

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Selective demolition of building elements for alteration purposes.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

3.01 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - Obtain required permits. 2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not
 - allow worker or public access within range of potential collapse of unstable structures.
 - 3. Provide, erect, and maintain temporary barriers and security devices.
 - Conduct operations to minimize effects on and interference with adjacent structures and occupants. Do not close or obstruct roadways or sidewalks without permits from authority having jurisdiction.
 - 6. Conduct operations to minimize obstruction of public and private entrances and exits. Do not obstruct required exits at any time. Protect persons using entrances and exits from removal operations. 7. Obtain written permission from owners of adjacent properties when demolition equipment will traverse,
- infringe upon, or limit access to their property. B. Do not begin removal until receipt of notification to proceed from Owner.
- C. Protect existing structures and other elements to remain in place and not removed.
- Provide bracing and shoring. Prevent movement or settlement of adjacent structures.
- 3. Stop work immediately if adjacent structures appear to be in danger.

3.02 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Existing construction and utilities indicated on drawings are based on casual field observation only. Verify construction and utility arrangements are as indicated.
- Report discrepancies to Architect before disturbing existing installation.
- Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Remove existing work as indicated and required to accomplish new work.
- 1. Remove items indicated on drawings.
- C. Services including, but not limited to, Electrical: Remove existing systems and equipment as indicated. Maintain existing active systems to remain in operation, and maintain access to equipment and
- operational components. 2. Where existing active systems serve occupied facilities but are to be replaced with new services,
- maintain existing systems in service until new systems are complete and ready for service. 3. Verify that abandoned services serve only abandoned facilities before removal.
- 4. Remove abandoned pipe, ducts, conduits, and equipment. Remove back to source of supply where
- possible, otherwise cap stub and tag with identification. D. Protect existing work to remain.
- Prevent movement of structure. Provide shoring and bracing as required.
- Perform cutting to accomplish removal work neatly and as specified for cutting new work.
- Repair adjacent construction and finishes damaged during removal work.
- 4. Patch to match new work.

3.03 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris from public and private lands.

SECTION 042000 UNIT MASONRY

PART 1 GENERAL

- 1.01 SECTION INCLUDES A. Clay facing brick.
- B. Mortar and grout
- C. Reinforcement and anchorage D. Accessories.
- 1.02 RELATED REQUIREMENTS

A. Section 079200 - Joint Sealants: Sealing control and expansion joints.

1.03 REFERENCE STANDARDS

- A. ASTM A153/A153M Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023. B. ASTM C216 - Standard Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale); 2023.
- C. ASTM C270 Standard Specification for Mortar for Unit Masonry; 2019a, with Editorial Revision
- D. ASTM C1714/C1714M Standard Specification for Preblended Dry Mortar Mix for Unit Masonry; 2019a.
- E. BIA Technical Notes No. 7 Water Penetration Resistance Design and Detailing; 2017.
- F. BIA Technical Notes No. 13 Ceramic Glazed Brick Exterior Walls; 2017.

PART 2 PRODUCTS 2.01 BRICK UNITS

- A. Manufacturers
 - Belden Brick; Face Brick Modular: www.beldenbrick.com/#sle.
 - Endicott Clay Products Co; Face Brick FBS: www.endicott.com/#sle.
 - Yankee Hill Brick; Face Brick Modular: www.yankeehillbrick.com.
 - B. Facing Brick (FB1): ASTM C216, Type FBS Smooth, Grade SW. Color and texture: Manufacturer's non-standard color to be field painted. Smooth texture.
 - 2. Modular size: 3 5/8 inch deep, 2 1/4 inch high, 7 5/8 inch long.

2.02 MORTAR MATERIALS

- A. 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.

Color: Standard gray. 2.03 REINFORCEMENT AND ANCHORAGE

- A. Masonry Veneer Anchors: 2-piece anchors that permit differential movement between masonry veneer and
 - structural backup, hot dip galvanized to ASTM A 153/A 153M, Class B. 1. Anchor plates: Not less than 0.075 inch (1.91 mm) thick, designed for fastening to structural backup through sheathing by two fasteners; provide design with legs that penetrate sheathing and insulation to
 - provide positive anchorage. Wire ties: Manufacturer's standard shape, 0.1875 inch (4.75 mm) thick.
- 3. Vertical adjustment: Not less than 3-1/2 inches (89 mm).

2.04 ACCESSORIES

- A. Preformed Control Joints: Rubber material. Provide with corner and tee accessories, fused joints.
- B. Cavity Mortar Control: Semi-rigid polyethylene or polyester mesh panels, sized to thickness of wall cavity, and designed to prevent mortar droppings from clogging weeps and cavity vents and allow proper cavity
- 1. Mortar Diverter: Semi-rigid mesh designed for installation at flashing locations. C. Weeps:
- Type: Extruded propylene with honeycomb design. Color(s): White

2.05 MORTAR MIXING

- A. Mortar for Unit Masonry: ASTM C270, using the Property Specification.
- 1. Exterior, non-loadbearing masonry: Type N.

PART 3 EXECUTION

3.01 COURSING

- A. Establish lines, levels, and coursing indicated. Protect from displacement.
- B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
- C. Brick Units Bond: Running.
 - Coursing: Three units and three mortar joints to equal 8 inches (200 mm).
- 3. Mortar Joints: Concave. 3.02 WEEPS/CAVITY VENTS
- A. Install weeps in veneer and cavity walls at 24 inches (600 mm) on center horizontally on top of through-wall flashing above shelf angles and lintels and at bottom of walls.

3.03 CAVITY MORTAR CONTROL

- A. Do not permit mortar to drop or accumulate into cavity air space or to plug weep/cavity vents.
- B. Install cavity mortar diverter at base of cavity and at other flashing locations as recommended by manufacturer to prevent mortar droppings from blocking weep/cavity vents.

3.04 CONTROL AND EXPANSION JOINTS

A. Do not continue horizontal joint reinforcement through control or expansion joints.

B. Install preformed control joint device in continuous lengths. Seal butt and corner joints in accordance with

SECTION 055213 PIPE AND TUBE RAILINGS

PART 2 PRODUCTS

1.01 RAILINGS - GENERAL REQUIREMENTS

- A. Design, fabricate, and test railing assemblies in accordance with the most stringent requirements of
- B. Allow for expansion and contraction of members and building movement without damage to connections or
- C. Dimensions: See drawings for configurations and heights.
- D. Provide anchors and other components as required to attach to structure, made of same materials as railing components unless otherwise indicated; where exposed fasteners are unavoidable provide flush
- E. Provide slip-on non-weld mechanical fittings to join lengths, seal open ends, and conceal exposed mounting bolts and nuts, including but not limited to elbows, T-shapes, splice connectors, flanges, escutcheons, and 1.02 FABRICATION
- A. Accurately form components to suit specific project conditions and for proper connection to building structure.
- B. Fit and shop assemble components in largest practical sizes for delivery to site.
- C. Fabricate components with joints tightly fitted and secured. Provide spigots and sleeves to accommodate site assembly and installation.

SECTION 061000 ROUGH CARPENTRY

PART 1 GENERAL 1.01 SECTION INCLUDES

- A. Structural dimension lumber framing.
- B. Sheathing.
- C. Concealed wood blocking, nailers, and supports.

1.02 REFERENCE STANDARDS

- A. AWC (WFCM) Wood Frame Construction Manual for One- and Two-Family Dwellings; 2018, with Errata
- B. PS 2 Performance Standard for Wood Structural Panels; 2018.
- C. PS 20 American Softwood Lumber Standard; 2021.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies. 1. If no species is specified, provide species graded by the agency specified; if no grading agency is
- specified, provide lumber graded by grading agency meeting the specified requirements. 2. Grading Agency: Grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee at www.alsc.org, and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Sizes: Nominal sizes as indicated on drawings, S4S.
- B. Moisture Content: S-dry or MC19.
- C. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
- Lumber: S4S, No. 2 or Standard Grade. 2. Boards: Standard or No. 3.
- 2.03 CONSTRUCTION PANELS
- A. Wall Sheathing: PS 2 type. Bond Classification: Exterior.
- Grade: Structural I Sheathing.
- Span Rating: 24. 4. Performance Category: 5/16 PERF CAT.

5. Edge Profile: Square edge. PART 3 EXECUTION

3.01 PREPARATION A. Install sill gasket under sill plate of framed walls bearing on foundations; puncture gasket cleanly to fit tightly around protruding anchor bolts.

3.02 INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.
- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.

3.03 FRAMING INSTALLATION

- A. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.
- B. Make provisions for temporary construction loads, and provide temporary bracing sufficient to maintain structure in true alignment and safe condition until completion of erection and installation of permanent
- C. Install structural members full length without splices unless otherwise specifically detailed.
- D. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes and AWC (WFCM) Wood Frame Construction Manual.
- E. Construct double joist headers at floor and ceiling openings and under wall stud partitions that are parallel to floor joists; use metal joist hangers unless otherwise detailed. F. Frame wall openings with two or more studs at each jamb; support headers on cripple studs.
- 3.04 BLOCKING, NAILERS, AND SUPPORTS
- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty B. In framed assemblies that have concealed spaces, provide solid wood fireblocking as required by applicable
- C. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.

other material acceptable to authorities having jurisdiction may be used in lieu of solid wood blocking.

local code, to close concealed draft openings between floors and between top story and roof/attic space;

D. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated. 3.05 INSTALLATION OF CONSTRUCTION PANELS

SECTION 072100

THERMAL INSULATION

A. Wall Sheathing: Secure with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using nails, screws, or staples.

PART 1 GENERAL

- 1.01 SECTION INCLUDES A. Board insulation and vapor retarder perimeter foundation wall and over roof deck.
- B. Batt insulation and vapor retarder in exterior wall construction.

C. Batt insulation for filling perimeter window and door shim spaces and crevices in exterior wall and roof. 1.02 REFERENCE STANDARDS

A. ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2023. B. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame

E. ASTM E136 - Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube

- Construction and Manufactured Housing; 2023.
- C. ASTM C1289 Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.

Furnace at 750 Degrees C; 2022. **PART 2 PRODUCTS**

- 2.01 APPLICATIONS A. Insulation at Perimeter of Foundation: Extruded polystyrene (XPS) board.
- B. Insulation in Wood Framed Walls: Batt insulation with integral vapor retarder. C. Insulation over Roof Deck: Polyisocyanurate board.

2.02 FOAM BOARD INSULATION MATERIALS A. Extruded Polystyrene (XPS) Board Insulation: Comply with ASTM C578 with either natural skin or cut cell

Flame Spread Index (FSI): Class A - 0 to 25, when tested in accordance with ASTM E84. Smoke Developed Index (SDI): 450 or less, when tested in accordance with ASTM E84.

- Type and Thermal Resistance, R-value (RSI-value): Type IV, 5.0 (0.88), minimum, per 1 inch (25.4 mm) thickness at 75 degrees F (24 degrees C) mean temperature.
- a. DuPont de Nemours, Inc; Styrofoam Brand Scoreboard: building.dupont.com/#sle. Kingspan Insulation LLC; GreenGuard GG25-LG XPS Insulation Board: www.kingspan.com/#sle.
- Owens Corning Corporation; FOAMULAR Type 250 Extruded Polystyrene (XPS) Insulation:
- www.ocbuildingspec.com/#sle. B. Polyisocyanurate (ISO) Board Insulation: Rigid cellular foam, comply with ASTM C1289.
- Classifications: a. Type II: Faced with either cellulosic facers or glass fiber mat facers on both major surfaces of the
 - 1) Class 1 Faced with glass fiber reinforced cellulosic facers on both major surfaces of core

 - 2) Compressive Strength: Classes 1-2-3, Grade 2 20 psi (138 kPa), minimum.
- 3) Thermal Resistance, R-value (RSI-value): At 1-1/2 inch (38.1 mm) thick; Class 1, Grades
- 1-2-3 8.4 (1.48), minimum, at 75 degrees F (24 degrees C).
- 2. Board Size: 48 inch by 96 inch (1220 mm by 2440 mm). 3. Board Thickness: 1.5 inch (37.5 mm).
- 4. Products: a. Atlas Roofing Corporation; ACFoam-II GRF Roof Insulation: www.atlasroofing.com/#sle.
- GAF: EnergyGuard Polviso Insulation: www.gaf.com/#sle. c. Johns Manville; AP Foil-Faced: www.jm.com/#sle.
- d. Elevate; ISOGARD CG: www.holcimelevate.com.
- 2.03 MINERAL FIBER BLANKET INSULATION MATERIALS
- A. Flexible Glass Fiber Blanket Thermal Insulation: Preformed insulation, complying with ASTM C665; friction
- Combustibility: Non-combustible, when tested in accordance with ASTM E136.
- Thermal Resistance: R-value (RSI-value) of 20.
- Facing: Aluminum foil, flame spread 25 rated; one side. 4. Products:
- a. CertainTeed Corporation; Sustainable Insulation: www.certainteed.com/#sle.
- b. Johns Manville: Unfaced Batts and Rolls: www.im.com/#sle. c. Owens Corning Corporation; EcoTouch PINK FIBERGLAS Insulation:

www.ocbuildingspec.com/#sle. 2.04 ACCESSORIES

A. Board Installation Over Roof Deck, General:

- A. Sheet Vapor Retarder: Black polyethylene film for above grade application, 30 mil thick. 1. Basis of Design: Elevate; V-Force Vapor Barrier Membrane: www. holcimelevate.com
- 3.01 BOARD INSTALLATION AT FOUNDATION PERIMETER
- A. Install boards horizontally on foundation perimeter. B. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.
- 3.02 BOARD INSTALLATION OVER LOW SLOPE ROOF DECK
 - See applicable roofing specification section for specific board installation requirements. Fasten insulation to deck in accordance with roofing manufacturer's written instructions and applicable Factory Mutual requirements.

3. Do not apply more insulation than can be covered with roofing on the same day. 3.03 BATT INSTALLATION

- A. Install insulation and vapor retarder in accordance with manufacturer's instructions. B. Install in exterior wall spaces without gaps or voids. Do not compress insulation.
- C. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids. D. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the

SECTION 075400

THERMOPLASTIC MEMBRANE ROOFING

PART 1 GENERAL 1.01 SECTION INCLUDES

B. Flashings.

plane of the insulation.

PART 3 EXECUTION

- A. Adhered system with thermoplastic roofing membrane.
- 1.02 REFERENCE STANDARDS A. ASTM D6878/D6878M - Standard Specification for Thermoplastic Polyolefin-Based Sheet Roofing; 2021.
- C. NRCA (WM) The NRCA Waterproofing Manual; 2021. 1.03 WARRANTY

B. NRCA (RM) - The NRCA Roofing Manual; 2024.

- A. System Warranty: Provide manufacturer's system warranty agreeing to repair or replace roofing that leaks or is damaged due to wind or other natural causes.
- 1. Warranty Term: 20 years. 2. For repair and replacement include costs of both material and labor in warranty.
- PART 2 PRODUCTS 2.01 MANUFACTURERS

A. Thermoplastic Polyolefin (TPO) Membrane Roofing Materials:

Elevate: UltraPlv TPO Membrane: www.holcimelevate.com/#sle.

- GAF; EverGuard TPO 45 mil: www.gaf.com/#sle. 3. Johns Manville; JM TPO - 45 mil: www.jm.com/#sle.
- 2.02 ROOFING A. Thermoplastic Membrane Roofing: One ply membrane, fully adhered, over insulation.

B. Acceptable Insulation Types - Constant Thickness Application:

- C. Acceptable Insulation Types Tapered Application: 2.03 MEMBRANE ROOFING AND ASSOCIATED MATERIALS
- A. Membrane Roofing Materials: 1. TPO: Thermoplastic polyolefin (TPO) complying with ASTM D6878/D6878M, sheet contains
- reinforcing fabrics or scrims. a. Thickness: 45 mil, 0.045 inch (1.1 mm), minimum.
- 2. Sheet Width: Manufacturer's standard width. 3. Color: Gray.
- B. Seaming Materials: As recommended by membrane manufacturer. C. Flexible Flashing Material: Same material as membrane.
- PART 3 EXECUTION 3.01 INSTALLATION, GENERAL
- A. Perform work in accordance with manufacturer's instructions, NRCA (RM), and NRCA (WM) applicable B. Do not apply roofing membrane during cold or wet weather conditions.
- C. Do not apply roofing membrane when ambient temperature is outside the temperature range recommended by manufacturer. D. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or
- E. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day. 3.02 INSTALLATION - VAPOR RETARDER AND INSULATION, UNDER MEMBRANE

A. Lay subsequent layers of insulation with joints staggered minimum 6 inches (152 mm) from joints of

- B. Place tapered insulation to the required slope pattern in accordance with manufacturer's instructions. C. Lay boards with edges in moderate contact without forcing. Cut insulation to fit neatly to perimeter blocking
- and around penetrations through roof. D. Do not install more insulation than can be covered with membrane in same day.
- 3.03 INSTALLATION MEMBRANE A. Roll out membrane, free from wrinkles or tears. Place sheet into place without stretching. B. Shingle joints on sloped substrate in direction of drainage.

F. Around roof penetrations, seal flanges and flashings with flexible flashing.

G. Coordinate installation of roof drains and sumps and related flashings.

- C. Fully Adhered Application: Apply adhesive to substrate at rate of ___ gallons per square foot (___ L/sq m). Fully embed membrane in adhesive except in areas directly over or within 3 inches (76 mm) of expansion joints. Fully adhere one roll before proceeding to adjacent rolls. D. Overlap edges and ends and seal seams by contact adhesive, minimum 3 inches (76 mm). Seal
- permanently waterproof. Apply uniform bead of sealant to joint edge. E. At intersections with vertical surfaces: 1. Extend membrane over cant strips and up a minimum of 4 inches (102 mm) onto vertical surfaces. 2. Fully adhere flexible flashing over membrane and up to nailing strips.
 - **SECTION 077100 ROOF SPECIALTIES**

PART 1 GENERAL

- 1.01 SECTION INCLUDES
- A. Manufactured roof specialties, including copings.
- 1.02 REFERENCE STANDARDS
- A. ANSI/SPRI/FM 4435/ES-1 Test Standard for Edge Systems Used with Low Slope Roofing Systems; 2022. B. NRCA (RM) - The NRCA Roofing Manual; 2024.

PART 2 PRODUCTS 2.01 COMPONENTS

- A. Copings: Factory fabricated to sizes required; corners mitered; concealed fasteners. Configuration: Concealed continuous hold down cleat at both legs; internal splice piece at joints of
- same material, thickness, and finish as cap; concealed stainless steel fasteners. Pull-Off Resistance: Tested in accordance with ANSI/SPRI/FM 4435/ES-1 using test method RE-3 to positive and negative design wind pressure as defined by applicable local building code.
- Wall Width: As indicated on drawings.
- Outside Face Height: 6 inches (152 mm). Inside Face Height: 4 inches (102 mm).
- Material: Formed aluminum sheet, 0.050 inch (1.3 mm) thick, minimum. Finish: 70 percent polyvinylidene fluoride.

PART 3 EXECUTION

Color: White.

3.01 INSTALLATION A. Install components in accordance with manufacturer's instructions and NRCA (RM) applicable requirements

SECTION 077123

MANUFACTURED GUTTERS AND DOWNSPOUTS **PART 1 GENERAL**

A. Pre-finished galvanized steel gutters and downspouts.

Coated (Galvannealed) by the Hot-Dip Process; 2023.

A. ASTM A48/A48M - Standard Specification for Gray Iron Castings; 2022. B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-

PART 2 PRODUCTS

2.02 COMPONENTS

(0.6 mm) thick base metal.

1.02 REFERENCE STANDARDS

1.01 SECTION INCLUDES

- 2.01 MATERIALS A. Pre-Finished Galvanized Steel Sheet: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 0.02 inch
 - Finish: Shop pre-coated with modified silicone coating. 2. Color: White.
- A. Gutters: SMACNA rectangular style profile B. Downspouts: SMACNA rectangular profile. C. Anchors and Supports: Profiled to suit gutters and downspouts.

Anchoring Devices: In accordance with CDA requirements. Gutter Supports: Brackets.

B. Fabricate with required connection pieces.

Downspout Supports: Brackets. 2.03 FABRICATION

A. Form gutters and downspouts of profiles and size indicated.

E. Fabricate gutter and downspout accessories; seal watertight.

body cleanout and cover with neoprene gaskets.

- C. 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.
- 2.04 ACCESSORIES A. Downspout Boots: Smooth interior without boxed corners or choke points; include integral lug slots and on-

A. Install gutters, downspouts, and accessories in accordance with manufacturer's instructions.

Configuration: Angular. Material: Cast iron; ASTM A48/A48M; casting thickness 3/8 inch (9.5 mm), minimum. **PART 3 EXECUTION**

D. Hem exposed edges of metal.

B. Slope gutters 1/2 inch per 10 feet.

- **SECTION 084313 ALUMINUM-FRAMED STOREFRONTS**
- PART 1 GENERAL 1.01 SECTION INCLUDES

3.01 INSTALLATION

A. Aluminum-framed storefront, with vision glass. B. Infill panels of glass C. Aluminum doors.

D. Weatherstripping.

and Tubes: 2021.

- E. Door hardware. 1.02 RELATED REQUIREMENTS
- A. Section 088000 Glazing: Glass and glazing accessories. 1.03 REFERENCE STANDARDS A. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles
- B. ASTM B221M Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric); 2021.

C. ASTM E283/E283M - Standard Test Method for Determining Rate of Air Leakage Through Exterior

Skylights and Curtain Walls by Uniform Static Air Pressure Difference; 2014 (Reapproved 2021).

Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen; D. ASTM E330/E330M - Standard Test Method for Structural Performance of Exterior Windows, Doors,

- PART 2 PRODUCTS 2.01 BASIS OF DESIGN -- FRAMING FOR INSULATING GLAZING
- Basis of Design: EFCO Series 433 Outside Set. Vertical and Horizontal Mullion Dimensions: 2 inches wide by 4-1/2 inches deep (50 mm wide by 114

and related flashings, anchorage and attachment devices.

and prevent "stack effect" in internal spaces.

allowing expected movement.

Finish: Color anodized with organic seal.

2.02 BASIS OF DESIGN -- SWINGING DOORS

A. Front-Set Style, Thermally-Broken:

Finish Color: Black.

A. Medium Stile, Insulating Glazing, Thermally-Broken: Basis of Design: EFCO; D300 Series: www.efcocorp.com. Thickness: 1-3/4 inches (43 mm). 2.03 ALUMINUM-FRAMED STOREFRONT

A. Aluminum-Framed Storefront: Factory fabricated, factory finished aluminum framing members with infill,

- a. Factory finish all surfaces that will be exposed in completed assemblies. b. Touch-up surfaces cut during fabrication so that no natural aluminum is visible in completed assemblies, including joint edges.
- prepared to receive anchors and hardware; fasteners and attachments concealed from view; reinforced as required for imposed loads. Construction: Eliminate noises caused by wind and thermal movement, prevent vibration harmonics,

Fabrication: Joints and corners flush, hairline, and weatherproof, accurately fitted and secured;

entering joints, condensation occurring in glazing channel, and migrating moisture occurring within Expansion/Contraction: Provide for expansion and contraction within system components caused by cycling temperature range of 170 degrees F (95 degrees C) over a 12 hour period without causing

System Internal Drainage: Drain to the exterior by means of a weep drainage network any water

- Movement: Allow for movement between storefront and adjacent construction, without damage to components or deterioration of seals. Perimeter Clearance: Minimize space between framing members and adjacent construction while
- B. 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.

detrimental effect to system components, anchorages, and other building elements.



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6139 Military Ave Facade Reconstruction

6139 Military Ave, Omaha, NE 68104

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DATE

REV.

Date

03.11.24

Project ID

24011.00

Reviewed By Drawn By

DESCRIPTION

Sheet Title

G-001

Sheet No.

Specifications

- a. Member Deflection: Limit member deflection to flexure limit of glass in any direction, with full recovery of glazing materials.
- 2. Air Leakage: 0.06 cfm/sq ft (0.3 L/sec sq m) maximum leakage of storefront wall area when tested in accordance with ASTM E283/E283M at 1.57 psf (75 Pa) pressure difference.
- 3. Air Leakage: 0.06 cfm/sq ft (0.3 L/sec sq m) maximum leakage of storefront wall area when tested in

accordance with ASTM E283/E283M at 1.57 psf (75 Pa) pressure difference. 2.04 COMPONENTS

- A. Aluminum Framing Members: Tubular aluminum sections, thermally broken with interior section insulated from exterior, drainage holes and internal weep drainage system.
- 1. Glazing Stops: Flush.
- B. Glazing: See Section 088000.

2.05 MATERIALS

- A. Extruded Aluminum: ASTM B221 (ASTM B221M).
- B. Fasteners: Stainless steel.
- C. Glazing Gaskets: Type to suit application to achieve weather, moisture, and air infiltration requirements.

2.06 HARDWARE

- A. For each door, include weatherstripping, sill sweep strip, and threshold.
- B. Weatherstripping: Wool pile, continuous and replaceable; provide on all doors.
- C. Sill Sweep Strips: Resilient seal type, retracting, of neoprene; provide on all doors.
- D. Threshold: Extruded aluminum, one piece per door opening, ribbed surface; provide on all doors.
- E. Hinges: Butt type, swing clear; top and bottom.
- F. Push/Pull Set: Standard configuration push/pull handles.
- G. Door Closers: Exposed overhead.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install wall system in accordance with manufacturer's instructions.

H. Locks: Dead latch with thumbturn inside; keyed cylinder outside.

- B. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other
- C. Provide alignment attachments and shims to permanently fasten system to building structure.
- D. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning
- with adjacent work.
- E. Provide thermal isolation where components penetrate or disrupt building insulation.
- F. Install sill flashings. Turn up ends and edges; seal to adjacent work to form water tight dam. G. Where fasteners penetrate sill flashings, make watertight by seating and sealing fastener heads to sill
- flashing. H. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
- I. Set thresholds in bed of sealant and secure.
- J. Install hardware using templates provided.
- K. Touch-up minor damage to factory applied finish; replace components that cannot be satisfactorily repaired. 3.02 ADJUSTING

A. Adjust operating hardware and sash for smooth operation.

SECTION 088000 GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Insulating glass units. B. Glazing compounds.
- 1.02 REFERENCE STANDARDS
- A. ASTM C864 Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks,
- and Spacers; 2005 (Reapproved 2019).
- B. ASTM C1036 Standard Specification for Flat Glass; 2021.
- C. ASTM C1376 Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass; 2021a.
- D. ASTM E1300 Standard Practice for Determining Load Resistance of Glass in Buildings; 2016. E. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation; 2019.
- F. NFRC 100 Procedure for Determining Fenestration Product U-factors; 2023.
- G. NFRC 200 Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible
- Transmittance at Normal Incidence; 2023. H. NFRC 300 - Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems;

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS - EXTERIOR GLAZING ASSEMBLIES

- A. Provide type and thickness of exterior glazing assemblies to support assembly dead loads, and to withstand
- live loads caused by positive and negative wind pressure acting normal to plane of glass. 1. Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions, and
- maximum lateral deflection of supported glass. 2. Provide glass edge support system sufficiently stiff to limit the lateral deflection of supported glass
- edges to less than 1/175 of their lengths under specified design load.
- 3. Glass thicknesses listed are minimum.
- B. Weather-Resistive Barrier Seals: Provide completed assemblies that maintain continuity of building enclosure water-resistive barrier, vapor retarder, and/or air barrier.
- 1. In conjunction with weather barrier related materials described in other sections, as follows:
- C. Thermal and Optical Performance: Provide exterior glazing products with performance properties as indicated. Performance properties are in accordance with manufacturer's published data as determined with
- the following procedures and/or test methods: 1. Center of Glass U-Value: Comply with NFRC 100 using Lawrence Berkeley National Laboratory
- (LBNL) WINDOW 6.3 computer program. 2. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence
- Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.

3. Solar Optical Properties: Comply with NFRC 300 test method. 2.02 GLASS MATERIALS

- A. Float Glass: Provide float glass based glazing unless otherwise indicated.
- 1. Annealed Type: ASTM C1036, Type I Transparent Flat, Class 1 Clear, Quality Q3.

2.03 INSULATING GLASS UNITS

- A. Insulating Glass Units: Types as indicated.
- 1. Durability: Certified by an independent testing agency to comply with ASTM E2190. 2. Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or magnetic sputter
- vapor deposition (soft-coat) type coatings on flat glass; coated vision glass, Kind CV; coated overhead glass, Kind CO; or coated spandrel glass, Kind CS.
- Spacer Color: Black.
- Edge Seal: a. Color: Black.
- 5. Purge interpane space with dry air, hermetically sealed.
- B. Type IG-1 Insulating Glass Units: Vision glass, double glazed. Applications: Exterior glazing unless otherwise indicated.
- Space between lites filled with air.
- 3. Outboard Lite: Annealed float glass, 1/4 inch (6.4 mm) thick, minimum. a. Tint: Clear.
- 4. Inboard Lite: Annealed float glass, 1/4 inch (6.4 mm) thick, minimum. a. Tint: Clear.
- 5. Total Thickness: 1 inch (25.4 mm). 6. Thermal Transmittance (U-Value), Summer - Center of Glass: 0.38, nominal.
- 7. Solar Heat Gain Coefficient (SHGC): 0.38, nominal.

2.04 ACCESSORIES

- A. Setting Blocks: Silicone, with 80 to 90 Shore A durometer hardness; ASTM C864 Option II. Length of 0.1 inch for each square foot (25 mm for each square meter) of glazing or minimum 4 inch (100 mm) by width of glazing rabbet space minus 1/16 inch (1.5 mm) by height to suit glazing method and pane weight and area.
- B. Glazing Splines: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C864 Option II; color black.

PART 3 EXECUTION

3.01 INSTALLATION, GENERAL

- A. Install glazing in compliance with written instructions of glass, gaskets, and other glazing material manufacturers, unless more stringent requirements are indicated, including those in glazing referenced
- 3.02 INSTALLATION DRY GLAZING METHOD (GASKET GLAZING)
- A. Application Exterior and/or Interior Glazed: Set glazing infills from either the exterior or the interior of the
- B. Place setting blocks at 1/4 points with edge block no more than 6 inch (152 mm) from corners.

- C. Rest glazing on setting blocks and push against fixed stop with sufficient pressure on gasket to attain full
- D. Install removable stops without displacing glazing gasket; exert pressure for full continuous contact.

SECTION 099113 EXTERIOR PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints.
- C. Scope: Finish exterior surfaces exposed to view, unless fully factory-finished and unless otherwise
- indicated, including the following:
- D. Do Not Paint or Finish the Following Items:
- 1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
- Items indicated to receive other finishes.

4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.

- Items indicated to remain unfinished.
- Floors, unless specifically indicated. Glass.

7. Concealed pipes, ducts, and conduits. 1.02 REFERENCE STANDARDS

A. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition. PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.
- B. Paints: Behr Paint Company: www.behr.com/#sle.
- PPG Paints: www.ppgpaints.com/#sle.
- 3. Sherwin-Williams Company: www.sherwin-williams.com/#sle.

2.02 PAINTS AND FINISHES - GENERAL

- A. Paints and Finishes: Ready-mixed, unless required to be a field-catalyzed paint.
- 1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
- 2. Supply each paint material in quantity required to complete entire project's work from a single
- 3. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is described

explicitly in manufacturer's product instructions. 2.03 PAINT SYSTEMS - EXTERIOR

- A. Paint E-OP Exterior Surfaces to be Painted, Unless Otherwise Indicated: Including brick.
- 1. Two top coats and one coat primer.
- 2. Top Coat(s): Exterior Latex; MPI #10, 11, 15, 119, or 214.
- a. Products: Behr Premium Plus Exterior Semi-Gloss Enamel [No.5050].
- PPG Paints Speedhide Exterior Latex, 6-900XI Series, Semi-Gloss. (MPI #11)

3) Sherwin-Williams Pro Industrial Acrylic, Semi-Gloss.

PART 3 EXECUTION

- 3.01 PREPARATION
- A. Clean surfaces thoroughly and correct defects prior to application. B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the
- substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- 1. Remove efflorescence and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces or if
- alkalinity of mortar joints exceed that permitted in manufacturer's written instructions. Allow to dry.
- A. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI
- Architectural Painting Specification Manual". B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- C. Apply each coat to uniform appearance. D. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying
- E. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to

finishing. 3.03 COLOR SCHEDULE

A. PT1: Sherwin Williams; #SW7005, Pure White.



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6139 Military Ave Facade Reconstruction

6139 Military Ave, Omaha, NE 68104

PJ Morgan

7001 Dodge Street, Omaha, NE 68132

Structural Engineer Thompson, Dreessen & Dorner, Inc. 10836 Old Mill Rd Omaha, NE 68154 Phone: 402-330-8860 Certificate of Authorization: CA-0199



REV. DATE

Reviewed By Drawn By PH

DESCRIPTION

Date 03.11.24

Project ID

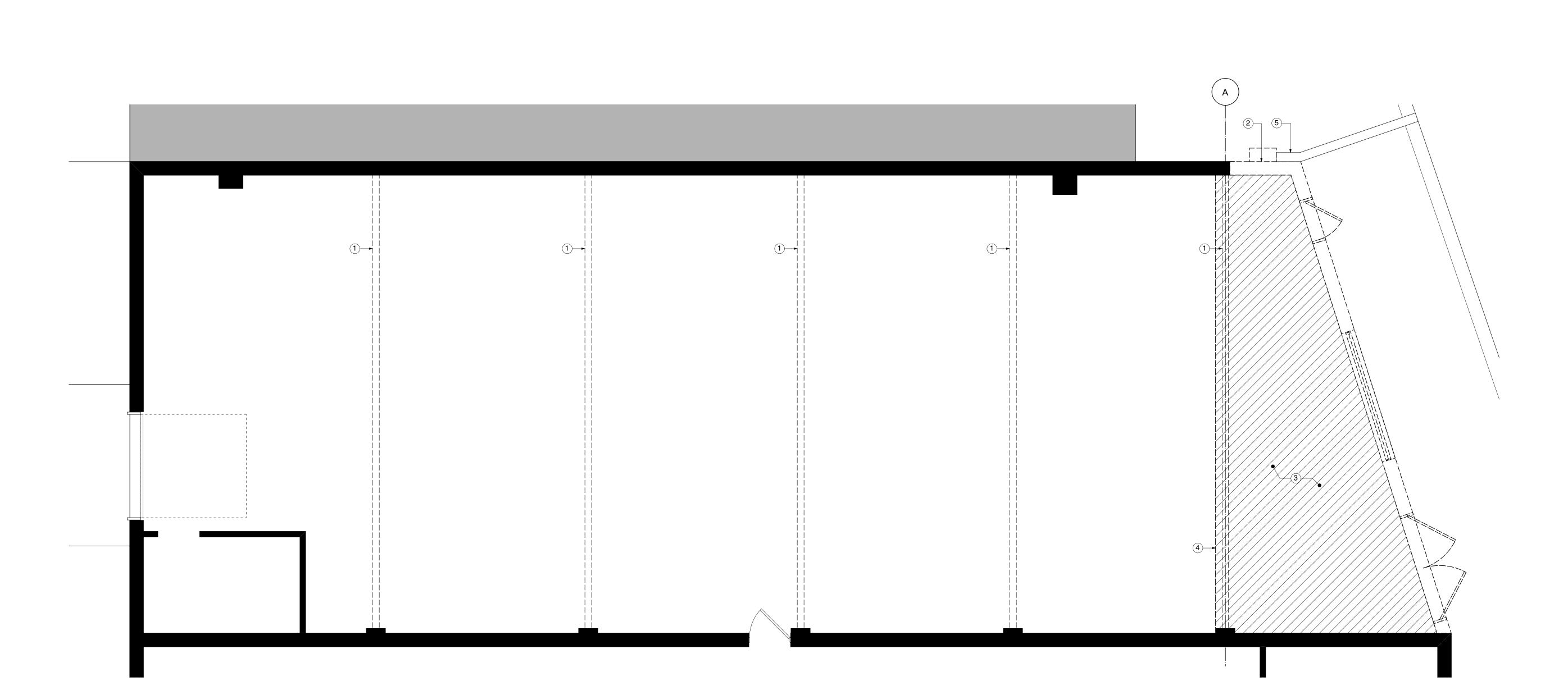
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Sheet Title

Specifications

Sheet No.

G-002





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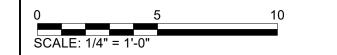
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Demolition Plan Key Notes
1. Dash indicates (e) beam above.
2. Remove (e) wall to grid line A. See 34/A-500 for additional information.
3. Remove (e) concrete slab. SSD for additional information.
4. SSD for extent of slab removal.
5. (E) channel drain

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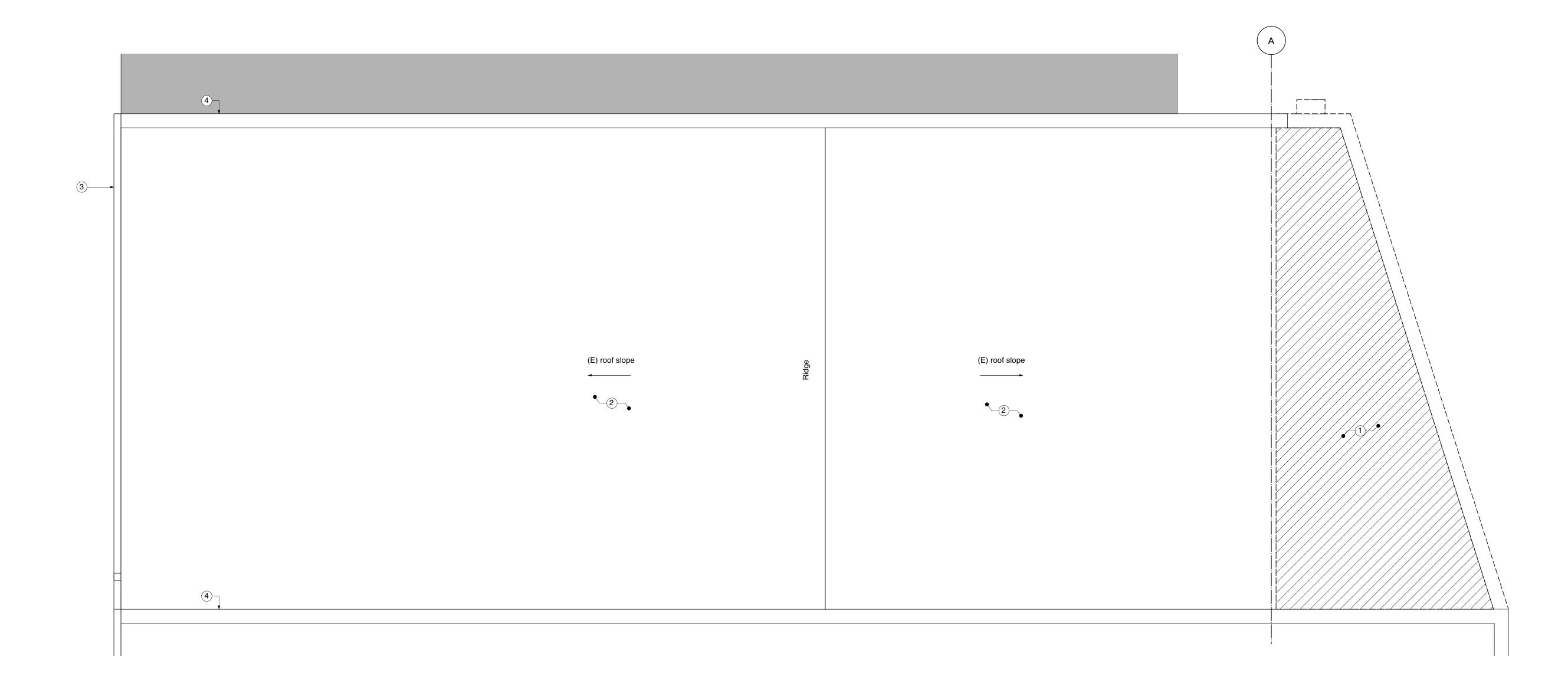
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Sheet Title

Demolition Plan

Sheet No.
D-100

Remove (e) roof assembly and structure to grid line A. SSD for additional information.
Remove (e) roof membrane to wd. plank deck for (n) roof.
Remove (e) gutter & downspout.
Remove (e) coping for (n) metal coping.





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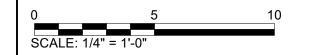
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DESCRIPTION

Reviewed By Drawn By Date 03.11.24

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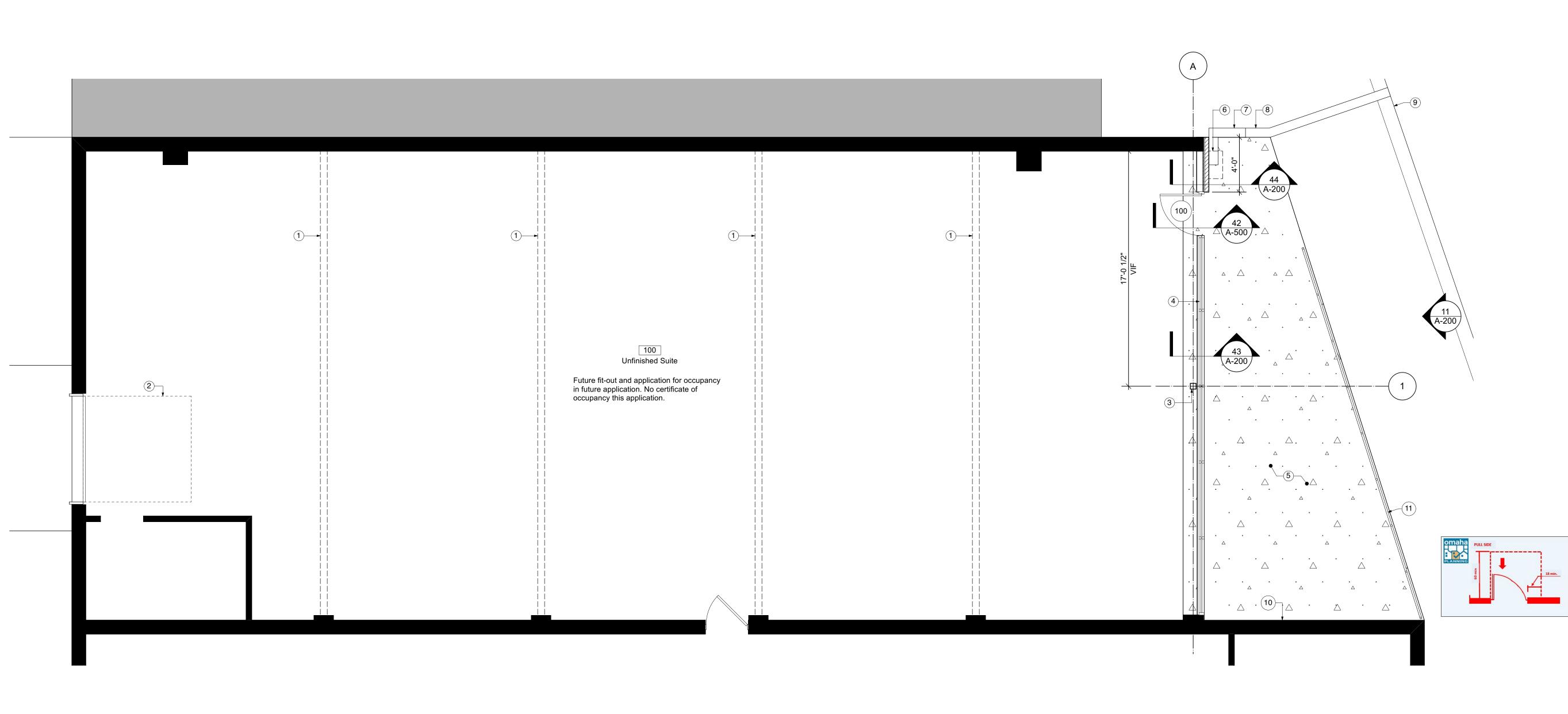
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Sheet Title

Roof Demolition Plan

Sheet No.

D-101





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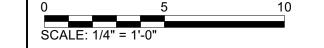
PJ Morgan

Floor Plan Key Notes

1. Dash indicates (e) beams above.
2. (E) O/H door
3. (N) stl. column, SSD. Locate on CL of storefront mullion.
4. (N) wall and storefront system
5. (N) stoop slab. Slope from (e) slab height to (e) sidewalk.
6. Dash indicates scupper above.
7. (N) channel drain. Match (e) grating and profile. Connect to (e) channel drain.
8. (E) channel drain
9. (E) line of curb
10. Paint (e) masonry wall PT1 to match existing.
11. (N) pipe railing

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GJD
PH

Date
03.11.24

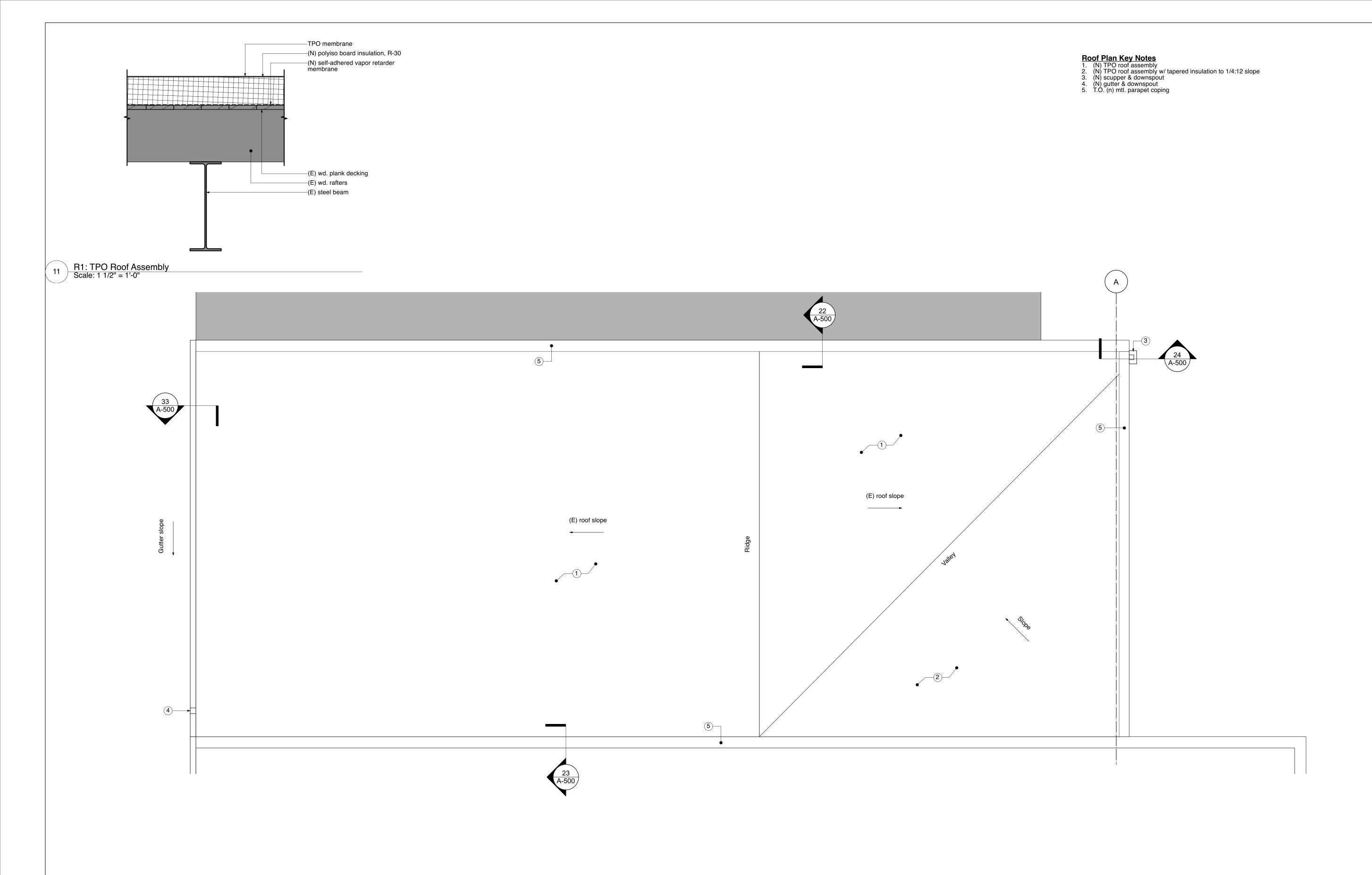
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Sheet Title

Floor Plan

Sheet No.

A-100



daa

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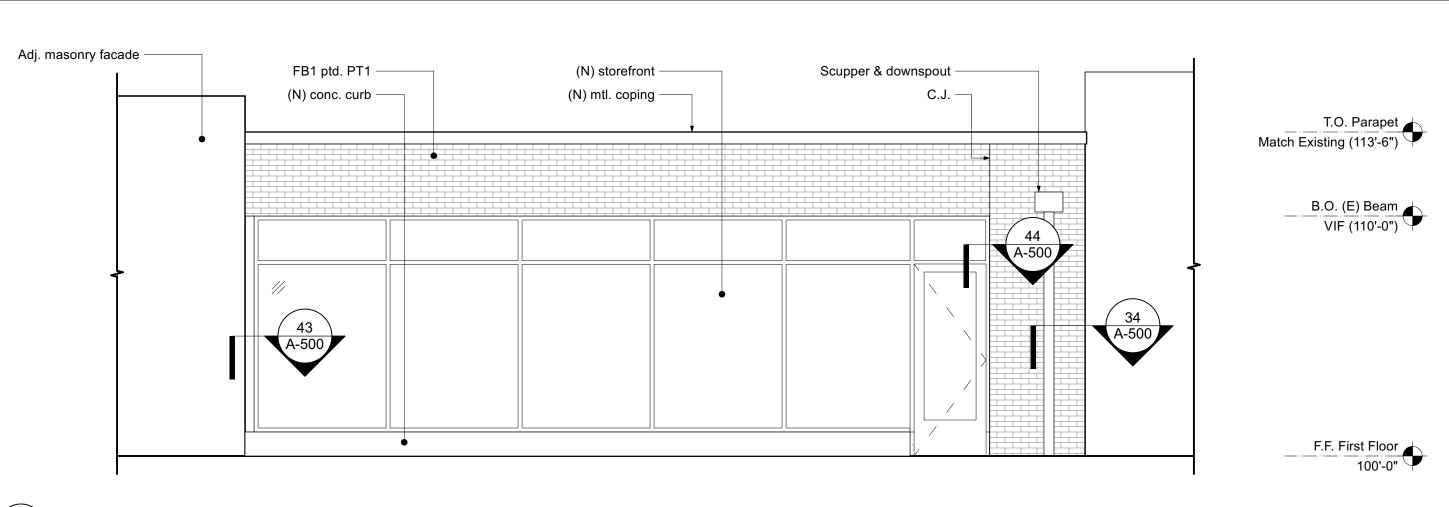
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Sheet Title

Roof Plan

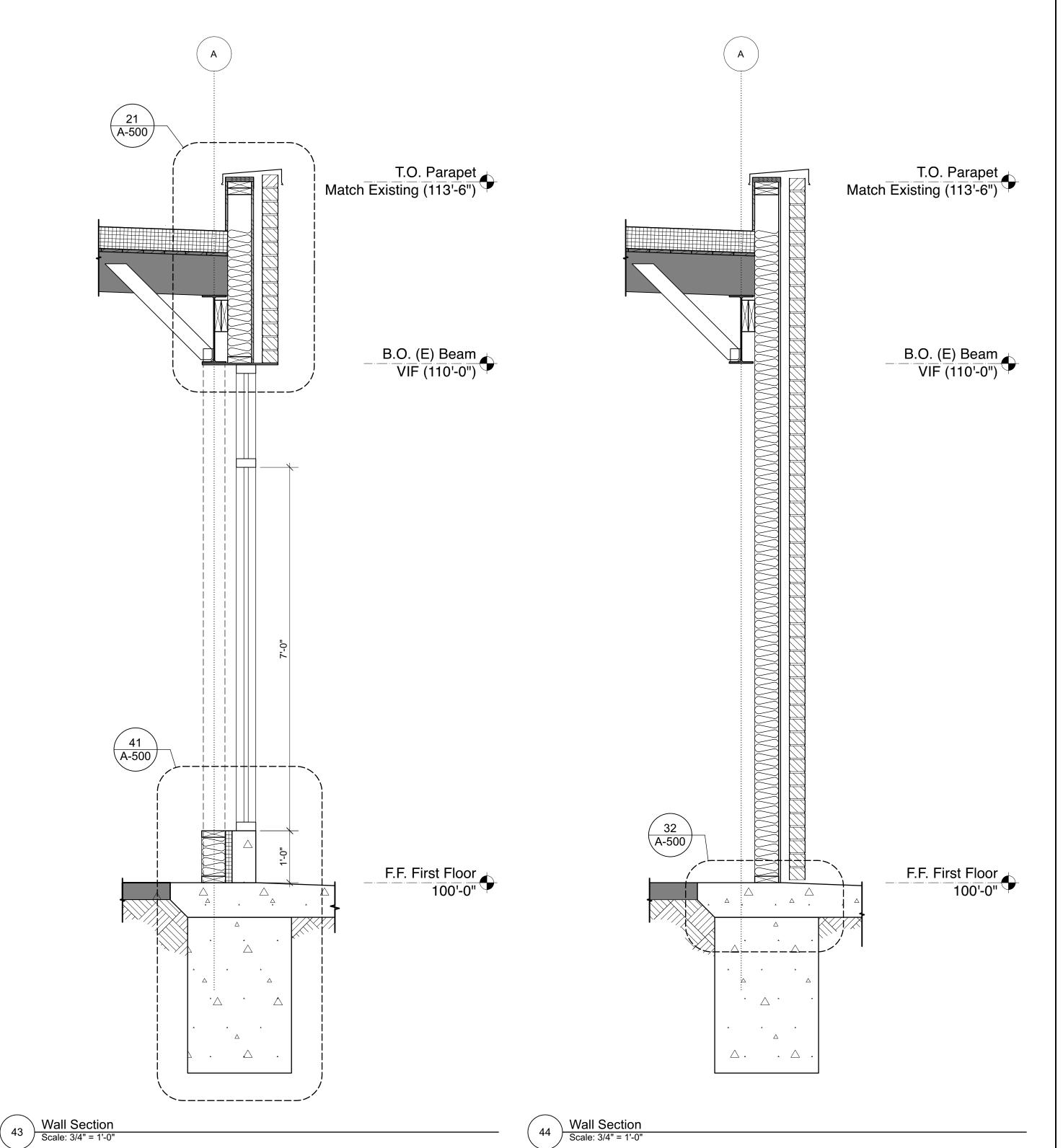
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A-101



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

Door S	Schedule				
Mark	Width	Height	Door Material	Frame Material	Comments
100	3'0"	8'0"	AL/GL	ALUM	By storefront manufacturer



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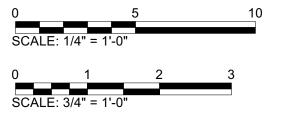
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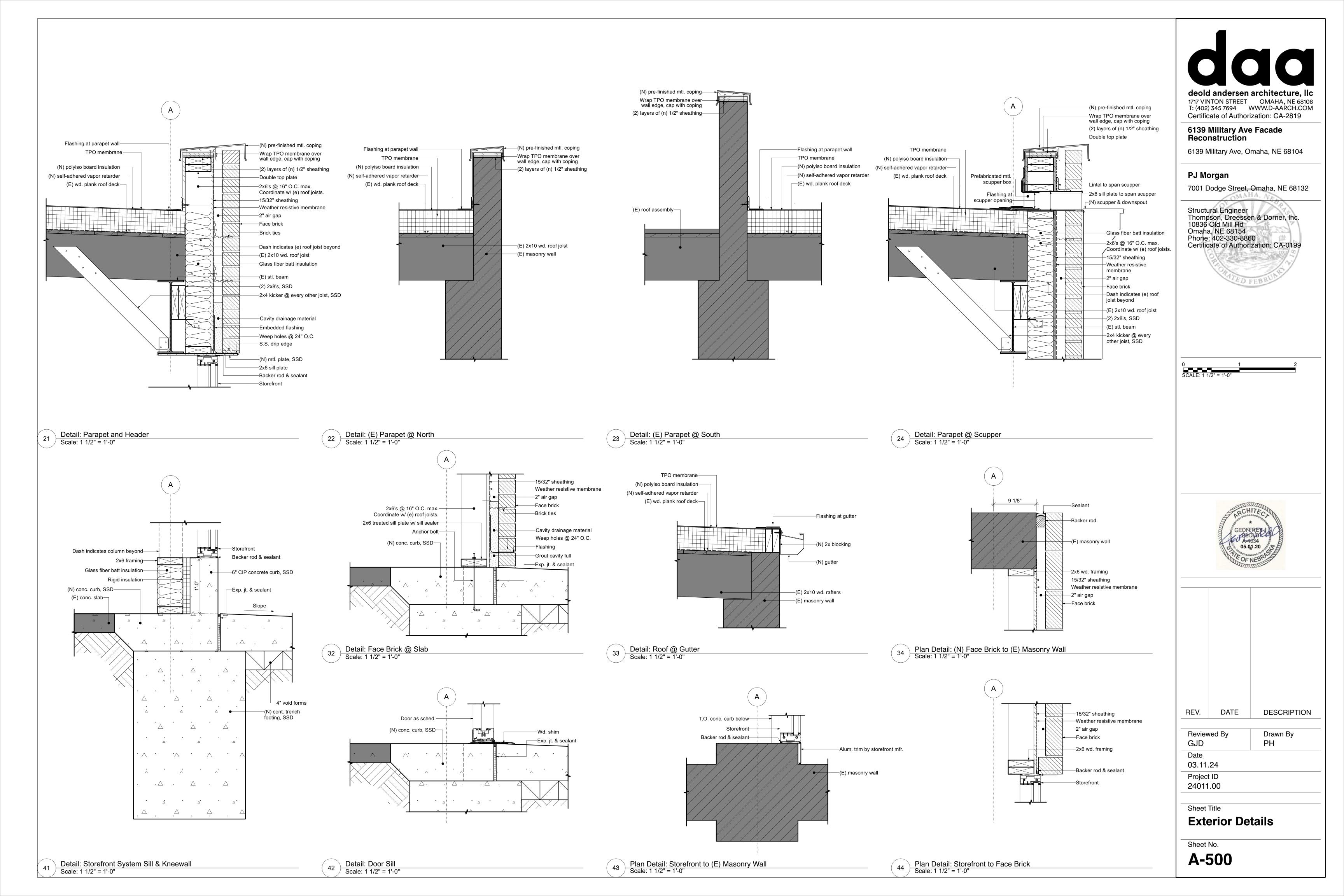
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East Elevation & Wall Sections

Sheet No.

A-200



STRUCTURAL NOTES, GENERAL

1. CODE: References to the "code" in each section shall be as follows:

IBC 2018 with local amendments Risk Category:

Other Applicable Codes as Referenced in the Building Code Concrete Code

ACI 318, ACI 301 Steel Code: AISC 360, Specification for steel buildings, AISC 341 Seismic Provisions Minimum Design Loads for Building: ASCE 7

NDS

25 PSF

Wood Code: 2. STRUCTURAL DESIGN LOADS:

> **ROOF LIVE LOADS:** Flat and Sloped Roofs:

> > 25 PSF Ground Snow Load: Flat-Roof Snow Load (Pf): 17.5 PSF Snow Exposure Factor: $C_{E} = 1.0$ $C_T = 1.0$ Thermal Factor: Importance Factor: I = 1.0

WIND:

111 MPH Wind Speed (Ultimate): Exposure Category: Internal Pressure Coefficient: ± 0.18

SEISMIC: Spectral Response Accelerations:

 $S_S = 0.072$; $S_1 = 0.045$ Site Class: Importance Factor: 1.00 Seismic Design Category:

3. FOUNDATION DESIGN CRITERIA:

1,500 PSF A. Assumed Soil Bearing Pressure:

Note: All Footing Excavations shall be inspected and approved by the Geotechnical Engineer prior to placing concrete.

4. EXCAVATION AND BACKFILL:

A. The contractor shall notify the geotechnical engineer at least 24 hours prior to earthwork operations. Perform all earthwork in accordance with the geotechnical engineers instructions. Do not proceed without approval of the geotechnical engineer.

B. Protect all excavations from damage due to water or freezing temperatures.

C. All Footing excavations shall be inspected and approved by the Geotechnical Engineer prior to placing

5. GENERAL NOTES:

A. All work shall comply with requirements of the Building Code, with recommendations of manufacturers, and with recognized workmanship and material standards.

B. Comply with all applicable codes, ordinances, and regulations including those promulgated and enforced by OSHA. The structural design represented by the drawings and specifications is based on interaction of the various components, materials, and systems shown or required by the drawings and specifications. The contractor shall determine the need for and provide all required bracing, shoring, or other means to ensure stability and safety until all work required by the contract documents is complete. When and where necessary to comply with these requirements, the contractor shall provide appropriate additional temporary or permanent connections, shoring, and/or bracing or, in the alternative, shall make appropriate modifications of specified connections and/or members. Where additions to or modifications of specified requirements are proposed, they shall be submitted to the Architect for review and approval. Such review and approval will be only for compliance with the structural and architectural design intent for the work. The adequacy for construction phase stability and safety is the responsibility

- C. Adapt requirements of details, sections, plans, and notes at all locations of which conditions are similar.
- D. The structural drawings are to be read in view of all other drawings and all specifications. Coordinate all work shown with all other work.
- Shop drawings for any part of the work shall show the interface with and provisions for related other work including such adaptations of requirements given as may be necessary.
- Contractor shall cross check dimensions and elevations between architectural, mechanical, and structural plans and notify Architect of any variance before contractor begins work.
- G. Lateral shoring of existing utilities and tunnels is the responsibility of the Contractor. See Site and AR plans for locations of existing utilities and tunnels and minimum locations of shoring. Notify Architect immediately if existing conditions conflict with drawings.
- 6. MECHANICAL, ELECTRICAL, AND PIPING SYSTEMS WORK:
- A. Secondary framing, bridging, or other means shall be provided to distribute loads to structural members. Such framing, bridging, or other means shall be shown on the shop drawings for the work of the mechanical, electrical and piping systems.
- B. For limitations on excavations, see 'Cast-In-Place Concrete Notes' regarding Footing Work.
- 7. SPECIAL INSPECTION:
 - A. Special Inspection in accordance with the Building Code will be performed per the special inspection schedules on this sheet.
 - B. Special Inspections shall be hired and paid for by the owner. Retest expenses for failed inspections will be charged to the contractor.
- C. The Contractor shall provide the Special Inspector sufficient notification to allow the required inspections to be made without delaying the construction schedule. The Contractor shall confirm that all inspections have been completed and approved by the Special Inspector prior to proceeding with Work.

8 ABBREVIATIONS

ABBREVI	ATIONS:				
ARCH. B.O.	Architect Bottom Of	E.O.R.	Structural Engineer of Record	PL REINF.	Plate Reinforcing
B.O.S.	Bottom of Steel	EA.	Each	REQ'D	Required
BOTT.	Bottom	EXIST.	Existing	S.O.G.	Slab on Grade
BRG.	Bearing	EXP.	Expansion	SIM.	Similar
BTWN.	Between	F.V.	Field Verify	STD.	Standard
CLR.	Clear	FTG.	Footing	T.O.	Top Of
COL.	Column	H.D.G.	Hot-Dipped	T.O.F.	Top of Footing
CONC.	Concrete		Galvanized	T.O.S.	Top fo Steel
CONT.	Continuous	H.S.	Headed Studs	T.O.W.	Top of Wall
COORD.	Coordinate	HORIZ.	Horizontal	TYP.	Typical
D.B.A.	Deformed Bar Anchor	JST.	Joist	U.N.O.	Unless Noted
DBL.	Double	JT.	Joint		Otherwise
DET.	Detail	N.W.	Normal Weight	V.W.A.	Verify with Architect
		O.C.	On Center	VERT.	Vertical
				w/	With

CAST-IN-PLACE CONCRETE WORK

1. MATERIALS:

Concrete:

Location:	28-Day Strength	Slump (*)	Max. Aggregate	Air Entrainment	Design Density	Exposure Class
Footings and all other concrete not noted below.	4000 PSI	4"-6"	1"	5%-7%	N.W.	F2
Interior slab-on-grade	4000 PSI	4"-6"	1"	N.A.	N.W.	F0
Exterior slabs-on-grade	5000 PSI	4"-6"	1"	5%-7%	N.W.	F3

(*) Slump may be increased as needed to make installation easier provided the increased slump is due to the use of proper admixture selection. All submitted concrete mixes shall indicate the use of such admixtures. Water may not be added in the field.

Other Materials: Reinforcing Bars:

Deformed Bar Anchors:

Weldable Reinforcing Bars:

Welded Wire Fabric:

ASTM A615 Grade 60, deformed. ASTM A496, with a minimum tensile strength of 80 ksi. ASTM A1064, flat sheet type. ASTM F1554 [GR. 36], Headed Type, U.N.O.

CONTINUITY:

Anchor Bolts:

All reinforcing shall be continuous unless noted otherwise. Continuity at corners and intersections shall be achieved using corner bars and contact lap splices; see typical detail. Continuity at other locations may be achieved using contact lap splices shown on approved shop drawings. Location of lap splices shall be shown on the shop drawings. Unless noted otherwise, the following lap splices shall be used: (All lap splices are class B splices)

ASTM A706 Grade 60, deformed.

Location:	#3	#4	#5	#6	#7	#8	#9	#10	#11
4000 & 4500 PSI Concrete:									
- Top Bars (*):	16"	19"	25"	36"	61"	80"	102"	129"	159"
- Other Bars:	16"	16"(**)	19"	28"	47"	62"	78"	99"	123"

- (*) Top bars are horizontal reinforcing where more than 12" of concrete is cast in the member below the
- (**) For #4 epoxy coated rebar, use 27" splice length at 3000 and 3500 PSI conc. and 19" at 4000 and 4500

Mechanical connections may be used in lieu of lap splices provided approval is obtained from the Architect/Engineer. Connections shall develop in tension 125 percent of the specified yield strength of the bar. All mechanical connections shall be shown on the shop drawings and be installed in accordance with the manufacturer's written instructions and the product's ICC-ES report. Submit the product's ICC-ES report for mechanical splice products with shop drawings.

GENERAL:

- A. Coordinate work with all other work.
- B. All reinforcing shall be continous; see notes above. All reinforcing, anchor bolts, and other embedded items shall be secured in place prior to placing concrete.
- C. Construction joints shall be keyed joints, unless noted otherwise, with reinforcing continuous through the joint. Construction joints shall be located in a manner not to affect the strength of the concrete. Concrete on one side of construction joints shall not be placed less than 24 hours after placement of concrete on the opposite side of the construction joint.
- D. Straight dowels may be 'wet set' in plastic concrete and vibrated if continous special inspection is provided. Dowels with hooks must be secured before pouring concrete.
- E. Minimum clear cover from reinforcing to surfaces of concrete shall be as follows:
- Concrete cast against and permanently exposed to earth:

3. Concrete not exposed to weather or in contact with earth:

- 2. Concrete exposed to earth or weather: 1 1/2" (#5 and smaller) 2" (#6 and larger)
- Clear distance between parallel bars in a layer shall be as shown on the plans with minimum of 2 1/2".

FOOTING WORK:

A. Pipes and other work which require trenching adjacent to pad footings and parallel to continuous footings shall not be located below lines extending downward from the bottom edges of the footing at a 45-degree angle from the horizontal. Pipes and other work perpendicular to continuous footings may be located beneath the footing. Footing elevations may be lowered if approved on the footing shop

5. SLAB-ON-GRADE WORK:

- A. Coordinate slab-on-grade work with all other work. Provide thickened slabs, depressed slabs, equipment pads, blockouts, etc. as needed. See Arch. plans for elevations and locations.
- B. Saw cut control joints in slab to a depth equal to 1/3 the slab thickness.
- C. Slabs-on-grade Requirements U.N.O. on the plans:
- Thickness: See Plans
- Reinforcing: See Plans Control Joints: 10'-0"o.c. maximum each way, unless noted otherwise.
- D. At contractor's option, where slab is not exposed, reinforcing may be synthetic fibrillated polypropylene fibers engineered and designed for use in concrete, complying with ASTM C1116, Type III. Uniformly dispense in concrete mix at Manufacturer's recommended rate, but not less than 1.5 lbs/CY.
- E. Separate S.O.G. w/ 3/8" expansion joint material from all columns and walls. Differential movement could occur between foundations and slab-on-grade.
- F. All slabs-on-grade shall have a 10 mil Class A Vapor Retarder or 15 mil Class A Vapor Barrier directly

WOOD FRAMING WORK

1. GENERAL:

- A. All members shall be framed, anchored, tied and braced to develop the strength and rigidity for the purpose for which they are used. Unless noted otherwise on the drawings, connect members in accordance with the "Fastening Schedule" of the Building Code.
- B. Hardware noted on the plans shall be Simpson Strong-Tie as manufactured by Simpson Company of San Leandro, California. An equivalent anchor manufactured by USP is acceptable subject to approval by the Architect/Engineer. The contractor shall submit for approval any proposed substitutions.
- C. WOOD MEMBER CONNECTIONS:
- 1. Connect multiple individual framing members that are parallel and in contact thus:

2 rows of 10d nails at 12"o.c.

3 Members: 2 rows of 16d nails on each face at 12"o.c. 4 or 5 Members: 2 rows of 1/4"dia. Simpson SDS Wood Screws or Equal spaced at 12"o.c.

Screw length shall match the total thickness of the built-up members. > 5 Members: 3/4"Ø A307 Thru-bolts at mid-depth, spaced at 12"o.c.

2. Unless noted otherwise on the Drawings, connect joists and rafters to wood members with Simpson 'LUS' hangers matching the joist depth. Unless noted otherwise, use the LUS (hanger) - 2 where members are doubled. Provide hangers with sloped or skewed seats as required.

D. PRESERVATIVE PRESSURE-TREATMENT:

- 1. All wood members shall be treated where in contact with concrete, masonry or concrete walls and at all exterior conditions. Treated members shall be Southern-Pine No. 2, unless noted otherwise. Interior sill or rim plates that are protected from weather and in contact with concrete or masonry shall be borate-treated members that are not corrosive to fasteners.
- 2. All Simpson hardware in contact with a wood member pressure treated with a preservative other than borate shall be hot-dipped galvanized or "Z-Max" galvanized, and all nails, bolts, screws and other fasteners shall be hot-dipped galvanized.
- 2. COLLATED GUN-DRIVEN NAILING:

A. Collated nails used in nail guns shall meet the requirements of ASTM F1667 and shall be of the following sizes:

Specified Nail Size	Collated Nail Diameter	Collated Nail Length
8d Common	0.131"	2 1/2"
10d Common	0.148"	3"
12d Common	0.148"	3 1/4"
16d Common	0.162"	3 1/2"

- B. Nail gun pressures shall be adjusted to install the nail into the substrate and in no case shall the nails be over-driven.

3. STUD WALLS:

- A. Wall Stud and Blocking Materials
- SPF No.: 2 with the following NDS's minimum "Reference" design values:
- 875 PSI 1,150 PSI (Parallel)
- 1,400,000 PSI
- B. Sill Plates in Contact with Concrete or Masonry:

Material: Southern-Pine No. 2 OR Doug-Fir No. 2 Treatment: Borate

C. Wall Stud Grade, Sizes and Spacing; unless noted otherwise:

- ,	1 3,	
Wall Location	Size/Spacing	Grade
Exterior Walls	2x6's at 16"o.c.	SPF No.:2

- D. Provide beams, bearing studs and jamb studs for openings as shown on the drawings.
- E. At locations where holes greater than 1" are required through the top plates of stud walls to accommodate items such as roof drains and plumbing, provide studs between the hole and the truss located on each side of the hole.
- F. Double top plates shall be installed to provide overlapping at corners and at intersections
- G. Unless noted or detailed otherwise, sill plates for interior non-bearing partition walls shall be anchored to the concrete floor slab per the Building Code using HILTI 'X-CF 72' sill plate fasteners or approved equal. Fasteners shall be installed in accordance with the manufacturer's ICC-ES Evaluation Report.
- 4. JOISTS, HEADERS, RAFTERS:
- A. Use Doug-Fir No.: 2, unless noted otherwise, with the following NDS's minimum "Reference" design
 - 625 PSI (Perpendicular) 180 PSI 1,600,000 PSI Fv:

5. SHEATHING:

- A. ROOF SHEATHING:
- 1. Slopes less than 3:12" 19/32" plywood or oriented strand board, 40/20 span rating, Exposure I.
- 5/8" ZIP System OSB Wall Sheathing, 40/20 span rating, Exposure I.
- B. EXTERIOR WALL SHEATHING: 1. 15/32" plywood or oriented strand board, 32/16 span rating, Exposure I.

6. SHEATHING ATTACHMENT:

A. Sheathing shall be attached per the following, unless noted otherwise on the drawings:

Location	Blocking at Panel Edges	Attachement at Panel Edges	Attachment at Other Members
Roofs	2x4 min. at Hips, Ridges, and Valleys. Plyclips at all other locations	10d nails at 6"o.c.	10d nails at 12"o.c.
Exterior Walls	Required	8d nails at 6"o.c.	8d nails at 12"o.c.

- Roof Sheathing shall be installed with face grain perpendicular to supports and continuous over 2 or more supports. Stagger the 8'-0" panel dimension 4'-0". - Floor sheathing shall be glued to supports prior to fastening.

2018 IBC TABLE 1705.6 REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS TYPE CONTINUOUS | PERIODIC Verify materials below shallow foundations are adequate to achieve the design bearing capacity. Verify excavations are extended to proper depth and have reached proper Perform classification and testing of compacted fill materials Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.

STRUCTURAL STEEL WORK

1. MATERIALS:

Wide Flange Beams and Tee Shapes: ASTM A992, Grade 50 Angles, Channels, Plates, and Bars: ASTM A36 Steel Tubes: ASTM A500, Grade C ASTM A53, Type E or S, Grade B Steel Pipes: ASTM A108. Grade 1015 Headed Studs: Anchor Bolts: ASTM F1554 [Gr. 36], Headed Type, U.N.O. Non-High Strength Bolts: ASTM A307 ASTM F3125 [Gr. A325] bearing type connections, U.N.O High Strength Bolts: Welding Electrodes:

Deformed Bar Anchors: ASTM A496, with a minimum tensile strength of 80 ksi.

- 2. STRUCTURAL STEEL:
- A. All steel work shall comply with the Building Code and Steel Code
- B. Provide structural steel work as shown on the drawings and submit shop drawings for the same. Where the design of members or connections are not specifically noted, provide such in accordance with the latest AISC specifications and submit the design with the shop drawings for approval.
- C. Steel shall be fabricated to achieve the elevations, slopes, and geometry shown on the Architectural and Structural Drawings. Structural steel shall provide a uniform surface for the attachment of metal deck.

POST INSTALLED ANCHORS

MATERIALS:

Concrete:

Adhesive Anchors

Hilti "HY200" Safeset, Hilti "RE500 V3", DeWalt "AC200+", DeWalt "Pure220+", or Simpson "AT", "ET', or "SET". Hilti "Kwik Bolt TZ", Simpson "Strong-Bolt", or DeWalt "Power-Stud+ SD2".

<u>Masonry:</u>

Mechanical Anchors:

- Hilti "HY270", Simpson "SET", or DeWalt "AC100+ Gold" adhesives with Adhesive Anchors: screen tubes when anchoring into brick or hollow CMU. - Hilti "HY200", Simpson "SET", or DeWalt "AC100+ Gold" adhesives when

Hilti "Kwik Bolt 3" or DeWalt "Power-Stud+ SD1" anchors. Mechanical Anchors:

- 2. Equivalent product may be submitted.
- Submit ICC report for all post installed anchors.
- 4. Installation of post installed anchors shall be per manufacturer's requirements and shall be subject to continous inspection.

anchoring into grouted solid CMU.

EXISTING CONSTRUCTION NOTES

- 1. Field verify vertical and horizontal location of existing construction prior to proceeding with work.
- 2. Existing conditions shown on the drawings were obtained from existing plans, field observations, or were assumed. If conditions other than those shown exist, immediately notify Architect before proceeding with the work at that location; alternate methods of construction may need to be used.
- 3. Use appropriate construction methods and equipment to support existing structures and to avoid overstressing the existing structures.
- 4. Where existing construction shows signs of deterioration or damage, notify Engineer for observation to determine if corrective work is required.
- 5. Where specifically noted on the drawings, notify engineer after existing structural items have been exposed to view. Allow (1) week from notification for engineer to observe existing conditions and issue requirements for new construction.

2018 IBC TABLE 1705.3 REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION CONTINUOUS PERIODIC SPECIAL REFERENCED PECIAL INSPECTION INSPECTION STANDARD REFERENCE Inspect reinforcement, including prestressing ACI 318 Ch. 20, 25.2, 1908.4 tendons, and verify placement. 25.3, 26.6.1-26.6.3 Reinforcing bar welding:

a. Verify weldability of reinforcing bars AWS D1.4 other than ASTM A706; b. Inspect single-pass fillet welds, maximum ACI 318: 26.6.4 5/16"; and c. Inspect all other welds. ACI 318: 17.8.2 Inspect anchors cast in concrete. Inspect anchors post-installed in hardened concrete members. (b) ACI 318: 17.8.2.4 a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads. ACI 318: 17.8.2 b. Mechanical anchors and adhesive anchors not defined in 4.a. Verify use of required design mix. ACI 318: Ch. 19, 1904.1, 1904.2 1908.2, 1908.3 26.4.3, 26.4.4 Prior to concrete placement, fabricate ASTM C172 specimens for strength tests, perform slump ASTM C31 1908.10 and air content tests, and determine the ACI 318: 26.4, 26.12 temperature of the concrete. Inspect concrete and shotcrete placement for 1908.6, 1908.7 ACI 318: 26.5 proper application techniques. 1908.8 Verify maintenance of specified curing ACI 318: Χ 1908.9 temperature and techniques 26.5.3-26.5.5 Inspect prestressed concrete for a. Application of prestressing forces; and ACI 318: 26.10 b. Grouting of bonded prestressing tendons. ACI 318: Ch. 26.9 Inspect erection of precast concrete members.

dimensions of the concrete member being formed.

beams and structural slabs.

. Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and

prior to removal of shores and forms from

2. Inspect formwork for shape, location and

For SI: 1 inch = 25.4 mm.

(a) Where applicable, see also Section 1705.12, Special inspections for seismic resistance.) Specific requirements for special inspection shall be included in the research report for the anchor issued by an approved source in accordance with 17.8.2 in ACI 318, or other qualification procedures. Where specific requirements are not provided, special inspection requirements shall be

specified by the registered design professional and shall be approved by the building official prior to the commencement of the work.

hompson. Dreessen & Dorner, Inc. 0836 Old Mill Rd Omaha, NE 68154 02.330.8860 www.td2co.com D2 Project #2246-108 NE CA-0199

ACI 318: 26.11.2

ACI 318: 26.11.1.2(b)



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Reconstruction

6139 Military Ave, Omaha, NE 68104

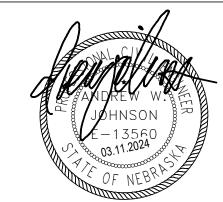
6139 Military Ave Facade

PJ

7001 Dodge Street, Omaha, NE 68132

Consultants

Structural Engineer Thompson, Dreessen & Dorner, Inc. 10836 Old Mill Rd Omaha, NE 68154 Phone: 402-330-8860 Certificate of Authorization: CA-0199



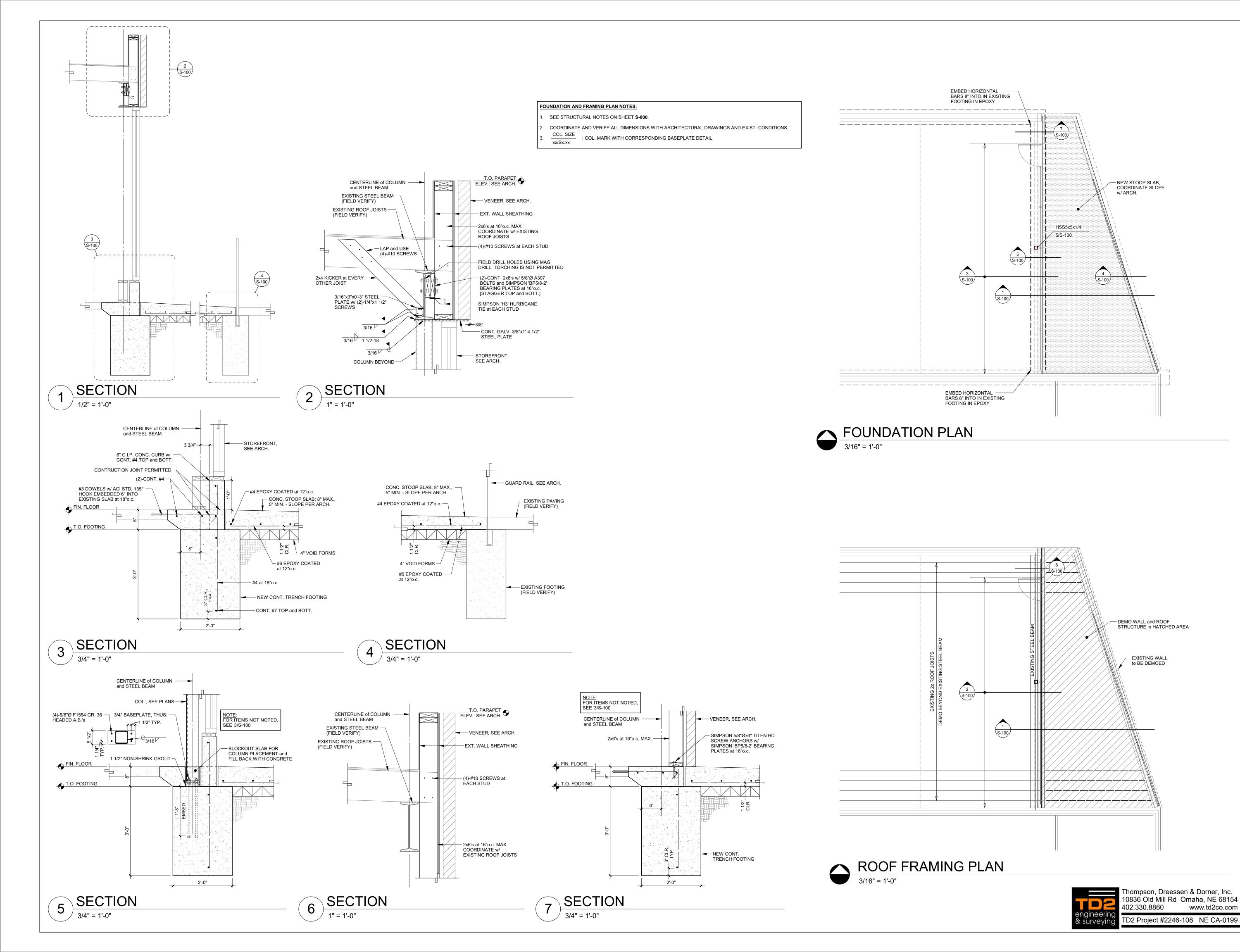
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Sheet Title STRUCTURAL NOTES

Sheet No.

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6139 Military Ave Facade Reconstruction

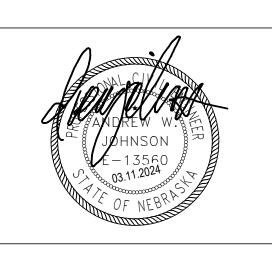
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Sheet Title

FRAMING PLANS AND SECTIONS

Sheet No.

S-100