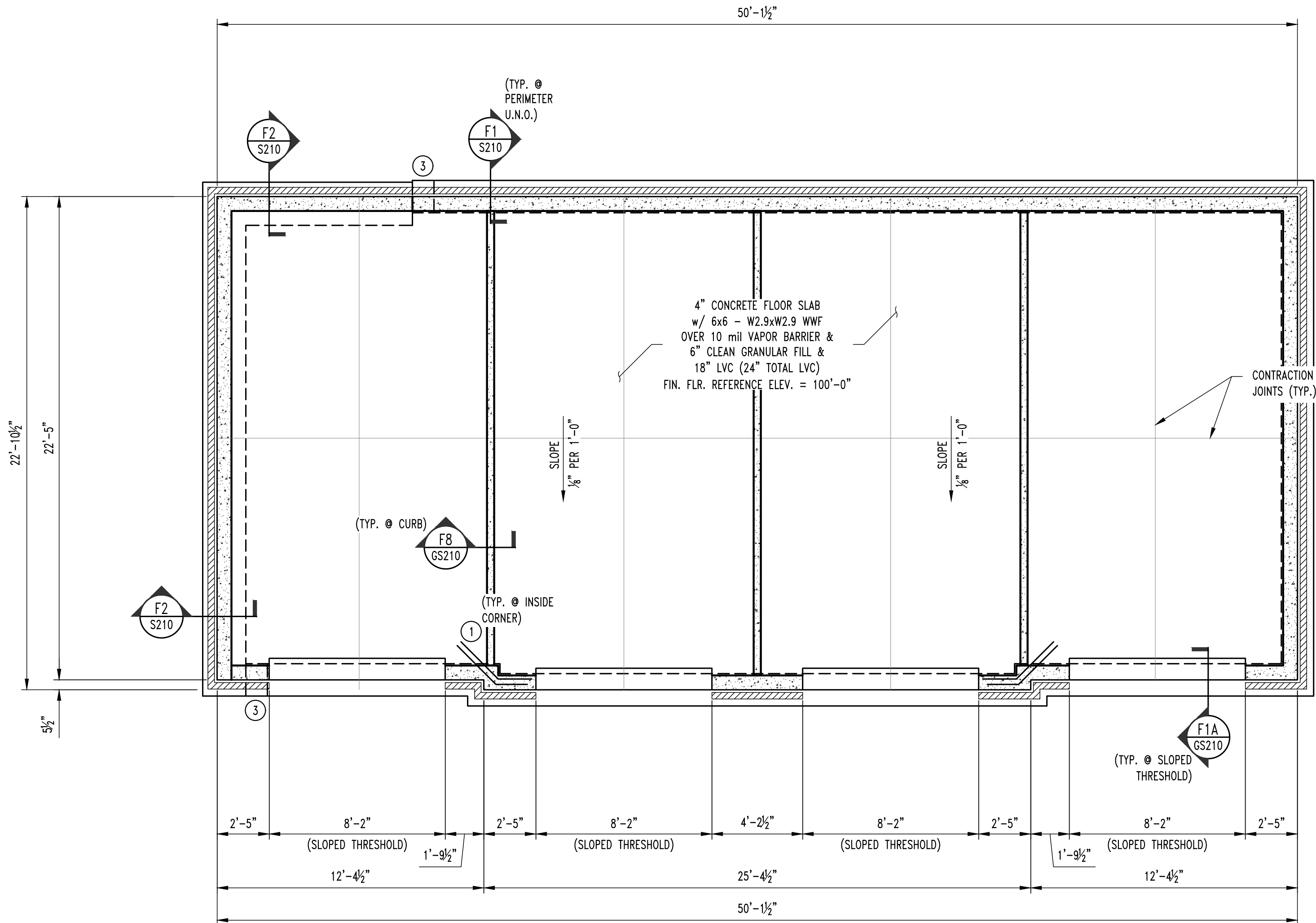
DRAWN: SEH

PROJECT NO.: 230286

SHEET:  
GS200A



NOTE:  
ALL DIMENSIONS ARE FROM FACE OF FOUNDATION WALL OR FRAMING;  
EDGE OF SLAB OR TRUSS/RAFTER; OR CENTERLINE  
OF COLUMN, BEAM, OR JOIST UNLESS NOTED OTHERWISE.



1 GARAGE BUILDING TYPE "A" (BLDG. "G10") FOUNDATION PLAN  
SCALE: 1/4" = 1'-0"

- FOUNDATION NOTES
- REENTRANT CORNER BARS, REFER TO TYPICAL CRACK CONTROL REINFORCING DETAIL ON SHEET GS210.
  - FOOTING STEP, REFER TO DETAIL FS1/GS211.
  - FOOTING STEP, REFER TO DETAIL FS2/GS211.
  - FOOTING STEP, REFER TO DETAIL FS3/GS211.

REVISIONS:

| No. | Date       |
|-----|------------|
| 1   | 04/15/2024 |
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STATE OF MISSOURI  
JARED W. VORSLUES  
NUMBER  
PE-2017090387  
PROFESSIONAL ENGINEER  
04/15/2025

STRUCTURAL ENGINEER:  
**CROCKETT**  
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COLUMBIA, MISSOURI

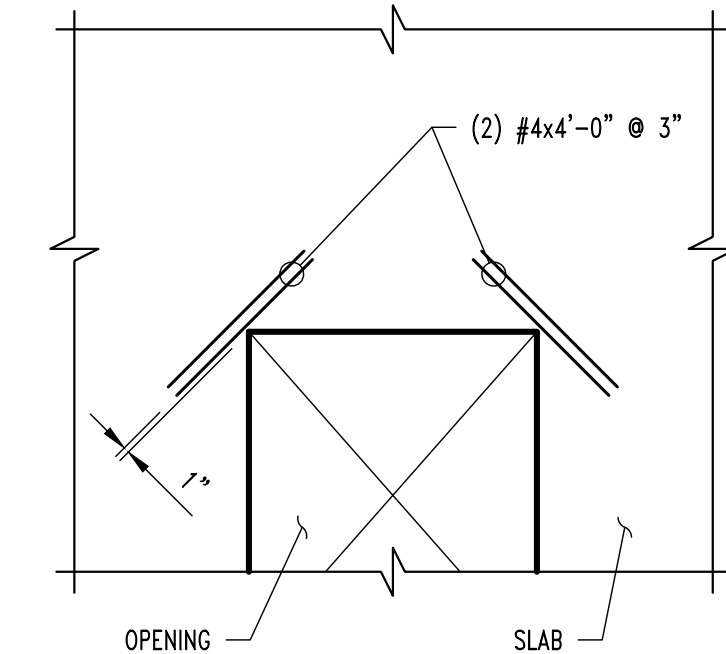
**Alura Village Garage Building Type "A"**  
Lee's Summit, Jackson County, Missouri

DRAWING INCLUDES:

FOUNDATION PLAN

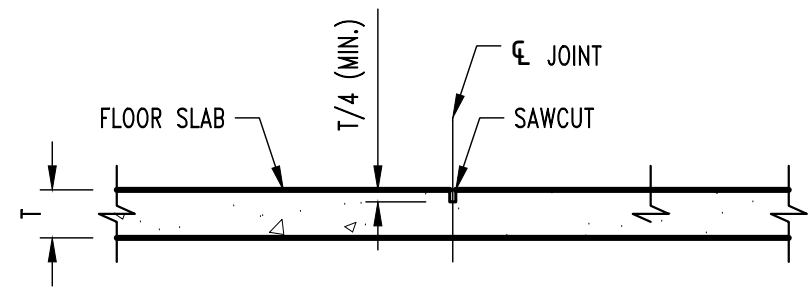
DESIGNED: JWV  
DRAWN: SEH  
PROJECT NO.: 230286  
SHEET: GS200B



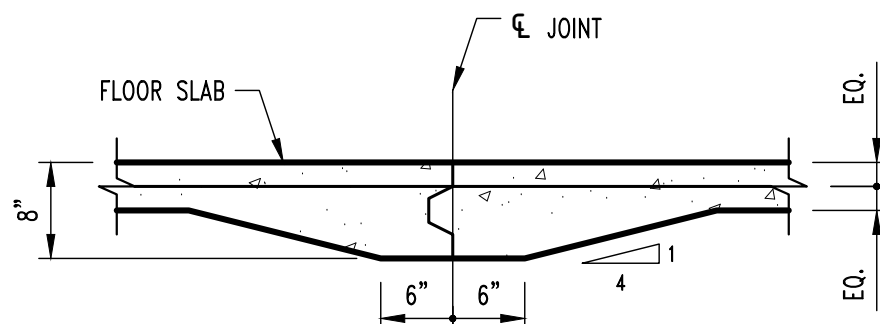


NOTE:  
TYPICAL AT ALL REENTRANT CORNERS FOR  
SLAB-ON-GRADE & STRUCTURAL SLAB.  
REINFORCING TO BE CENTERED IN SLAB THICKNESS.

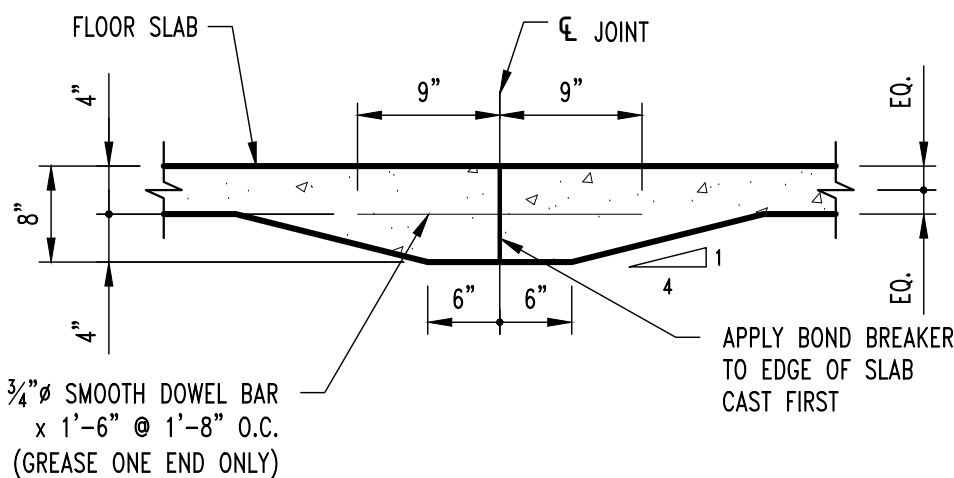
### CRACK CONTROL REINFORCING



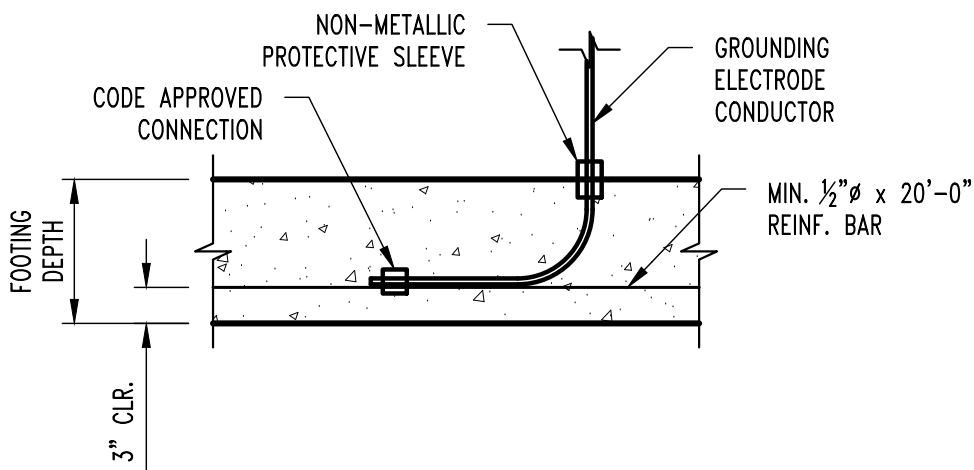
### CONTRACTION JOINT



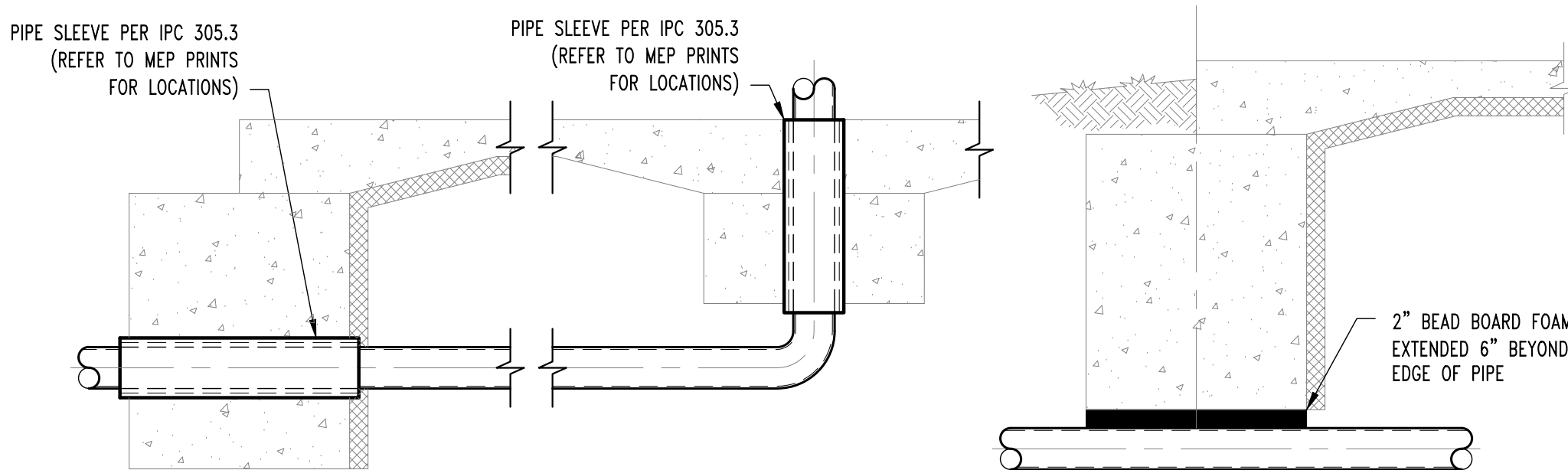
### CONSTRUCTION JOINT



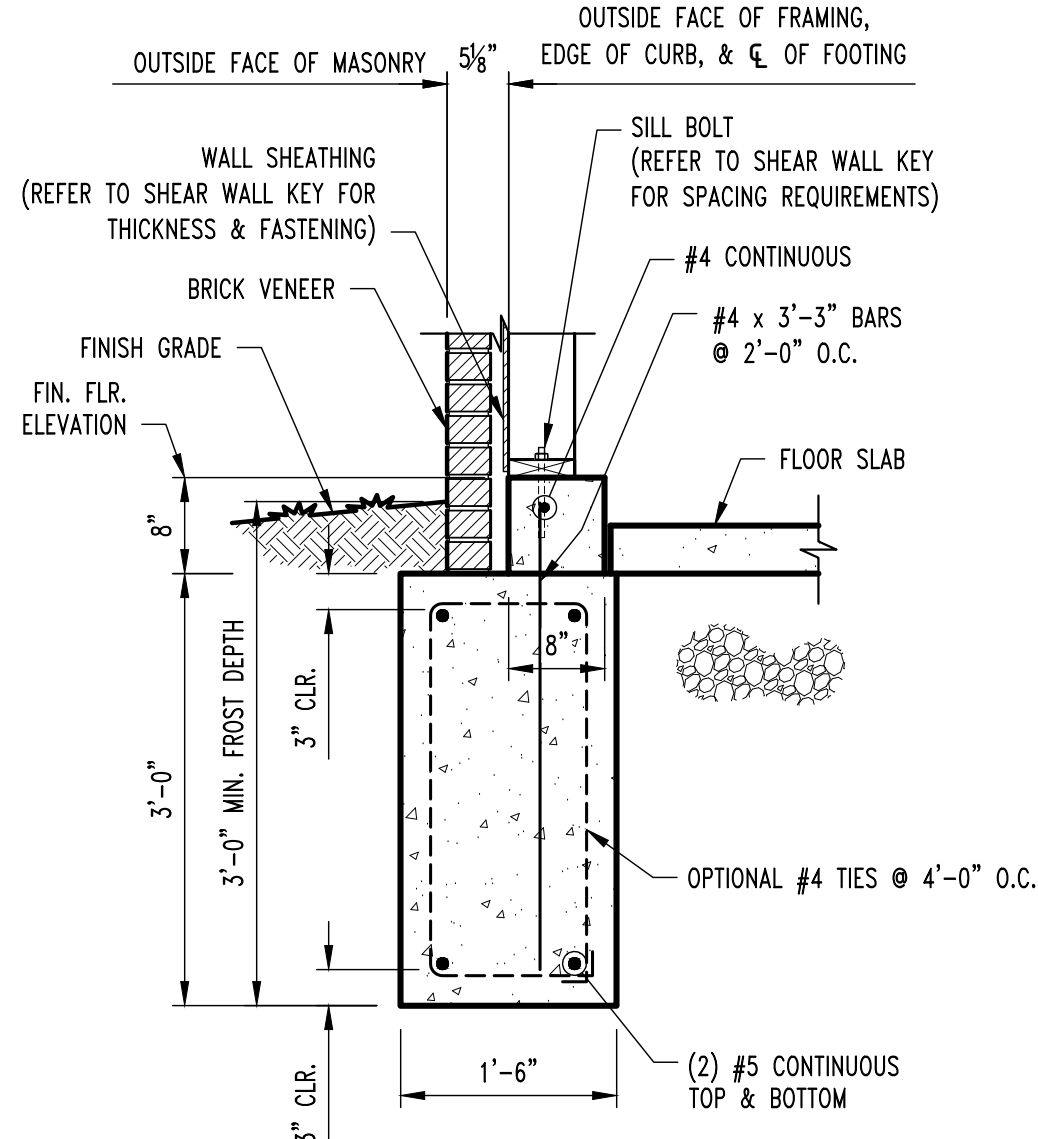
### CONSTRUCTION JOINT



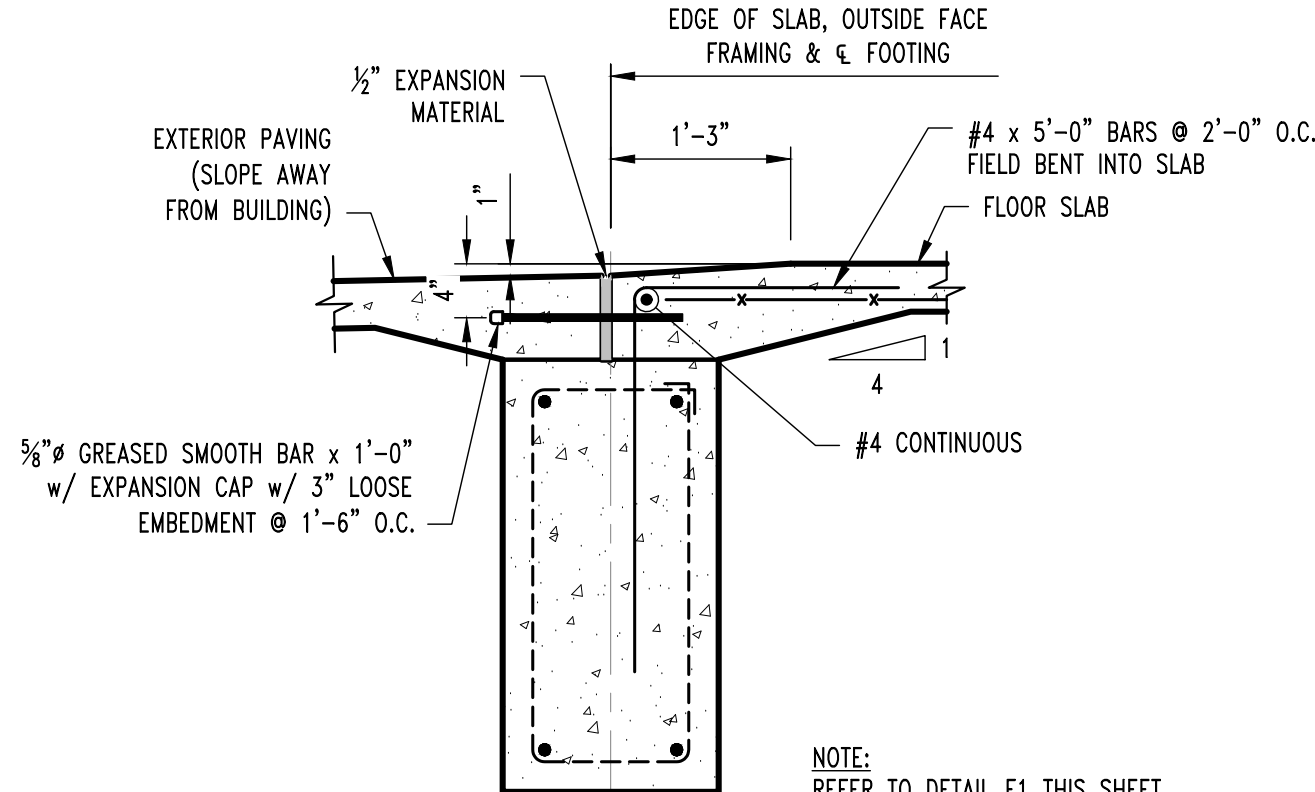
### TYP. ELECTRICAL GROUNDING DETAIL @ FOOTING



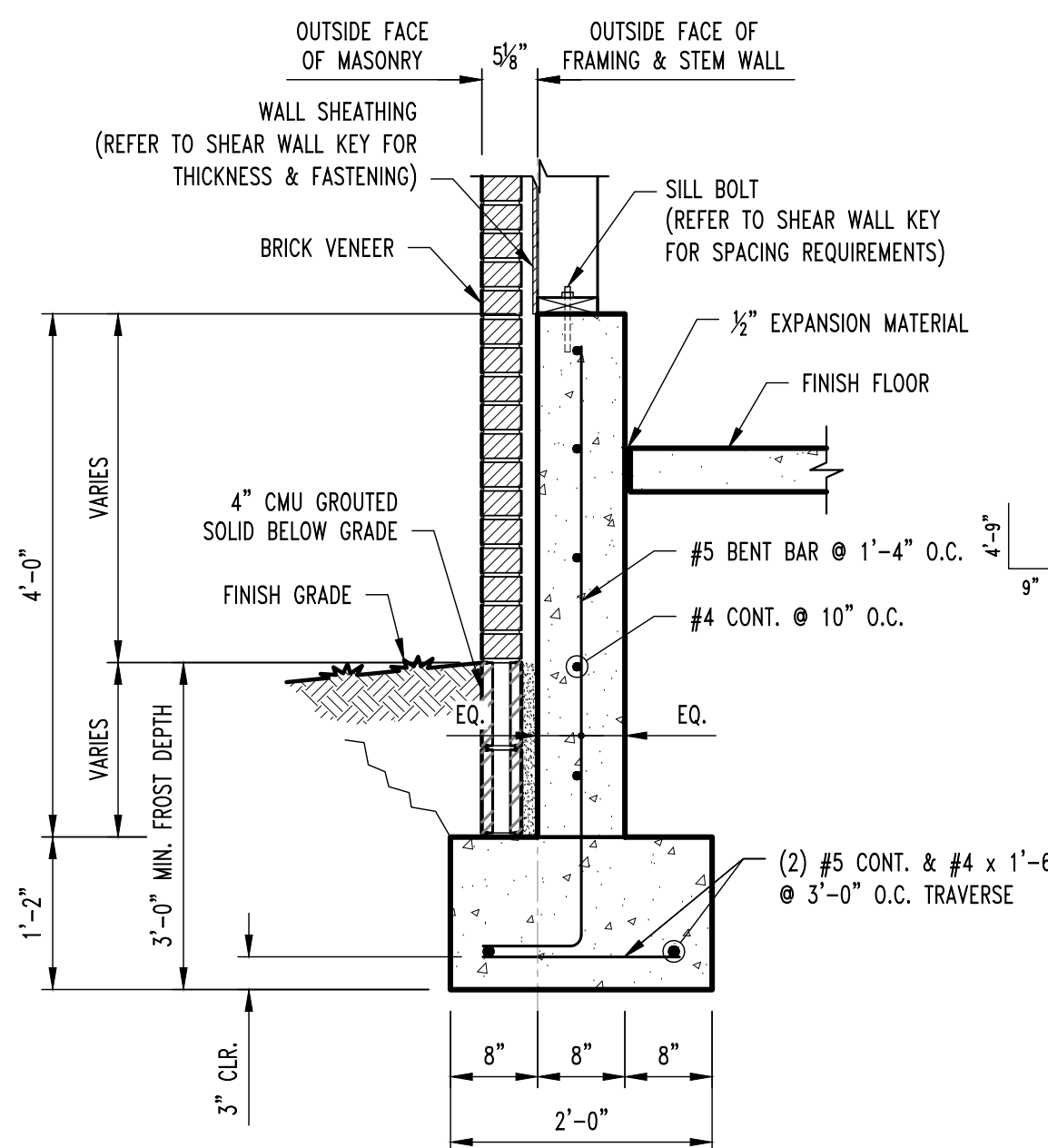
### TYP. PLUMBING COORDINATION DETAILS



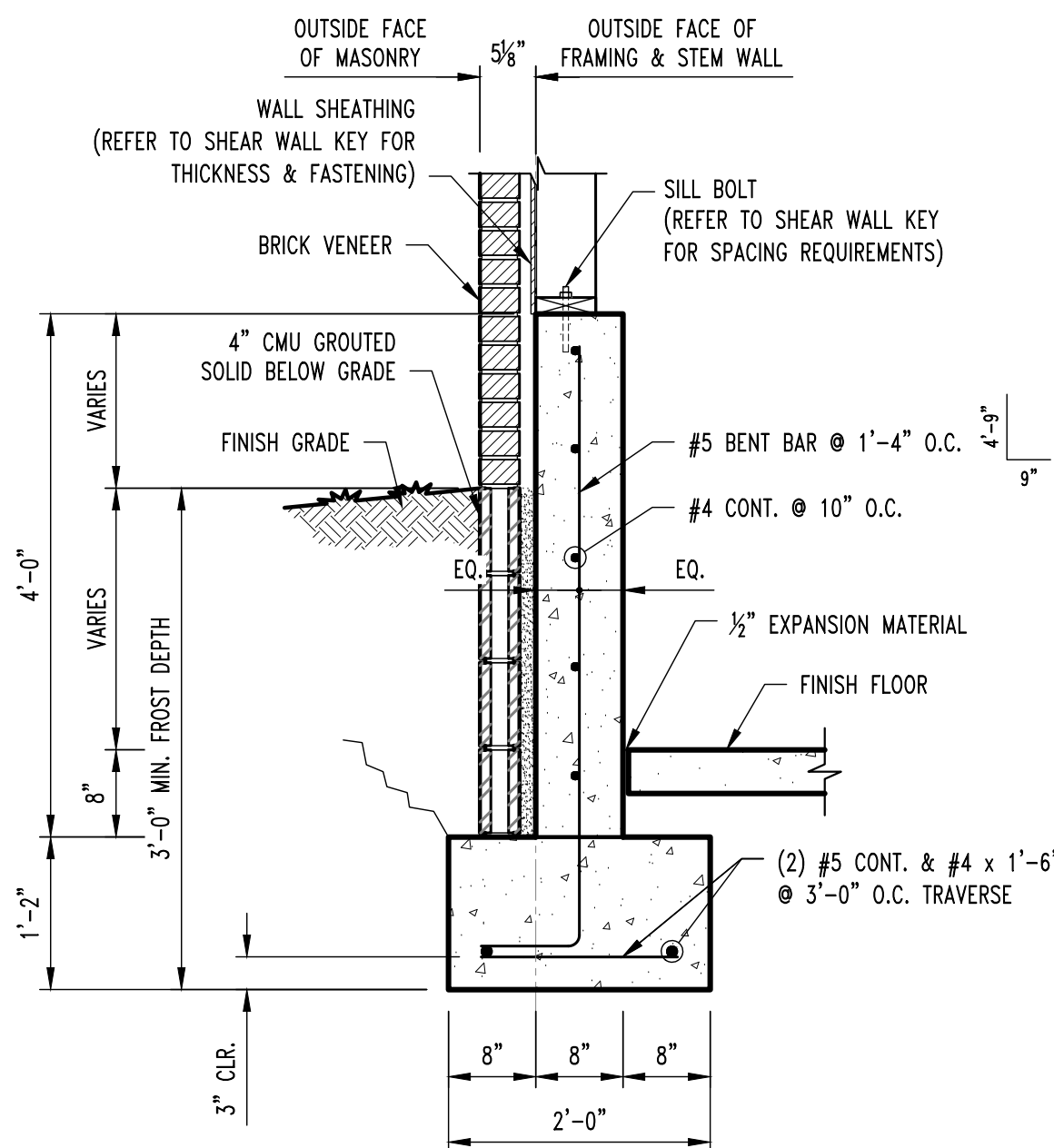
F1  
GS200-GS200B  
SCALE: 3/4" = 1'-0"



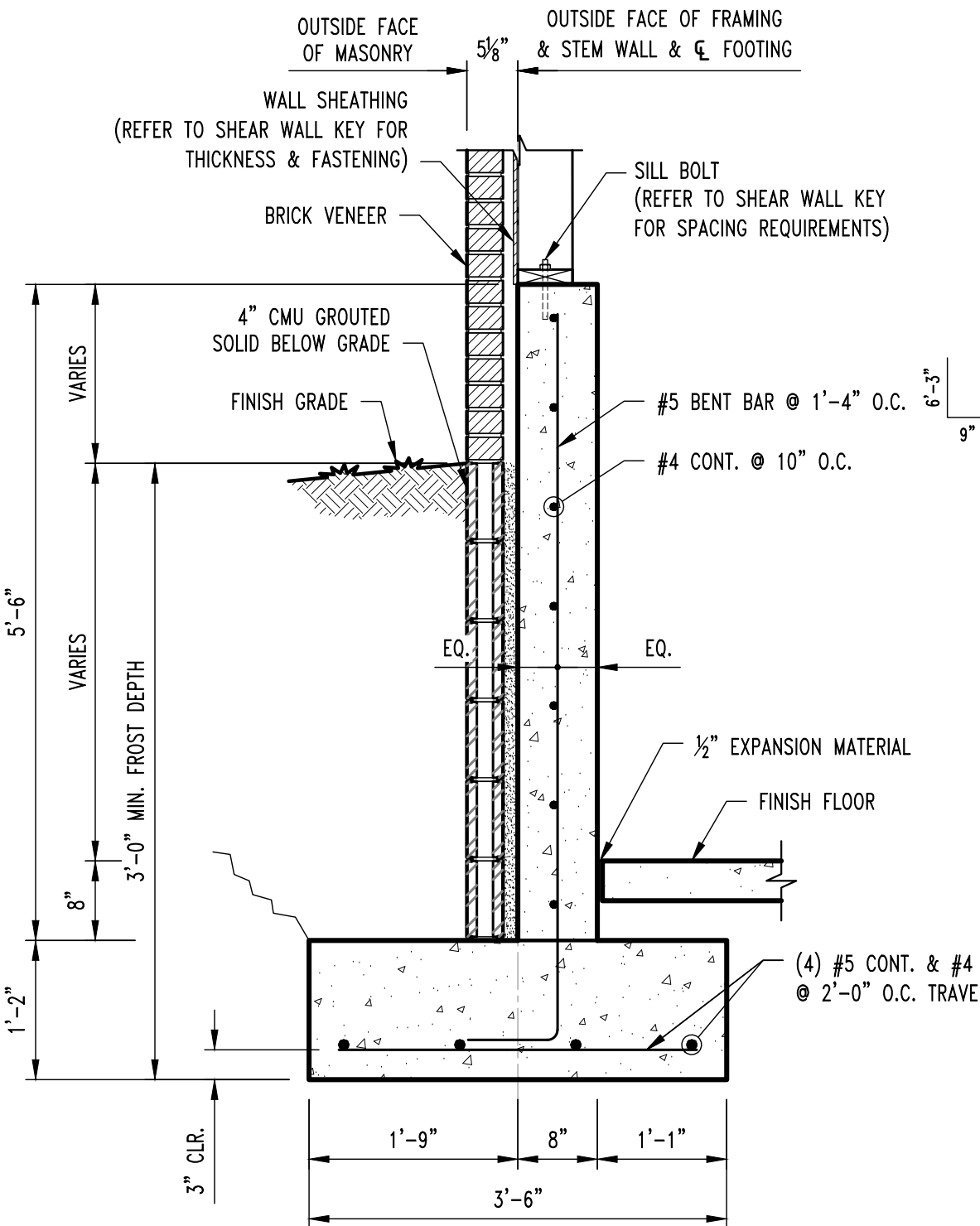
F1A  
GS200-GS200B  
SCALE: 3/4" = 1'-0"



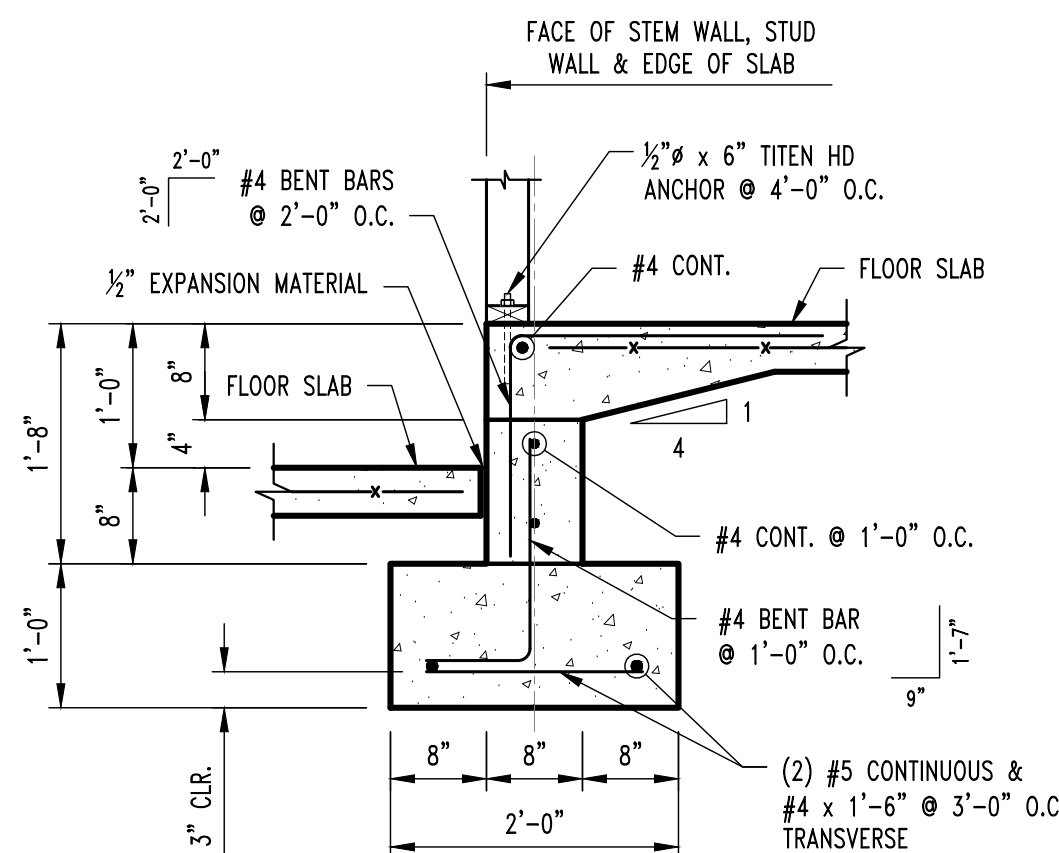
F2  
GS200-GS200B  
SCALE: 1/4" = 1'-0"



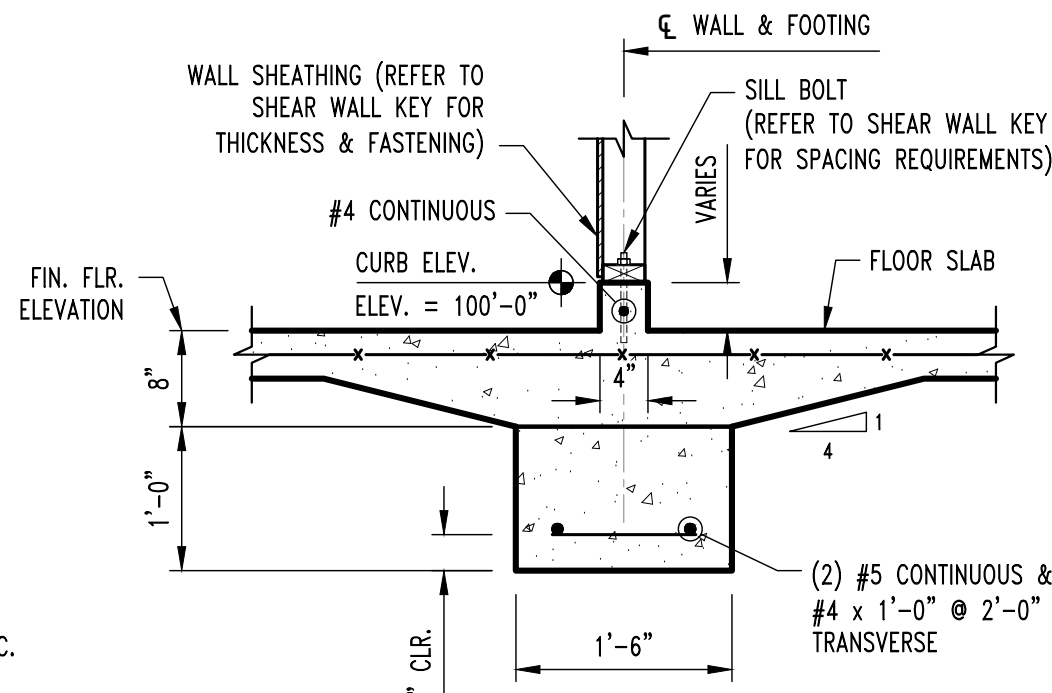
F3  
GS200A  
SCALE: 1/4" = 1'-0"



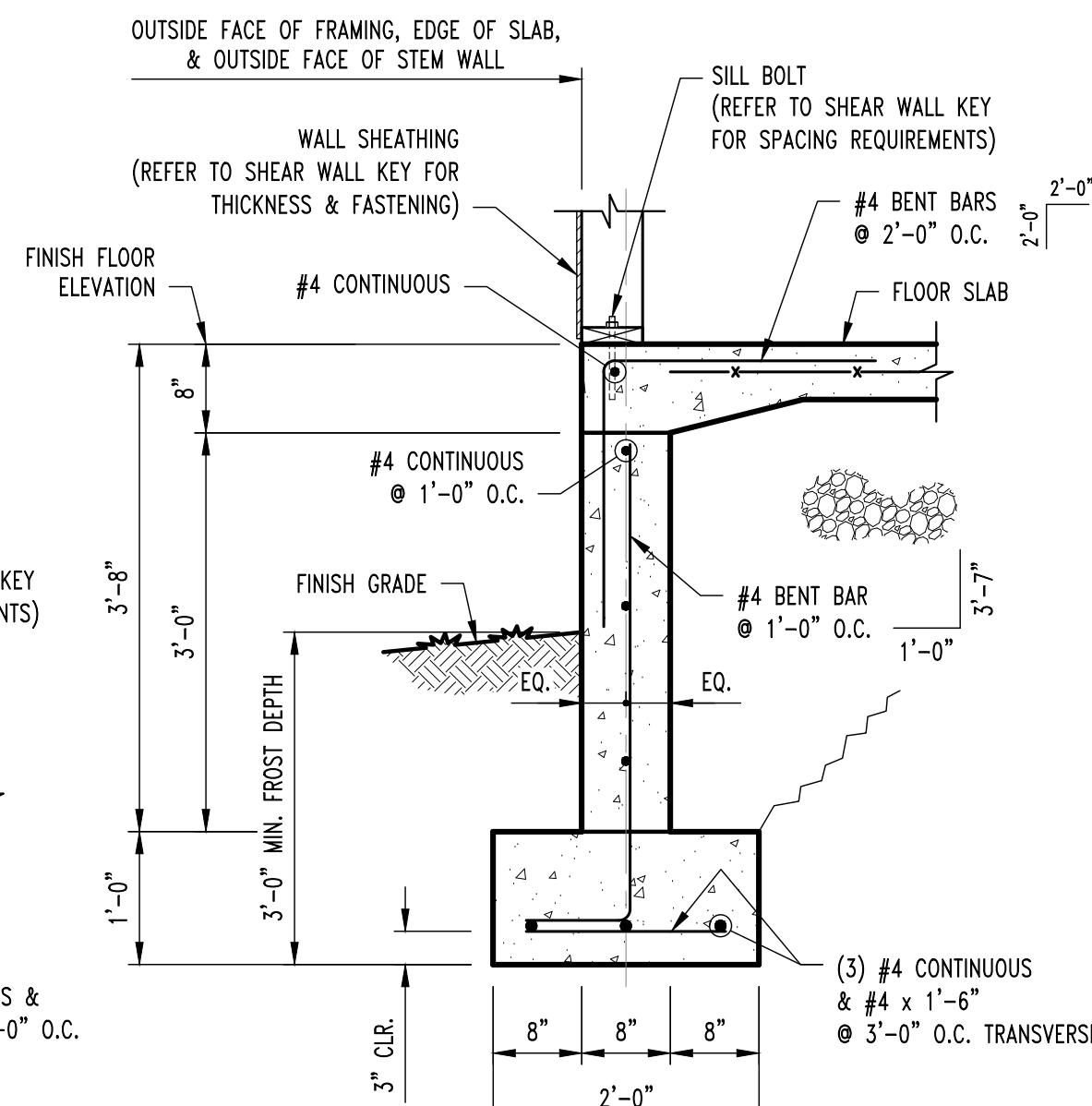
F4  
GS200A  
SCALE: 1/4" = 1'-0"



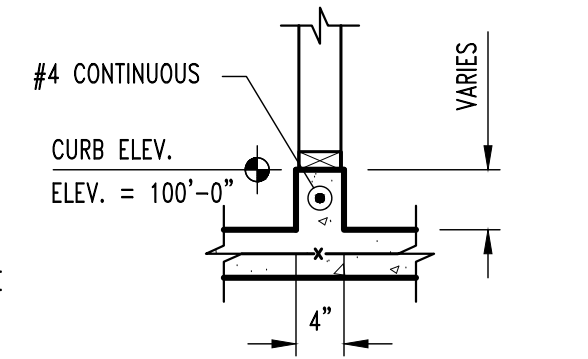
F5  
GS200  
SCALE: 3/4" = 1'-0"



F6  
GS200  
SCALE: 3/4" = 1'-0"

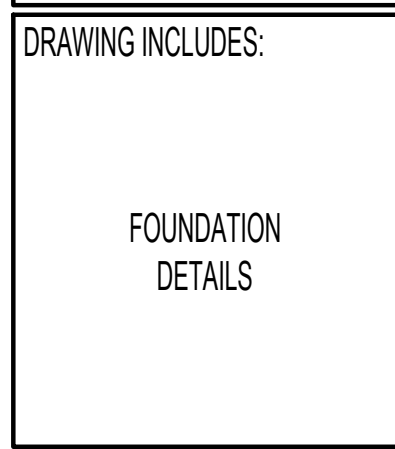
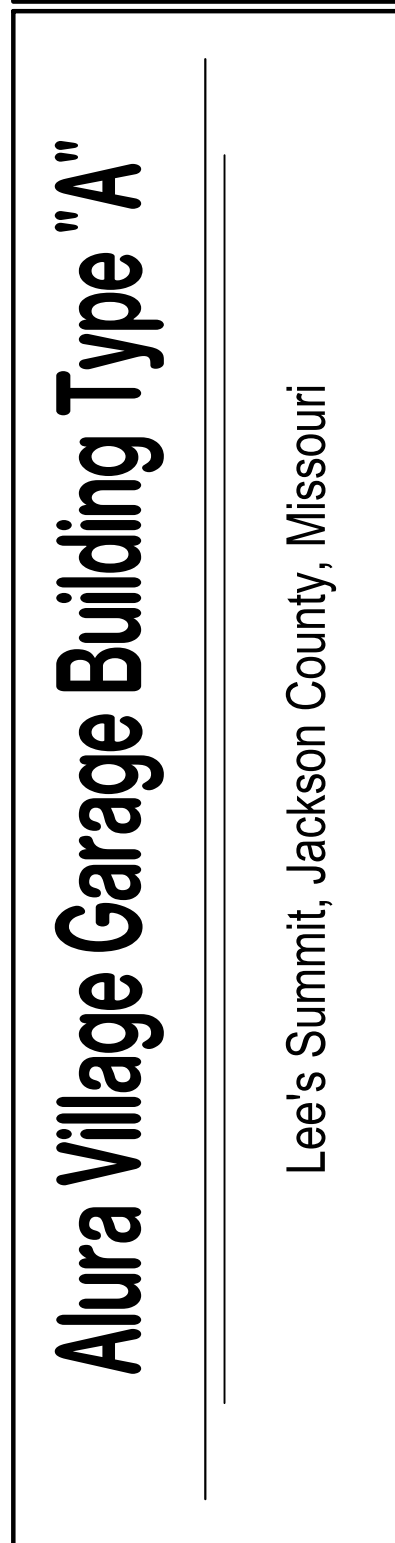
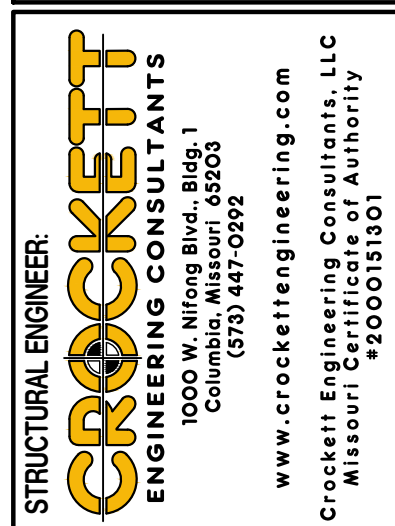
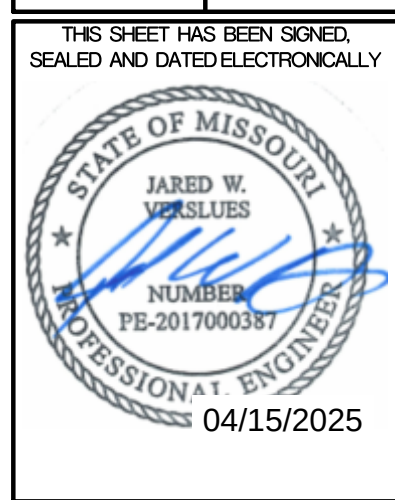


F7  
GS200  
SCALE: 3/4" = 1'-0"



F8  
GS200  
SCALE: 3/4" = 1'-0"

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|              |        |
|--------------|--------|
| DESIGNED:    | JWW    |
| DRAWN:       | SEH    |
| PROJECT NO.: | 230286 |
| SHEET:       | GS210  |



REVISIONS:

| No.       | Date       |
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www.crockettengineering.com  
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Missouri Certificate of Authority  
#000000001

CLIENT:  
**INTRINSIC  
DEVELOPMENT**  
3622 ENDENBOR AVE.  
COLUMBIA, MISSOURI

**Alura Village Garage Building Type "A"**  
  
Lee's Summit, Jackson County, Missouri

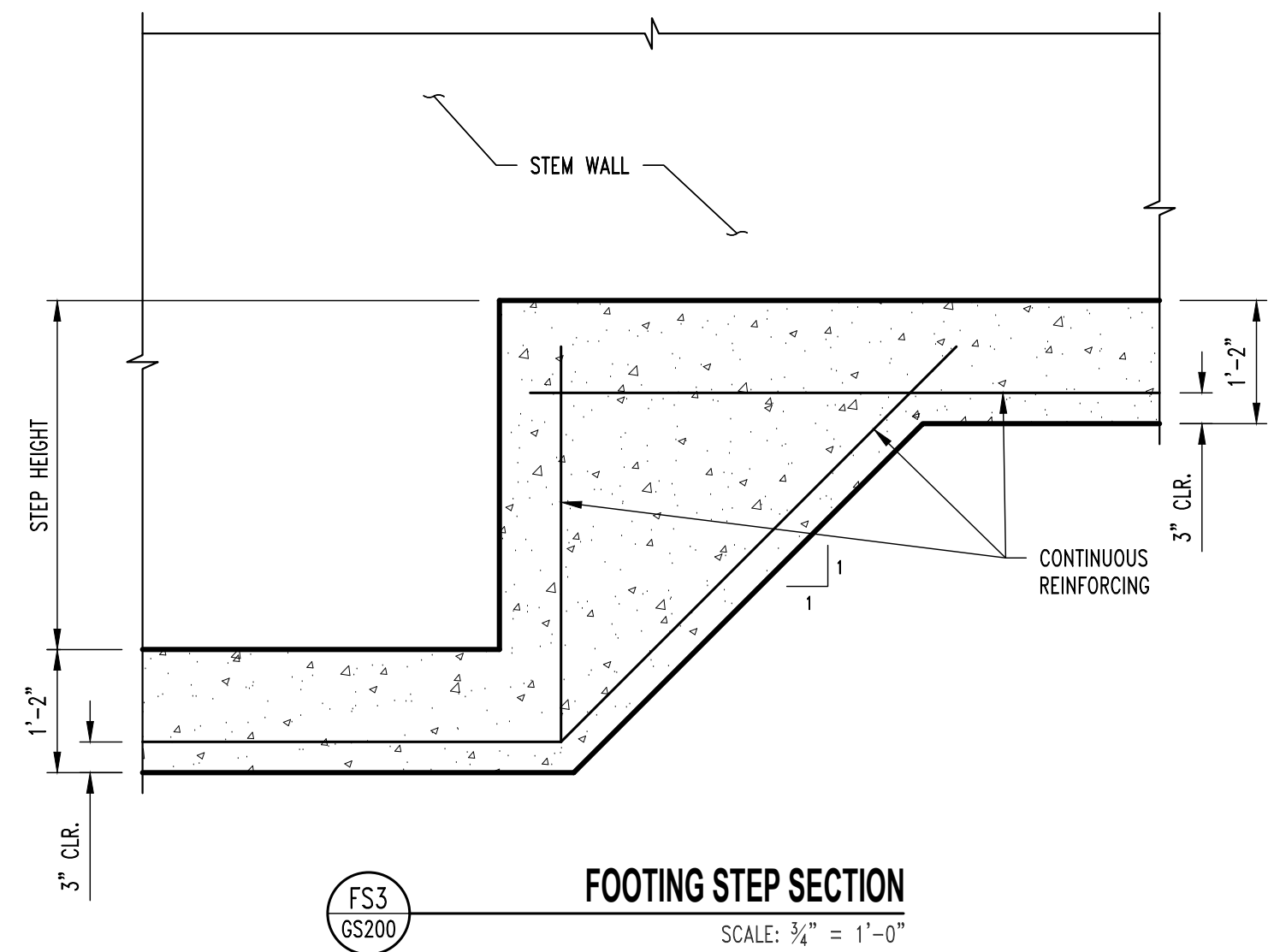
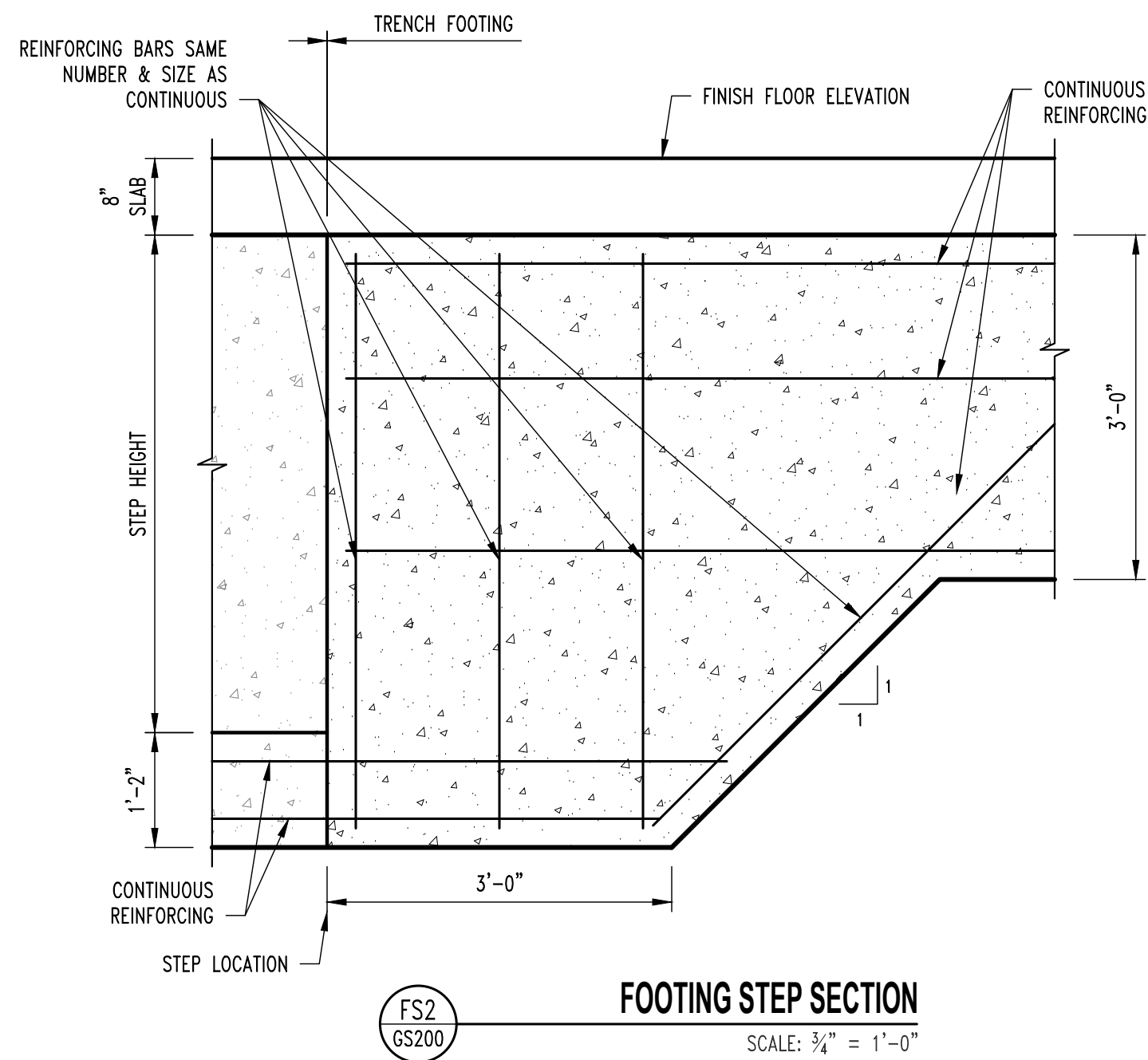
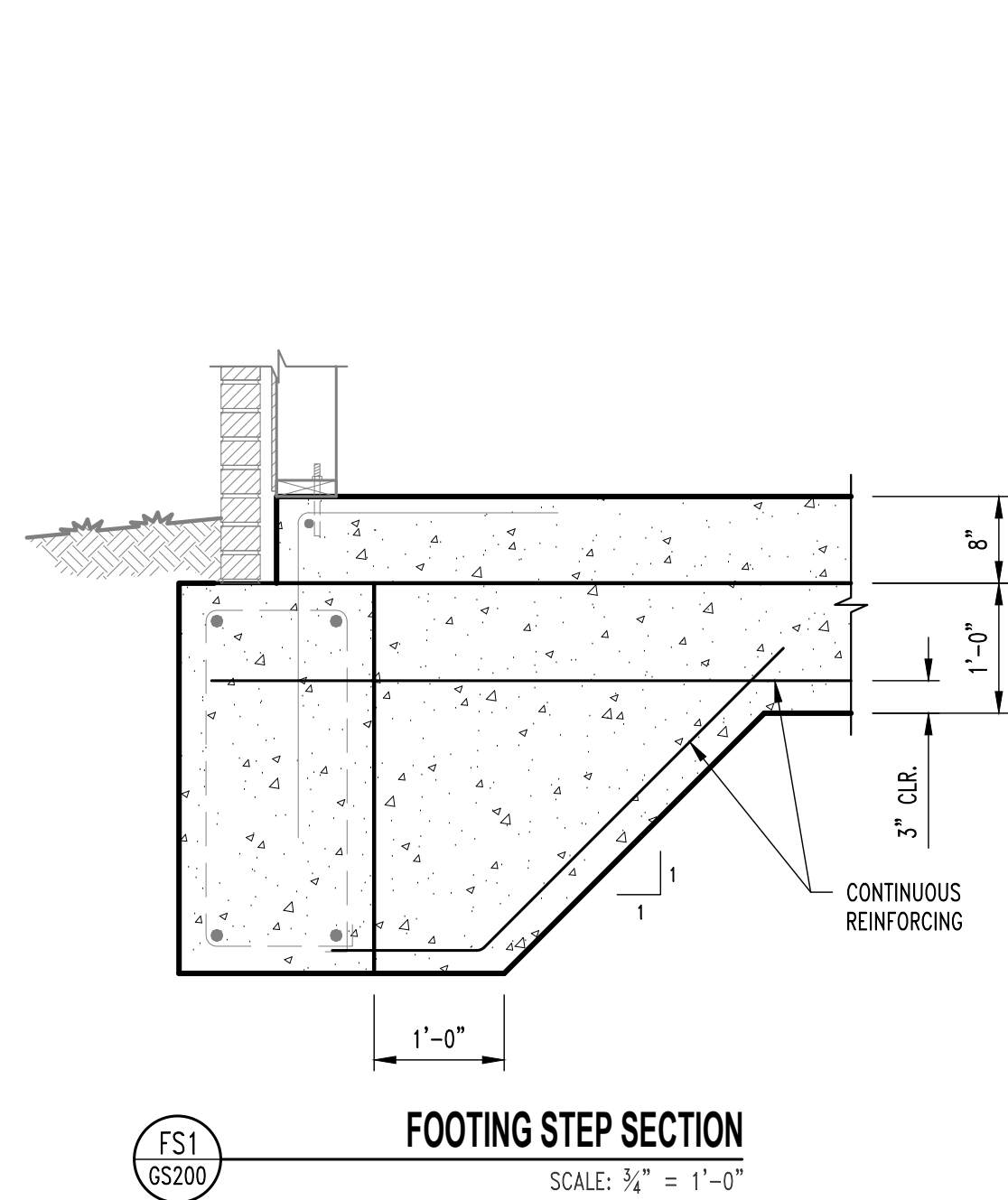
DRAWING INCLUDES:  
  
FOUNDATION  
DETAILS

DESIGNED: JWV

DRAWN: SEH

PROJECT NO.: 230286

SHEET:  
GS211





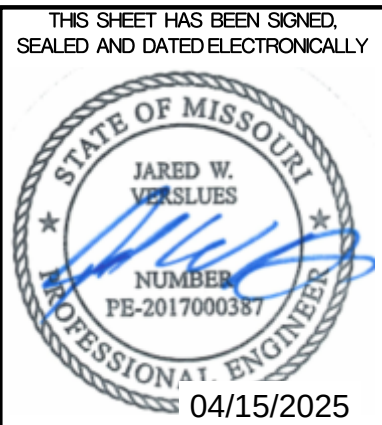
NOTE:  
ALL DIMENSIONS ARE FROM FACE OF FOUNDATION WALL OR FRAMING;  
EDGE OF SLAB OR TRUSS/RAFTER; OR CENTERLINE  
OF COLUMN, BEAM, OR JOIST UNLESS NOTED OTHERWISE.

ROOF FRAMING NOTES

- 1 FRAME ROOF OVER PRE-ENGINEERED TRUSSES TO  
CREATE RIDGE, VALLEY, OR HIP AS SHOWN w/ 2x SPF  
No.1/No.2 RAFTERS @ 16" O.C. OR PRE-ENGINEERED  
TRUSSES @ 2'-0" O.C. MAX. (SHADED AREA)
- 2 ATTIC ACCESS; REFER TO ARCHITECTURALS FOR  
ADDITIONAL INFORMATION.
- 3 GIRDER TRUSS
- 4 3-PLY BUILT-UP POST BENEATH GIRDER TRUSS  
THIS LEVEL TO FLOOR SLAB  
CONNECTIONS ARE AS FOLLOWS:  
FLOOR SLAB: SIMPSON LITTPZ.  
ROOF TRUSS: BY TRUSS MANUFACTURER
- 5 GIRDER TO HEADER CONNECTION. REFER TO TYPICAL  
DETAIL ON SHEET S310.
- 6 REFER TO TYPICAL SHEAR WALL DETAIL ON SHEET S310.

REVISIONS:

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#000101001

CLIENT:  
**INTRINSIC  
DEVELOPMENT**  
3622 ENDAVOR AVE.  
COLUMBIA, MISSOURI

Aura Village Garage Building Type "A"

Lee's Summit, Jackson County, Missouri

DRAWING INCLUDES:

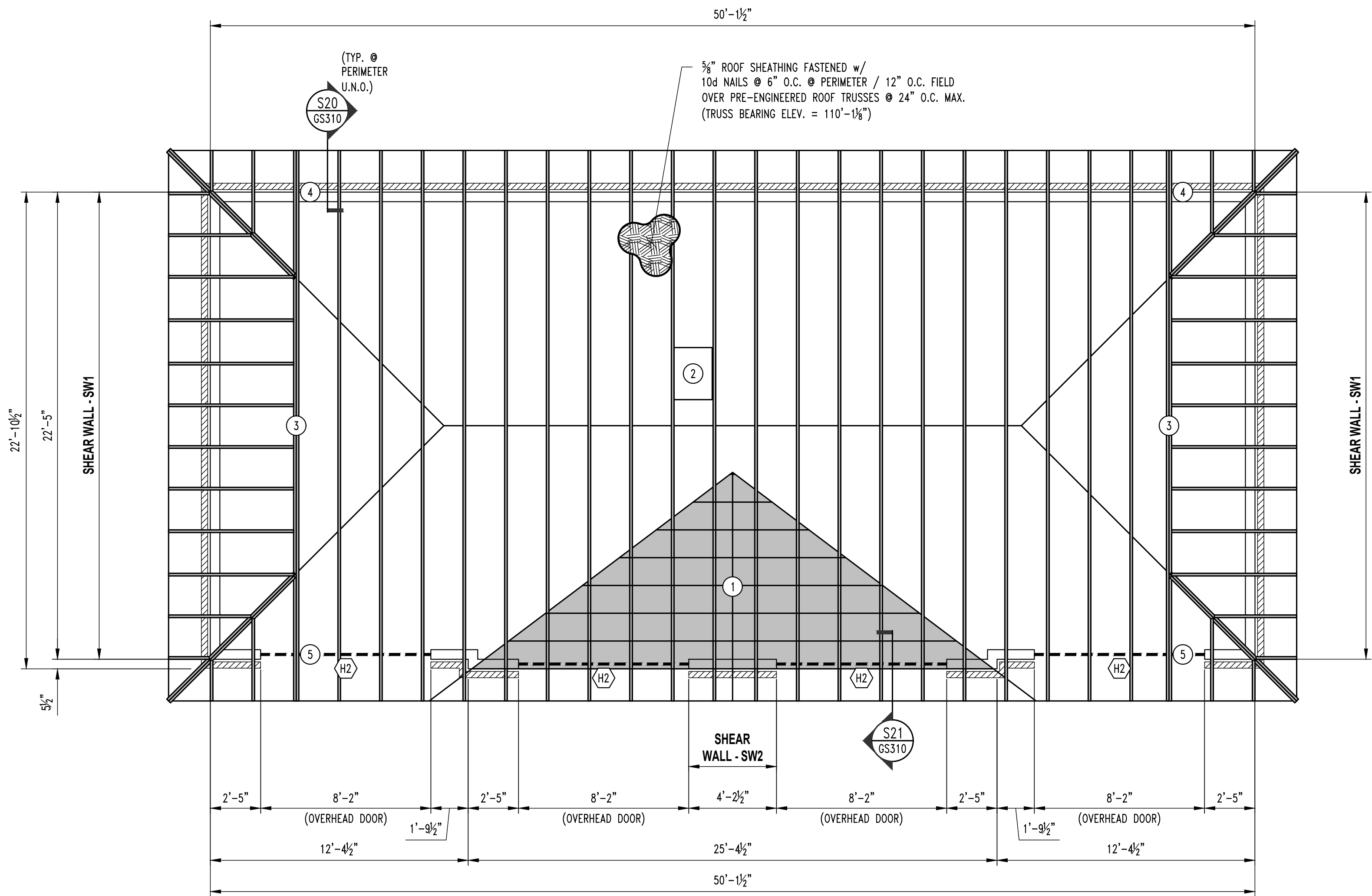
ROOF  
FRAMING PLAN

DESIGNED: JWV

DRAWN: SEH

PROJECT NO.: 230286

SHEET:  
GS300



1 GS300 GARAGE BUILDING TYPE "A" ROOF FRAMING PLAN  
SCALE: 3/4" = 1'-0"  
PLAN NORTH

| BRICK LINTEL SCHEDULE |                                         |  |  |
|-----------------------|-----------------------------------------|--|--|
| LENGTH                | MEMBER SIZE (GALVANIZED)                |  |  |
| L ≤ 4'-0"             | L4x4x3/8 WITH 6" BEARING EACH END       |  |  |
| L ≤ 8'-6"             | L6x4x3/8 (LLV) WITH 6" BEARING EACH END |  |  |

| HEADER SCHEDULE |                                   |                              |                              |
|-----------------|-----------------------------------|------------------------------|------------------------------|
| LABEL           | HEADER                            | CRIPPLE/JACK                 | JAMBUKING                    |
| "H1"            | 2 Ply 2x8 Doug. Fir No.2          | Single Ply 2x6 SPF No.1/No.2 | Single Ply 2x6 SPF No.1/No.2 |
| "H2"            | 2 Ply 2x10 Doug. Fir Sel. Struct. | 2 Ply 2x6 SPF No.1/No.2      | 2 Ply 2x6 SPF No.1/No.2      |
| "H3"            | 3 Ply 2x10 Doug. Fir Sel. Struct. | 2 Ply 2x6 SPF No.1/No.2      | 2 Ply 2x6 SPF No.1/No.2      |
| "H4"            | 3 Ply 2x12 Doug. Fir Sel. Struct. | 2 Ply 2x6 SPF No.1/No.2      | 2 Ply 2x6 SPF No.1/No.2      |

SHEAR WALL KEY

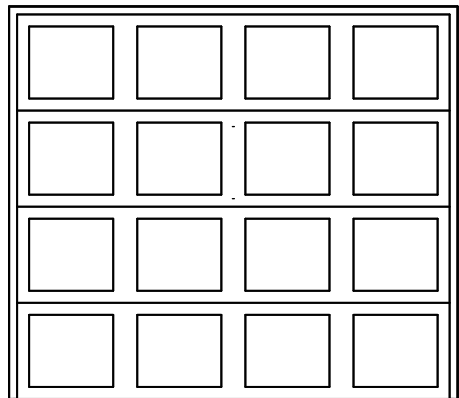
- SW1 SHEAR WALL  
FIRST FLOOR:
- 7/16" OSB SHEATHING FASTENED WITH 8D NAILS @ 4" O.C. @ PERIMETER / 12" O.C. FIELD
  - 1/2" DIAMETER X 6" SIMPSON TITEN HD ANCHOR SCREWS @ 3'-0" O.C.
  - REQUIRES SIMPSON DTT2Z-SDS2.5 HOLDOWN FASTENED TO 2-PLY STUDS W/ (8) 3/4" X 13/8" SDS SCREWS W/ 1/2" DIAMETER A307 THREADED ROD W/ 16" TOTAL (8" INTO FOOTING) SIMPSON "AT-3G" EPOXY EMBEDMENT AT EACH END OF THE SHEAR WALL
- SW2 SHEAR WALL  
FIRST FLOOR:
- 7/16" OSB SHEATHING FASTENED WITH 8D NAILS @ 4" O.C. @ PERIMETER / 12" O.C. FIELD
  - 1/2" DIAMETER X 6" SIMPSON TITEN HD ANCHOR SCREWS @ 2'-0" O.C.
  - REQUIRES SIMPSON WTT4 TENSION TIE FASTENED TO 2-PLY STUDS W/ (18) #10 X 13/8" SDS SCREWS W/ 5/8" DIAMETER A307 THREADED ROD W/ 16" TOTAL (8" INTO FOOTING) SIMPSON "AT-3G" EPOXY EMBEDMENT AT EACH END OF THE SHEAR WALL
- SW3 SHEAR WALL  
FIRST FLOOR:
- 7/16" OSB SHEATHING FASTENED WITH 8D NAILS @ 2" O.C. @ PERIMETER / 12" O.C. FIELD (NOTE: THIS SHEET FASTENING PATTERN REQUIRES 3X OR DOUBLE 2X FRAMING MEMBERS WHERE SHEETS MEET)
  - 1/2" DIAMETER X 6" SIMPSON TITEN HD ANCHOR SCREWS @ 1'-0" O.C.
  - REQUIRES SIMPSON HDU8-SDS2.5 HOLDOWN FASTENED TO 3-PLY STUDS W/ (20) 3/4" X 2 1/2" SDS SCREWS W/ 7/8" DIAMETER A307 THREADED ROD W/ 20" TOTAL (12" INTO FOOTING) SIMPSON "AT-3G" EPOXY EMBEDMENT AT EACH END OF THE SHEAR WALL
- TYPICAL SHEAR WALL UNLESS NOTED
- 7/16" OSB SHEATHING FASTENED WITH 8D NAILS @ 4" O.C. @ PERIMETER / 12" O.C. FIELD
  - 1/2" DIAMETER X 6" SIMPSON TITEN HD ANCHOR SCREWS @ 3'-0" O.C.
  - NO HOLDOWNS REQUIRED







| DOOR SCHEDULE |                        |       |             |             |                                    |
|---------------|------------------------|-------|-------------|-------------|------------------------------------|
| TYPE MARK     | SIZE                   | ELEV. | FRAME MATL. | PANEL MATL. | COMMENTS                           |
| 1             | 8'-0" x 8'-0" x 1 3/4" | A     | WOOD        | STEEL       | DECORATIVE, MULTI-PANEL O.H. DOOR. |



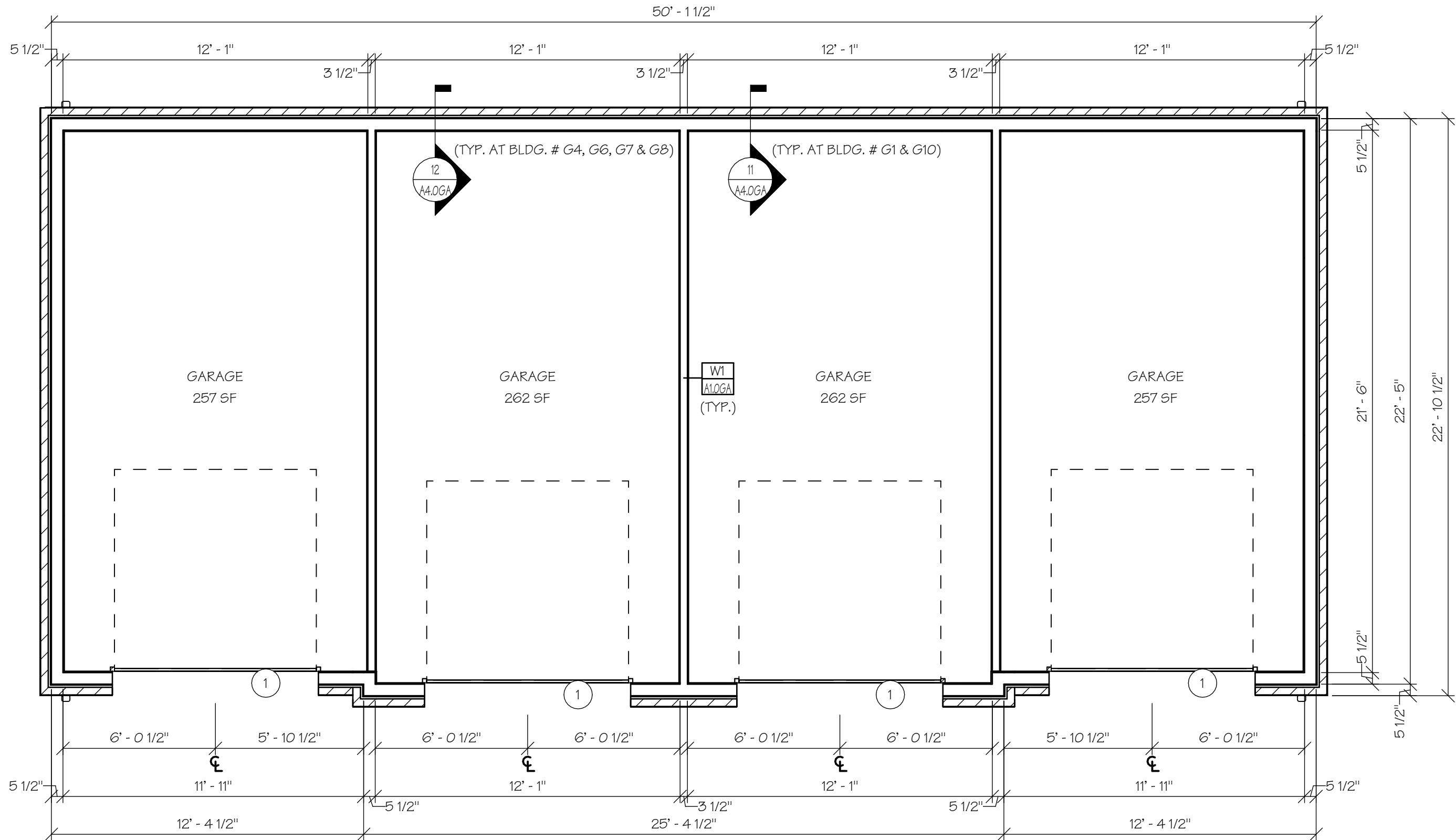
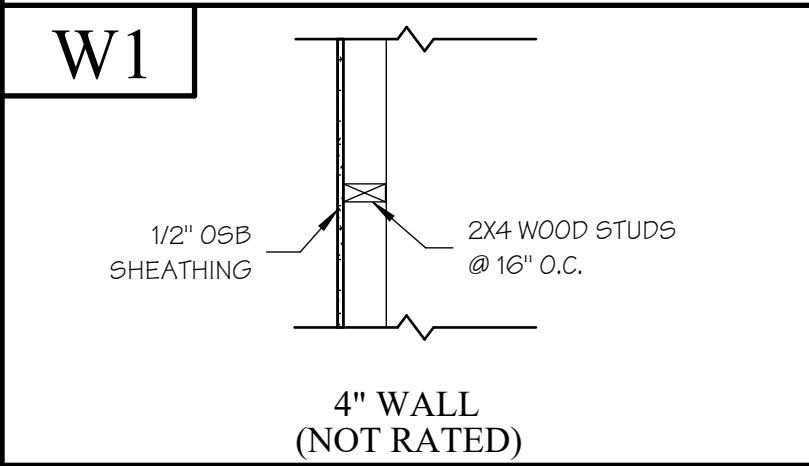
A

| GENERAL NOTES |                                                     |
|---------------|-----------------------------------------------------|
| 1)            | DIMENSIONS SHOWN ARE FACE OF STUD TO FACE OF STUD.  |
| 2)            | SEAL CONCRETE FLOOR TO REDUCE MOISTURE PENETRATION. |

| FINISH SCHEDULE |                 |                              |                 |                 |
|-----------------|-----------------|------------------------------|-----------------|-----------------|
| ROOM NAME       | FLOOR           | BASE                         | WALL            | CEILING         |
| GARAGE          | SEALED CONCRETE | NONE OR NO ADDITIONAL FINISH | PAINTED GYP BD. | PAINTED GYP BD. |

SPECIAL INSTRUCTION:  
STRUCTURAL DRAWINGS AND SPECIFICATIONS TAKE PRECEDENCE OVER ANY DRAWING, DETAIL OR NOTE SHOWN ON THIS SHEET.  
CONTRACTORS, SUBCONTRACTORS, AND SUPPLIERS MUST REFERENCE STRUCTURAL DRAWINGS AND/ OR SPECIFICATIONS BEFORE CONSTRUCTING, OR SUPPLYING ANY LOAD-BEARING, OR LOAD-RESISTING ELEMENT SHOWN ON THIS SHEET.

WALL TYPE SCHEDULE



1  
A1.0GA

GARAGE "A" BUILDING PLAN/FINISH PLAN

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

(GARAGE BLDGS. G1, G4, G6, G7, G8 & G10 - SEE CIVIL)

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GAR. G1   GAR. G4   GAR. G5   GAR. G7   GAR. G8   GAR. G10



LEGEND

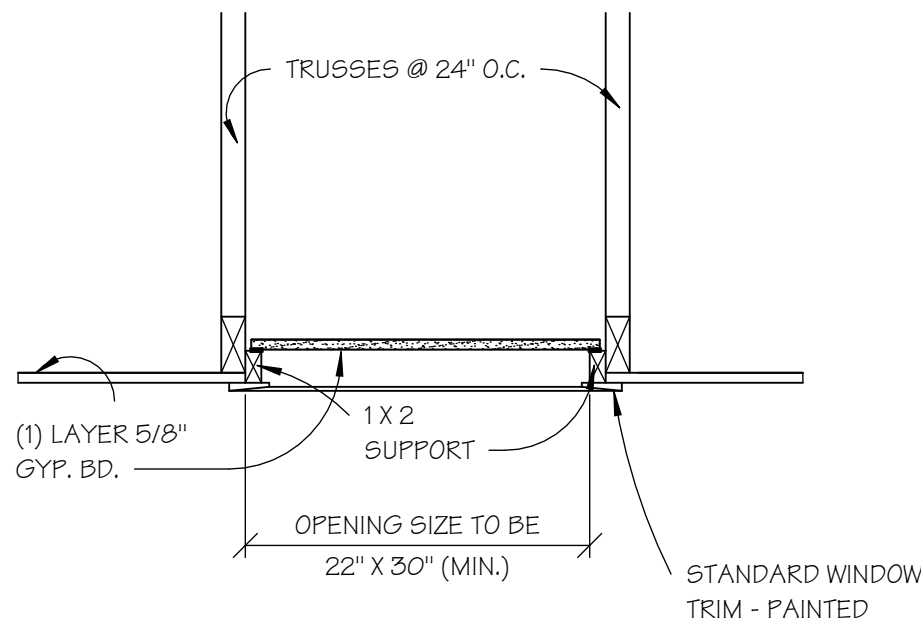
-  DOWNSPOUT LOCATIONS
-  POD VENT

ATTIC COMPARTMENT VENTILATION

| NAME       | TYPE        | AREA    | TOTAL REQ'D VENT. (SQ. IN.) | SOFFIT VENT (SQ. IN.) | ROOF VENT (SQ. IN.) |
|------------|-------------|---------|-----------------------------|-----------------------|---------------------|
| GARAGE "A" | ATTIC SPACE | 1135 SF | 545                         | 272                   | 272                 |

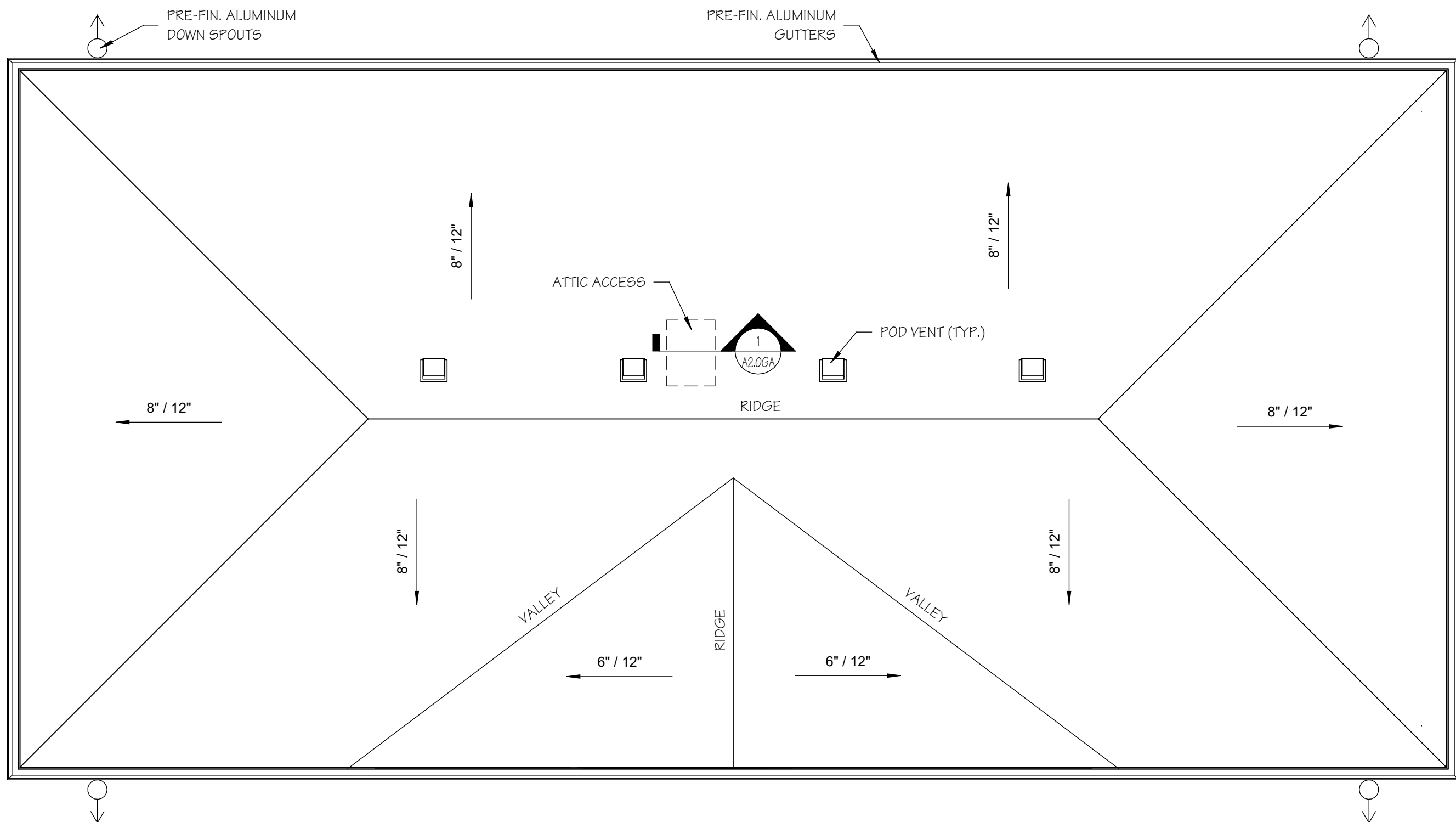
GENERAL ATTIC VENTILATION NOTES

- 1) TOTAL FREE AREA SHALL EQUAL 1/300 OF ATTIC AREAS W/50% OF VENT AREA AT ROOF AND 50% AT SOFFITS.
- 2) SPECIFIED VENTILATION POD QUANTITY BASED ON 80 SQ. IN FREE AREA PER POD. ADJUST QUANTITY AS REQUIRED BASED ON FREE AREA OF SPECIFIC VENTILATION POD USED.



ATTIC ACCESS

1  
A2.03A SCALE: 1" = 1'-0"



GARAGE "A" ROOF PLAN

2  
A2.03A SCALE: 1/4" = 1'-0"

(GARAGE BLDGS. G1, G4, G6, G7, G8 & G10 - SEE CIVIL)

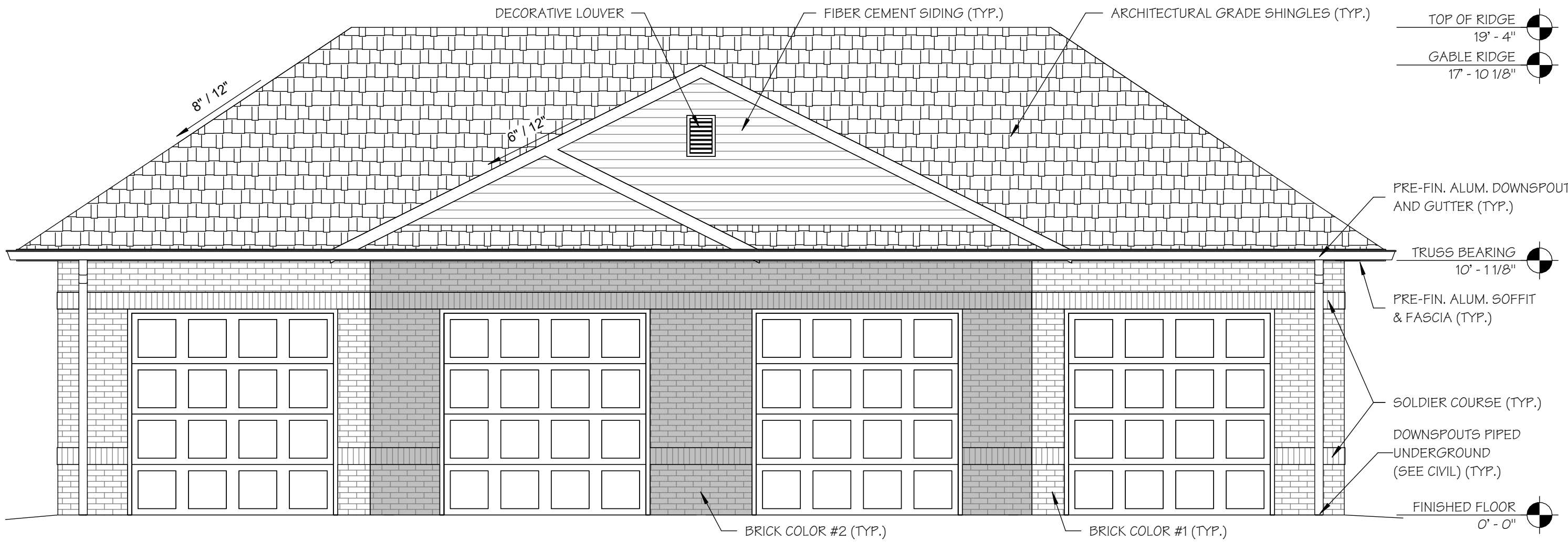




BUILDING NOTES

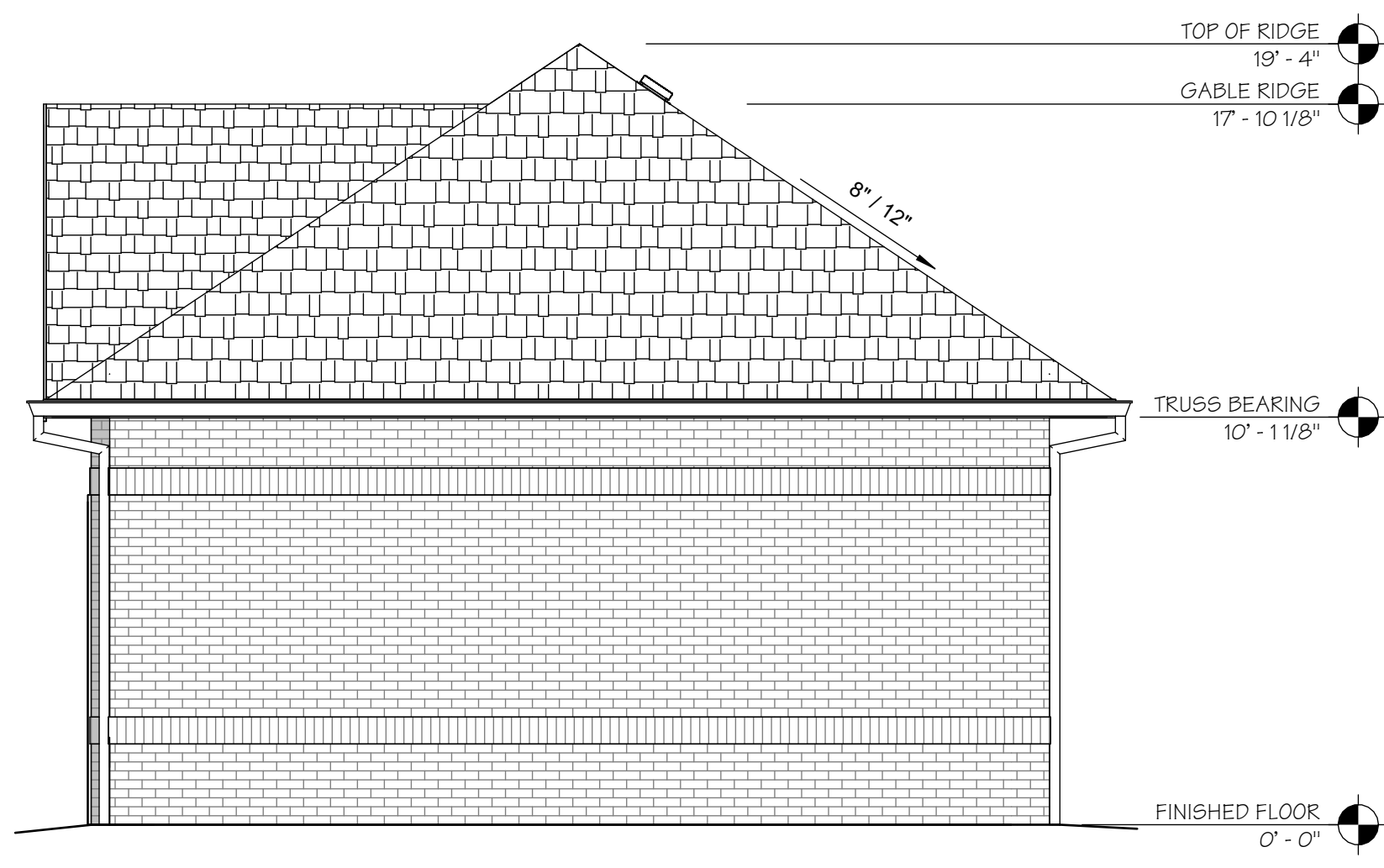
- 1) BRICK CONTROL JOINTS EVERY 20'-0" MAX.
- 2) CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS.

NOTE: ELEVATIONS SHOWN ARE FOR GARAGE BUILDINGS G1 & G10.  
ELEVATIONS FOR GARAGE BUILDINGS G4, G6, G7 & G8 ARE SIMILAR.



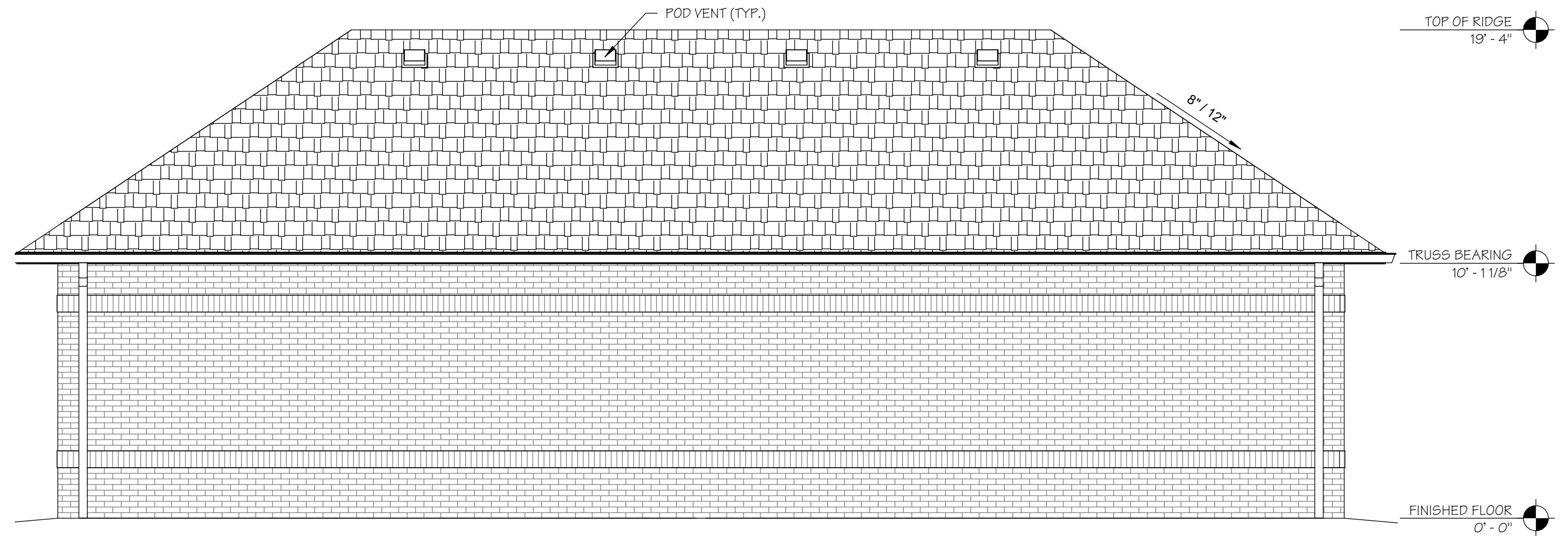
GARAGE "A" FRONT ELEVATION

1  
A3.0GA  
SCALE: 1/4" = 1'-0"



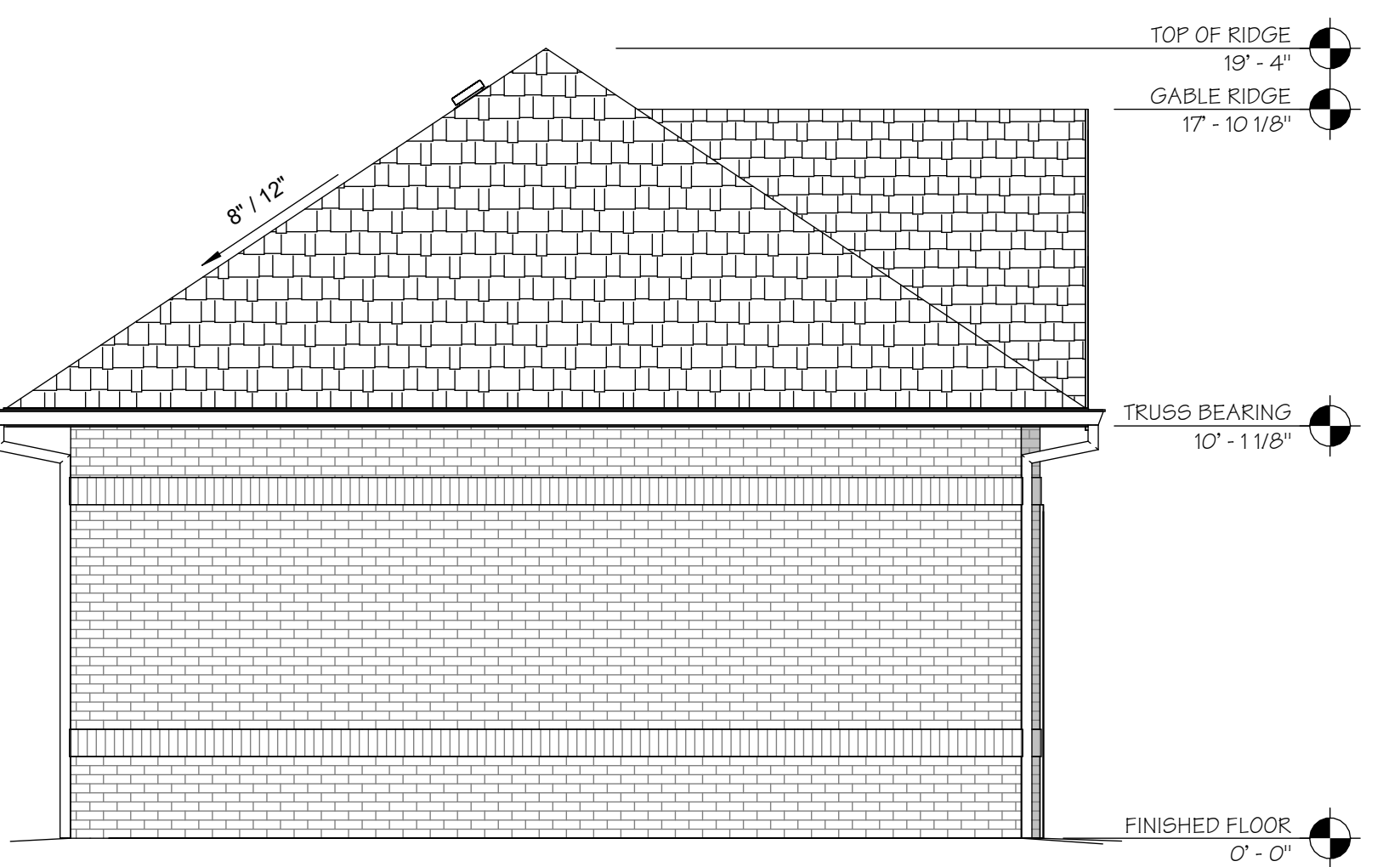
GARAGE "A" RIGHT ELEVATION

2  
A3.0GA  
SCALE: 1/4" = 1'-0"



GARAGE "A" REAR ELEVATION

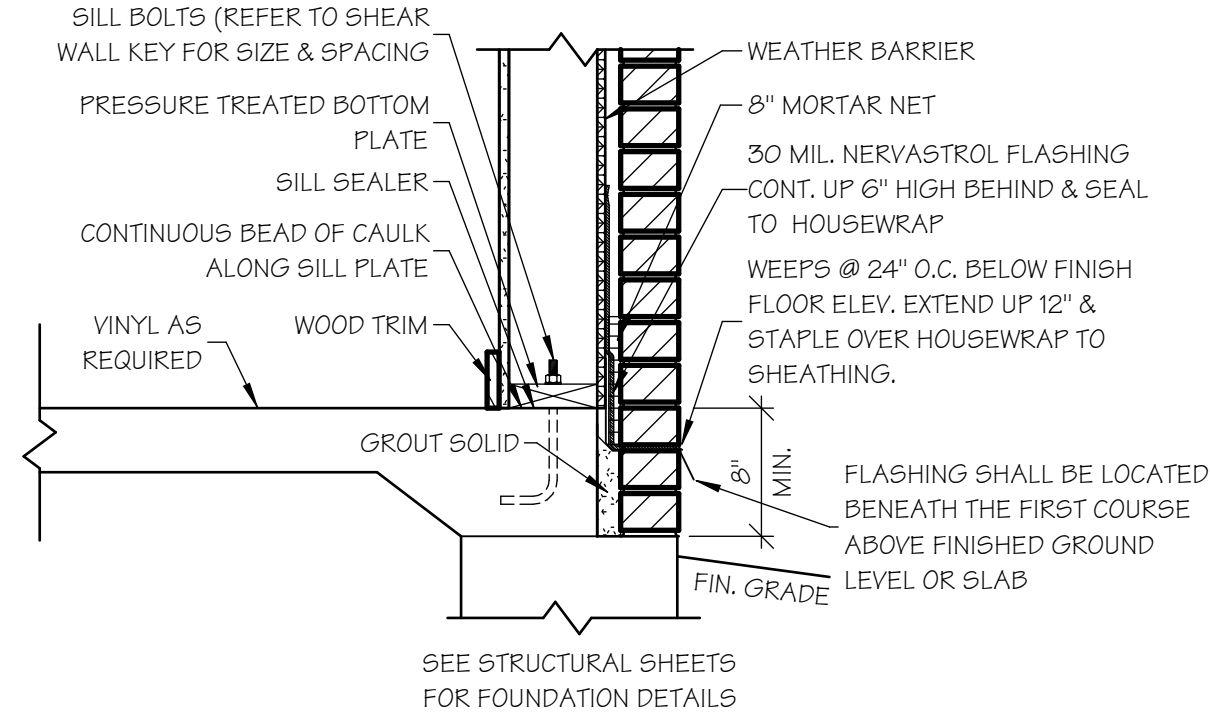
3  
A3.0GA  
SCALE: 1/4" = 1'-0"



GARAGE "A" LEFT ELEVATION

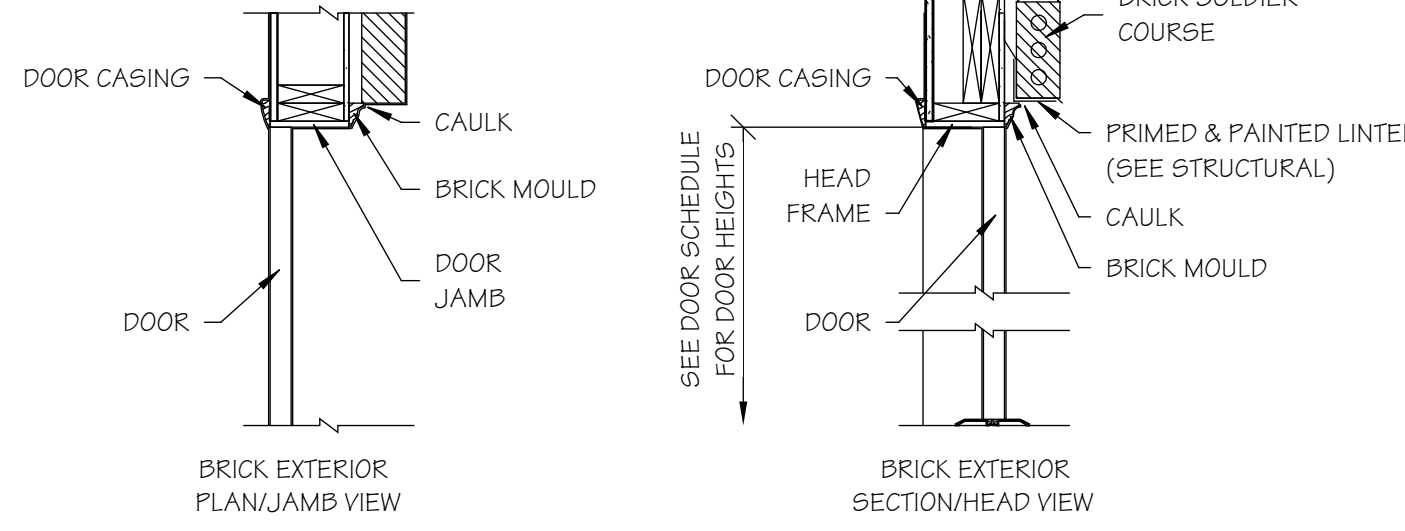
4  
A3.0GA  
SCALE: 1/4" = 1'-0"





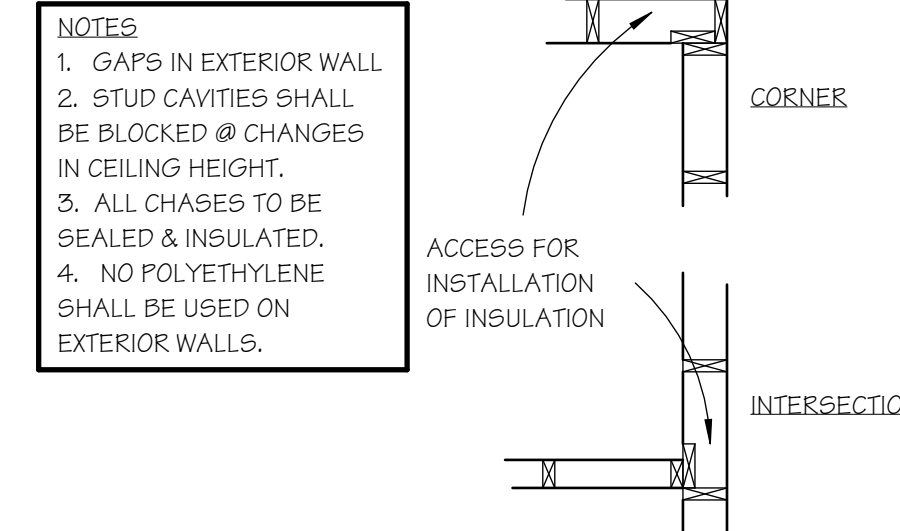
FOUNDATION  
FLASHING DETAIL

1  
A4.0GA SCALE: 1" = 1'-0"



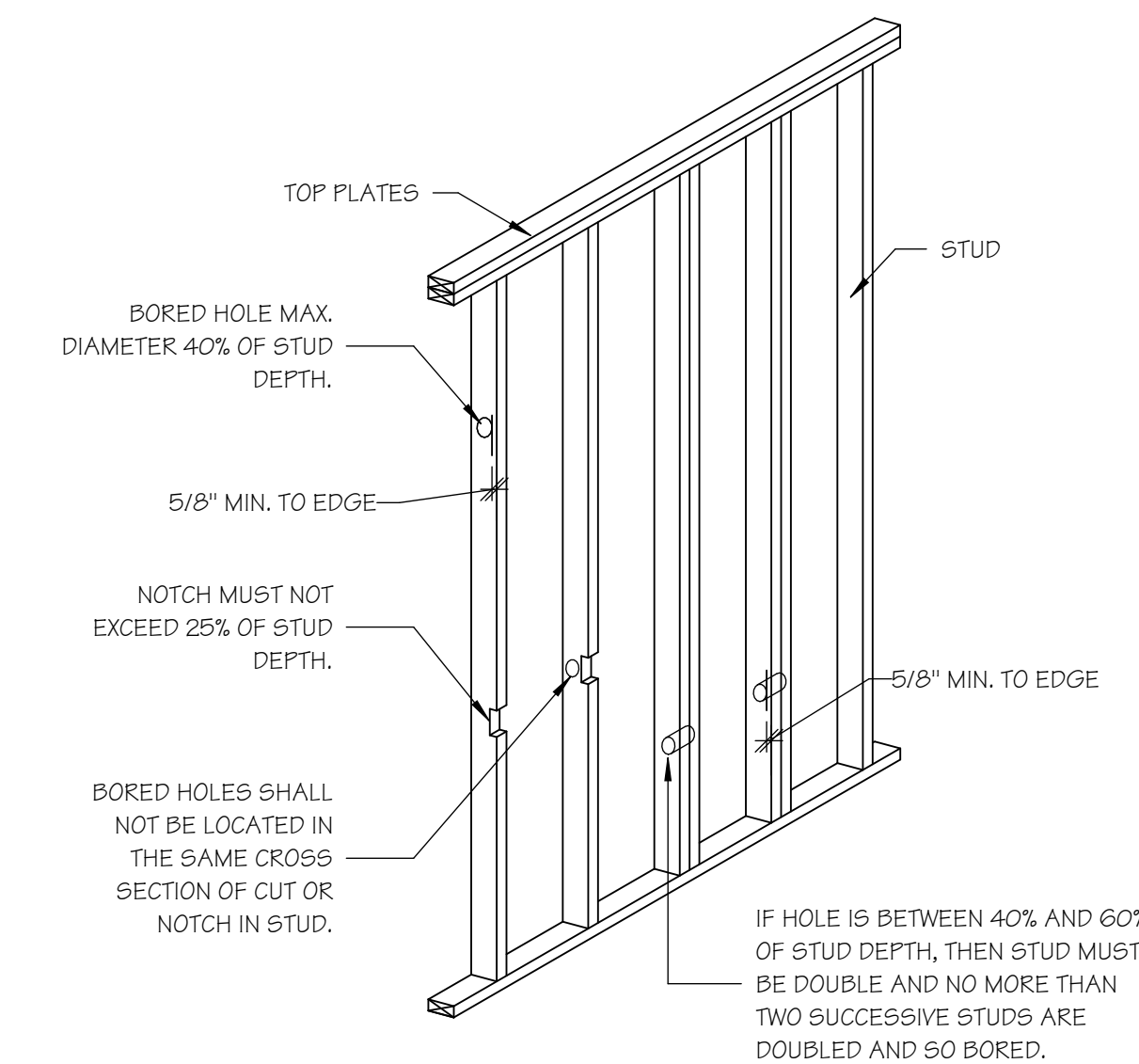
WALL SECTIONS AND  
DETAILS @ EXTERIOR DOORS

2  
A4.0GA SCALE: 3/4" = 1'-0"



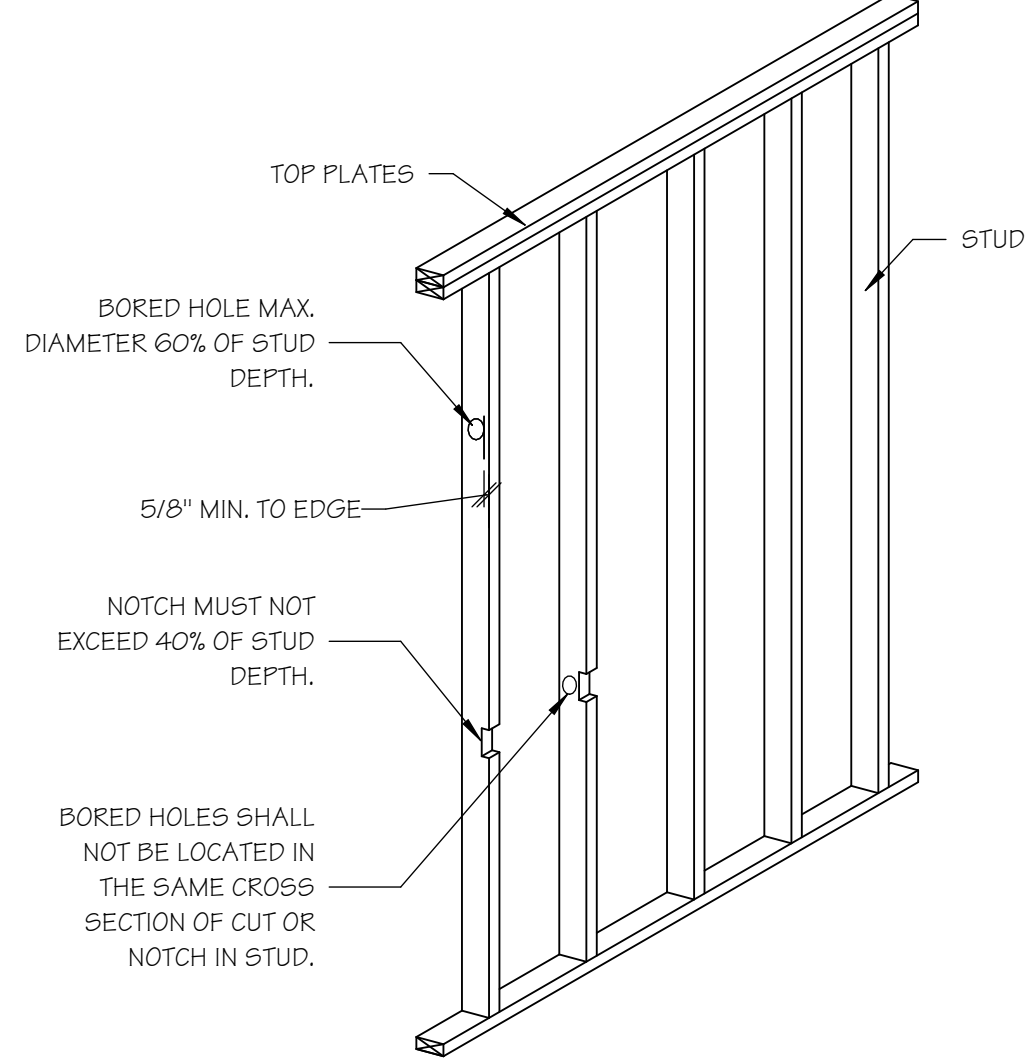
EXT. WALL / ADVANCED  
FRAMING DETAIL

3  
A4.0GA SCALE: 1/2" = 1'-0"



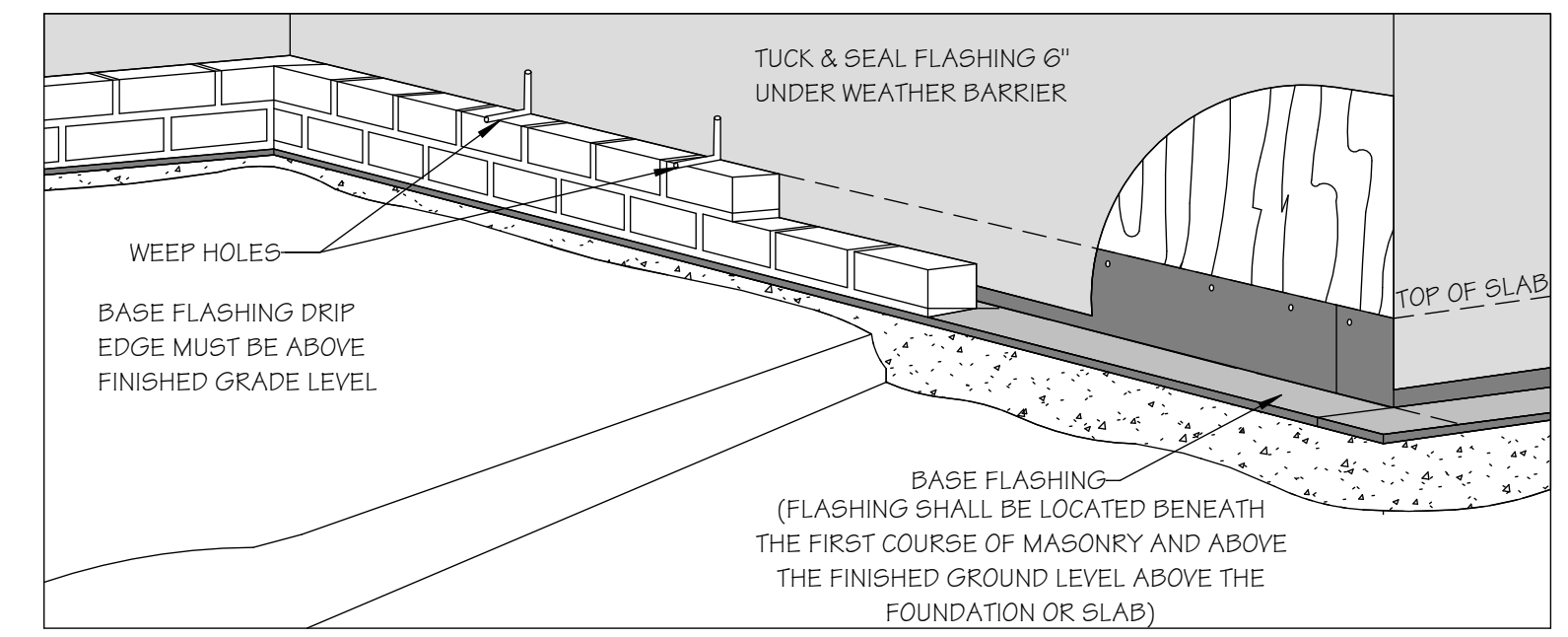
LOAD BEARING WALL NOTCHING  
& BORING HOLE DETAILS

4  
A4.0GA SCALE: 1/2" = 1'-0"



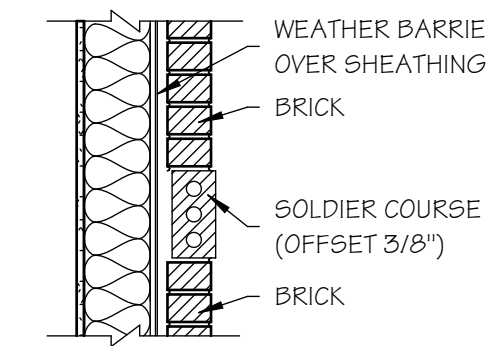
NON-LOAD BEARING WALL  
NOTCHING & BORING HOLE DETAILS

5  
A4.0GA SCALE: 1/2" = 1'-0"



BASE FLASHING @ BRICK

6  
A4.0GA SCALE: 3/4" = 1'-0"



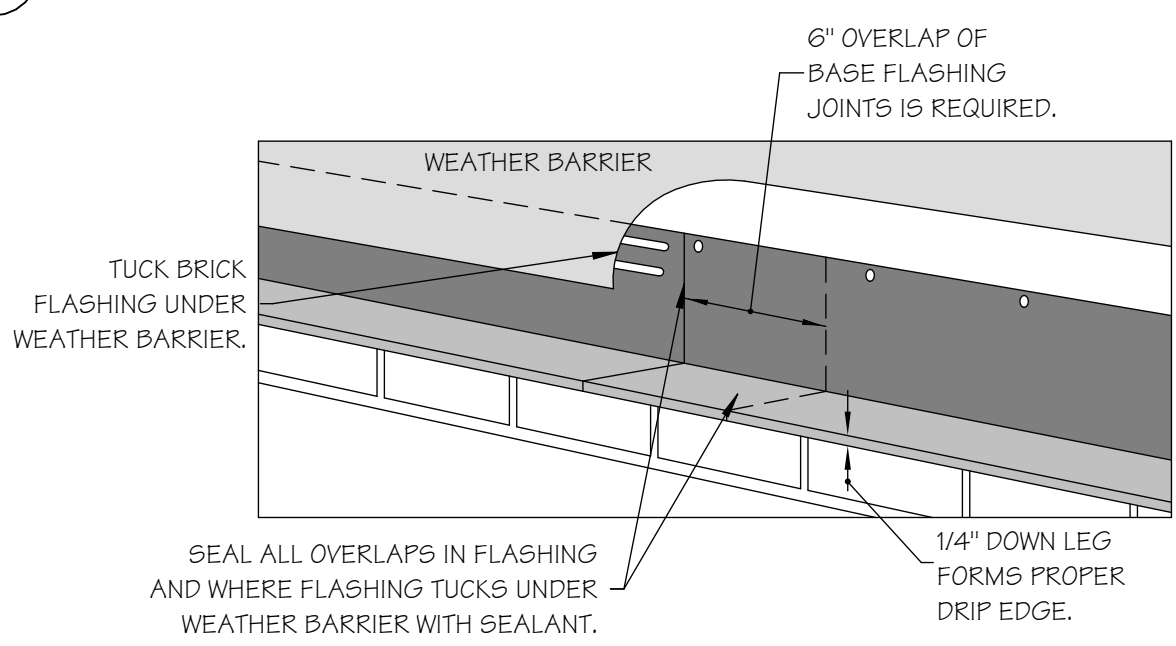
SOLDIER COURSE DETAIL

7  
A4.0GA SCALE: 3/4" = 1'-0"

TYP. ROOF/CEILING CONSTRUCTION (U.N.O.)  
(TOP TO BOTTOM)  
• ARCHITECTURAL GRADE SHINGLES  
• (1) LAYER 15# FELT  
• ROOF SHEATHING (SEE STRUCTURAL DRAWINGS FOR SIZING & FASTENING REQUIREMENTS)  
• PRE-ENGINEERED WOOD TRUSSES. (SEE STRUCTURAL)  
• (1) LAYER 5/8" GYP. BD.

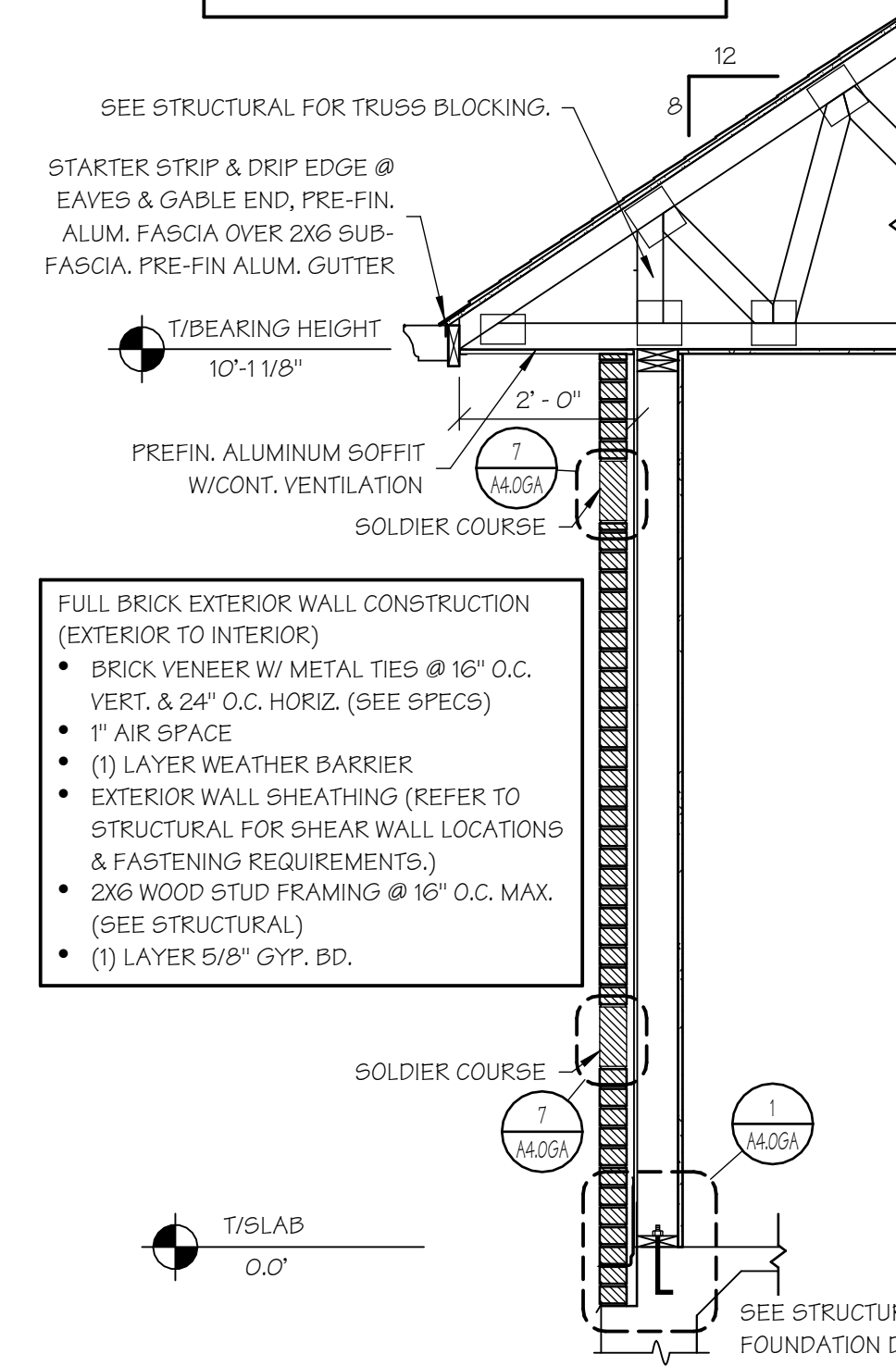
TYP. ROOF/CEILING CONSTRUCTION (U.N.O.)  
(TOP TO BOTTOM)  
• ARCHITECTURAL GRADE SHINGLES  
• (1) LAYER 15# FELT  
• ROOF SHEATHING (SEE STRUCTURAL DRAWINGS FOR SIZING & FASTENING REQUIREMENTS)  
• PRE-ENGINEERED WOOD TRUSSES. (SEE STRUCTURAL)  
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• PRE-ENGINEERED WOOD TRUSSES. (SEE STRUCTURAL)  
• (1) LAYER 5/8" GYP. BD.



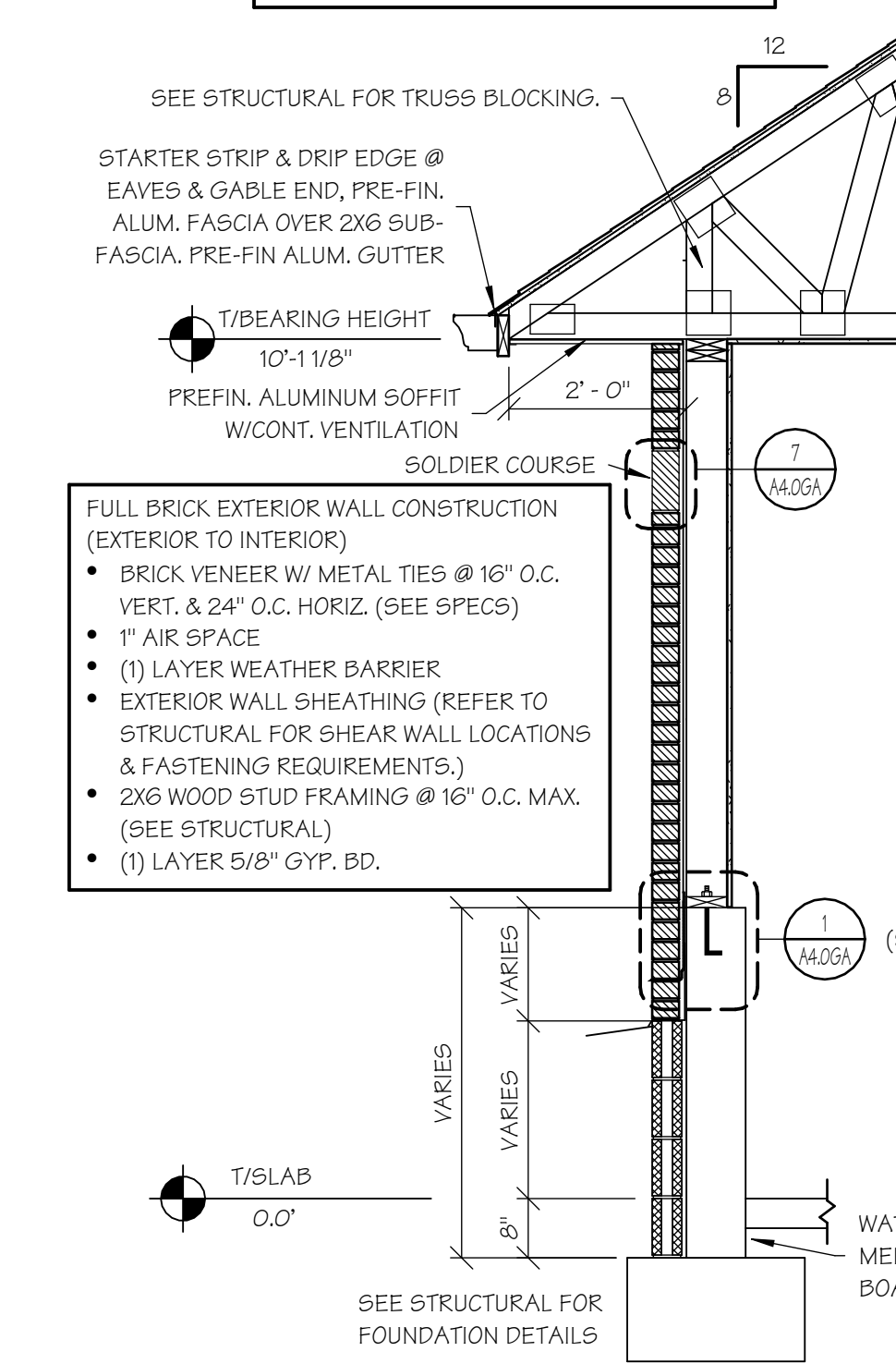
JOINT FLASHING DETAIL @ BRICK

8  
A4.0GA SCALE: 3/4" = 1'-0"



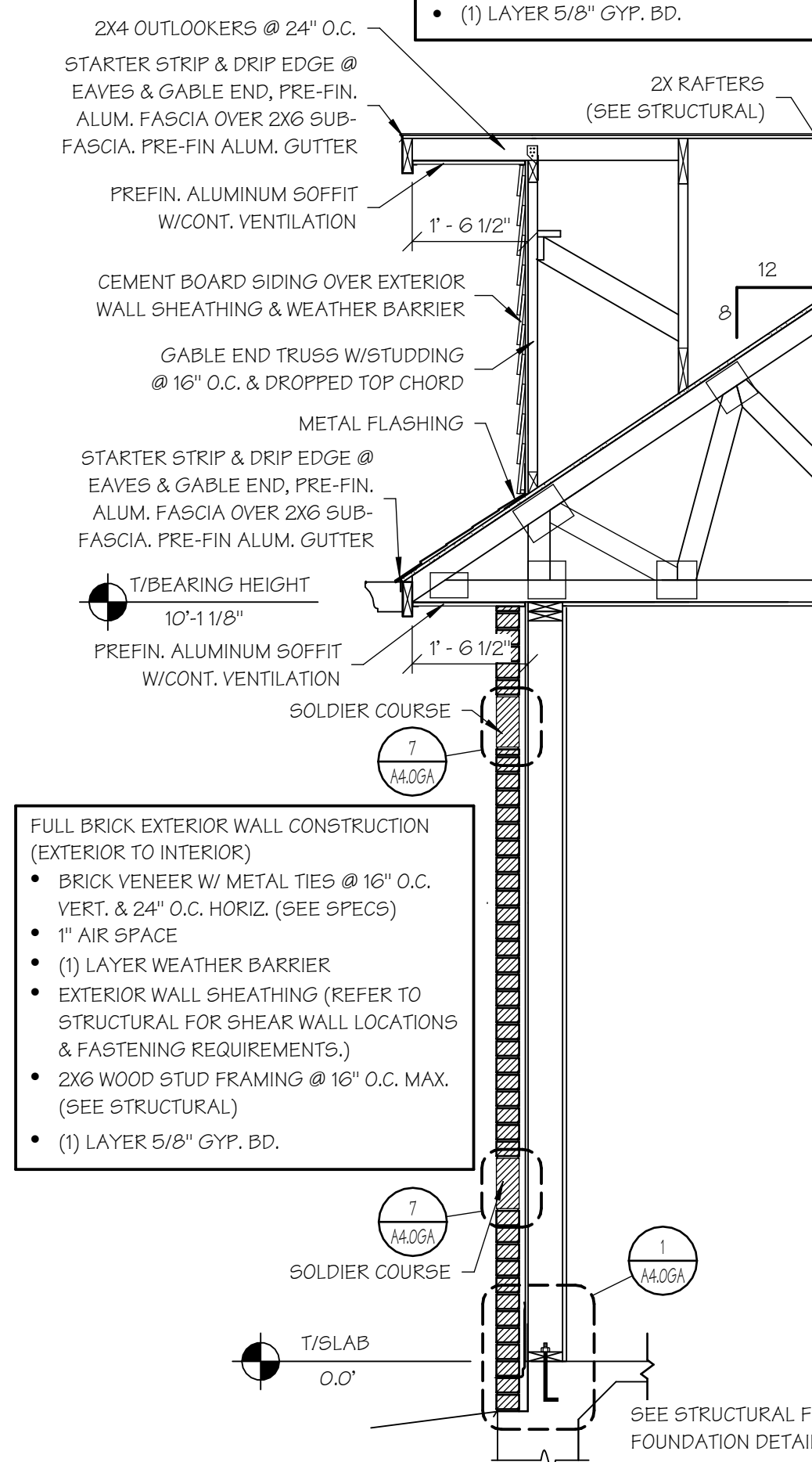
WALL SECTION @ EAVE 1

11  
A4.0GA SCALE: 1/2" = 1'-0"



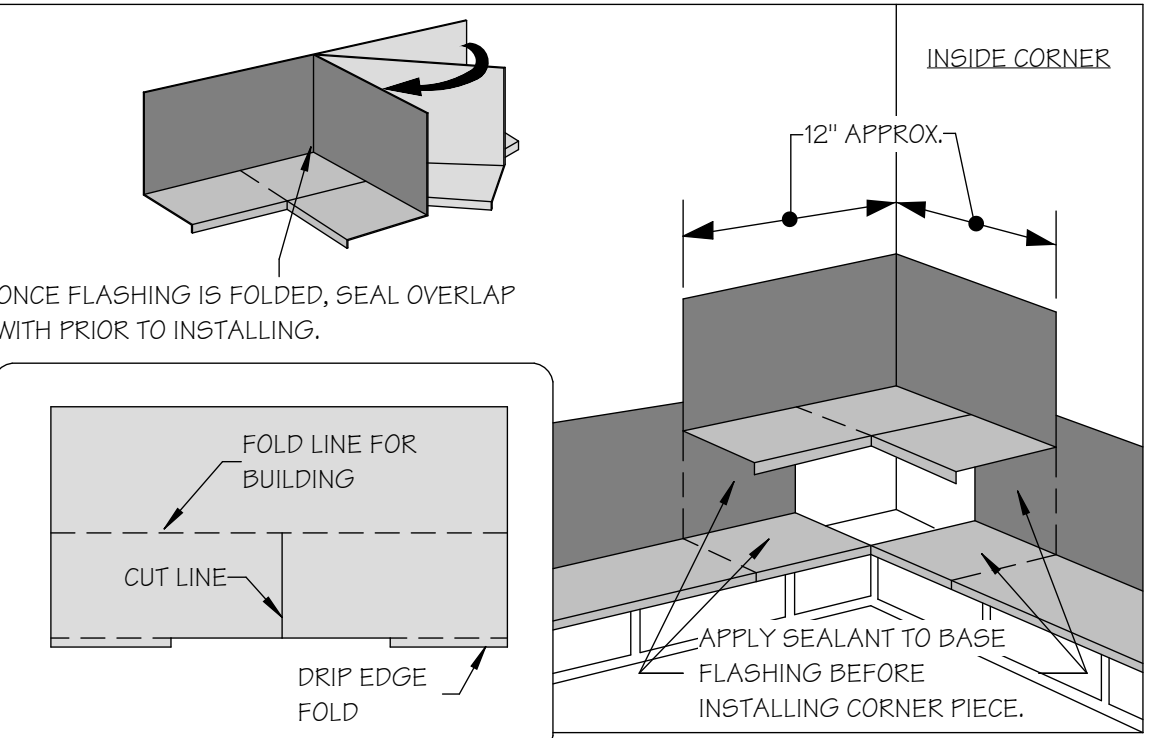
WALL SECTION @ EAVE 2

12  
A4.0GA SCALE: 1/2" = 1'-0"



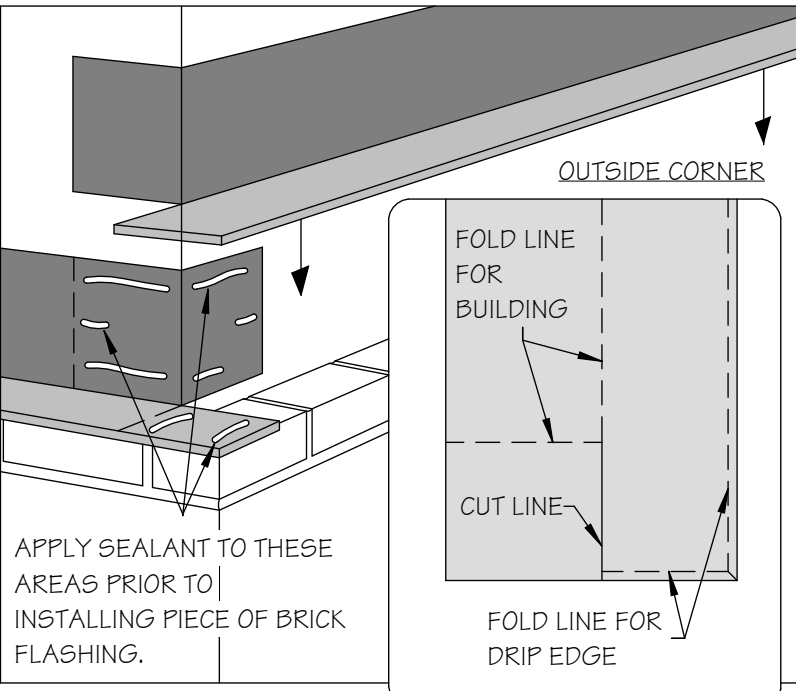
WALL SECTION @ RAKE

13  
A4.0GA SCALE: 1/2" = 1'-0"



INSIDE CORNER FLASHING  
DETAIL @ BRICK

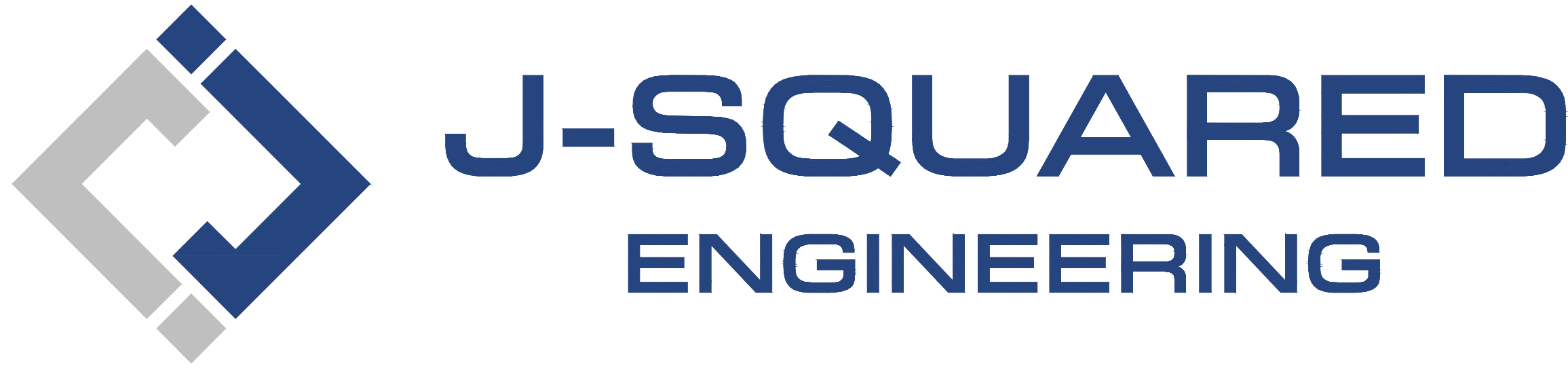
9  
A4.0GA SCALE: 3/4" = 1'-0"



OUTSIDE CORNER FLASHING  
DETAIL @ BRICK

10  
A4.0GA SCALE: 3/4" = 1'-0"





ELECTRICAL DESIGN DRAWINGS FOR:

The Village at Discovery Park Alura Apartments Garage #7

Northeast Douglas Street  
Lee's Summit, Jackson County, Missouri

GENERAL MEP SPECIFICATIONS

1. GENERAL
- 1.1.

ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH LOCALLY ADOPTED CODES AND ORDINANCES. IT IS THE RESPONSIBILITY OF CONTRACTOR TO REVIEW AND UNDERSTAND ALL DRAWINGS AND SPECIFICATIONS IN CONTRACT DOCUMENTS. EACH CONTRACTOR IS RESPONSIBLE FOR ALL WORK ASSOCIATED WITH THEIR TRADE, REGARDLESS OF WHERE WORK IS DEPICTED IN PROJECT DRAWINGS OR SPECIFICATIONS.
- 1.2.

LAYOUT OF SYSTEMS SHOWN ON PLANS ARE APPROXIMATE AND SCHEMATIC IN NATURE. ALL SYSTEMS WILL NEED TO BE FIELD-COORDINATED. CONTRACTOR SHALL INCLUDE THIS COORDINATION IN THEIR SCOPE AND INCLUDE ALL COSTS OF MODIFYING LAYOUT AS REQUIRED IN THEIR BID. PLANS ARE NOT INTENDED TO BE SHOP DRAWINGS FROM WHICH MATERIALS CAN BE ORDERED, FABRICATED, OR INSTALLED WITHOUT ADDITIONAL FIELD MEASUREMENTS AND COORDINATION.
- 1.3.

NOT ALL SPECIFIC PIECES AND COMPONENTS OF EACH SYSTEM ARE DETAILED OR OUTLINED ON PLANS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY PARTS AND LABOR TO PRODUCE A COMPLETE AND FULLY OPERATIONAL SYSTEM UNLESS STATED OTHERWISE ON PLANS. CONTRACTOR IS TO PROVIDE AND INCLUDE ALL EQUIPMENT AND MATERIAL NEEDED TO COMPLETE WORK ASSOCIATED WITH THEIR BID UNLESS ANY ITEMS ARE SPECIFICALLY NOTED ON PLANS AS PROVIDED BY OTHERS. ALL MATERIALS TO BE NEW, FIRST CLASS, AND INSTALLED PER MANUFACTURER'S PUBLISHED INSTRUCTIONS.
- 1.4.

WHERE CONFLICTS EXIST BETWEEN MEP PLANS AND CIVIL, ARCHITECTURAL, OR STRUCTURAL PLANS, NOTIFY MEP ENGINEER OF DISCREPANCIES FOR CLARIFICATION PRIOR TO PERFORMING ANY WORK THAT MAY CONTRADICT INFORMATION ELSEWHERE IN THE PROJECT PLANS.
- 1.5.

THESE PLANS ARE NOT TO BE SCALED. SEE ARCHITECTURAL PLANS FOR DIMENSIONS. WHERE THERE IS A CONFLICT BETWEEN ARCHITECTURAL DIMENSIONS AND MEP DIMENSIONS, ARCHITECTURAL SHALL GOVERN.
- 1.6.

CONTRACTOR IS TO INCLUDE IN THEIR SCOPE THE COST OF ALL PERMITS, INSPECTIONS, METERING, TAPS, ETC. ASSOCIATED WITH THEIR WORK.
- 1.7.

CONTRACTOR IS RESPONSIBLE FOR ALL EXCAVATION, CUTTING, CORING, PATCHING, AND BACKFILL REQUIRED TO COMPLETE THEIR WORK, UNLESS NOTED OTHERWISE ON PLANS.
- 1.8.

SPECIFIC EQUIPMENT MANUFACTURERS AND/OR MODEL NUMBERS LISTED ON PLANS ARE TO ESTABLISH A BASIS-OF-DESIGN FOR QUALITY AND PERFORMANCE, VERIFY THAT SUBSTITUTIONS WILL BE ACCEPTABLE PRIOR TO PURCHASE & INSTALLATION.
- 1.9.

NOTIFY ENGINEER OF ANY MAJOR PLAN DISCREPANCIES OR CONFLICTS PRIOR TO PROVIDING BIDS OR COMPLETING ANY WORK.
- 1.10.

SEE DISCIPLINE SHEETS FOR ADDITIONAL TRADE SPECIFIC SPECIFICATIONS.
- 1.11.

WHERE SHUTDOWN OF ANY EXISTING UTILITY OR SERVICE TO BUILDING IS REQUIRED FOR COMPLETION OF WORK, COORDINATE OUTAGE WITH OWNER AS TO NOT DISRUPT TYPICAL OPERATIONS.
- 1.12.
2. WORKMANSHIP
- 2.1.

SYSTEMS SHALL BE INSTALLED IN A FIRST-CLASS MANNER USING BEST ACCEPTABLE METHODS AND PRACTICES.
- 2.2.

ALL SYSTEMS SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BUILDING ORIENTATION. COMPONENTS SHALL BE INSTALLED LEVEL AND PLUMB WITH ATTENTION GIVEN TO OVERALL AESTHETICS.
- 2.3.

CONTRACTOR IS RESPONSIBLE FOR COORDINATING EQUIPMENT LOCATIONS AND SYSTEM ROUTING WITH OTHER TRADES PRIOR TO INSTALLATION.
- 2.4.

CONTRACTOR TO GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE THE COMPLETED PROJECT IS RELEASED TO THE OWNER, UNLESS NOTED OTHERWISE ON PLANS.
- 2.5.

DURING INSTALLATION OF MATERIALS OR ACTIVITIES IN NEW WORK SCOPE, AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT TO REMAIN. ANY DAMAGE TO EXISTING SURFACES OR EQUIPMENT SHALL BE CORRECTED AT NO COST TO OWNER.

DEFERRED SUBMITTAL NOTES

1. FIRE ALARM SYSTEM
- 1.1.

FIRE ALARM CONTRACTOR SHALL PROVIDE DEFERRED SUBMITTAL PACKAGE FOR FIRE ALARM SYSTEM. SUBMITTAL SHALL INCLUDE BATTERY CALCULATIONS, VOLTAGE DROP CALCULATIONS, EQUIPMENT SPECIFICATIONS FOR DEVICES AND PANELS, ETC. DESIGN SHALL BE SEALED BY A QUALIFIED DESIGN PROFESSIONAL LICENSED BY THE STATE.
- 1.2.

FIRE ALARM SYSTEM COMPONENTS SHOWN (IF APPLICABLE) ARE GENERAL AND SCHEMATIC IN NATURE, SHOWN FOR APPROXIMATE ROUGH-IN LOCATIONS AND QUANTITIES ONLY. CONTRACTOR TO VERIFY EXACT DEVICE LOCATIONS AND REQUIREMENTS WITH FIRE ALARM SYSTEM DESIGNER OF RECORD PRIOR TO ROUGH-IN.
2. FIRE SPRINKLER SYSTEM
- 1.1.

FIRE SPRINKLER CONTRACTOR TO PROVIDE DEFERRED SUBMITTAL PACKAGE FOR FIRE SPRINKLER SYSTEM. SUBMITTAL SHALL INCLUDE HYDRAULIC CALCULATIONS AND SPRINKLER SYSTEM DRAWINGS SEALED BY A QUALIFIED DESIGN PROFESSIONAL LICENSED BY THE STATE.
- 1.2.

WHERE COMBINED FIRE & DOMESTIC WATER SUPPLY LINES ARE SHOWN ON PLANS, INSTALLING CONTRACTOR SHALL VERIFY WITH FIRE SPRINKLER CONTRACTOR THAT INCOMING LINE SIZE IS ADEQUATE FOR FIRE SUPPRESSION SYSTEM.

REFERENCED CODES IN EFFECT

- PROJECT HAS BEEN DESIGNED IN COMPLIANCE WITH THE FOLLOWING CODES LISTED BELOW, BUT THIS IS NOT AN EXHAUSTIVE LIST. PROJECT SHALL COMPLY WITH ALL APPLICABLE CODES, STANDARDS, AND LOCAL REQUIREMENTS.
- 2018 INTERNATIONAL MECHANICAL CODE
  - 2018 INTERNATIONAL PLUMBING CODE
  - 2018 INTERNATIONAL FUEL GAS CODE
  - 2018 INTERNATIONAL FIRE CODE
  - 2017 NATIONAL ELECTRIC CODE

FIRE RATED PENETRATION NOTES

- THIS BUILDING CONTAINS FIRE RATED ASSEMBLIES. SEE ARCHITECTURAL PLANS FOR LOCATIONS AND DETAILS.
- A UL-LISTED FIRESTOP SYSTEM SHALL BE INSTALLED AT EACH PENETRATION OF A HORIZONTAL OR VERTICAL RATED ASSEMBLY IN ACCORDANCE WITH ASTM E814 OR UL 1479.
- EACH CONTRACTOR IS RESPONSIBLE FOR PROVIDING PROTECTION FOR THEIR PENETRATIONS THRU RATED ASSEMBLIES.
- GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING A CATALOG OF ALL UL LISTED FIRESTOP ASSEMBLIES, AND KEEPING A PHYSICAL COPY OF DETAILS FOR EACH USED FIRESTOP ASSEMBLY ON SITE FOR REFERENCE.

SHEET LIST TABLE

| SHEET # | SHEET TITLE            |
|---------|------------------------|
| MEP1    | ELECTRICAL COVER SHEET |
| MEP2    | SITE UTILITIES PLAN    |
| E101    | ELECTRICAL PLAN        |

RELEASED FOR  
CONSTRUCTION  
As Noted on Plans Review

Development Services Department  
Lee's Summit, Missouri  
04/15/2025

STATE OF MISSOURI  
JAMES P. WATSON  
NUMBER  
PE-2015017071  
PROFESSIONAL ENGINEER

James Watson, P.E.  
PE-2015017071  
MO Certificate of Authority # 2018029680

April 15, 2025

J-SQUARED  
ENGINEERING

2400 Bluff Creek Drive, Suite 101  
Columbia, Missouri 65201  
573.234.4492  
www.j-squaredeng.com

|                |                |
|----------------|----------------|
| J2 PROJECT No: | J21357         |
| J2 DESIGN:     | ACW            |
| ISSUE TITLE    | DATE           |
| PERMIT SET     | 04 - 15 - 2025 |
|                |                |
|                |                |
|                |                |
|                |                |
|                |                |

MECHANICAL - ELECTRICAL - PLUMBING DESIGN DRAWINGS FOR:

The Village at Discovery Park Alura Apartments

Northeast Douglas Street  
Lee's Summit, Jackson County, Missouri

AHJ APPROVAL STAMP

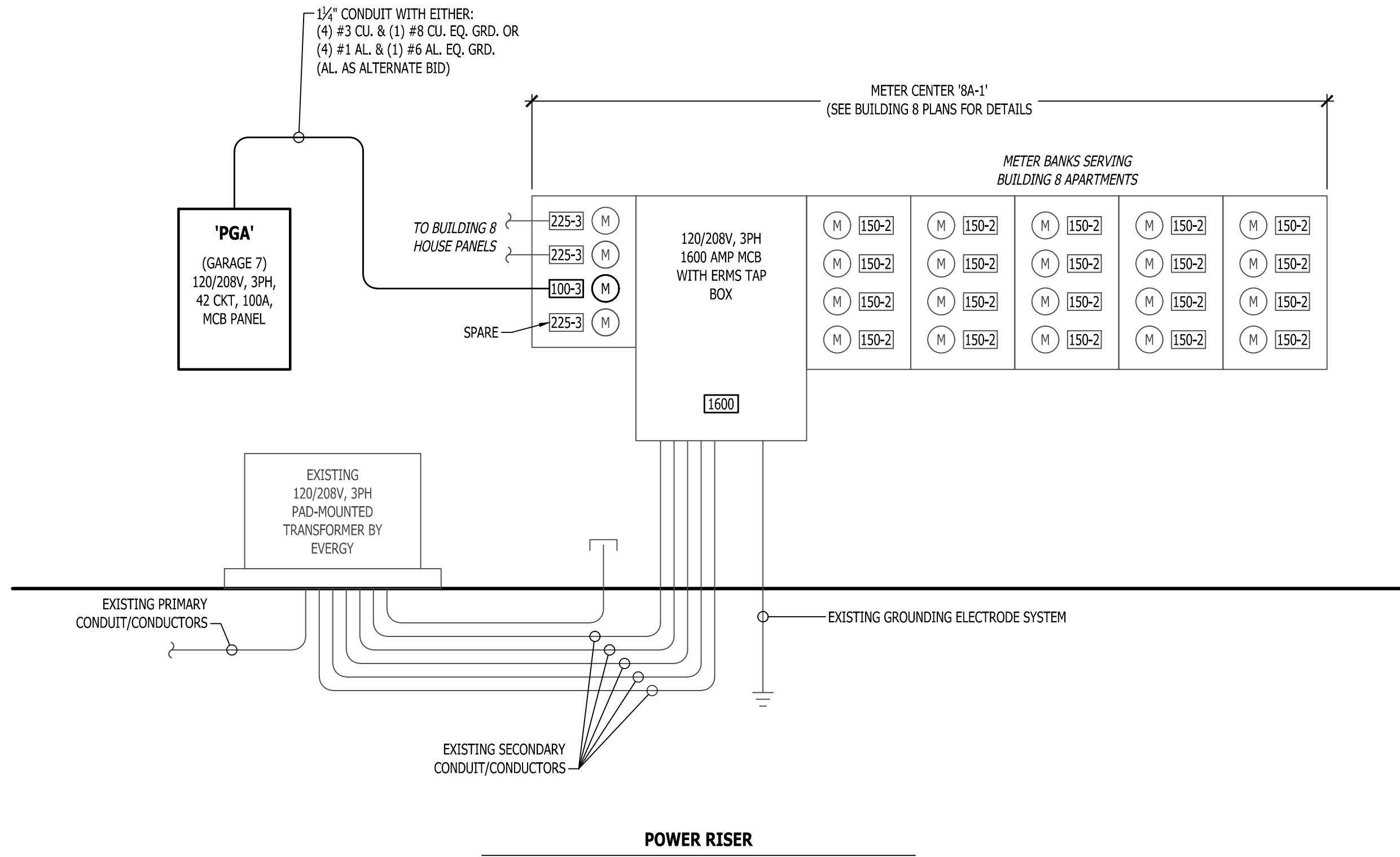
SHEET TITLE

ELECTRICAL  
PLAN COVER  
SHEET

SHEET NUMBER

MEP1





| GARAGE PANEL 'PGA' SCHEDULE |                   |              |                         |       |      |                         |                      |                |  |  |  |  |
|-----------------------------|-------------------|--------------|-------------------------|-------|------|-------------------------|----------------------|----------------|--|--|--|--|
| PANEL SPECIFICATIONS        |                   |              |                         |       |      | TOTAL CONNECTED LOAD    |                      |                |  |  |  |  |
| VOLTAGE: 120/208V 3-PH      |                   |              | NEMA RATING: 3R         |       |      | PHASE "A" LOAD: 56 AMPS |                      |                |  |  |  |  |
| AMPACITY: 100A MCB          |                   |              | PANEL MOUNTING: SURFACE |       |      | PHASE "B" LOAD: 70 AMPS |                      |                |  |  |  |  |
| AIC-RATING: 10kA            |                   |              |                         |       |      | PHASE "C" LOAD: 67 AMPS |                      |                |  |  |  |  |
| CIRCUIT NUMBER              | DESCRIPTION       | BREAKER SIZE | AMPS                    | PHASE | AMPS | BREAKER SIZE            | DESCRIPTION          | CIRCUIT NUMBER |  |  |  |  |
| 1                           | GARAGE RECEPTS.   | 20-1         | 6                       | A     | 5    | 20-1                    | OVERHEAD DOOR OPENER | 2              |  |  |  |  |
| 3                           | EXTERIOR RECEPTS. | 20-1         | 3                       | B     | 5    | 20-1                    | OVERHEAD DOOR OPENER | 4              |  |  |  |  |
| 5                           | SPARE             | 20-1         |                         | C     | 5    | 20-1                    | OVERHEAD DOOR OPENER | 6              |  |  |  |  |
| 7                           | SPARE             | 20-1         |                         | A     | 5    | 20-1                    | OVERHEAD DOOR OPENER | 8              |  |  |  |  |
| 9                           | SPARE             | 20-1         |                         | B     | 20   | 30-2                    | EV CHARGING RECEPT.  | 10             |  |  |  |  |
| 11                          | SPARE             | 20-1         |                         | C     | 20   | -                       | -                    | 12             |  |  |  |  |
| 13                          | SPARE             | 20-1         |                         | A     | 20   | 30-2                    | EV CHARGING RECEPT.  | 14             |  |  |  |  |
| 15                          | SPARE             | 20-1         |                         | B     | 20   | -                       | -                    | 16             |  |  |  |  |
| 17                          | SPARE             | 20-1         |                         | C     | 20   | 30-2                    | EV CHARGING RECEPT.  | 18             |  |  |  |  |
| 19                          | SPARE             | 20-1         |                         | A     | 20   | -                       | -                    | 20             |  |  |  |  |
| 21                          | SPARE             | 20-1         |                         | B     | 20   | 30-2                    | EV CHARGING RECEPT.  | 22             |  |  |  |  |
| 23                          | SPARE             | 20-1         |                         | C     | 20   | -                       | -                    | 24             |  |  |  |  |
| 25                          | SPARE             | 20-1         |                         | A     |      |                         | OPEN                 | 26             |  |  |  |  |
| 27                          | SPARE             | 20-1         |                         | B     | 2    | 20-1                    | INTERIOR LIGHTING    | 28             |  |  |  |  |
| 29                          | SPARE             | 20-1         |                         | C     | 2    | 20-1                    | EXTERIOR LIGHTING    | 30             |  |  |  |  |

NOTES:

A: PANEL SHALL BE EQUAL TO SQUARE D MODEL "QO"

B: ELECTRICIAN SHALL VERIFY EXACT EQUIPMENT OVERCURRENT PROTECTION REQUIREMENTS PRIOR TO PURCHASE & INSTALLATION OF EQUIPMENT.

C: AFTER COMPLETION OF WORK, ELECTRICIAN SHALL PROVIDE A TYPE WRITTEN PANEL DIRECTORY IN NEW PANEL.

#### SITE UTILITIES PLAN SYMBOL LEGEND

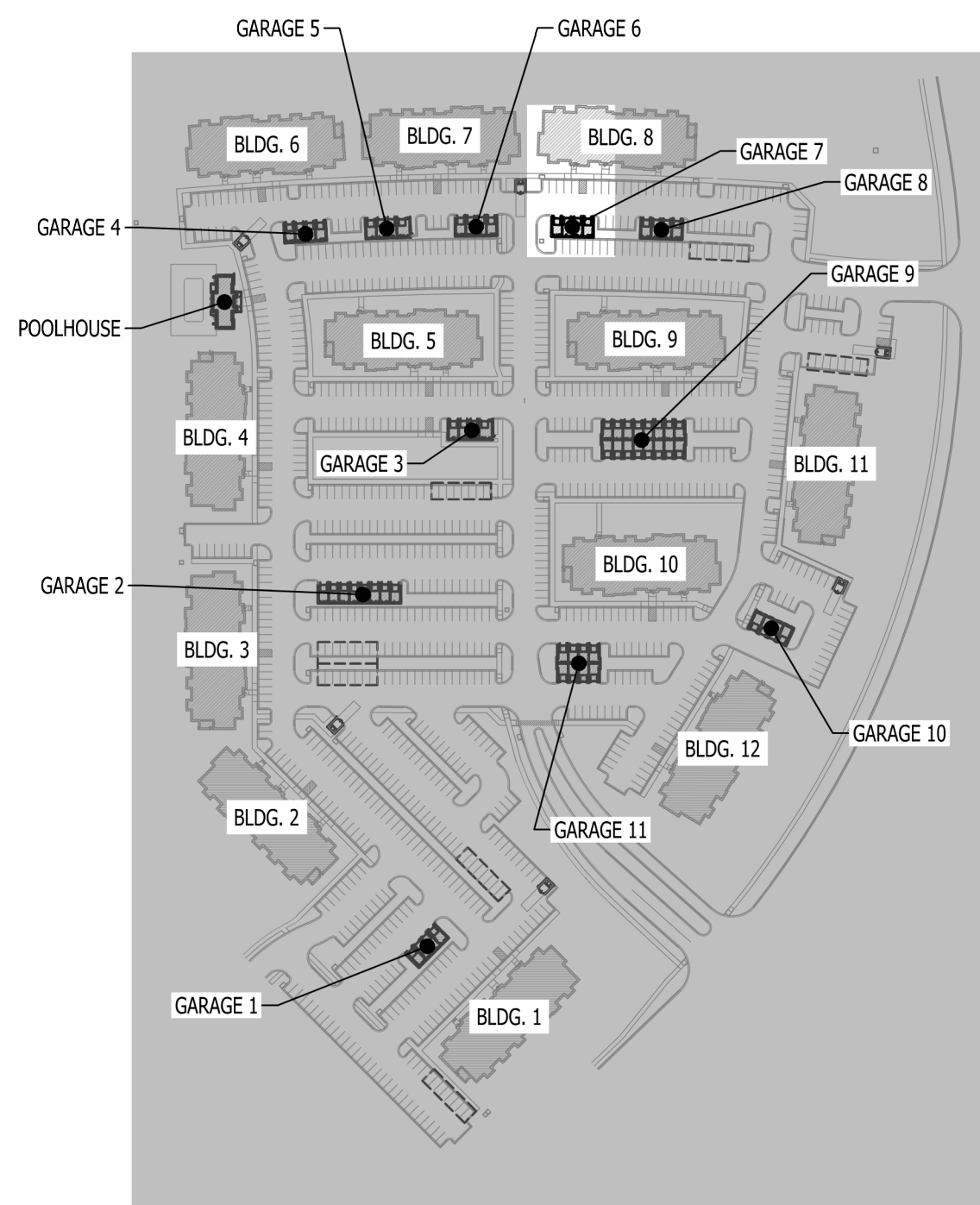
- SANITARY SEWER PIPING
- COLD WATER LINE
- WATER METER
- VALVE
- GAS LINE
- GAS METER
- TIE INTO EXISTING
- ELECTRIC

#### SITE UTILITIES PLAN GENERAL NOTES:

- REFER TO CIVIL PLANS FOR EXACT UTILITY LOCATIONS, CONNECTIONS, DETAILS, ETC.
- COORDINATE EXACT LOCATIONS OF ALL ELECTRICAL CONDUITS & EQUIPMENT WITH EVERGY.

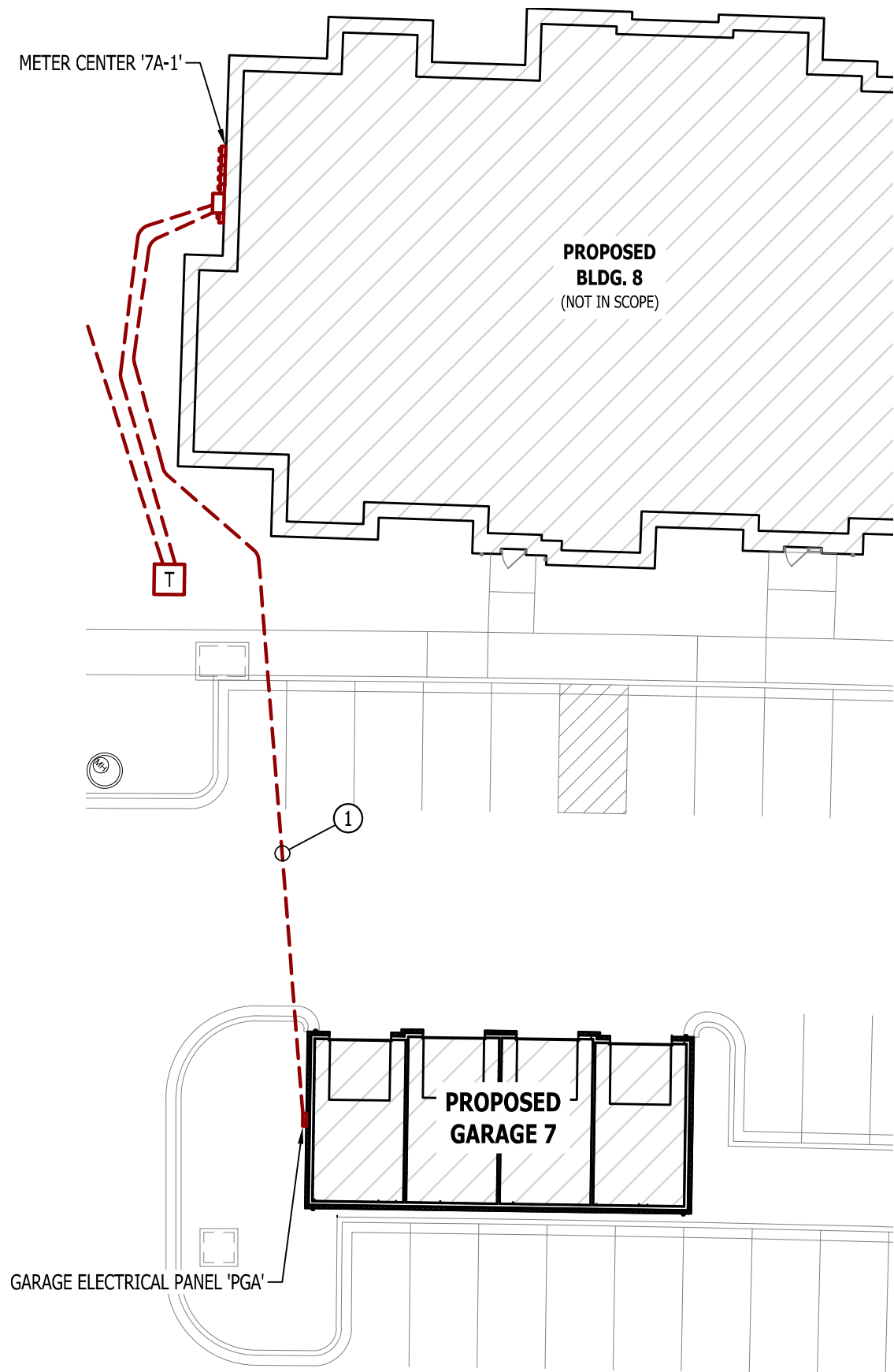
#### SITE UTILITIES PLAN KEY NOTES:

- ① UNDERGROUND CONDUIT/CONDUCTORS FROM APARTMENT METER CENTER TO GARAGE (SEE POWER RISER FOR DETAILS).



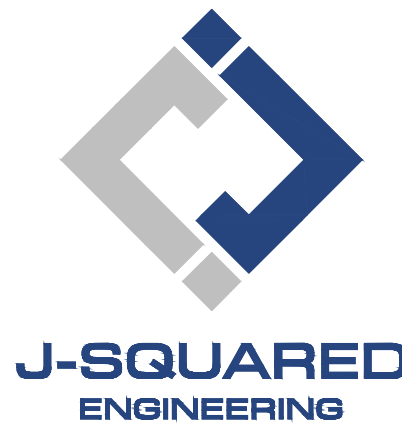
#### SITE KEY PLAN

SCALE: 1" = 200 ft



#### SITE UTILITIES PLAN

SCALE: 1" = 20 ft



2400 Bluff Creek Drive, Suite 101  
Columbia, Missouri 65201  
573.234.4492  
www.j-squaredeng.com

J2 PROJECT No: J21357

J2 DESIGN: ACW

ISSUE TITLE DATE

REVIEW SET 03 - 28 - 2025

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MECHANICAL - ELECTRICAL - PLUMBING DESIGN DRAWINGS FOR:

## The Village at Discovery Park Alura Apartments

Northeast Douglas Street  
Lee's Summit, Jackson County, Missouri

AHJ APPROVAL STAMP

SHEET TITLE

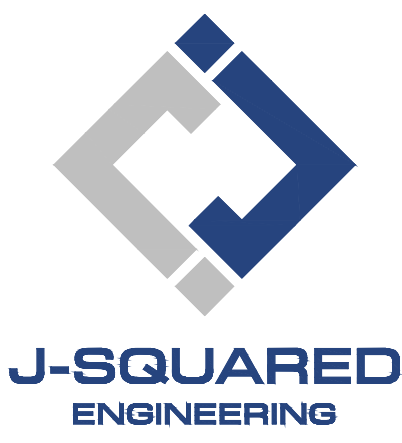
SITE UTILITIES  
PLAN

SHEET NUMBER

MEP2



James Watson, P.E. April 15, 2025  
PE-2015017071  
MO Certificate of Authority # 2018029680



2400 Bluff Creek Drive, Suite 101  
Columbia, Missouri 65201  
573.234.4492  
www.j-squaredeng.com

J2 PROJECT No: J21357

J2 DESIGN: ACW

ISSUE TITLE DATE

PERMIT SET 04 - 15 - 2025

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MECHANICAL - ELECTRICAL - PLUMBING DESIGN DRAWINGS FOR:

The Village at Discovery Park Alura Apartments

Northeast Douglas Street  
Lee's Summit, Jackson County, Missouri

A43 APPROVAL STAMP

SHEET TITLE

ELECTRICAL PLAN

SHEET NUMBER

E101

POWER PLAN SYMBOL LEGEND

- CIRCUIT WIRING
- CIRCUIT TAG
- JUNCTION BOX
- RECEPTACLE  
INDICATES MOUNTING HEIGHT TO BOTTOM OF BOX  
(STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)  
"WP" = WEATHERPROOF OUTDOOR RECEPTACLE
- GFCI DUPLEX CONVENIENCE RECEPTACLE
- 208V RECEPTACLE
- QUADPLEX CONVENIENCE RECEPTACLE
- DATA / PHONE JACK; BOX WITH 1" CONDUIT & CAT6 CABLE BACK TO MEDIA PANEL LOCATION (STANDARD @ 18" AFF UNLESS NOTED OTHERWISE)
- DISCONNECT
- 120V IONIZATION SMOKE 520Hz LOW FREQUENCY ALARM WITH SILENCING CAPABILITIES & LOW-VOLTAGE CONTACTS WIRED TO SHUT DOWN AHU UPON FIRE DETECTION. COORDINATE WITH HVAC CONTRACTOR. SMOKE DETECTOR MUST BE LOCATED AT LEAST 3' FROM CEILING FAN BLADES AND AT LEAST 10' FROM ANY COOKING APPLIANCE (FIELD-COORDINATE)

POWER PLAN GENERAL NOTES:

- SEE E500 & E600 SERIES SHEETS FOR POWER SCHEDULES, DETAILS, REQUIREMENTS, ETC.
- ELECTRICAL CONTRACTOR SHALL REVIEW ALL PROJECT DOCUMENTS AND COORDINATE LOCATION OF ALL ELECTRICAL EQUIPMENT, WIRING, HANGERS / SUPPORTS, ETC. WITH HVAC AND PLUMBING TRADES BEFORE INSTALLATION OF ANY MATERIAL. ADDITIONAL COSTS ASSOCIATED WITH LACK OF COORDINATION WILL NOT BE REIMBURSED.

POWER PLAN KEY NOTES:

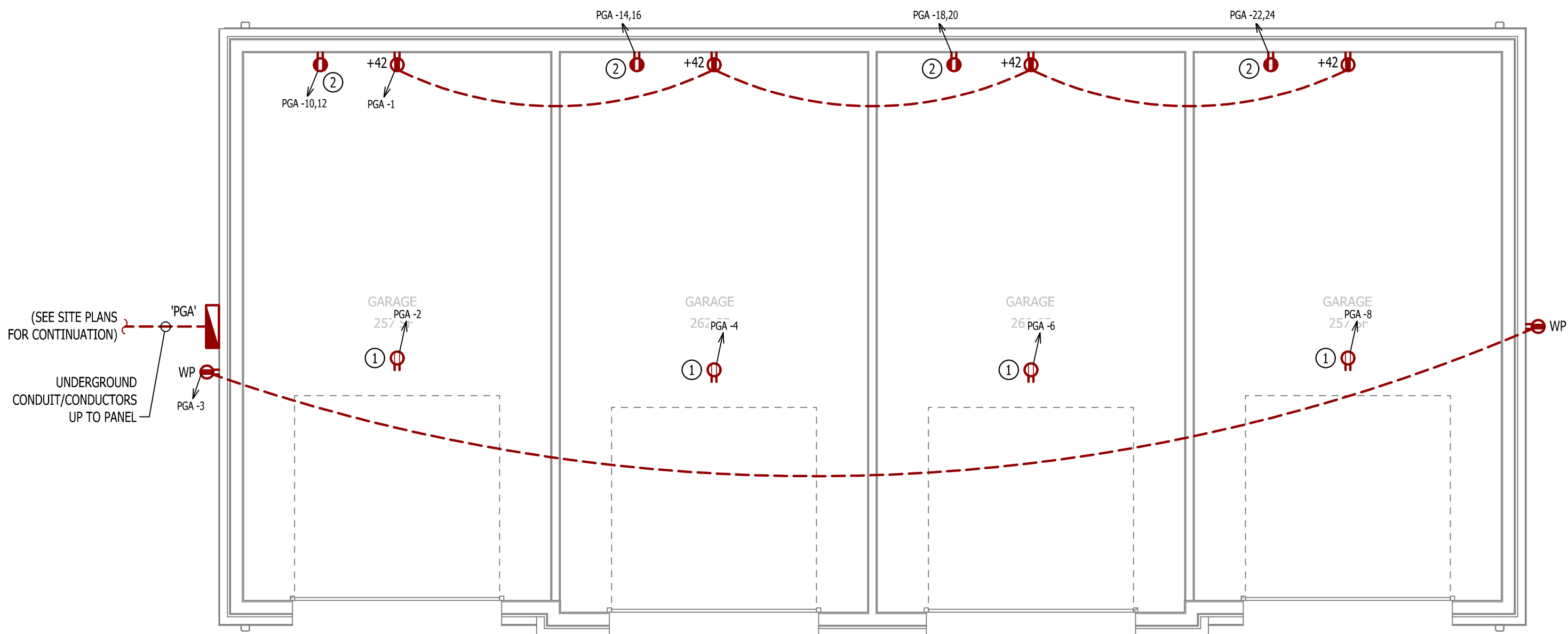
- POWER IN CEILING FOR OVERHEAD DOOR OPENER. COORDINATE EXACT LOCATION & REQUIREMENTS WITH DOOR INSTALLER.
- NEMA 6-30R RECEPTACLE FOR EV CHARGER. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.

LIGHTING PLAN SYMBOL LEGEND

- LIGHTING FIXTURE  
"X1" INDICATES FIXTURE TYPE  
(REFER TO SCHEDULE)
- TOGGLE SWITCH
- SWITCH TYPE
- DIMMER SWITCH

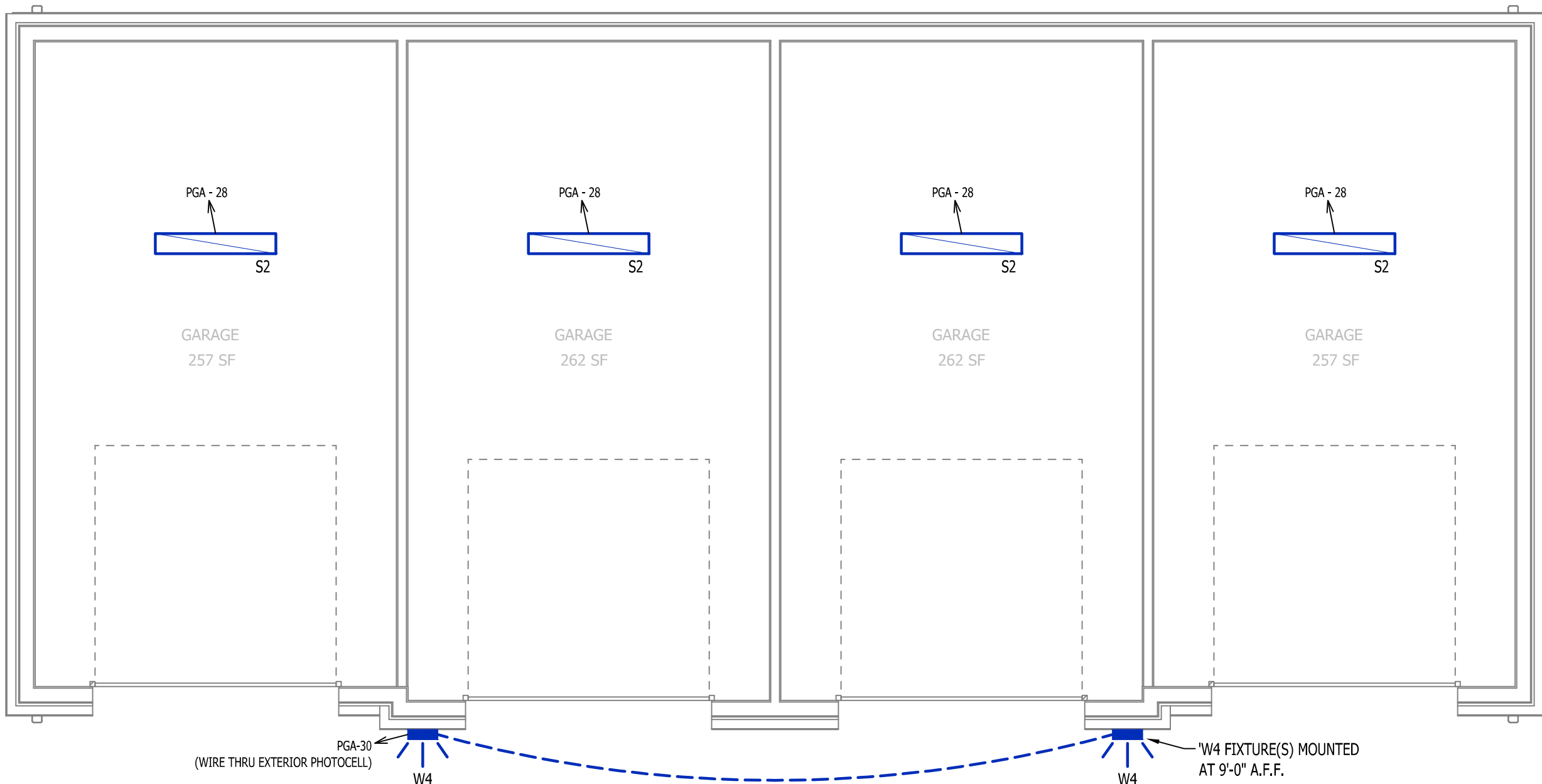
LIGHTING PLAN GENERAL NOTES:

- SEE E500 & E600 SERIES SHEETS FOR ADDITIONAL ELECTRICAL NOTES, DETAILS, & SCHEDULES.
- OCCUPANCY/VACANCY SENSOR QUANTITIES AND GENERAL LOCATIONS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO PROVIDE & INSTALL SENSOR WITH SPACING PER MANUFACTURER'S SPECIFICATIONS AND INCLUDE ADDITIONAL SENSORS IF NECESSARY. CEILING-MOUNTED SENSORS SHALL BE INSTALLED WITHIN MANUFACTURER'S ACCEPTABLE MOUNTING HEIGHT RANGE.
- ELECTRICAL CONTRACTOR SHALL REVIEW ALL PROJECT DOCUMENTS AND COORDINATE LOCATION OF ALL FIXTURES, WIRING, HANGERS / SUPPORTS, ETC. WITH HVAC AND PLUMBING TRADES BEFORE INSTALLATION OF ANY MATERIAL. ADDITIONAL COSTS ASSOCIATED WITH LACK OF COORDINATION WILL NOT BE REIMBURSED.



POWER PLAN

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



LIGHTING PLAN

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