To: Prospective Bidders

From: Wold Architects and Engineers

Date: February 17, 2023

Comm. No: 213106

Subject: Addendum No. 1 for Bidding Documents for the
Regional Operations and Communications Facility
Libertyville, Illinois

BIDS DUE MARCH 9, 2023, AT 11:00 A.M.

This addendum forms a part of the Contract Documents dated December 30, 2022. Acknowledge receipt of this Addendum on the space provided on the Bid Form. Failure to do so may result in disqualification of Bid.

This Addendum consists of two (2) typed sheets and attachments:
Specifications: 00 01 10 – Book 1, 00 41 00, 01 22 00, 08 16 13, 09 68 13
Drawings: L101, L107, L110, A1.00, A2.901, A4.901, A5.504, E5.02

PROJECT MANUAL

1. **SPECIFICATION SECTION 00 01 10 TABLE OF CONTENTS – BOOK 1**
   A. Reissued this addendum.
2. **SPECIFICATION SECTION 00 41 00 BID FORM SUPPLEMENTAL INFORMATION**
   A. Reissued this addendum.
3. **SPECIFICATION SECTION 01 22 00 UNIT PRICES**
   A. Reissued this addendum.
4. **SPECIFICATION SECTION 08 16 13 FIBERGLASS DOORS AND FRAMES**
   A. Issued this addendum.
5. **SPECIFICATION SECTION 09 68 13 CARPET FLOORING**
   A. Reissued this addendum.

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DRAWINGS

1. **SHEET L-101 – LANDSCAPE PLAN – NORTHEAST**
   A. Reissued this addendum.
2. **SHEET L-107 – LANDSCAPE DETAILS**
   A. Reissued this addendum.
3. **SHEET L-110 – LANDSCAPE SPECIFICATIONS**
   A. Reissued this addendum.
4. **SHEET A1.00 – ARCHITECTURAL SITE PLAN**
   A. Reissued this addendum.
5. **SHEET A2.901 – DOOR/FRAME/LOUVER TYPES & SCHEDULE**
   A. Reissued this addendum.
6. **SHEET A4.901 – DETAILS – INTERIOR CEILING DETAILS**
   A. Reissued this addendum.
7. **SHEET A5.504 – DETAILS – EXTERIOR WALL**
   A. Reissued this addendum.
8. **SHEET E5.02 – METERING AND BAS DETAILS**
   A. Reissued this addendum.

END OF ADDENDUM #1

SECTION 00 01 10

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SECTION 00 41 00
BID FORM SUPPLEMENTAL INFORMATION
(CONTRACTOR SHALL USE THIS SECTION TO SUPPLEMENT THE REQUIRED LAKE COUNTY BID SOLICITATION FORM)

THE PROJECT AND THE PARTIES

1.01 TO:

A. LAKE COUNTY
LAKE COUNTY GOVERNMENT BUILDING
18 NORTH COUNTY STREET
WAUKEGAN, ILLINOIS 60085

1.02 FOR:

A. Project: REGIONAL OPERATIONS AND COMMUNICATIONS FACILITY
B. Project Number: 213106
LAKE COUNTY GOVERNMENT CAMPUS
LIBERTYVILLE, ILLINOIS 60048

We have examined the Contract Documents for the proposed Regional Operations and Communications Facility as prepared by Wold Architects and Engineers, Palatine, Illinois, and the conditions affecting the work.

1.03 ALTERNATES

A. The Bidder agrees to add to or deduct from the Base Bid Sum the following amounts to perform the alternate work described in Section 01 23 00, including all associated costs.
1. Alternate No. 1 Reduce UPS Runtime – Deduct Alternate
2. Alternate No. 2 Additional Audio/Visual Display Locations – Add Alternate
3. Alternate No. 3 Provide Metal Standing Seam Roof and EPDM Room in lieu of PVC – Add Alternate
4. Alternate No. 4 Remove Loading Dock – Deduct Alternate
5. Alternate No. 5 Reduce Walking Path – Deduct Alternate
6. Alternate No. 6 Sound Masking – Add Alternate
7. Alternate No. 7 Provision for Additional Site Trailer for County Use – Add Alternate
8. Alternate No. 8 Itemized Costs for A/V Network Resiliency
9. Alternate No. 9 BIM (LOD) 400 final deliverable from the Contractor

1.04 PRICING BOUNDARY ZONES

A. Contractor shall identify pricing associated with full and complete construction of work zones with clarification as identified below. Please note this information is being requested for cost associative purposes on behalf of various Lake County grants and funding sources. THE FOLLOWING COSTS WILL NOT BE GROUNDS FOR BID ALTERNATES/OPTIONS OR SUBDIVISION OF THIS WORK FROM THE PROCUREMENT OF THE TOTAL PROJECT. Actual costs along with percentage based costs are appropriate for this break down. The contractor will be required to work with Lake County to replicate this logic on statement of values and invoicing.
1. Zone 1 – Backup Generator (equipment and install), including: foundation, barrier wall, wiring, controls, testing, and start up
2. Zone 2 – UPS (equipment and install): wiring, controls, testing and start up.
3. Zone 3 – Geothermal Wells (equipment and install), including: wells, piping, manifolds, pumps, testing, and start up.
4. Zone 4 – ARPA (equipment and install): see ARPA funding zone designation graphic as shown on Architectural Drawing A2.03.

5. Zone 5 – FEMA (finishes, equipment, etc.) see FEMA funding zone designation graphic and explanation as shown on Architectural Drawing A2.03.
6. Zone 6 – ETSB (equipment and install): see ETSB funding zone designation graphic as shown on Architectural Drawing A2.03.

1.05 UNIT PRICES

A. The following are Unit Prices requested for use in changes of the Work as listed below:

Unit Price #1 – Pre-mixed glycol/DI Solution	$_____gallon
Unit Price #2 – Removal and Disposal of Unsuitable Materials	$_____CY
Unit Price #3 – Aggregate Subgrade Improvement	$_____CY
Unit Price #4 – Preparation of Base	$_____SY
Unit Price #5 – Geotechnical Fabric for Ground Stabilization	$_____SY
Unit Price #6 – Combination Concrete Curb & Gutter, Type B-6.12	$_____LF
Unit Price #7 – Portland Cement Concrete Sidewalk, 5 inch	$_____SF
Unit Price #8 – Ribbon Curb	$_____LF
Unit Price #9 – Pavers	$_____SF
Unit Price #10 – Audio/Visual Extended Warranty	$_____YEARS 2-6
Unit Price #11 – Senior Technician Time	***$_____HR***
Unit Price #12 – Additional IP Drops	***$_____PER DROP***

END OF SECTION 00 41 00

SECTION 01 22 00
UNIT PRICES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. In the space indicated on the Bid Form, submit unit prices as required by this section and listed in the Unit Price Schedule. Only one value for each unit price will be allowed.

B. A unit price is a price per unit of measurement for materials or services that will be added to or deducted from the Contract Sum by Change Order in the event the quantities of Work required by the Contract Documents are increased or decreased.

C. Refer to individual Specification Sections for construction activities requiring the establishment of unit prices.

1.02 COSTS INCLUDED

A. Unit Prices included on the Bid Form shall include full compensation for all required labor, products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; applicable taxes; overhead and profit.

B. While unit prices are not to be used in the selection of the successful Bidder, they must be submitted and approved prior to execution of the Contract.

1. The Owner reserves the right to reject a unit price they deem unsatisfactory and to require a resubmittal, based other bidders unit prices.
2. The Owner reserves the right to reject the Contractor's measurement of quantities, and to have this Work measured by an independent party.
3. The Owner reserves the right to throw out a bid that does not include a unit price or assign a unit price based on other bidders unit prices.

1.03 UNIT QUANTITIES SPECIFIED

A. Quantities and measurements of actual Work during construction will determine the payment amount.

1.04 MEASUREMENT OF QUANTITIES

A. Take all measurements and compute quantites. Measurements and quantities may be verified by an independent party selected by the Owner.

B. Assist by providing necessary equipment, workers, and survey personnel as required.

C. Measurement by Volume: Measured by cubic dimension using mean length, width and height or thickness.

D. Measurement by Area: Measured by square dimension using mean length and width or radius.

E. Linear Measurement: Measured by linear dimension, at the item centerline or mean chord.

F. Stipulated Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as a completed item or unit of the Work.

G. Contractor's Engineer Responsibilities: Sign surveyor's or testing agency's field notes or keep duplicate field notes, calculate and certify quantities for payment purposes.

1.05 PAYMENT

A. Payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities of Work that is incorporated in or made necessary by the Work and accepted by the Architect, multiplied by the unit price.

B. Payment will not be made for any of the following:

1. Products wasted or disposed of in a manner that is not acceptable.
2. Products determined as unacceptable before or after placement.

3. Products not completely unloaded from the transporting vehicle.
4. Products placed beyond the lines and levels of the required Work.
5. Loading, hauling, and disposing of rejected Products.

1.06 SCHEDULE OF UNIT PRICES

A. Unit Price #1: Pre-mixed glycol/DI Solution
   1. Description: The addition of glycol/DI solution as outlined in Division 23 Specifications.
   2. Unit of measurement: Gallons

B. Unit Price #2: Removal and Disposal of Unsuitable Materials
   1. Description: Excavation, removal and disposal offsite of existing soils below the soil correction depths indicated in the geotechnical evaluation report that are beyond the scope of Work represented by the Contract Documents, determined to be unsuitable by the project geotechnical engineer for support of foundations, slabs, utilities, traffic, or additional fill materials
   2. Unit of measurement: In place cubic yard.

C. Unit Price #3: Aggregate Subgrade Improvement
   1. Description: Providing and installing additional aggregate subgrade improvements that are beyond the scope of Work represented by the Contract Documents.
   2. Unit of measurement: Compacted cubic yard.

D. Unit Price #4: Preparation of Base
   1. Description: Providing and installing additional base preparation that is beyond the scope of Work represented by the Contract Documents.
   2. Unit of measurement: Installed square yard

E. Unit Price #5: Geotechnical Fabric for Ground Stabilization
   1. Description: Providing and installing additional geotechnical fabric that is beyond the scope of Work represented by the Contract Documents.
   2. Unit of measurement: Installed square yard

F. Unit Price #6: Combination Concrete Curb & Gutter, Type B-6.12
   1. Description: Providing and installing additional curb and gutter, type listed above, that is beyond the scope of Work represented by the Contract Documents.
   2. Unit of measurement: Installed lineal feet

G. Unit Price #7: Portland Cement Concrete Sidewalk, 5 inch
   1. Description: Providing and installing additional PCC sidewalk, type listed above, that is beyond the scope of Work represented by the Contract Documents.
   2. Unit of measurement: Installed square feet

H. Unit Price #8: Ribbon Curb
   1. Description: Providing and installing additional ribbon curb that is beyond the scope of Work represented by the Contract Documents.
   2. Unit of measurement: Installed lineal feet

I. Unit Price #9: Pavers
   1. Description: Providing and installing additional pavers that are beyond the scope of Work represented by the Contract Documents.
   2. Unit of measurement: Installed square feet

J. Unit Price #10: Audio/Visual Extended Warranty
   1. Description: The addition audio/visual extended warranty as outlined in Division 27 Specifications.
   2. Unit of measurement: Additional years of extended service.

K. ***Unit Price #11: Senior Technician Time***
   1. ***Description: Provide an hourly rate for senior technician as identified in Specification Section 25 15 11.02.***
   2. ***Unit of measurement: Hourly Rate.***

L. ***Unit Price #12: Additional IP Drops***

1. ***Description: To provide typical plenum rated CAT 6 IP drop run from the server room to a TBD location. Terminate into patch panel and provide R56 end module, assume 150' length and conduit provided by others.***
2. ***Unit of measurement: Each Drop.***

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 01 22 00

SECTION 08 16 13
FIBERGLASS DOORS AND FRAMES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fiberglass doors for Exterior Openings.
B. Fiberglass door frames.

1.02 ADMINISTRATIVE REQUIREMENTS

A. Coordination: Obtain hardware templates from hardware manufacturer prior to starting fabrication.

1.03 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
B. Product Data: Provide manufacturer's standard details, installation instructions, hardware and anchor recommendations.
C. Shop Drawings: Indicate layout and profiles; include assembly methods.
    1. Indicate product components, including hardware reinforcement locations and preparations, accessories, finish colors, patterns, and textures.
    2. Indicate wall conditions, door and frame elevations, sections, materials, gauges, finishes, location of door hardware by dimension, and details of openings; use same reference numbers indicated on drawings to identify details and openings.
D. Selection Samples: Submit two complete sets of color chips, illustrating manufacturer's available finishes, colors, and textures.
E. Sample Warranty: Submit manufacturer warranty.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in manufacturer’s original, unopened, undamaged containers with identification labels intact.
B. Store materials in original packaging, under cover, protected from exposure to harmful weather conditions and from direct contact with water.
    1. Store at temperature and humidity conditions recommended by manufacturer.
    2. Do not use non-vented plastic or canvas shelters.
    3. Immediately remove wet wrappers.
C. Store in position recommended by manufacturer, elevated minimum 4 inches (102 mm) above grade, with minimum 1/4 inch (6.4 mm) space between doors.

1.05 FIELD CONDITIONS

A. Do not install interior doors until structure is enclosed.
B. Maintain temperature and humidity at manufacturer's recommended levels during and after installation of doors.

1.06 WARRANTY

A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
B. Provide ten (10) year manufacturer warranty covering materials and workmanship , including degradation or failure due to chemical contact.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Pultruded Fiberglass Reinforced Plastic (FRP) Doors:
    1. Special-Lite, Inc; AF-200 for Interior, AF-100 for Exterior and AF-150 Frame: www.special-lite.com.
    2. Tiger Door, LLC; Heavy Duty Doors and Door Frames for Interior: www.tigerdoor.com. Approved for interior doors only.
    3. Chem-Pruf Door Co; Doors and Frames: P Series with polyisocanurate core for Interior, CP8 with polyisocanurate core for Exterior: www.chem-pruf.com.

2.02 DOOR AND FRAME ASSEMBLIES

A. Door and Frame Assemblies: Factory-fabricated, prepared and machined for hardware.
   1. Screw-Holding Capacity: Tested to 890 pounds (404 kg), minimum.
   2. Surface Burning Characteristics: Flame spread index (FSI) of 0 to 25, Class A, and smoke developed index (SDI) of 450 or less, when tested in accordance with ASTM E84.
   3. Flammability: Self-extinguishing when tested in accordance with ASTM D635.
   4. Clearance Between Door and Frame: 1/8 inch (3 mm), maximum.
   5. Clearance Between Meeting Stiles of Pairs of Doors: 1/8 inch (3 mm), maximum.
   6. Clearance Between Bottom of Door and Finished Floor: 3/4 inch (19 mm), maximum; not less than 1/4 inch (6 mm) clearance to threshold.
   7. Clearances at door sills:
      a. where no threshold is used - 5/8" maximum to finish floor surface.
      b. where threshold is used - 1/4" maximum between door and threshold.
      c. where required for hardware operation - as recommended by hardware manufacturer.
   8. Provide frame anchors that allow for variation in rough opening size; field cutting of doors or frames to fit is not permitted.

2.03 COMPONENTS

A. Doors: Fiberglass construction with urethane core.
   1. Type: As indicated on drawings, including swinging doors.
   2. Thickness: 1-3/4 inch (44 mm), nominal.
   3. Construction:
      a. Pultruded as single monolithic fiberglass reinforced plastic (FRP) panel.
      b. Fiberglass face sheets, 1/8 inch (3.2 mm) thick, laminated to core.
   4. Face Sheet Texture: Smooth.
   5. Door Panel Configuration: As indicated on drawings.
   6. Subframe and Reinforcements: Fiberglass pultrusions; no metal or wood.
   7. Waterproof Integrity: Provide factory fabricated edges, cut-outs, and hardware preparations of fiberglass reinforced plastic (FRP); provide cut-outs with joints sealed independently of glazing, louver inserts, or trim.
   8. Hardware Preparations: Factory reinforce, machine, and prepare for door hardware including field installed items; provide solid blocking for each item; field cutting, drilling or tapping is not permitted; obtain manufacturer's hardware templates for preparation as necessary.
   9. Bottom Rail: Provide height necessary to allow up to 1-1/4 inch (31.8 mm) field cut off at bottom of door without impairing door strength or durability.
   10. Clearances at door sills:
      a. where no threshold is used - 5/8" maximum to finish floor surface.
      b. where threshold is used - 1/4" maximum between door and threshold.
      c. where required for hardware operation - as recommended by hardware manufacturer.

B. Door Frames: Provide type in compliance with performance requirements specified for doors.
   1. Type: Factory assembled with chemically welded joints.
   2. Profiles: As indicated on drawings.
   3. Profiles: 5-3/4 inches (146 mm) deep, 2 inches (51 mm) wide at jambs, and 2 inches (51 mm) wide at headers.
   4. Door Stop: 5/8 inch (15.9 mm) wide, by 1-7/8 inches (47.6 mm) deep.
   5. Non-Fire-Rated:
      a. Fiberglass pultrusions with factory finish.
   6. Corner Joints: Mitered with concealed corner blocks or angles of same material as frame; fiberglass and aluminum joined with screws; steel and stainless steel spot welded; sealed watertight with silicone sealant; field assemble knock-down type frames as required.

7. Hardware Cut-outs: Provide continuous backing or mortar guards of same material as frame, with watertight seal.
8. Frame Anchors: Stainless steel, Type 304; provide three anchors in each jamb for heights up to 84 inches (2130 mm) with one additional anchor for each additional 24 inches (610 mm) in height.
9. Reinforcing: Provide manufacturer's standard reinforcing at hinge, strike, and closer locations.

C. Transom and Opaque Side Panels: Same construction as doors.

2.04 PERFORMANCE REQUIREMENTS

A. Provide door assemblies that have been designed and fabricated in compliance with specified performance requirements.

B. Water Leakage: No uncontrolled leakage on interior face when tested in accordance with ASTM E331 at differential pressure of 7.5 psf (359 Pa).

C. Air Leakage: Maximum of 0.1 cfm per square foot at 6.27 psf (0.5 L/sec/sq m at 300 Pa) differential pressure, when tested in accordance with ASTM E283.

D. Structural Performance Requirements: Design and size components to withstand the following load requirements without damage or permanent set.

1. Provide capacity to withstand the following loads without deformation and without deflection greater than L/175 to spans up to 13’-6” (4114.8 mm) and L/240 + ¼ inch (6.25 mm) to spans greater than 13’-6” (4114.8 mm) with the following Wind Load Provision of ANSI/ASCE 7:
2. Exposure Category = B.
3. Occupancy Category = 4 with a Basic Wind Speed of 130 mph (209.21472 kph) and an Importance Factor of 1.15.
4. Mean Roof Height = 35’-0”

E. Thermal Transmittance, Exterior Doors: AAMA 1503, U-value of .009, maximum, measured on exterior door in size required for this project.

F. Acoustical Performance: Sound Transmission Class (STC) of 25, minimum, when tested in accordance with ASTM E90.

2.05 FINISHES

A. Painted: Two-part aliphatic polyurethane, low VOC industrial coating.

1. Thickness: Minimum 5 mils, 0.005 inch (0.127 mm) wet thickness.
2. Exterior Colors: As selected by Architect from manufacturer's custom line of colors.

2.06 HARDWARE

A. Door Hardware: See Section 08 71 00.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify actual dimensions of openings by field measurements before door fabrication; show recorded measurements on shop drawings.

B. Do not begin installation until substrates have been properly prepared.

C. If substrate preparation is the responsibility of another installer, notify General Contractor or Construction Manager of unsatisfactory preparation before proceeding.

3.02 PREPARATION

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

B. Clean and prepare substrate in accordance with manufacturer's directions.

C. Protect adjacent work and finish surfaces from damage during installation.

3.03 INSTALLATION

A. Install in accordance with manufacturer's instructions; do not penetrate frames with anchors.

B. Install exterior doors in accordance with ASTM E2112.

C. Install door hardware as specified in Section 08 71 00.

D. Set units plumb, level, and true-to-line, without warping or racking doors, and with specified clearances; anchor in place.

E. Set thresholds in continuous bed of sealant.
F. In masonry walls, install frames prior to laying masonry; anchor frames into masonry mortar joints; fill jambs with grout as walls are laid up.
G. In stud walls, install frames prior to building walls; anchor frames to studs using concealed anchors.
H. Separate aluminum and other metal surfaces from sources of corrosion of electrolytic action at points of contact with other materials.
I. Repair or replace damaged installed products.

3.04 ADJUSTING

A. Lubricate, test, and adjust doors to operate easily, free from warp, twist or distortion, and to fit watertight for entire perimeter.
B. Adjust hardware for smooth and quiet operation.
C. Adjust doors to fit snugly and close without sticking or binding.

3.05 CLEANING

A. Clean installed products in accordance with manufacturer's instructions prior to owner's acceptance.

END OF SECTION 08 16 13

SECTION 09 68 13
CARPET FLOORING

PART 1 GENERAL

1.01 SECTION INCLUDES

A Floor preparation as specified in Section 09 05 61 Common Work Results for Floor Preparation:
1. Substrate Prep and Patching.
2. Porosity Inhibiting Admixture (PIA) in new slabs.

B Carpet tile, fully adhered.

C Installation accessories.

1.02 SUBMITTALS

A See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns, colors available, and method of installation.

C Shop Drawings:
1. Indicate color and pattern layouts.

D Samples: Submit two carpet samples minimum size of 12 inches (304.8 mm) square, illustrating color and pattern design for each carpet color selected.

E Installer's Qualification Statement of Approval from the Manufacturer.

F Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.

G Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
1. See Section 01 60 00 - Product Requirements, for additional provisions.
2. Provide 2% of each type/color of flooring, trim and base used on the project in original packaging.

1.03 QUALITY ASSURANCE

A Installer Qualifications: Company specializing in installing carpet tile with minimum five years documented experience and approved by carpet tile manufacturer.

1.04 FIELD CONDITIONS

A Store materials in area of installation for minimum period of 24 hours prior to installation.

PART 2 PRODUCTS

2.01 CARPET TILE MATERIALS

A Carpet Tile, Type CPT #1:
1. Manufacturer:
   a. ~~**Interface, Inc: www.interface.com.**~~ ***Staticworx: www.staticworx.com***
2. ~~**Tile Size: 50cm by 50cm nominal.**~~ ***Tile Size: 24” by 24” nominal.***
3. Product/Collection/Pattern and Color: See Interior Material Finish/Color Schedule on the Drawings.

B Carpet Tile, Type CPT #2:
1. Manufacturer:
   a. ~~**Interface, Inc: www.interface.com.**~~ ***Staticworx: www.staticworx.com***
2. ~~**Tile Size: 50cm by 50cm nominal.**~~ ***Tile Size: 24” by 24” nominal.***
3. Product/Collection/Pattern and Color: See Interior Material Finish/Color Schedule on the Drawings.

C Carpet Tile, Type CPT #3:
1. Manufacturer:
   a. ~~**Interface, Inc: www.interface.com.**~~ ***Staticworx: www.staticworx.com***
2. ~~**Tile Size: 50cm by 50cm nominal.**~~ ***Tile Size: 24” by 24” nominal.***

3. Product/Collection/Pattern and Color: See Interior Material Finish/Color Schedule on the Drawings.

D Carpet Tile, Type CPT #4:
1. Manufacturer:
   a. Interface, Inc: www.interface.com.
2. Tile Size: 50cm by 50cm nominal.
3. Product/Collection/Pattern and Color: See Interior Material Finish/Color Schedule on the Drawings.

2.02 FLOORING - SUSTANABLE REQUIREMENTS

A. Flooring shall comply with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers." as outlined in Specification Section 01 81 13 Sustainable Design Requirements.

2.03 ACCESSORIES

A Carpet Adhesive: As recommended by carpet manufacturer.
1. ***Static dissipative adhesive required at all Staticworx carpet locations as recommended by manufacturer.***

B Moldings, Transition and Edge Strips:
1. Refer to the requirements of Section 09 65 00 Resilient Flooring.

C Resilient Base: Refer to the requirements of Section 09 65 00 Resilient Flooring.

PART 3 EXECUTION

3.01 EXAMINATION

A Verify that subfloor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive carpet tile.

B Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive carpet tile.

C Verify that subfloor surfaces are dust-free and free of substances that could impair bonding of adhesive materials to subfloor surfaces.

D Contact the General Contractor or Construction Manager for corrections to deficiencies prior to proceeding.

3.02 PREPARATION

A Prepare floor substrates for installation of flooring in accordance with Section 09 05 61.

3.03 INSTALLATION

A Starting installation constitutes acceptance of subfloor conditions.

B Install carpet in accordance with manufacturer's instructions.

C Blend carpet from different cartons to ensure minimal variation in color match.

D Cut carpet tile clean. Fit carpet tight to intersection with vertical surfaces without gaps.

E Lay carpet tile in pattern shown on the Drawings, with pile direction parallel to next unit, set parallel to building lines.

F Locate change of color or pattern between rooms under door centerline.

G Fully adhere carpet tile to substrate.

H Trim carpet tile neatly at walls and around interruptions.

I Complete installation of edge strips, concealing exposed edges.

3.04 INSTALLATION ON STAIRS

A Use one piece of carpet for each tread and the riser below.

1. Trowel adhesive onto stair and allow to tack up prior to installing carpet.
2. Apply seam adhesive to all cut edges.

B Lay carpet with pile direction in the length of the stair.

C Adhere carpet tight to stair treads and risers.

3.05 CLEANING

A Remove excess adhesive without damage, from floor, base, and wall surfaces.

B Clean and vacuum carpet surfaces.

3.06 DEMONSTRATION AND TRAINING

A Engage a factory-authorized representative to train Owner's maintenance personnel on proper cleaning techniques and seam and carpet maintenance.

END OF SECTION 09 68 13

IL

LA

PRA.3
(SEED ENTIRE
GEOTHERMAL
FIELD AREA)

PROPOSED BUILDING
FF: 709.00

DECORATIVE
STONE DRIP EDGE
(TYP) (SEE DETAIL)

TURF TYPE
BOUNDARY
(TYP)

PRA.2
(SEED ENTIRE
BOTTOM & SIDE
SLOPES OF SWALE)

ANNUALS
(TYP)

NORTHEAST AREA (SEE SHEET L-101)
SOUTHEAST AREA (SEE SHEET L-103)

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LANDSCAPE ARCHITECT
Tod J. Stanton
157-001070
STATE OF ILLINOIS

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed
LANDSCAPE ARCHITECT
under the laws of the State of **ILLINOIS**

Tod J. Stanton
License Number: **157.001070** Date **8/31/23**

Revisions		
Description	Date	Num
Addendum #1	02/17/2023	1

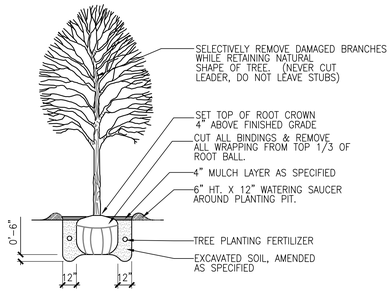
Comm: **213106**
Date: **12/30/2022**
Drawn: **TS**
Check: **TS**

North

LANDSCAPE PLAN-NORTHEAST

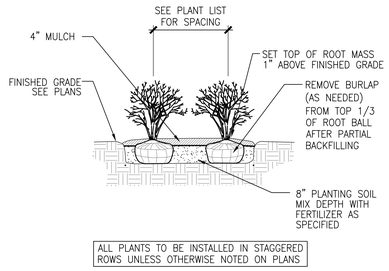
0 20 40 60
Scale: SCALE: 1" = 20'

L-101



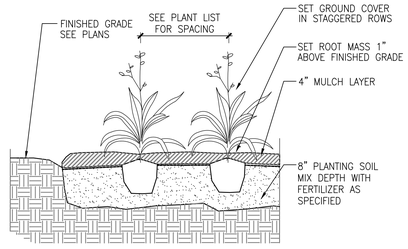
SHADE TREE PLANTING

SCALE: NTS



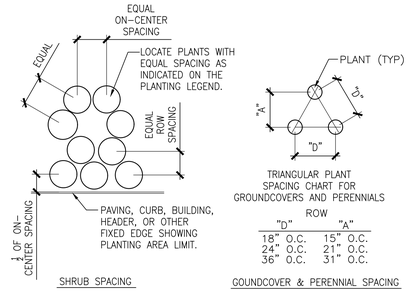
SHRUB PLANTING

SCALE: 1/2"=1'-0" DT-shrub-gyn



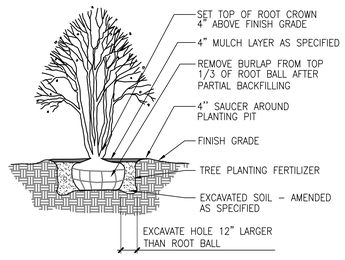
GROUNDCOVER PLANTING

SCALE: 1"=1'-0" DT-groundcover-gyn



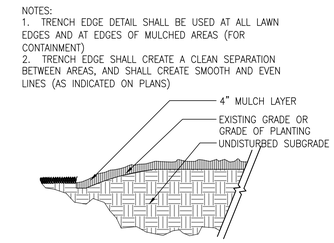
PLANT SPACING DETAIL

SCALE: 1/2"=1'-0" DT-plantspace-gyn



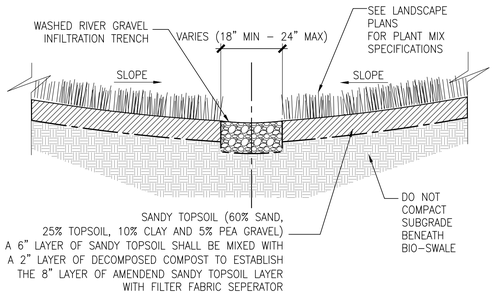
ORNAMENTAL TREE PLANTING

SCALE: 1/4"=1'-0" DT-ornamentaltree-gyn



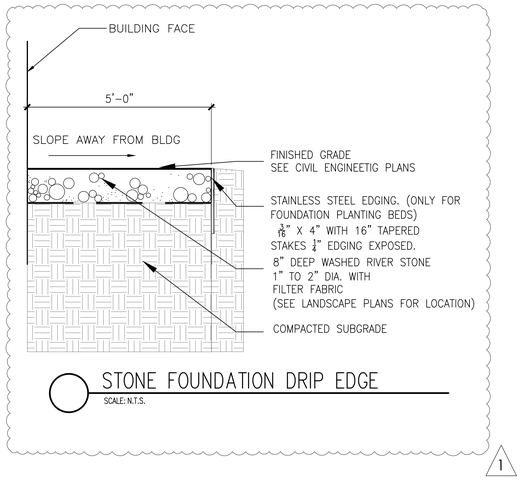
TRENCH EDGE DETAIL

SCALE: 1"=1'-0" DT-ls-trench-gyn



BIO-SWALE

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



STONE FOUNDATION DRIP EDGE

SCALE: N.T.S.

1

1. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES AND STRUCTURES. SEE CONSTRUCTION NOTES.

2. DO NOT WILLFULLY PROCEED WITH PLANTINGS AS DESIGNED WHEN IT IS OBVIOUS THAT OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING THE DESIGN PROCESS. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER. THE LANDSCAPE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY NECESSARY REVISIONS AND COSTS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.

3. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS AND/OR SUPPLIERS AS REQUIRED TO ACCOMPLISH PLANTING OPERATIONS.

4. THE LANDSCAPE CONTRACTOR IS TO RECEIVE THE SITE AT +/- 1/10TH OF AN INCH. THE LANDSCAPE CONTRACTOR SHALL OBTAIN A LETTER OF GRADE FROM THE GENERAL CONTRACTOR PRIOR TO BEGINNING WORK.

5. REFER TO SPECIFICATIONS FOR PLANTING REQUIREMENTS, MATERIALS, AND EXECUTION.

6. ALL TREES SHALL BE TAGGED BY THE PROJECT MANAGER AT A NURSERY SELECTED BY THE LANDSCAPE CONTRACTOR OR AT THE DISCRETION OF THE PROJECT MANAGER.

7. FINAL LOCATION OF ALL PLANT MATERIAL SHALL BE SUBJECT TO APPROVAL OF THE PROJECT MANAGER PRIOR TO DIGGING ANY HOLES. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR PROVIDING PROJECT MANAGER ADEQUATE ADVANCE NOTICE FOR ON-SITE APPROVALS. THE LANDSCAPE CONTRACTOR IS TO THE FOLLOWING BEFORE BEGINNING INSTALLING PLANTINGS:

SHRUBS - LAY OUT THE ACTUAL CONTAINERS ON-SITE BEFORE DIGGING HOLES.

TREES - STAKE THE LOCATIONS BEFORE DIGGING HOLES. ANY TREE PLANTED WITHOUT ITS FINAL LOCATION APPROVED BY THE PROJECT MANAGER MAY BE REQUESTED TO BE RELOCATED AT THE SOLE EXPENSE OF THE LANDSCAPE CONTRACTOR.

8. THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER AT LEAST 48 HOURS IN ADVANCE PRIOR TO COMMENCEMENT OF WORK TO COORDINATE PROJECT OBSERVATION SCHEDULES.

9. IF CONFLICTS ARISE BETWEEN THE ACTUAL SIZE OF AREAS ON THE SITE AND THE DRAWINGS, CONTACT THE PROJECT MANAGER FOR RESOLUTION.

10. IT IS THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO FURNISH PLANTS FREE OF PESTS AND/OR DISEASES. PRE-SELECTED OR "PROJECT MANAGER TAGGED" PLANT MATERIAL MUST BE INSPECTED BY THE LANDSCAPE CONTRACTOR AND CERTIFIED PEST AND DISEASE FREE. IT IS THE LANDSCAPE CONTRACTOR'S OBLIGATION TO WARRANTY ALL PLANT MATERIAL PER THE SPECIFICATIONS.

11. GROUNDCOVERS AND SHRUBS ARE TO BE TRIANGULARLY SPACED UNLESS INDICATED ON THE PLANS.

12. ALL TREES WITHIN A SPECIES SHALL HAVE MATCHING FORM, UNLESS OTHERWISE NOTED.

13. ALL TREES, SHRUB AND GROUNDCOVER AREAS (EXCLUDING TURF AND SLOPE AREAS) ARE TO BE MULCHED PER DETAILS.

14. ALL MULCH TO BE SHREDDED HARDWOOD MULCH MINIMUM 4" THICK.

15. TREES SHALL BE SET BACK A MINIMUM OF TEN FEET (10') HORIZONTALLY FROM UTILITY STRUCTURES, INCLUDING, BUT NOT LIMITED TO, MANHOLES, VALVE VAULTS, VALVE BOXES, FIRE HYDRANTS, TRANSFORMERS AND SWITCH CANS. TREES SHALL BE SET BACK A MINIMUM OF FIVE (5') HORIZONTALLY FROM SANITARY SEWER AND WATER SERVICES. CONTRACTOR TO MAKE NECESSARY ADJUSTMENTS UNDER THE APPROVAL OF OWNER.

16. PLANTING RESTRICTIONS: PLANT DURING ONE OF THE FOLLOWING PERIODS. COORDINATE PLANTING PERIODS WITH MAINTENANCE PERIODS TO PROVIDE REQUIRED MAINTENANCE FROM DATE OF SUBSTANTIAL COMPLETION.

1. SPRING PLANTING: 5/1 - 6/15
2. FALL PLANTING: 9/15 - 12/1

PLANTING NOTES

SCALE: NTS DT-plantnote-gyn

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REGISTERED LANDSCAPE ARCHITECT Tod J. Stanton 157-001070 STATE OF ILLINOIS

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed **LANDSCAPE ARCHITECT** under the laws of the State of **ILLINOIS**

Tod J. Stanton
License Number: **157.001070** Date **8/31/23**

Revisions		
Description	Date	Num
Addendum #1	02/17/2023	1

Comm: **213106**
Date: **12/30/2022**
Drawn: **TS**
Check: **TS**

North

LANDSCAPE DETAILS

Scale:

L-107

C. Mow-Strip/Maintenance Edge Installation:
1. Excavate for mow strip or maintenance edge as indicated on Drawings.
2. Compact subgrade uniformly beneath mow strip or maintenance edge.
3. For mow strips, apply nonselective, pre-emergent herbicide that inhibits growth of grass and weeds. For maintenance edges, install 6-oz non-woven geotextile fabric as shown on the Drawing Details.
4. Install steel edging, delineating the edge of the mow strip or maintenance edge.
5. Place indicated thickness of mulch or stone.
6. Rake mulch to a uniform surface level with adjacent finish grades.

D. Outline Edger lines with stakes or paint for acceptance by Project Manager before installing irrigation.

E. Spade cut edger shall be in all locations identified on the Drawings. Minor fine tuning of these lines may be required after the placement of sod.

3.8 MULCHING

A. Fine grade all planting beds to be mulched allowing for full depth of specified mulch.

B. Place specified mulch evenly over all areas at depth indicated on plans.

C. Rake and feather finish grade of mulch level and ½" below adjacent edger surfaces (if edger is specified).

D. Make sure mulch is at full depth at adjacent walks and paved surfaces and that mulch doesn't protrude above these surfaces.

E. Mulch a 36" diameter ring around all trees in turf areas with specified depth of wood mulch, after irrigation areas have been watered in.

F. All trees and shrubs in native areas are to have a mulch ring equal to the diameter of the planting pit. Mulch shall be a uniform three inches in depth. Do not remove saucer (or berm) around plants in native areas when mulching.

3.9 PRUNING

A. Remove only dead, dying, or broken branches. Do not prune for shape.

B. Do not cut tree leaders, and remove only injured or dead branches from flowering trees, if any.

C. Prune shrubs to retain their natural character and shape, and to accomplish their use in the landscape design.

D. Do not apply pruning paint to wounds.

E. Required shrub sizes are the size after pruning.

F. Remove and replace excessively pruned or deformed stock resulting from improper pruning.

3.10 GUYING AND STAKING

A. Standard guying system
1. Pound stakes into undisturbed soil beyond the planting pit so that stake is secure (2' deep minimum). Secure wire through metal grommets on nylon strap and wrap above first branch or at mid-point of tree. Secure guy wire to stake so that it is taut but allows some movement and so that no sharp projection of wire are extending from post. Adjust tension on wire if needed. Flag guy wire with 3/4" PVC pipe for visibility.

B. Alternate (conifer) guying system
1. Pound stakes into undisturbed soil beyond the planting pit so that stake is secure (2' deep min.), angling away from planting pit and so that top is flush with finish grade. Secure wire through metal grommets on canvas strap and wrap at mid-point of tree. Secure guy wire to stake so that it is taut but not overly tight and so that no sharp projection of wire are extending from post. Adjust tension on wire if needed. Flag guy wire with 3/4" PVC for visibility.

3.11 INSTALLING SLOW-RELEASE WATERING DEVICE

A. Provide one device for each tree.

B. Place device on top of the mulch at base of tree stem and fill with water according to manufacturer's written instructions.

3.12 MECHANIZED TREE-SPADE PLANTING (FOR ON-SITE TRANSPLANTS, IF INDICATED ON PLANS)

A. Trees may be planted with an approved mechanized tree spade at the designated locations. Do not use tree spade to move trees larger than the maximum size allowed for a similar field-grown, balled-and-burlapped root ball diameter according to ANSI Z60.1, or larger than manufacturer's maximum size recommendation for the tree spade being used, whichever is smaller.

B. Use the same tree spade to excavate the planting hole as will be used to extract and transport the tree.

C. When extracting the tree, center the trunk within the tree spade and move tree with a solid ball of earth.

D. Cut exposed roots cleanly during transplanting operations.

E. Plant trees following procedures in "Tree, Shrub, Ornamental Grass, and Perennial Planting" Article.

F. Where possible, orient the tree in the same direction as in its original location (north side north).

3.13 PLACING SOIL IN PLANTERS

A. Place a layer of drainage gravel at least 4 inches thick in bottom of planter. Cover bottom with filter fabric and wrap filter fabric 4 inches up on all sides. Duct tape along the entire top edge of filter fabric to secure the filter fabric against the sides during the soil-filling process.

B. Fill planter with planting soil. Place soil in lightly compacted layers to an elevation of 1-1/2 inches below top of planter, allowing natural settlement.

3.14 TURF AREA PREPARATION

A. General: Prepare planting area for soil placement and mix planting soil as indicated on the Drawings.

B. Placing Planting Soil: Place planting soil as indicated on the Drawings.

1. Reduce elevation of planting soil to allow for soil thickness of sod.

C. Moisten prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

D. Before planting, obtain Project Manager's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.15 PREPARATION FOR EROSION-CONTROL MATERIALS

A. Prepare area as specified in "Turf Area Preparation" Article.

B. For erosion-control mats, install planting soil in two lifts, with second lift equal to thickness of erosion-control mats. Install erosion-control mat and fasten as recommended by material manufacturer.

C. Fill cells of erosion-control mat with planting soil and compact before planting.

D. For erosion-control blanket or mesh, install from top of slope, working downward, and as recommended by material manufacturer for site conditions. Fasten as recommended by material manufacturer.

E. Moisten prepared area before planting if surface is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

3.16 SEEDING

A. Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph (8 km/h).
1. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
2. Do not use wet seed or seed that is moldy or otherwise damaged.
3. Do not seed against existing trees. Limit extent of seed to outside edge of planting saucer.

B. Sow seed at a total rate according to the written recommendations of the seed supplier.

C. Rake seed lightly into top 1/8 inch (3 mm) of soil, roll lightly, and water with fine spray.

D. Protect seeded areas with slopes exceeding 1:4 with erosion-control blanket installed and stapled according to manufacturer's written instructions.

E. Protect seeded areas with erosion-control mats where indicated on Drawings; install and anchor according to manufacturer's written instructions.

F. Protect seeded areas with slopes not exceeding 1:4 by spreading straw mulch. Spread uniformly at a minimum rate of 2 tons/acre > to form a continuous blanket 1-1/2 inches (38 mm) in loose thickness over seeded areas. Spread by hand, blower, or other suitable equipment.
1. Anchor straw mulch by crimping into soil with suitable mechanical equipment.
2. Bond straw mulch by spraying with asphalt emulsion at a rate of 10 to 13 gal./1000 sq. ft. (38 to 49 L/92.9 sq. m) Take precautions to prevent damage or staining of structures or other plantings adjacent to mulched areas. Immediately clean damaged or stained areas.

G. Protect seeded areas from hot, dry weather or drying winds by applying compost mulch within 24 hours after completing seeding operations. Soak areas, scatter mulch uniformly to a thickness of 3/16 inch (4.8 mm) and roll surface smooth.

3.17 HYDROSEEDING

A. Hydroseeding: Mix specified seed, fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.

1. Mix slurry with fiber-mulch manufacturer's recommended tackifier.

2. Spray-apply slurry uniformly to all areas to be seeded in a one-step process. Apply slurry at a rate so that mulch component is deposited at not less than1500-lb/acre (15.6-kg/92.9 sq. m) dry weight, and seed component is deposited at not less than the specified seed-sowing rate.

3. Spray-apply slurry uniformly to all areas to be seeded in a two-step process. Apply first slurry coat at a rate so that mulch component is deposited at not less than 500-lb/acre (5.2-kg/92.9 sq. m) dry weight, and seed component is deposited at not less than the specified seed-sowing rate. Apply slurry cover coat of fiber mulch (hydromulching) at a rate of 1000 lb/acre (10.4 kg/92.9 sq. m).

3.18 SODDING

A. Lay sod within 24 hours of harvesting. Do not lay sod if dormant or if ground is frozen or muddy.

B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to soil or sod during installation. Tamp and roll lightly to ensure contact with soil, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.

1. Lay sod across slopes exceeding 1:3.

2. Anchor sod on slopes exceeding 1:6 with bio-degradable stakes spaced as recommended by sod manufacturer but not less than two anchors per sod strip to prevent slippage.

C. Saturate sod with fine water spray within two hours of planting. During first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches (38 mm) below sod.

3.19 PLUGGING

A. Plant plugs in holes or furrows, at spacings indicated on the Drawings in triangular pattern. On slopes, contour furrows to near level.

3.20 TURF RENOVATION

A. Renovate existing turf where indicated.

B. Renovate turf damaged by Contractor's operations, such as storage of materials or equipment and movement of vehicles.

1. Reestablish turf where settlement or washouts occur or where minor regrading is required.

2. Install new planting soil as required.

C. Remove sod and vegetation from diseased or unsatisfactory turf areas; do not bury in soil.

D. Remove topsoil containing foreign materials, such as oil drippings, fuel spills, stones, gravel, and other construction materials resulting from Contractor's operations, and replace with new planting soil.

E. Mow, dethatch, core aerate, and rake existing turf.

F. Remove weeds before seeding. Where weeds are extensive, apply selective herbicides as required. Do not use pre-emergence herbicides.

G. Remove waste and foreign materials, including weeds, soil cores, grass, vegetation, and turf, and legally dispose of them off Owner's property.

H. Till stripped, bare, and compacted areas thoroughly to a soil depth of 6 inches (150 mm).

I. Apply soil amendments as required based on site-specific soil conditions and initial fertilizer required for establishing new turf and mix thoroughly into top 4 inches (100 mm) of existing soil. Install new planting soil to fill low spots and meet finish grades.

1. Initial Fertilizer: Slow-release fertilizer applied according to manufacturer's recommendations.

J. Apply seed and protect with straw mulch or sod (see Drawings) as required for new turf.

K. Water newly planted areas and keep moist until new turf is established.

3.21 TURF MAINTENANCE

A. General: Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.

1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.

2. In areas where mulch or blanket has been disturbed by wind or maintenance operations, add new mulch/blanket and anchor as required to prevent displacement.

3. Apply treatments as required to keep turf and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.

B. Watering:

1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.

2. Water turf with fine spray at a minimum rate of 1 inch (25 mm) per week unless rainfall precipitation is adequate.

C. Mow turf as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than one-third of grass height. Remove no more than one-third of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain proper grass height

D. Turf Post-fertilization: Apply as noted in Materials Article, I. Fertilizer, based on season.

3.22 SATISFACTORY TURF

A. Turf installations shall meet the following criteria as determined by Project Manager:

1. Satisfactory Seeded Turf: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. (0.92 sq. m) and bare spots not exceeding 5 by 5 inches (125 by 125 mm)

2. Satisfactory Sodded Turf: At end of maintenance period, a healthy, well-rooted, even-colored, viable turf has been established, free of weeds, open joints, bare areas, and surface irregularities.

B. Use specified materials to reestablish turf that does not comply with requirements, and continue maintenance until turf is satisfactory.

3.23 PESTICIDE APPLICATION

A. Apply pesticides and other chemical products and biological control agents according to requirements of authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.

B. Pre-Emergent Herbicides (Selective and Nonselective): Apply to tree, shrub, and groundcover areas according to manufacturer's written recommendations. Do not apply to seeded areas.

C. Post-Emergent Herbicides (Selective and Nonselective): Apply only as necessary to treat already-germinated weeds and according to manufacturer's written recommendations.

3.24 FIELD QUALITY CONTROL

A. When all the landscape work is completed, the Project Manager shall, upon seven (7) calendar days advance notice, make an inspection of the landscape work to determine if the work is complete. The Project Manager shall prepare a punch list of items improperly installed, inadequately sized or otherwise deficient based on the findings of his inspection. The punch list shall be completed not more than seven (7) working days after the field inspection. When the Contractor has remedied all deficiencies and completed all items on the punch list, the Contractor shall request another inspection by the Project Manager to determine whether the deficiencies have been adequately corrected. Once the punch list items have been corrected and re-inspected, the Project Manager shall issue a written certificate to the Owner who will then respond to the Contractor in writing formally accepting the work and beginning the warranty and guarantee period.

B. Additional landscape inspections shall be conducted upon request by the Project Manager, to determine the condition of the work at the completion of the guarantee period.

C. The required maintenance instructions shall be forwarded to the Owner's representative prior to the final acceptance to inform the Owner of any maintenance responsibilities that would be required for the project.

3.25 CLEANING AND PROTECTION

A. During landscape work, store materials and equipment where directed.

B. Keep pavements clean and work areas in an orderly condition.

C. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas. At the time of the final inspection of the work and before the issuance of Final Acceptance, all paved areas shall be thoroughly cleaned by the Contractor by sweeping, and washing. All construction equipment and excess materials shall have been removed and any debris or rubbish shall have been removed from the site.

D. Protect landscape work from loss, damage, and deterioration during storage, installation, and maintenance periods.

E. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

F. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established.

G. Protect from unauthorized persons (trespassers), as well as from operations by other Contractors and tradesmen and landscape operations.

H. Remove non-degradable erosion-control measures after grass establishment period.

3.26 NATIVE PRAIRIE, BIOSWALE, DETENTION AREA, AND WETLAND SEEDING

A. All work deemed native prairie, bioswale, detention area, and/or wetland seeding shall be performed by an ecological restoration contractor with at least 5 years of documented experience in selective brush clearing, planting of native species, and natural areas management for the purpose of ecological restoration, and shall be able to demonstrate their knowledge through references and in the field.

B. Seedbed shall be well settled and firm, but friable enough that seed can be placed at the seeding depth required.

1. The seedbed shall be reasonable free of weeds.

2. Soils that have been over-compacted by traffic or equipment shall be tilled to breakup root restrictive layers and then harrowed, rolled, or packed to prepare the required seedbed.

C. Sow seed at rate indicated on the Drawings.

1. Seed shall be drill seeded in a manner such that the surface is raked and rolled, seed shall have ¼" of cover.

2. Accomplish seeding by "Rangeland" type drills.

3. Any furrows left by drill seeding shall be left in place to discourage erosion and encourage seed and soil contact.

D. When using a drill type seeder, the seeder should cover the area in two passes, perpendicular to each other. Each pass of the seeder should apply approximately ½ of the required seed.

E. Standard erosion control blanket shall be applied to all seeded areas.

F. Final Acceptance of seeded areas will not be granted until Landscape Architect is satisfied with germination and a full stand of vegetation is in vigorous growing condition, with consistency and completion of coverage. During this time, contractor is responsible for watering, mowing, spraying, weeding, fertilizing, and all related work as necessary to ensure that seeded areas are established in a vigorous growing condition.

3.24 NATIVE PRAIRIE, BIOSWALE, DETENTION AREA, AND WETLAND MAINTENANCE

SHORT & LONG TERM MAINTENANCE

Short (Years 1-3) and Long Term (Years 4-10) Maintenance

Mowing - Vegetation within the riparian restoration areas shall be mowed to a height of 6-10 inches after vegetation has reached a height of 24 inches and before non-native or invasive species go to seed. Mowing should be conducted up to two times during the first growing season (June and/or August) and possibly one time during spring of the second growing season (May-June). Mowing should be conducted only as needed following the second full growing season.

Selective Herbicide Application - Herbicide application should be limited to areas where mowing is not feasible or is not effective. Herbicide should be applied to target species (i.e. non-native and/or invasive species) using a hand-held wick application, whenever possible to avoid spraying native species, or by careful spot spraying. Herbicide can be applied any time during the growing season as needed but best application period is just before flowering of targeted species. Two herbicide trips per year will likely need to occur during the first, second, and third growing seasons and at least one visit per year thereafter.

Prescribed Burning - Prescribed burning will become the primary method for long-term management of the native plant communities. Burning should begin in late fall of the third growing season or spring of the fourth growing season. Burning should then be conducted approximately every 3 years thereafter. Burning must be conducted by an entity experienced in burn planning and permit application as well as prescribed burn management.

Table 1. Recommended Short Term (Years 1-3) Maintenance Schedule.

Task	Year 1 Quarter	Year 2 Quarter	Year 3 Quarter
Mowing: Conducted twice in the 1st growing season and once in the 2nd growing season if applicable.			
	1 [2] [3] 4	1 [2] 3 4	1 2 3 4
Herbicide Application: Conducted twice annually in the 1st - 3rd growing seasons.			
	1 [2] [3] 4	1 [2] [3] 4	1 [2] [3] 4
Prescribed Burning: Conducted at the end of the 3rd growing season or beginning of 4th growing season.			
	1 2 3 4	1 2 3 4	1 [2] 3 [4]

*Brackets indicate the quarter(s) in which work is recommended but is not necessarily limited to the quarter(s) indicated.

Table 2. Recommended Long Term (Years 4-10) Maintenance Schedule.

Task	Year 4 Quarter	Year 5 Quarter	Year 6 Quarter	Year 7 Quarter	Year 8 Quarter	Year 9 Quarter	Year 10 Quarter
Prescribed Burn: Conduct burn in early spring or fall approximately every three years.							
	1 [2] 3 [4]	1 2 3 4	1 2 3 4	1 [2] 3 [4]	1 2 3 4	1 2 3 4	1 [2] 3 [4]
Herbicide Application: Conducted at least annually if needed for weed control.							
	1 [2] [3] 4	1 [2] [3] 4	1 [2] [3] 4	1 [2] [3] 4	1 [2] [3] 4	1 [2] [3] 4	1 [2] [3] 4
Supplemental Woody Species Removal: Conducted as needed to keep woody invasives under control.							
	1 [2] 3 [4]	1 [2] 3 [4]	1 [2] 3 [4]	1 [2] 3 [4]	1 [2] 3 [4]	1 [2] 3 [4]	1 [2] 3 [4]

*Brackets indicate the quarter(s) in which work is recommended but is not necessarily limited to the quarter(s) indicated.

MONITORING AND REPORTING

Native areas shall be assessed annually for a period of three years and at least once annually from the fourth to tenth (and beyond) years to determine conditions. Existing conditions shall be photo-documented and described in a letter report provided to the Owner for submission to the Village of Libertyville by December 31st of each year. Installed native vegetation shall meet the 3 Year Performance Standards found in Performance Standards section of this document.

Monitoring

- Twice annual monitoring of all plant communities and stream stabilization structures shall be conducted for three full growing seasons following initial implementation; one season for stream structures.
- The annual site visit each year shall be conducted between May 15 and September 30.
- Each visit shall be conducted by a qualified professional with adequate plant identification skills and who is able to make recommendations regarding management of native plant communities and stream structure maintenance. The site inspector shall collaborate over the needed maintenance requirements for a given year the Owner and/or maintenance contractor.
- The vegetation monitoring shall be conducted using the "meander search" method to identify 1) dominant vegetation (native vs. non-native) within each plant community, 2) the approximate percent vegetative coverage by native and non-native species within each plant community, 3) a species list for each plant community that can be compared to installed plant list, and 4) to make recommendations related to site management to meet 3 Year Performance Standards. Floristic Quality calculations are not required.
- Representative photographs of the restored native plant communities and stream stabilization structures shall be taken to document the site conditions through time.

Reporting

- An annual letter report shall be prepared and submitted to the Owner at the end of each growing season and not later than December 31 of the monitoring year.
- The report shall identify management recommendations and services that have been conducted throughout the growing season and outline future management recommendations.
- The report shall include a section that addresses the required 3 Year Performance Standards included in the Plan/Specifications.
- Site photographs shall be included in the report to document the site conditions.

Performance Standards

Annual monitoring reports shall specifically address how well the native areas meet 3 Year Performance Standards listed below.

Native Seeding

- The Contractor shall guarantee each seeded and/or planted areas will meet or exceed the following performance criteria **three full growing seasons** after provisional acceptance: 80% total (aerial) plant cover and at least 60% relative cover by seeded and/or planted native species in each plant community. In addition, non-native and/or invasive native species shall collectively not comprise greater than 30% relative cover in each plant community. Opportunistic invasive/non-native shrubs and trees shall not exceed 5% of any plant community.

END OF SECTION 02920

OMIT

Regional Operations and Communications Facility

Lake County Campus
Libertyville, IL 60048

Lake County

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RossDrulisCusenbery ARCHITECTURE

DesignPerspectives INC.
Grounded in Creativity

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Naperville, Illinois 60540
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LANDSCAPE ARCHITECT Tod J. Stanton 157-001070 STATE OF ILLINOIS

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed
LANDSCAPE ARCHITECT
under the laws of the State of **ILLINOIS**

Tod J. Stanton
License Number: **157.001070** Date **8/31/23**

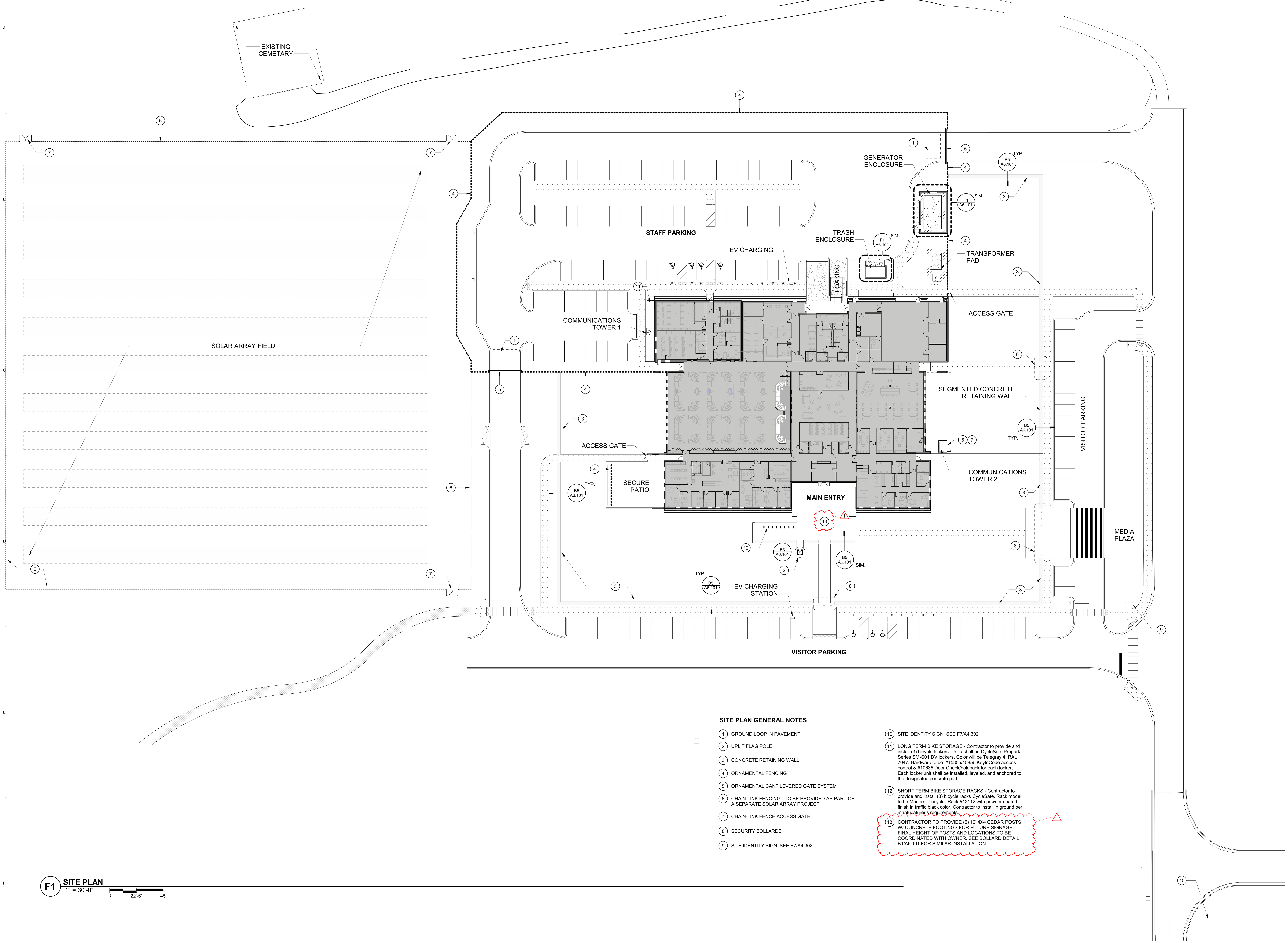
Revisions		
Description	Date	Num
Addendum # 1	02/17/2023	1

Comm: **213106**
Date: **12/30/2022**
Drawn: **TS**
Check: **TS**
North

LANDSCAPE SPECIFICATIONS

Scale:

L-110



SITE PLAN GENERAL NOTES

1. GROUND LOOP IN PAVEMENT
2. UPLIT FLAG POLE
3. CONCRETE RETAINING WALL
4. ORNAMENTAL FENCING
5. ORNAMENTAL CANTILEVERED GATE SYSTEM
6. CHAIN-LINK FENCING - TO BE PROVIDED AS PART OF A SEPARATE SOLAR ARRAY PROJECT
7. CHAIN-LINK FENCE ACCESS GATE
8. SECURITY BOLLARDS
9. SITE IDENTITY SIGN, SEE E7/A4.302
10. SITE IDENTITY SIGN, SEE F7/A4.302
11. LONG TERM BIKE STORAGE - Contractor to provide and install (3) bicycle lockers. Units shall be CycleSafe Propark Series SM-S01 DV lockers. Color will be Telegray 4, RAL 7047. Hardware to be #15855/15856 KeyInCode access control & #10635 Door Check/holdback for each locker. Each locker unit shall be installed, leveled, and anchored to the designated concrete pad.
12. SHORT TERM BIKE STORAGE RACKS - Contractor to provide and install (8) bicycle racks CycleSafe. Rack model to be Modern "Tricycle" Rack #12112 with powder coated finish in traffic black color. Contractor to install in ground per manfucaturer's requirements.
13. CONTRACTOR TO PROVIDE (5) 10' 4X4 CEDAR POSTS W/ CONCRETE FOOTINGS FOR FUTURE SIGNAGE. FINAL HEIGHT OF POSTS AND LOCATIONS TO BE COORDINATED WITH OWNER. SEE BOLLARD DETAIL B1/A6.101 FOR SIMILAR INSTALLATION

F1 **SITE PLAN**
1" = 30'-0"
0 22'-6" 45'

IL

A

Regional Operations and Communications Facility

Lake County Campus
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Libertyville, IL 60048

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MATTHEW JAMES BICKEL 001-020883
LICENSED ARCHITECT STATE OF ILLINOIS
EXP. 11/30/24

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed
ARCHITECT
under the laws of the State of **Illinois**

Matthew J Bickel
License Number: **001.020883** Date **11/30/2024**

Revisions		
Description	Date	Num
Addendum #1	02/17/2023	1

Comm: **213106**
Date: **12/30/2022**
Drawn: **JMK**
Check: **KME**

North

ARCHITECTURAL SITE PLAN

Scale: As indicated

A1.00

Regional Operations and Communications Facility

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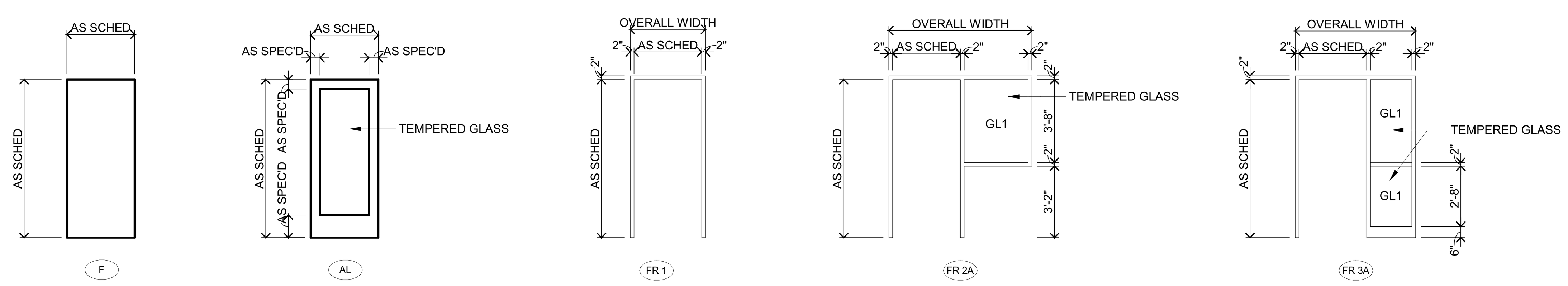
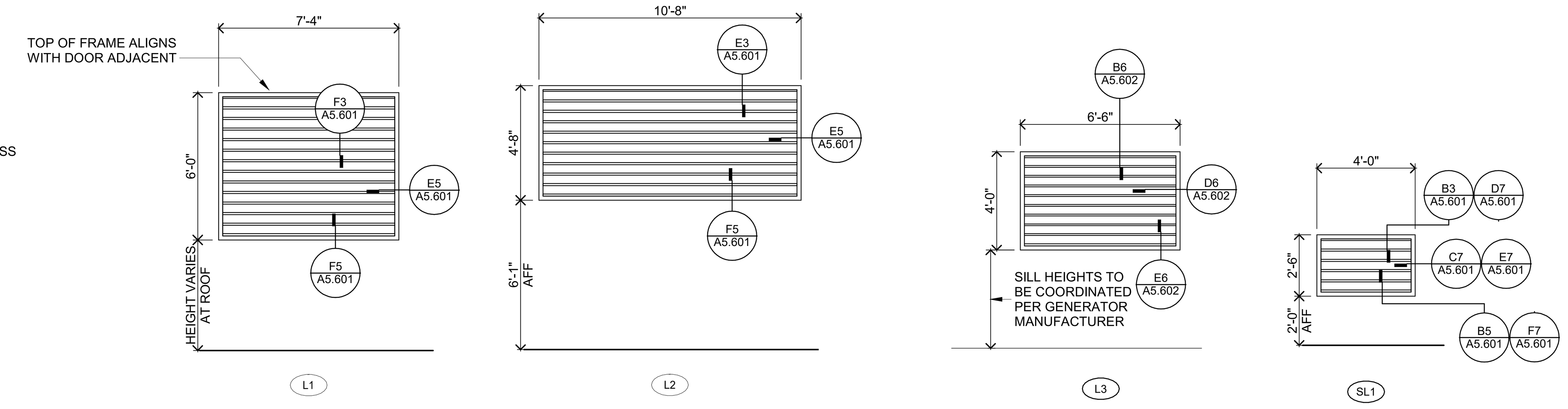




DOOR SCHEDULE GENERAL NOTES

1. ALL DOORS ARE 1 3/4" THICK UNLESS OTHERWISE NOTED.
2. FOR FRAME DEPTH, ONLY EXCEPTIONS TO THE FOLLOWING TABLE ARE SCHEDULED:

   GYPSUM BOARD PARTITIONS: THROAT OF FRAME TO MATCH WALL THICKNESS.

   MASONRY PARTITIONS:

   4" WALL: 3 3/4" FRAME
   6" WALL: 5 3/4" FRAME
   8" AND GREATER WALL: 7 3/4" FRAME

   FRAME DEPTHS ARE SCHEDULED IN NOMINAL DIMENSIONS. SEE FRAME/ DOOR TYPES (DETAIL SECTION 51000) FOR CORRESPONDING ACTUAL DIMENSIONS.
3. FOR GLASS TYPES, ONLY EXCEPTIONS TO THE FOLLOWING TABLE ARE SCHEDULED:

   INTERIOR NON RATED:

   CLEAR (SAFETY WHEN REQUIRED BY TABLE IN GLAZING SPECIFICATION.)

   INTERIOR AND EXTERIOR RATED:

   FIRE RATED

   EXTERIOR NON-RATED:

   CLEAR INSULATED (SAFETY INSULATED WHEN REQUIRED BY TABLE IN GLAZING SPECIFICATION.)
4. SEE SCHEDULE FOR FRAME TYPES.
5. SEE SCHEDULE FOR DOOR TYPES.
6. AT DOOR SCHEDULE, LABEL DESIGNATION "45/20" INDICATES:

   FOR ALL OPENINGS WITH SIDE LITES AND SCHEDULED TO BE RATED FOR 20 MINUTES, THE DOOR AND ANY GLASS WITHIN THE DOOR IS TO BE RATED FOR 20 MINUTES; THE FRAME AND ADJACENT SIDELITE(S) GLASS AND FRAME IS TO BE RATED FOR 45 MINUTES."

DOOR SCHEDULE REMARKS

1. DOOR IS TO BE SEALED AIR TIGHT.
2. STORM DOOR, FRAME AND HARDWARE. DOOR HARDWARE TO BE BY STORM DOOR MANUFACTURER.
3. EXTERIOR DOOR AND HARDWARE. SEE ARCHITECTURAL SITE PLAN FOR LOCATION

DOOR / OPENING SCHEDULE - AREA 'A

	DOOR / OPENING					LABEL/	OVERALL	FRAME				MOUNTING CONDITIONS				
DOOR NO	TYPE	QTY	WIDTH	HEIGHT	MATL	RATING	WIDTH	TYPE	DEPTH	MATL	GL	HEAD	JAMB	SILL	HDW GRP	Remarks-Door
01148A	F	2	3'-0"	7'-0"	WD	--	6'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		AC1.00	
01210B	AL	1	3'-0"	9'-0"	AL	--	3'-0"	--	--	AL	--	SEE ELEV	SEE ELEV		AC6.00	
01211	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	B3/A4.801	B4/A4.801		1.00	
01213	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	B3/A4.801	B4/A4.801		2.00	
01220A	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		AC2.00	
01220B	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.00	
01220C	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.00	
01220D	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.00	
01220E	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.00	
01220F	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.00	
01220G	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.00	
01220H	F	1	3'-0"	7'-0"	WD	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		2.01	
01240A	F	1	3'-0"	7'-0"	WD	--	4'-8"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		AC2.00	
01240B	F	1	3'-0"	7'-0"	WD	--	4'-8"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.00	
01240C	F	1	3'-0"	7'-0"	WD	--	4'-8"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.00	
01240D	F	1	3'-0"	7'-0"	WD	--	4'-8"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.00	
01240E	F	1	3'-0"	7'-0"	WD	--	4'-8"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.00	
01240F	F	1	3'-0"	7'-0"	WD	--	4'-8"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.00	
01240G	F	1	3'-0"	7'-0"	WD	--	4'-8"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.00	
01245A	F	1	3'-0"	7'-0"	WD	--	4'-8"	FR 2A	--	HM	--	B3/A4.801	B4/A4.801		AC2.01	
01245B	F	1	3'-0"	7'-0"	WD	--	4'-8"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.01	
01300	FG2	1	3'-3"	7'-0"	AL	--	3'-7"	SFR 1	--	AL	--	C3/A5.601	D3/A5.601			2
01310A	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		1.00	
01310A	F	1	3'-3"	7'-0"	HM	90 MIN	3'-7"	FR 1	--	HM	--	F1/A4.801	F3/A4.801			2
01310B	F	1	3'-0"	7'-0"	WD	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		1.00	
01310B	F	1	3'-0"	7'-0"	WD	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		4.00	
01310C	F	1	3'-0"	7'-0"	WD	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		2.00	
01311	F	1	3'-0"	7'-0"	WD	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		5.00	
01312	F	1	3'-0"	7'-0"	WD	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		5.00	
01313	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.02	
01314	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.02	
01314A	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		6.00	
01315A	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		4.01	
01315B	F	1	3'-0"	7'-0"	HM	90 MIN	3'-4"	FR 1	--	HM	--	D5/A5.601	C5/A5.601		AC3.00	
01316	F	1	3'-0"	7'-0"	WD	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		6.01	
01317A	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		AC2.01	
01317B	F	2	3'-0"	7'-0"	WD	--	6'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		2.02	
01317C	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	B3/A4.801	B4/A4.801		AC2.00	1
01318A	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		AC2.01	
01318B	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B3/A4.801	B4/A4.801		AC2.00	1
01318C	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.02	
01319A	F	1	3'-0"	7'-0"	WD	--	3'-4"	FR 1	--	HM	--	B3/A4.801	B4/A4.801		AC2.01	1
01319B	F	2	3'-0"	7'-0"	WD	--	6'-4"	FR 1	--	HM	--	B3/A4.801	B4/A4.801		AC2.02	1
01320A	AL	2	3'-4"	9'-0"	AL	--	6'-0"	--	--	AL	--	SEE ELEV	SEE ELEV		AC6.03	
01325	F	1	3'-0"	7'-0"	WD	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		AC1.03	
01325A	F	2	4'-6"	10'-0"	P LAM-3	--	4'-6"	--	--	--	--				7.00	
01325B	F	2	4'-6"	10'-0"	P LAM-3	--	4'-6"	--	--	--	--				7.00	
01325C	F	2	4'-6"	10'-0"	P LAM-3	--	4'-6"	--	--	--	--				7.00	
01325D	F	2	4'-6"	10'-0"	P LAM-3	--	4'-6"	--	--	--	--				7.00	
01325E	F	2	4'-6"	10'-0"	P LAM-3	--	4'-6"	--	--	--	--				7.00	
01325F	F	2	4'-6"	10'-0"	P LAM-3	--	4'-6"	--	--	--	--				7.00	
01325G	F	2	4'-6"	10'-0"	P LAM-3	--	4'-6"	--	--	--	--				7.00	
01325H	F	2	4'-6"	10'-0"	P LAM-3	--	4'-6"	--	--	--	--				7.00	
01325I	F	2	4'-6"	10'-0"	P LAM-3	--	4'-6"	--	--	--	--				7.00	
01325J	F	2	4'-6"	10'-0"	P LAM-3	--	4'-6"	--	--	--	--				7.00	
01325K	F	2	4'-6"	3'-6"	P LAM-3	--	3'-6"	--	--	--	--				7.00	
01325L	F	2	4'-6"	3'-6"	P LAM-3	--	3'-6"	--	--	--	--				7.00	
01325M	F	2	4'-6"	3'-6"	P LAM-3	--	3'-6"	--	--	--	--				7.00	
01325N	F	2	4'-6"	3'-6"	P LAM-3	--	3'-6"	--	--	--	--				7.00	
01325O	F	2	4'-6"	10'-0"	P LAM-3	--	4'-6"	--	--	--	--				7.00	
01325P	F	2	4'-6"	10'-0"	P LAM-3	--	4'-6"	--	--	--	--				7.00	
01325Q	F	2	4'-6"	10'-0"	P LAM-3	--	4'-6"	--	--	--	--				7.00	
01325R	F	2	4'-6"	10'-0"	P LAM-3	--	4'-6"	--	--	--	--				7.00	
01325S	F	2	4'-6"	10'-0"	P LAM-3	--	4'-6"	--	--	--	--				7.00	
01325T	F	2	4'-6"	10'-0"	P LAM-3	--	4'-6"	--	--	--	--				7.00	

DOOR / OPENING SCHEDULE - AREA 'B'

	DOOR / OPENING					LABEL/	OVERALL	FRAME				MOUNTING CONDITIONS				
DOOR NO	TYPE	QTY	WIDTH	HEIGHT	MATL	RATING	WIDTH	TYPE	DEPTH	MATL	GL	HEAD	JAMB	SILL	HDW GRP	Remarks-Door
01100A	AL	1	3'-0"	9'-0"	AL	--	3'-0"	--	--	AL	--	SEE ELEV	SEE ELEV		AC5.01	
01100B	AL	1	3'-0"	9'-0"	AL	--	3'-0"	--	--	AL	--	SEE ELEV	SEE ELEV		AC5.01	
01107	AL	1	4'-0"	9'-0"	AL	--	3'-0"	--	--	AL	--	SEE ELEV	SEE ELEV		AC1.01	
01109B	F	1	2'-11 7/8"	7'-0"	WD	--	4'-9 7/8"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		6.02	
01110A	AL	1	3'-0"	9'-0"	AL	--	3'-0"	--	--	AL	--	SEE ELEV	SEE ELEV		4.02	
01110B	AL	1	3'-0"	9'-0"	AL	--	3'-0"	--	--	AL	--	SEE ELEV	SEE ELEV		AC5.00	
01111	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	B3/A4.801	B4/A4.801		1.00	
01112	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	B3/A4.801	B4/A4.801		1.00	
01115A	F	1	3'-0"	7'-0"	HM	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		AC2.03	
01115B	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	B3/A4.801	B4/A4.801		AC2.01	
01115C	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		6.00	
01115D	F	1	4'-0"	7'-0"	HM	--	4'-4"	FR 1	--	HM	--	B3/A4.801	B4/A4.801		AC2.03	
01120	F	2	2'-10"	7'-0"	HM	--	6'-0"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		AC6.01	
01122A	F	2	3'-0"	7'-0"	HM	--	6'-4"	FR 1	--	HM	--	D1/A5.601	C1/A5.601		4.03	
01122B	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	F1/A5.601	E1/A5.601		AC1.05	
01125	AL	1	3'-0"	7'-0"	AL	--	3'-0"	--	--	AL	--	B1/A4.801	B1/A4.801		5.01	
01139	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		AC1.03	
01148B	F	2	2'-10"	7'-0"	WD	--	6'-0"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		AC6.02	
01149	AL	1	4'-0"	9'-0"	AL	--	3'-0"	--	--	AL	--	SEE ELEV	SEE ELEV		AC1.01	
01150	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		AC2.03	
01210C	AL	1	4'-0"	9'-0"	AL	--	3'-0"	--	--	AL	--	SEE ELEV	SEE ELEV		AC1.01	
01400	AL	1	3'-0"	9'-0"	AL	--	3'-0"	--	--	AL	--	SEE ELEV	SEE ELEV		AC6.00	
01400A	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		AC2.03	
01402A	AL	1	3'-0"	7'-0"	AL	--	3'-0"	--	--	AL	--	SEE ELEV	SEE ELEV		AC2.04	
01402B	AL	1	3'-0"	7'-0"	AL	--	3'-0"	--	--	AL	--	SEE ELEV	SEE ELEV		5.01	
01402C	AL	1	3'-0"	7'-0"	AL	--	3'-0"	--	--	AL	--	SEE ELEV	SEE ELEV		5.01	
01402D	AL	1	3'-0"	7'-0"	AL	--	3'-0"	--	--	AL	--	SEE ELEV	SEE ELEV		5.01	
01402E	F	2	3'-0"	7'-0"	WD	--	6'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		AC1.00	
01402F	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	E1/A4.801	E3/A4.801		2.00	
01402G	F	2	1'-6"	7'-0"	WD	--	3'-4"	FR 3	--	HM	--	B1/A4.801	B1/A4.801			
01410A	AL	2	3'-0"	9'-0"	AL	--	3'-0"	--	--	AL	--	SEE ELEV	SEE ELEV		AC1.06	
01410C	F	1	3'-0"	7'-0"	WD	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		2.00	
01411	F	1	3'-0"	7'-0"	WD	--	3'-4"	FR 1	--	HM	--	B3/A4.801	B4/A4.801		1.00	
01412	F	1	3'-0"	7'-0"	WD	--	3'-4"	FR 1	--	HM	--	B3/A4.801	B4/A4.801		1.00	
01420	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		AC2.03	
01420B	F	1	3'-0"	7'-0"	WD	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		2.03	
01420D	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.00	
01420E	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.00	
01420F	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.00	
01420G	F	1	3'-0"	7'-0"	WD	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		3.00	
01450	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		2.00	
01451	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		2.00	
01500	F	2	3'-0"	7'-0"	HM	--	6'-4"	FR 1	--	HM	--	D1/A5.601	C1/A5.601		AC5.02	
01502	F	2	2'-10"	7'-0"	WD	--	6'-0"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		4.04	
01504	F	1	3'-0"	7'-0"	HM	--	4'-10"	FR 2A	--	HM	--	B1/A4.801	B1/A4.801		AC2.03	
01504A	--	1	4'-0"	7'-0"	HM	--	4'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		5.02	
01510A	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	E1/A4.801	E3/A4.801		1.00	
01510B	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		5.03	
01510C	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	E1/A4.801	E3/A4.801		1.00	
01510D	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		2.00	
01511A	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		5.04	
01511B	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		5.02	
01512A	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		5.04	
01512B	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	B1/A4.801	B1/A4.801		5.02	
01620	F	2	3'-0"	7'-0"	HM	--	6'-4"	FR 1	--	HM	--	B3/A4.801	B4/A4.801		AC2.05	
01620A	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	B3/A4.801	B4/A4.801		6.00	
01650	F	2	3'-3 3/8"	7'-0"	HM	--	6'-10 3/4"	FR 1	--	HM	--	B3/A4.801	B4/A4.801		AC1.02	
01650A	F	1	4'-0"	7'-0"	WD	--	4'-4"	FR 1	--	HM	--	B3/A4.801	B4/A4.801		4.07	
01650B	F	1	4'-0"	7'-0"	WD	--	4'-4"	FR 1	--	HM	--	B3/A4.801	B4/A4.801		4.07	
01650C	F	1	4'-0"	7'-0"	WD	--	4'-4"	FR 1	--	HM	--	B3/A4.801	B4/A4.801		4.05	
01650D	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	F1/A5.601	E1/A5.601		AC1.05	
01650D	F	1	3'-0"	7'-0"	WD	--	3'-4"	FR 1	--	HM	--	B3/A4.801	B4/A4.801		4.05	
01650E	F	1	3'-0"	7'-0"	HM	--	3'-4"	FR 1	--	HM	--	F1/A5.601	E1/A5.601		4.06	
EX01	F	1	4'-0"	7'-0"	FRP	--	4'-4"	FR 1	--	HM	--					3
EX02	F	1	4'-0"	7'-0"	FRP	--	4'-4"	FR 1	--	HM	--	B6/A5.602 SIM	D6/A5.602 SIM			3

1

MATTHEW JAMES BICKEL 001-020883 LICENSED ARCHITECT STATE OF ILLINOIS
Exp. 11/30/24

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed ARCHITECT under the laws of the State of Illinois

Matthew J Bickel
License Number: 001.020883 Date 11/30/2024

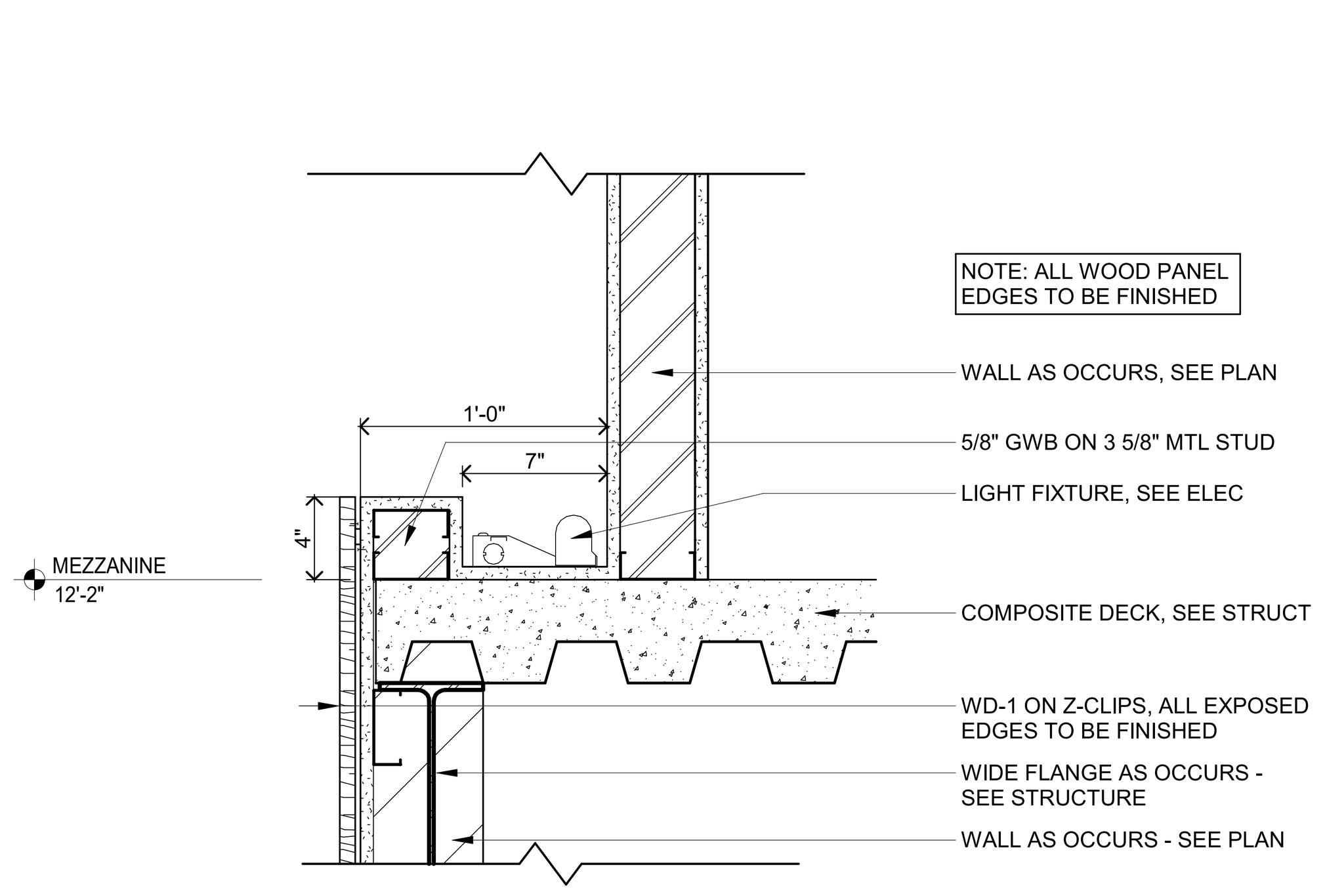
Revisions		
Description	Date	Num
Addendum #1	02/17/2023	1

Comm: 213106
Date: 12/30/2022
Drawn: MB/ML
Check: JMK

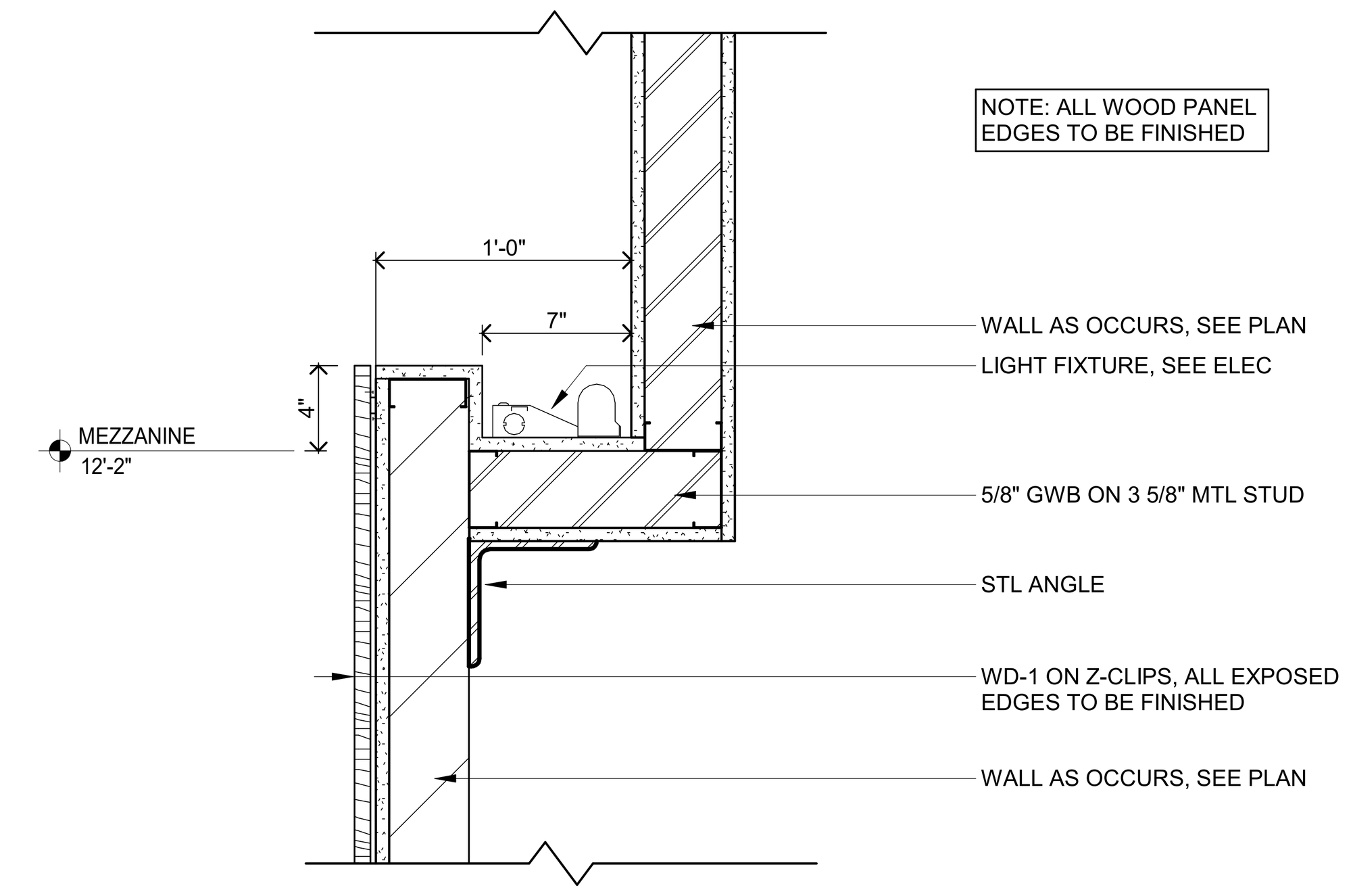
DOOR/ FRAME/ LOUVER TYPES & SCHEDULE

Scale: As indicated

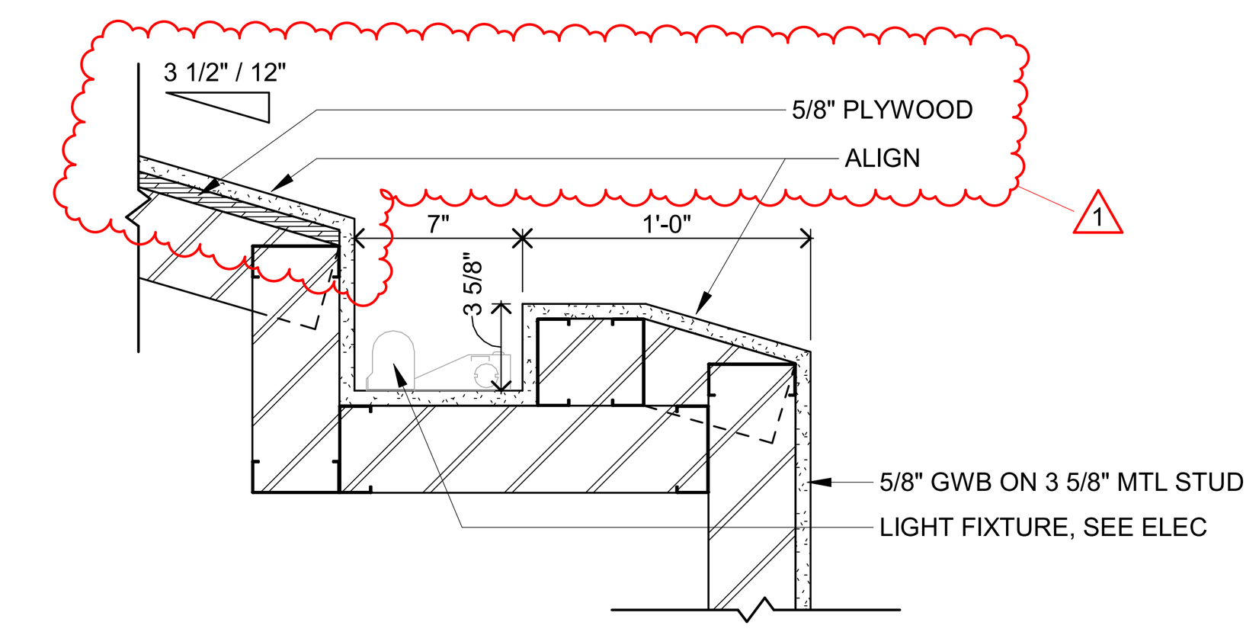
A2.901



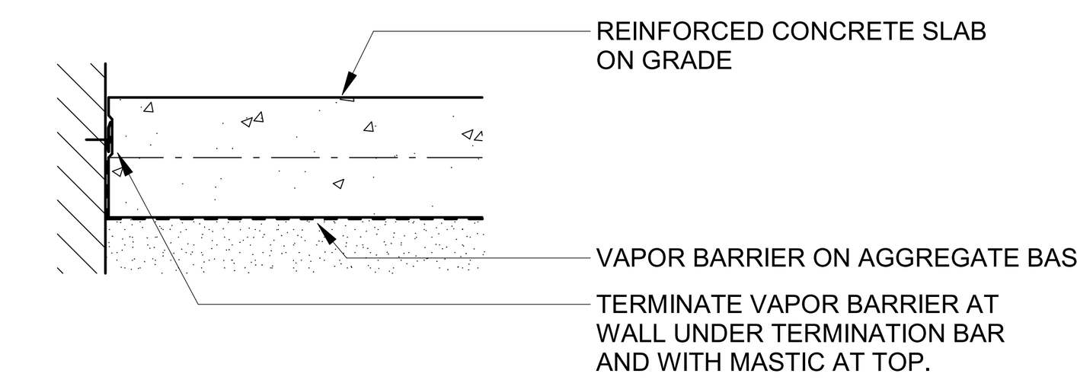
B1 DETAIL AT COVE LIGHT
1 1/2" = 1'-0"



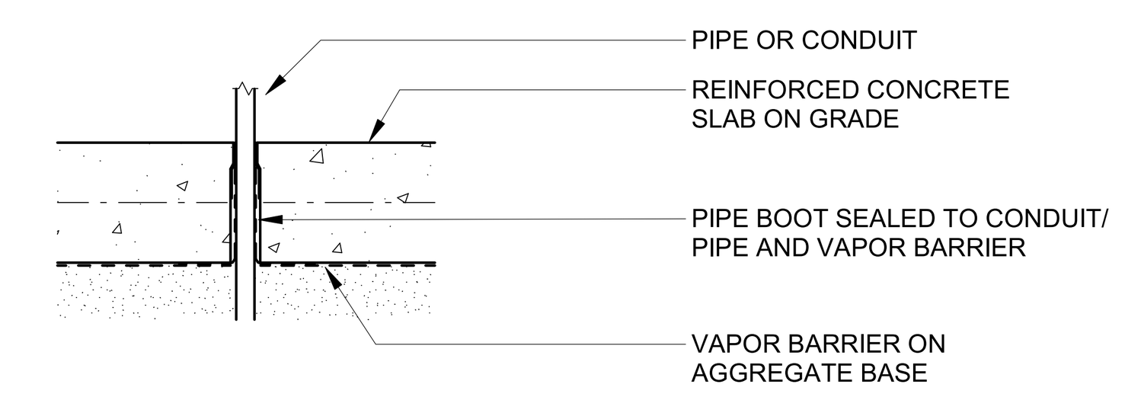
B3 DETAIL AT COVE LIGHT
1 1/2" = 1'-0"



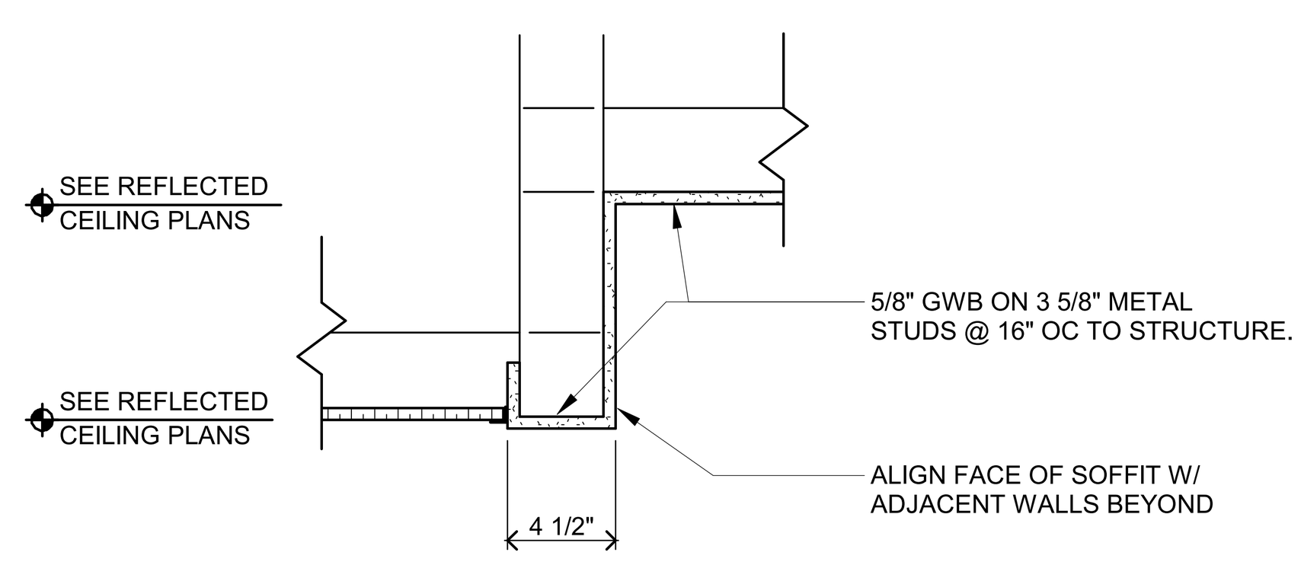
B5 DETAIL AT COVE LIGHT
1 1/2" = 1'-0"



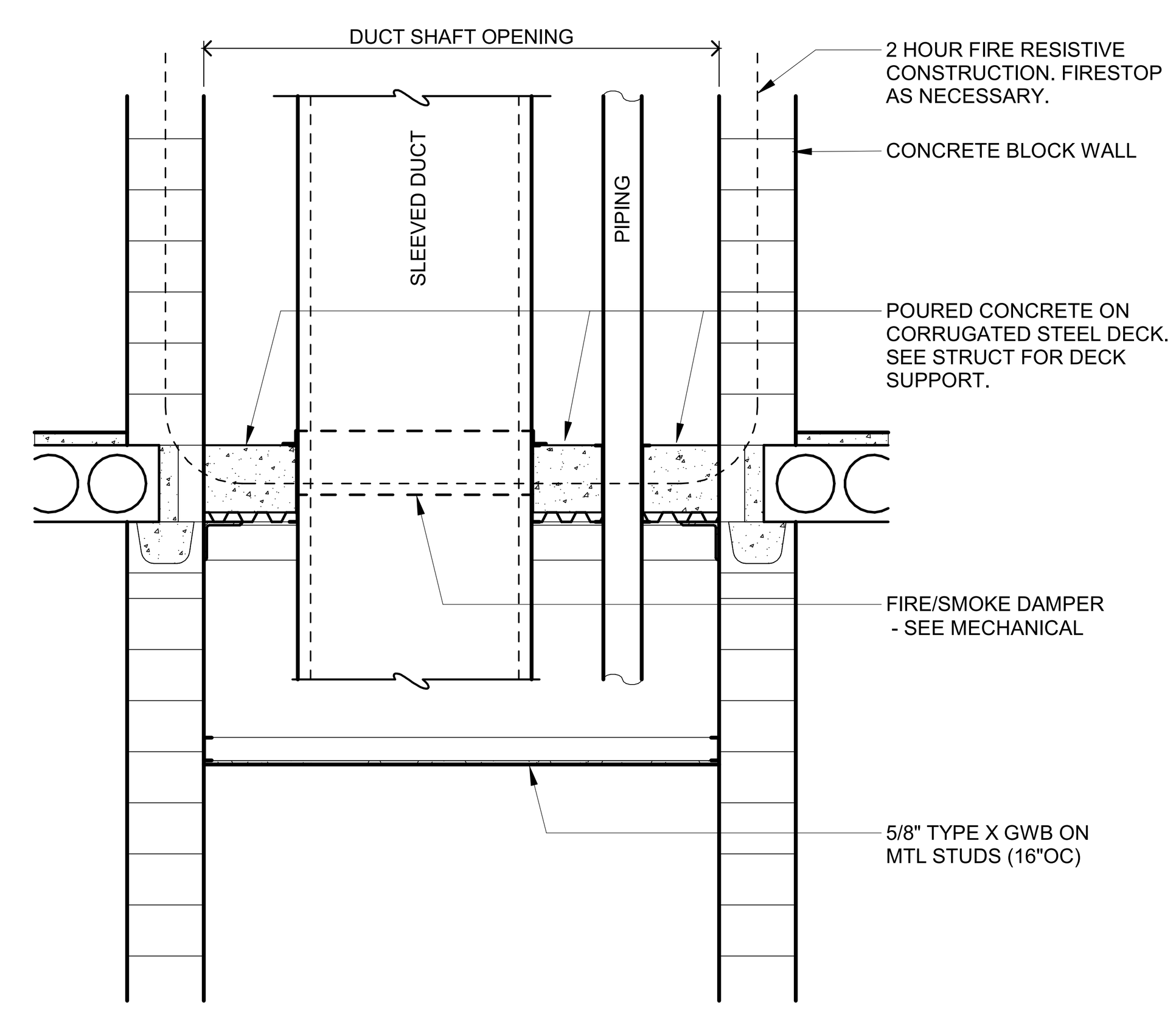
B7 SLAB ON GRADE VAPOR BARRIER
1 1/2" = 1'-0"



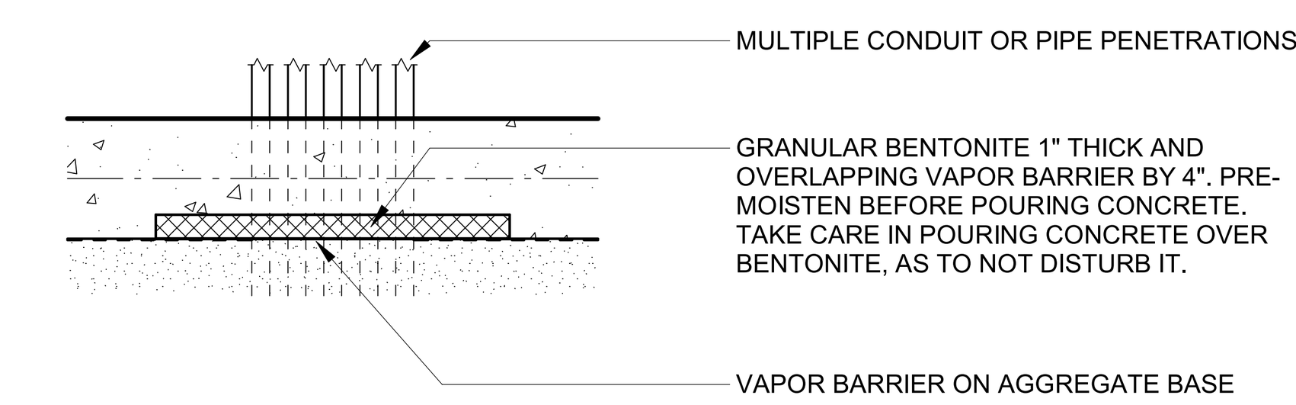
C7 VAPOR BARRIER AT SINGLE PENETRATION
1 1/2" = 1'-0"



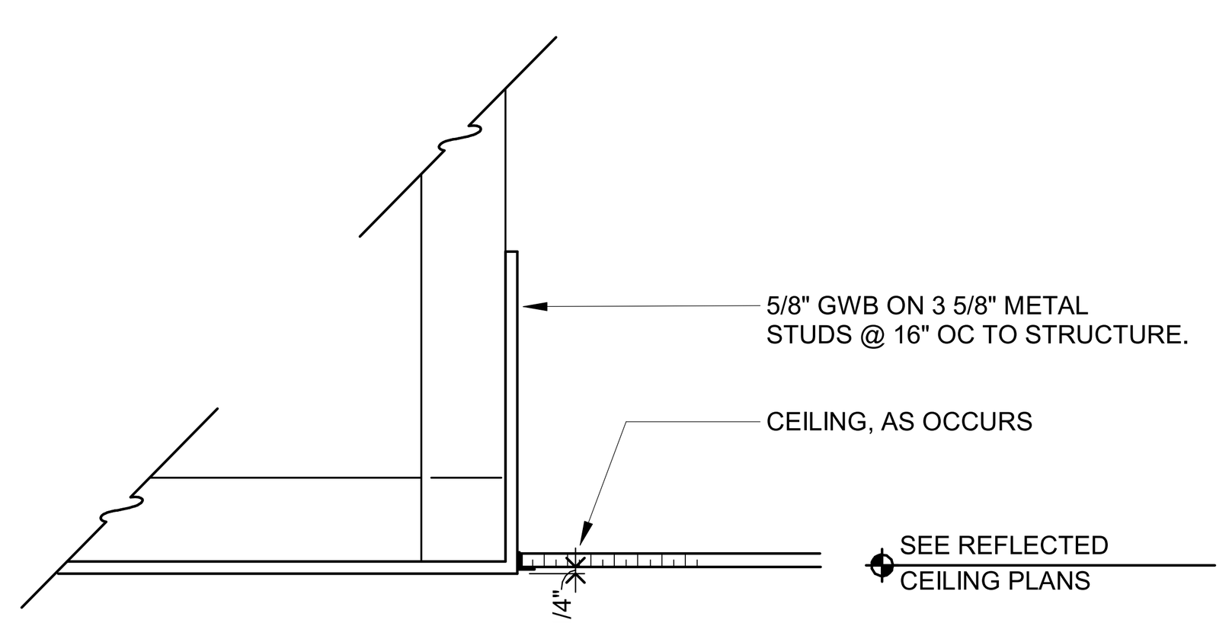
D3 GYPSUM BOARD SOFFIT TRANSITION
1 1/2" = 1'-0"



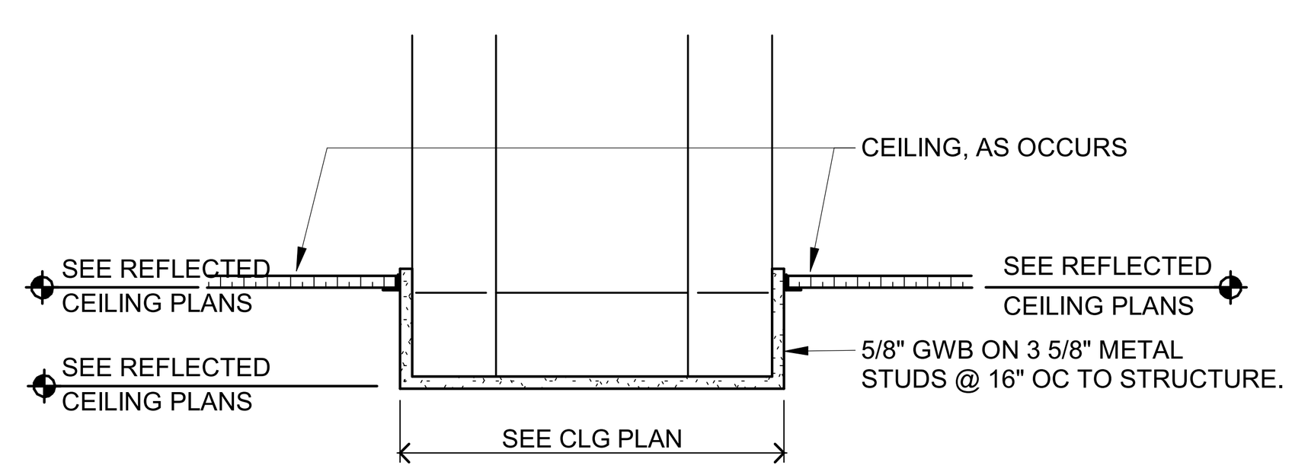
D5 ENCLOSURE AT RATED MECHANICAL SHAFT
1/2" = 1'-0"



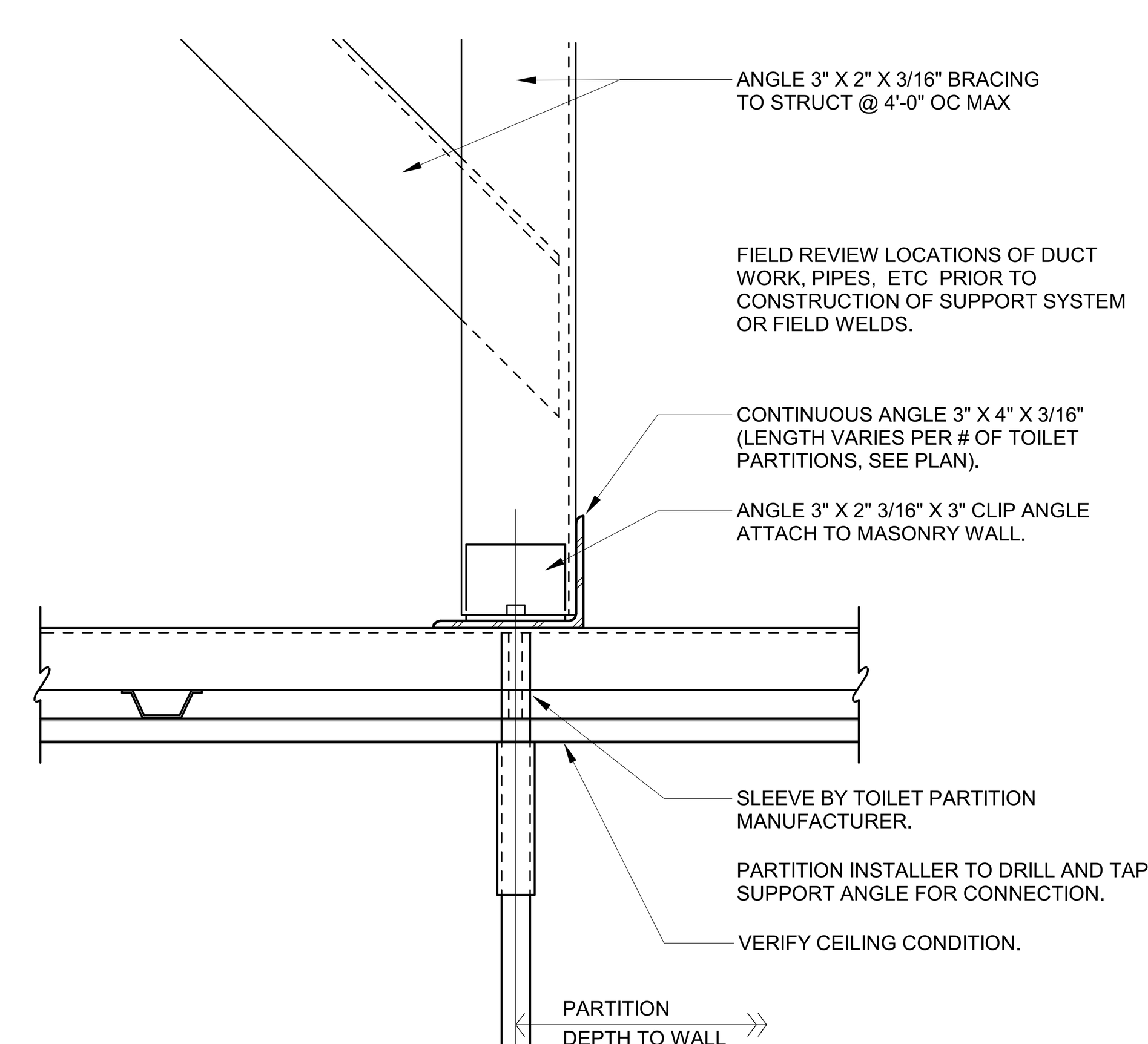
D7 VAPOR BARRIER AT MULTIPLE PENETRATIONS
1 1/2" = 1'-0"



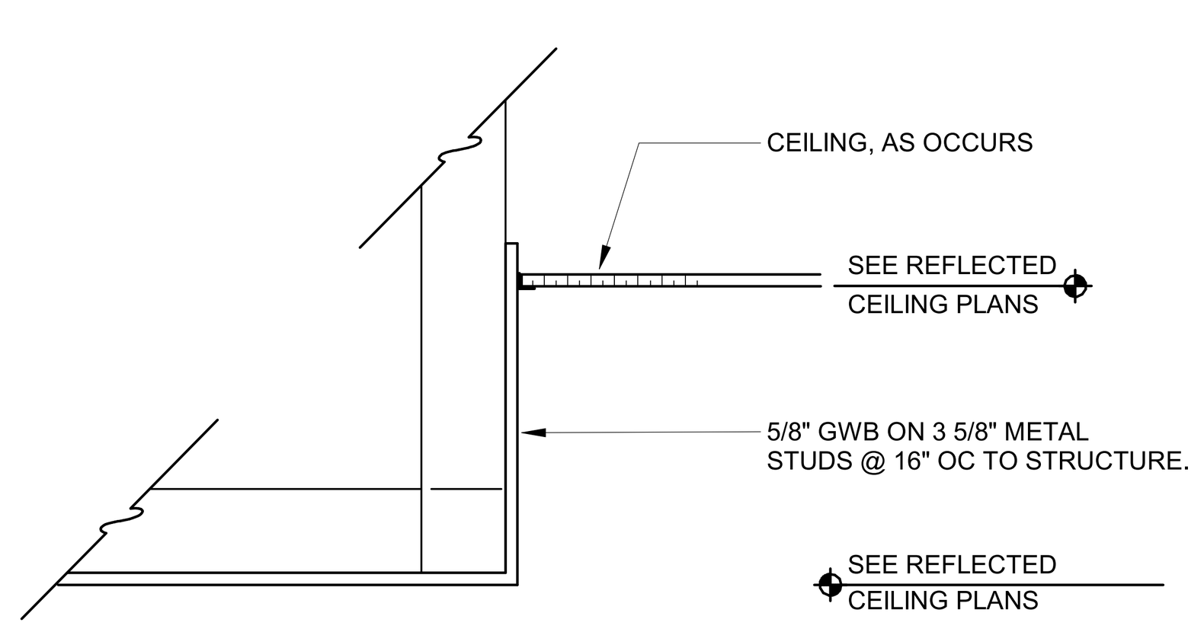
E1 GYPSUM BOARD SOFFIT
1 1/2" = 1'-0"



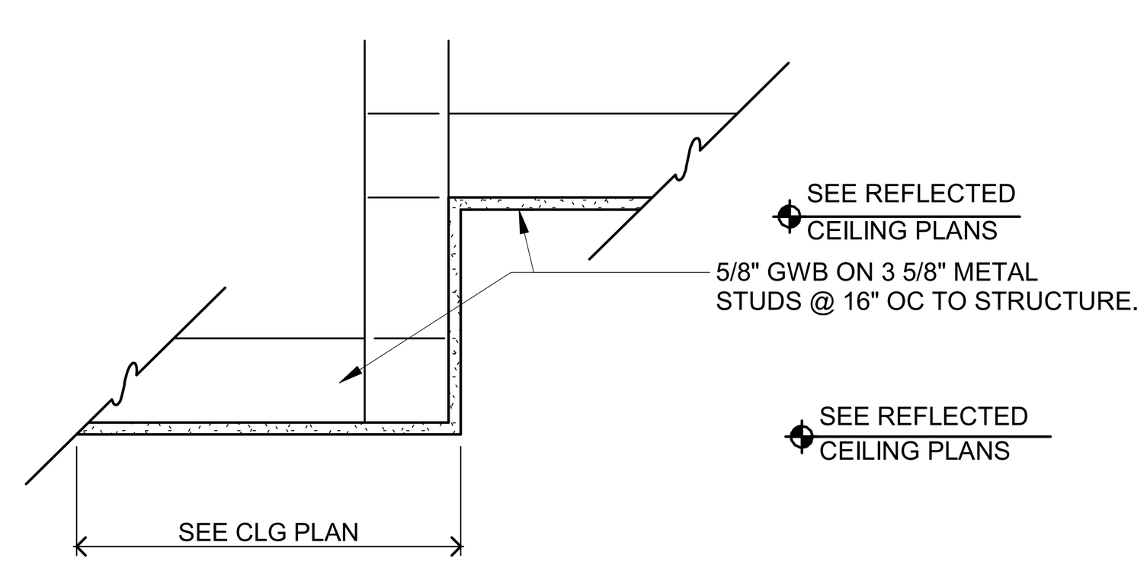
E3 GYPSUM BOARD SOFFIT
1 1/2" = 1'-0"



F5 TOILET PARTITION SUPPORT
3" = 1'-0"



F1 GYPSUM BOARD SOFFIT
1 1/2" = 1'-0"



F3 GYPSUM BOARD SOFFIT
1 1/2" = 1'-0"

Regional Operations and Communications Facility

Lake County Campus
Libertyville, IL 60048

LakeCounty
656 Winchester Rd,
Libertyville, IL 60048

Wold

WOLD ARCHITECTS AND ENGINEERS
220 North Smith Street, Suite 310
Palatine, Illinois 60067
woldae.com | 847 241 6100

RossDrulisCusenbery
18294 Sonoma Highway
Sonoma, CA 95476
rdcarchitecture.com | tel 707 996 8448

LICENSED ARCHITECT
MATTHEW JAMES BICKEL
001-020883
STATE OF ILLINOIS
Exp. 11/30/24

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed ARCHITECT under the laws of the State of Illinois

Matthew J Bickel
License Number: 001.020883 Date: 11/30/2024

Revisions

Description	Date	Num
Addendum #1	02/17/2023	1

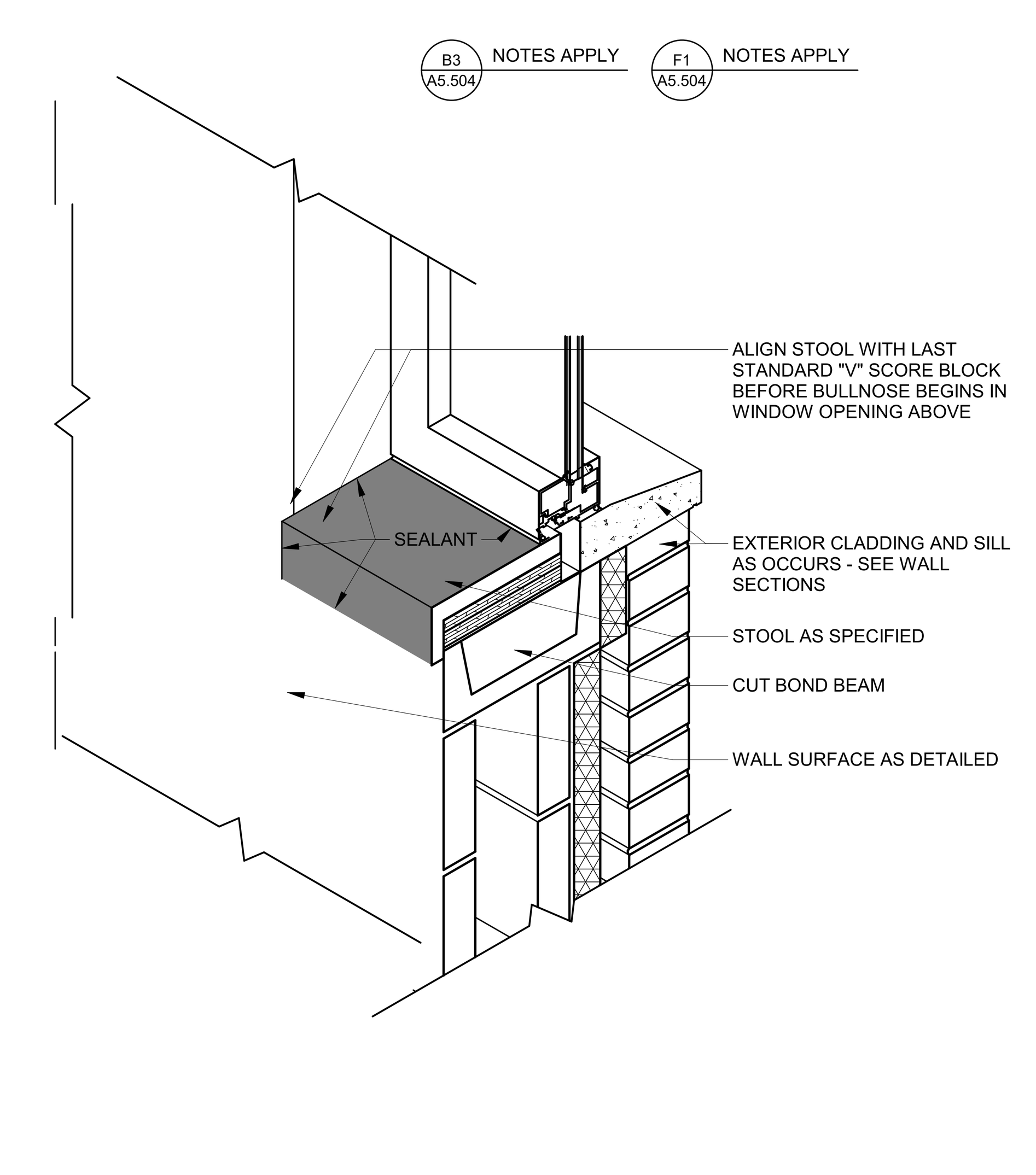
Comm: 213106
Date: 12/30/2022
Drawn: MB
Check: JMK

North

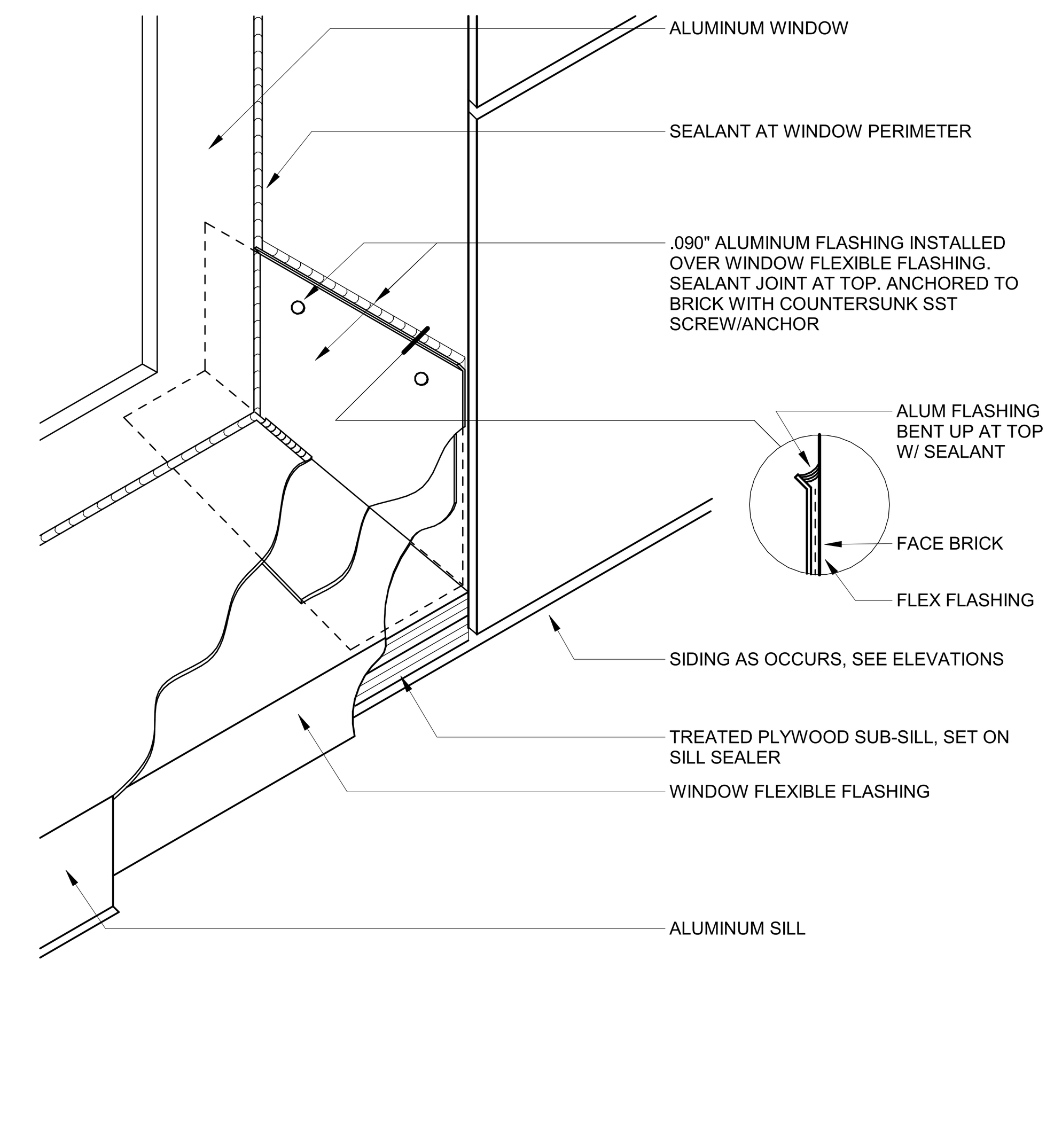
DETAILS - INTERIOR CEILING DETAILS

Scale: As indicated

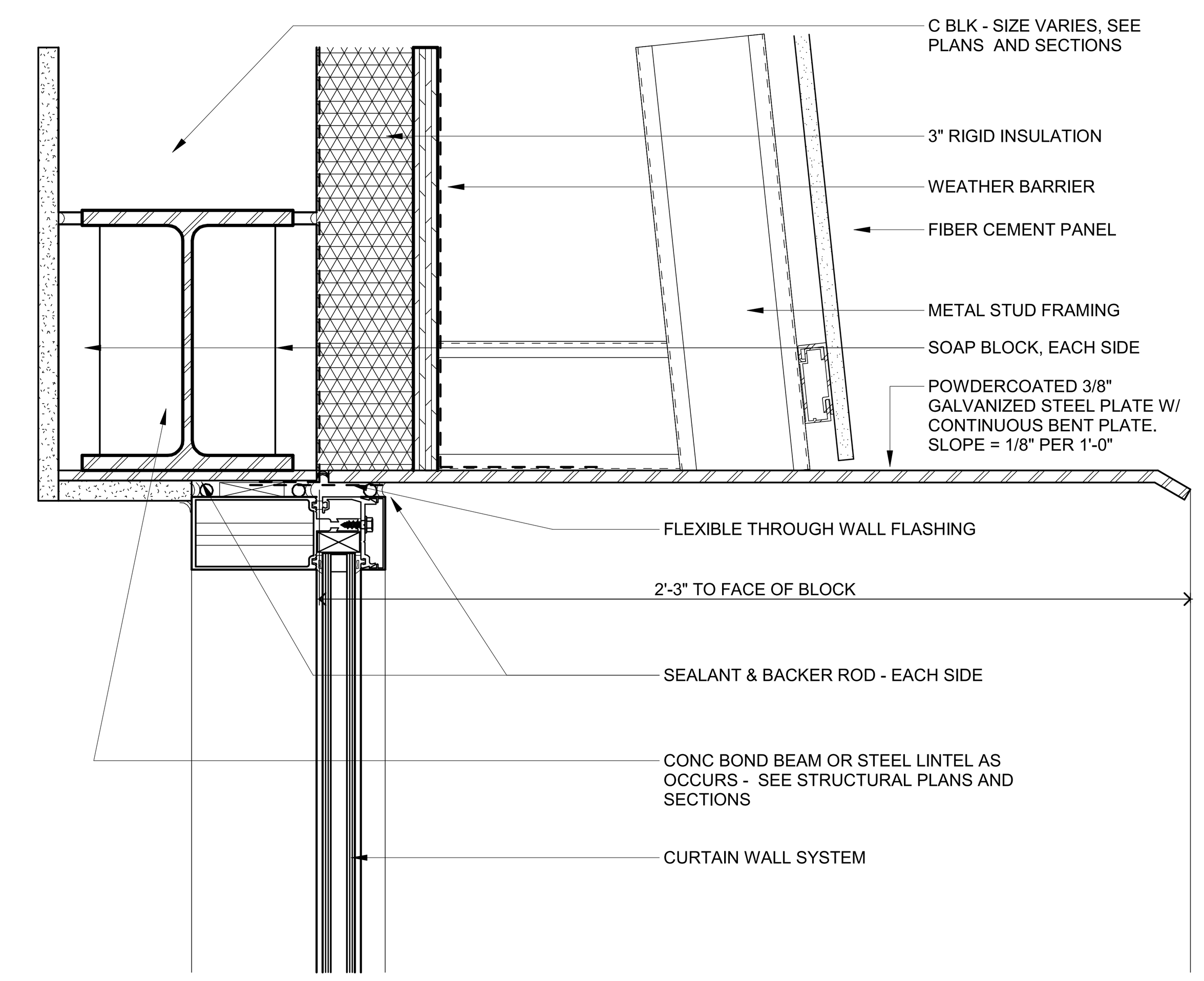
A4.901



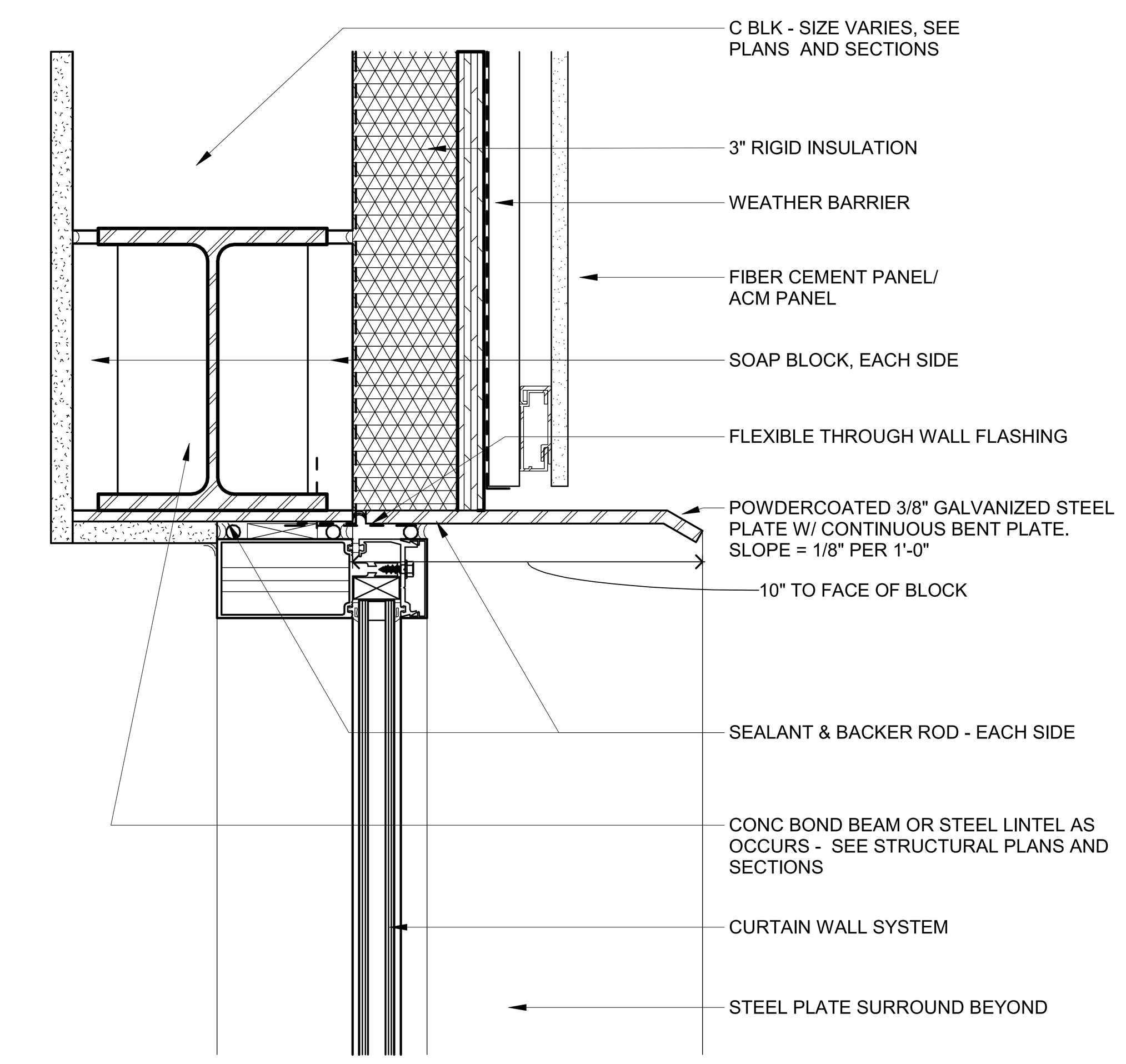
B1 SILL DETAIL
1 1/2" = 1'-0"



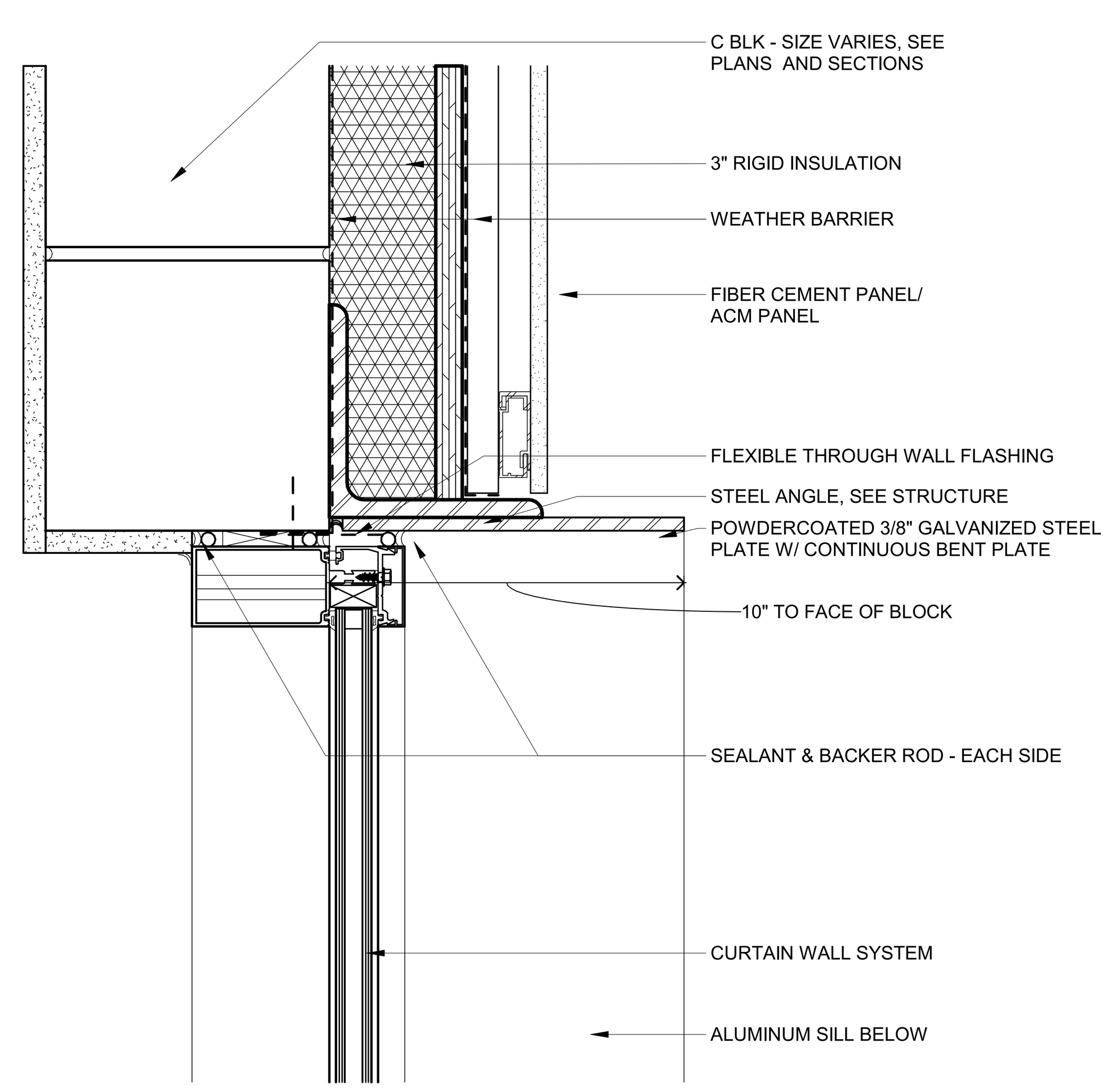
B3 SILL FLASHING DETAIL
3" = 1'-0"



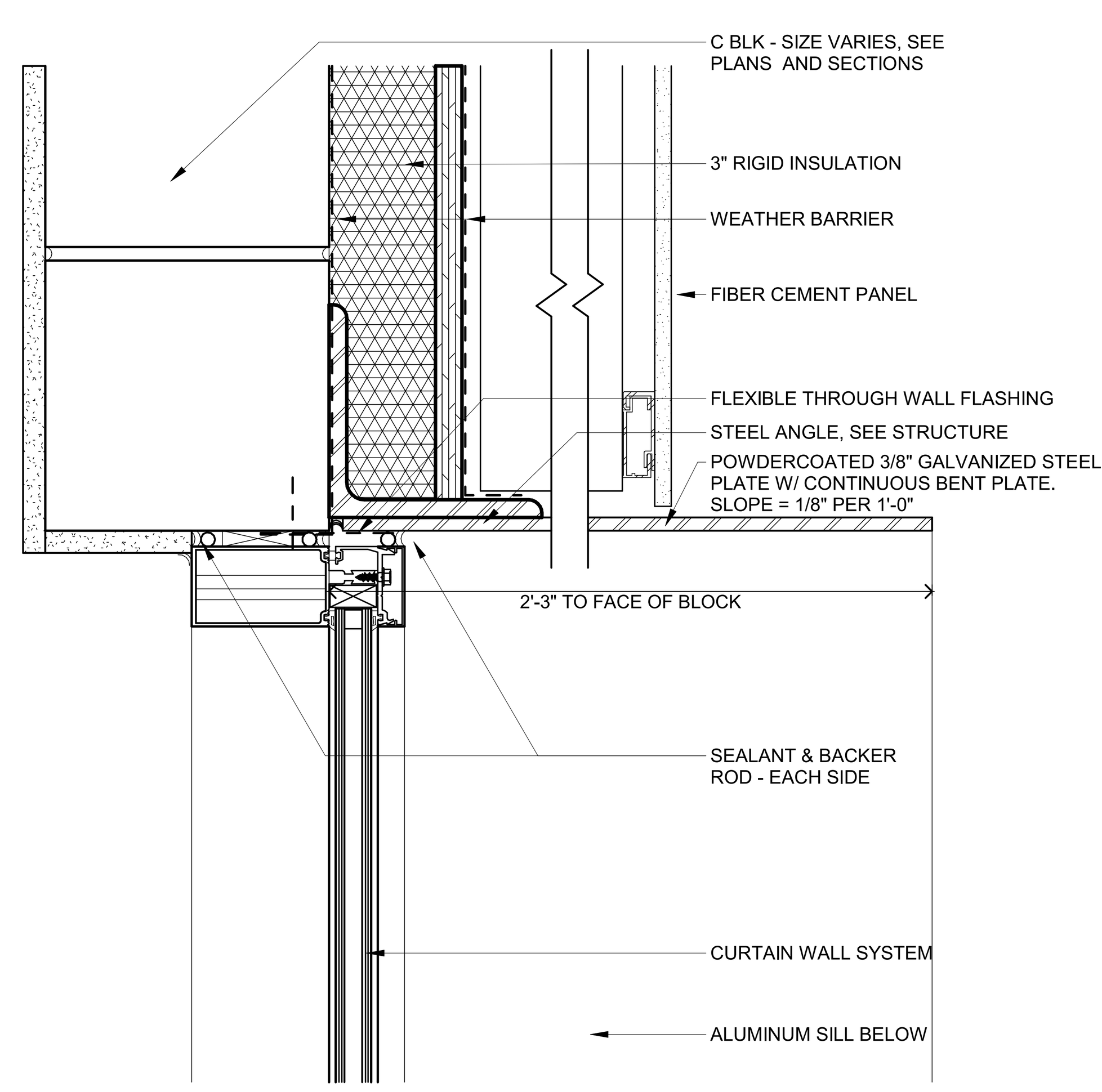
B5 CURTAIN WALL HEAD DETAIL @ ANGLED WALL
3" = 1'-0"



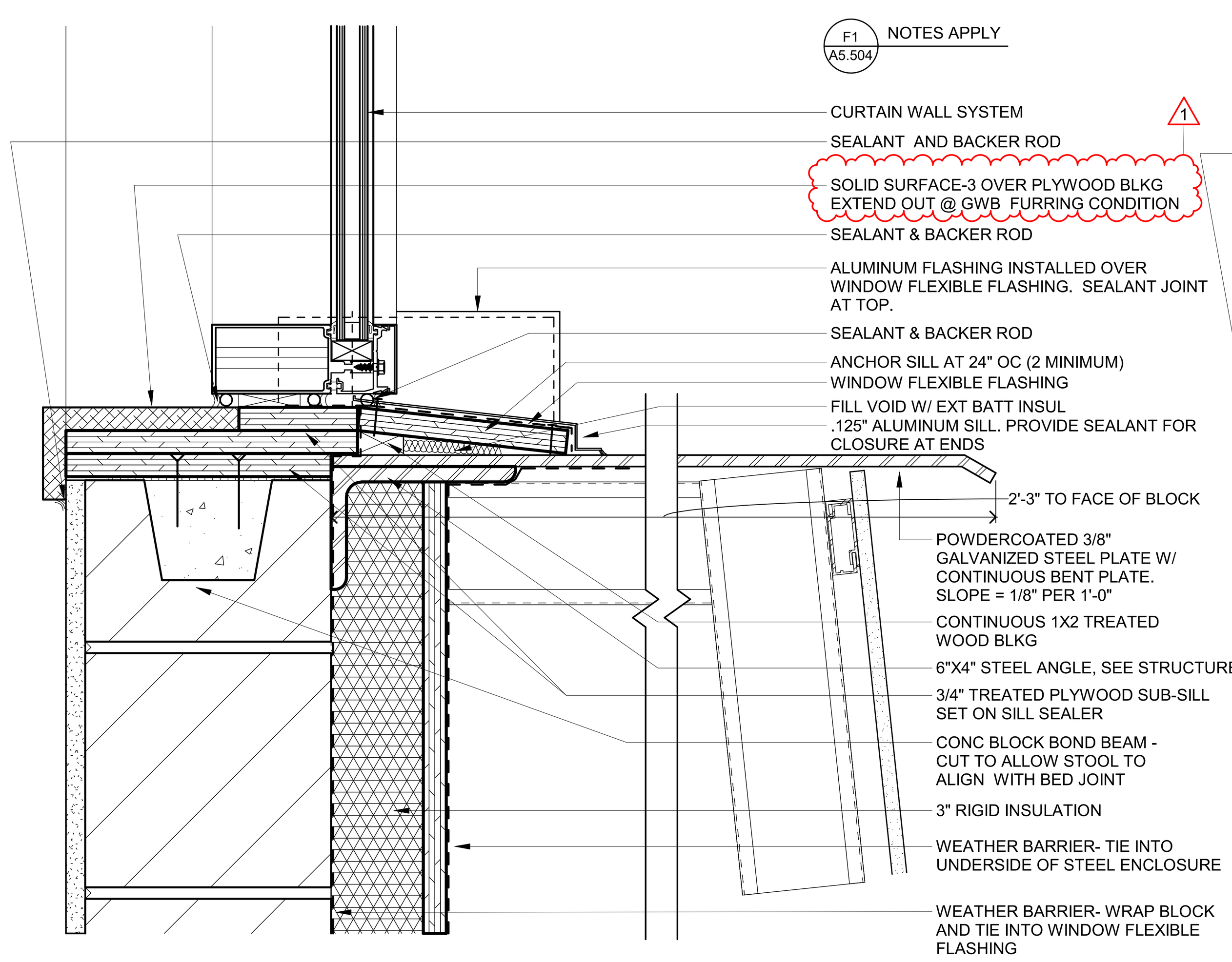
B7 CURTAIN WALL HEAD DETAIL
3" = 1'-0"



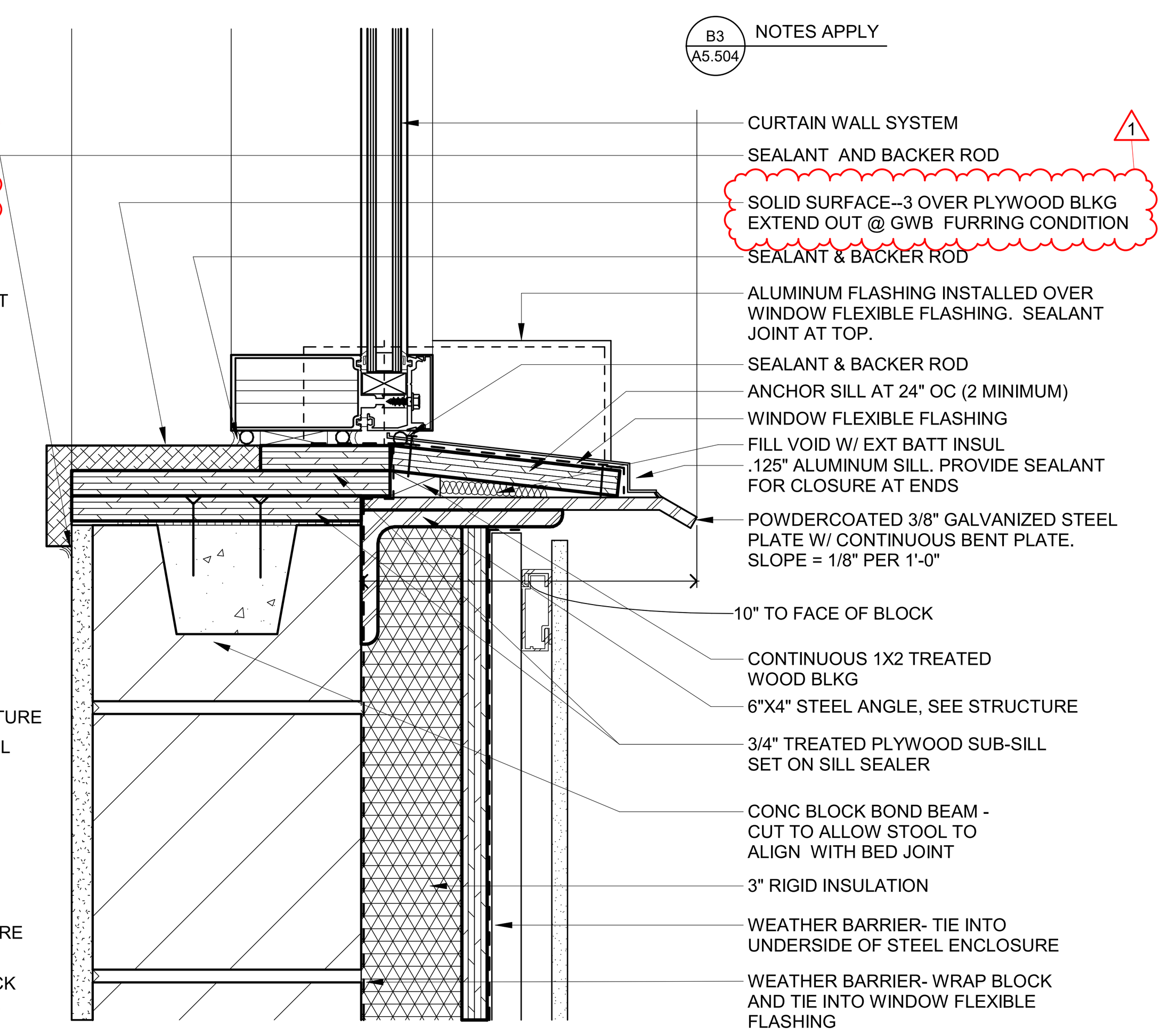
D1 CURTAIN WALL JAMB DETAIL
3" = 1'-0"



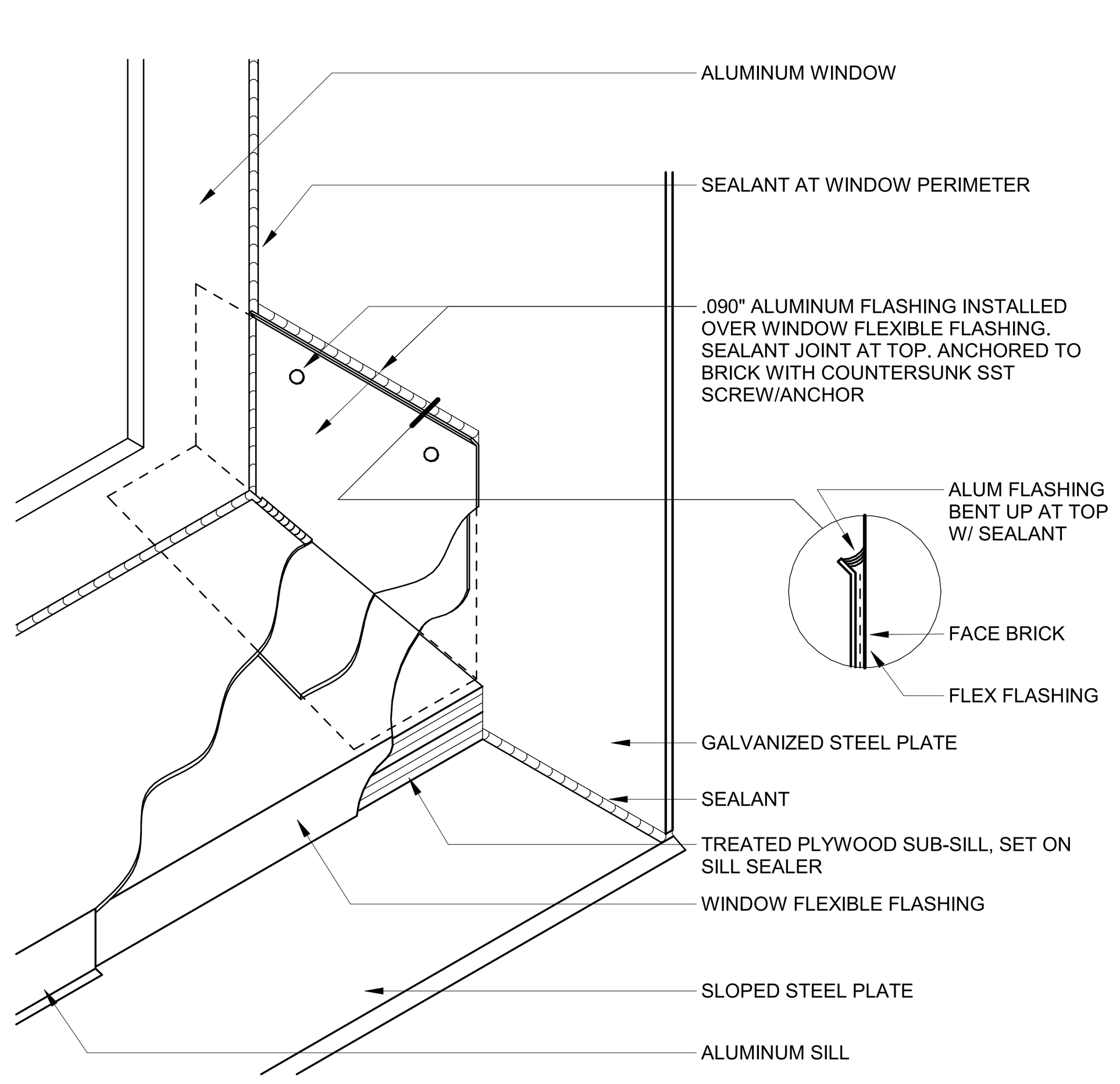
D3 CURTAIN WALL JAMB DETAIL @ ANGLED WALL
3" = 1'-0"



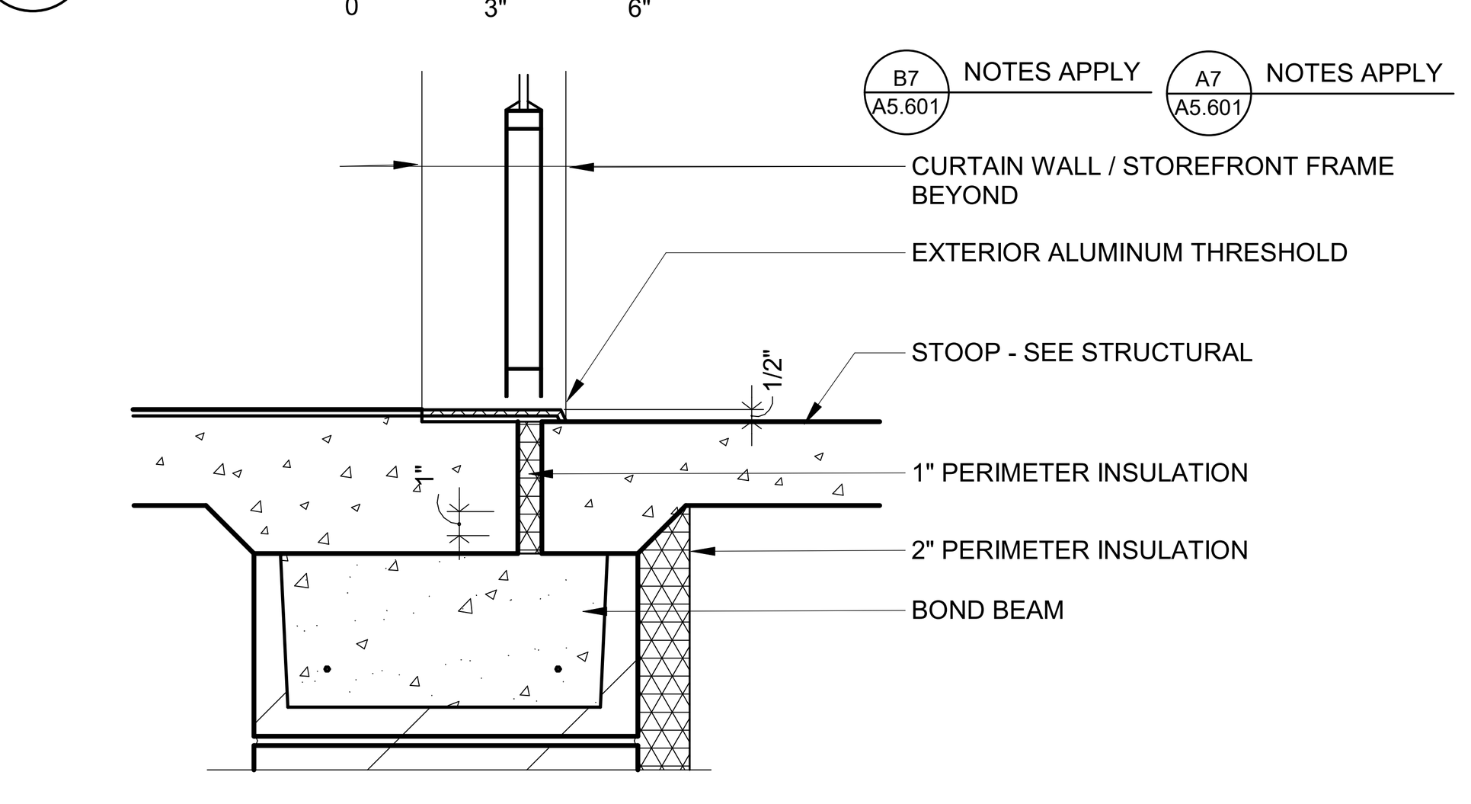
D5 CURTAIN WALL SILL DETAIL @ ANGLED WALL
3" = 1'-0"



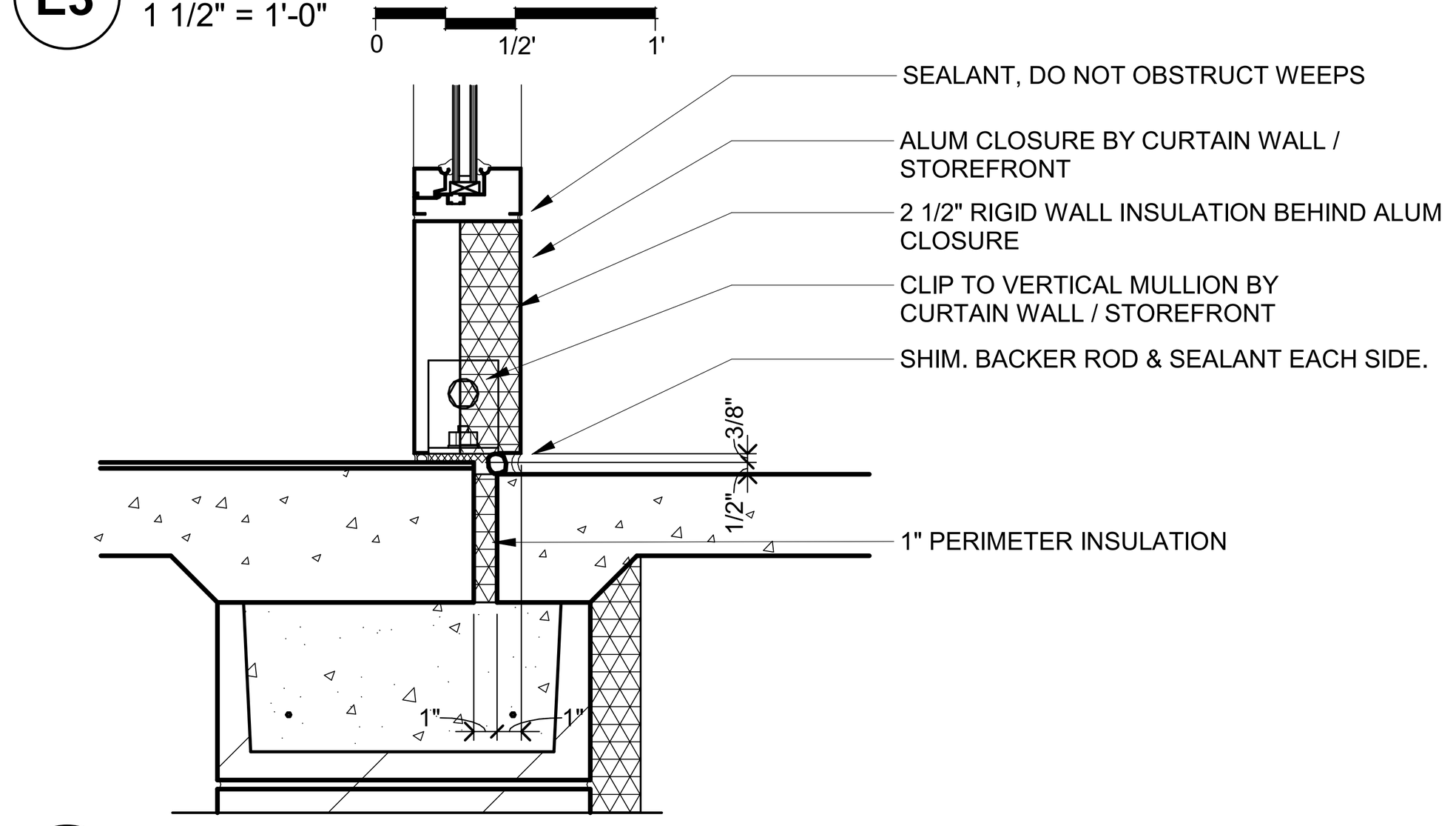
D7 CURTAIN WALL SILL DETAIL
3" = 1'-0"



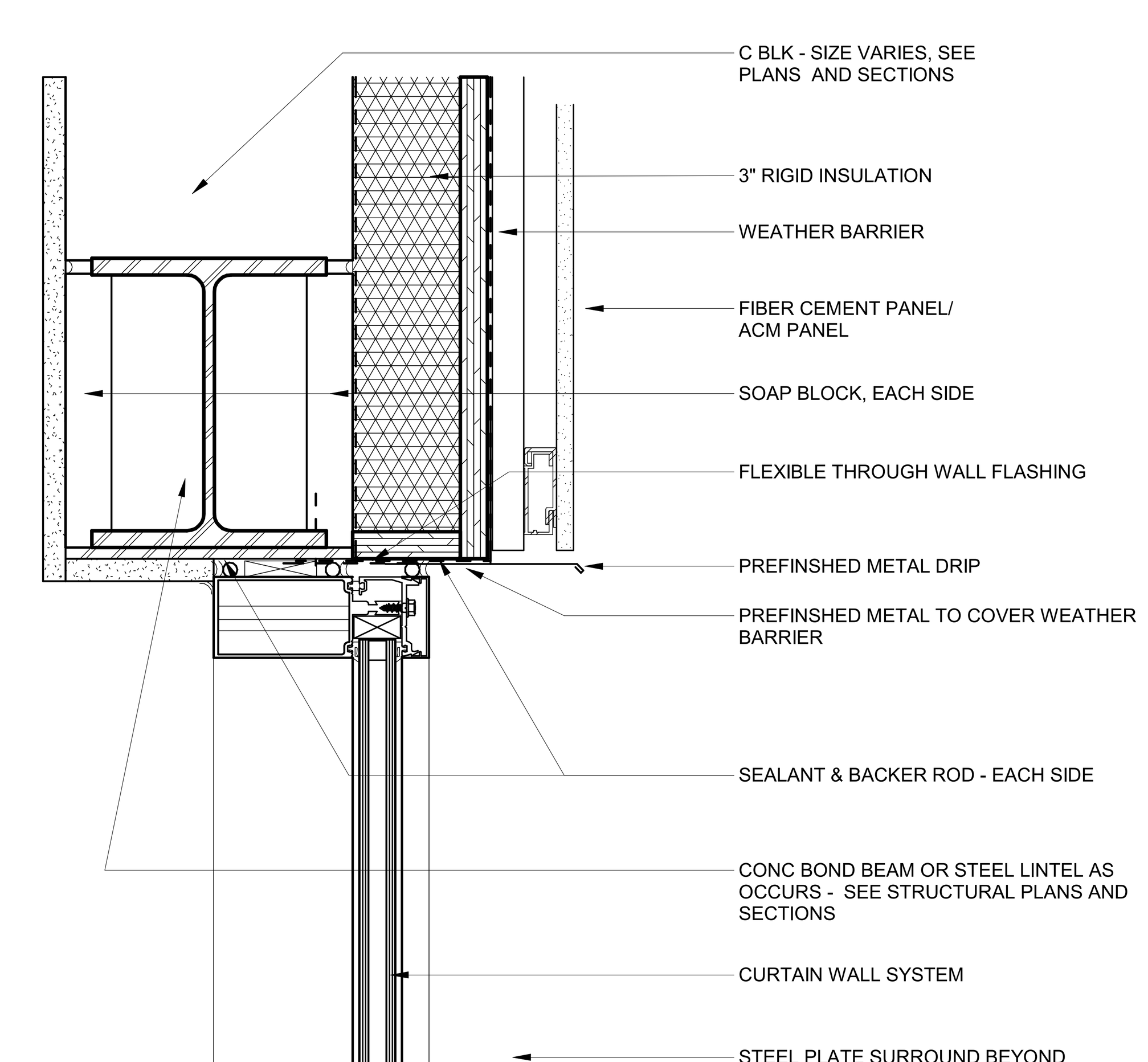
F1 SILL FLASHING DETAIL
3" = 1'-0"



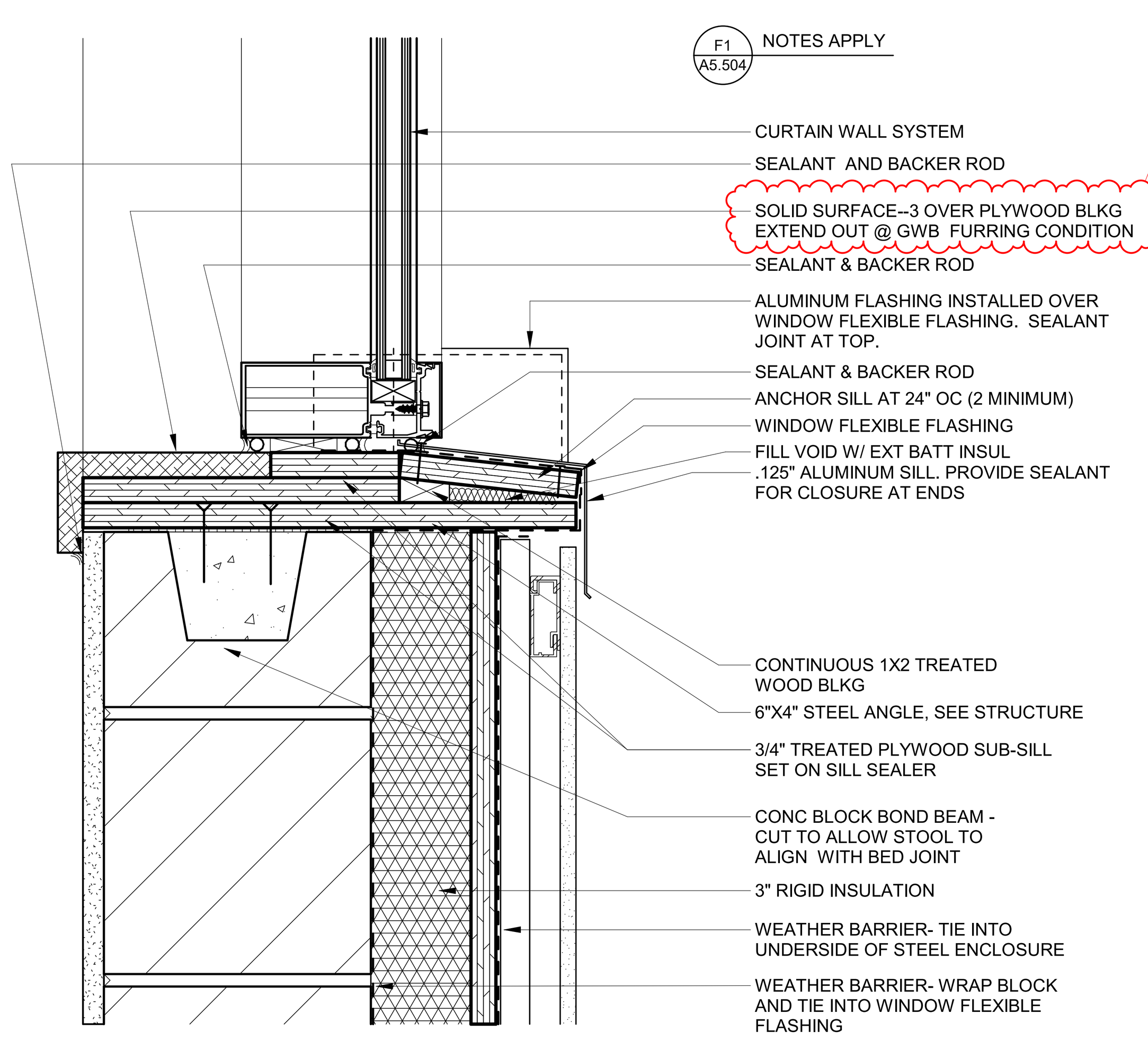
E3 THRESHOLD AT ALUM DOOR
1 1/2" = 1'-0"



F3 SILL
1 1/2" = 1'-0"



F5 CURTAIN WALL HEAD DETAIL
3" = 1'-0"



F7 CURTAIN WALL SILL DETAIL
3" = 1'-0"

Regional Operations and Communications Facility

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Libertyville, IL 60048

LakeCounty

656 Winchester Rd,
Libertyville, IL 60048

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Palatine, Illinois 60067
woldae.com | 847 241 6100

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18294 Sonoma Highway
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EXP. 11/30/24

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Matthew J Bickel
License Number: 001.020883 Date: 11/30/2024

Revisions

Description	Date	Num
Addendum #1	02/17/2023	1

Comm: 213106
Date: 12/30/2022
Drawn: ML
Check: JMK

North

DETAILS - EXTERIOR WALL

Scale: As indicated

A5.504

Wold Architects Engineers
220 N Smith Street, Suite 310
Palatine, IL 60067

Lake County New ROCF
Short Circuit Study
Electrical Distribution System

Project Number: 213106
2/17/2023
Prepared by B. Johannsen

Bus Name	Bus Voltage	Isc 3P (A)	Isc SLG (A)	Available Fault Current	15% Safety Factor	Selection Current	Specified Fault Rating (kA)	Notes
UTILITY BUS	480	34,240	34,151	34,240	5,136	39,376	na	
SOLAR ARRAY	480	21,554	17,981	21,554	3,233	24,787	na	
GENERATOR	480	4,805	4,805	4,805	721	5,526	na	
CONNCAB	480	33,265	32,694	33,265	4,990	38,255	65	OK
DISC-SOLAR	480	32,884	32,137	32,884	4,933	37,817	65	OK
MSBH-1	480	31,944	30,783	31,944	4,792	36,736	65	OK
EDPH-1	480	4,353	4,148	4,353	653	5,006	10	OK
ATS-LR	480	26,561	23,213	26,561	3,984	30,545	35	OK
ATS-LS	480	25,264	21,551	25,264	3,790	29,054	35	OK
ATS-COPS	480	29,184	26,979	29,184	4,378	33,562	35	OK
ATS-COPS/UPS A	480	29,184	26,979	29,184	4,378	33,562	35	OK
ATS-COPS/UPS B	480	23,094	18,932	23,094	3,464	26,558	35	OK
FIRE PUMP CONTROLLER	480	3,339	1,943	3,339	501	3,840	5	OK
DP-CH10	480	27,829	25,208	27,829	4,174	32,003	35	OK
DP-CL10	208	9,466	9,762	9,762	1,464	11,226	14	OK
DP-CUH1A	480	27,193	24,253	27,193	4,079	31,272	35	OK
DP-CUH1B	480	21,619	17,265	21,619	3,243	24,862	35	OK
DP-CUL1A	208	6,158	6,703	6,703	1,006	7,709	10	OK
DP-CUL1B	208	5,920	6,443	6,443	966	7,409	10	OK
TC1	480	24,342	20,923	24,342	3,651	27,993	35	OK
TC2	480	5,092	4,770	5,092	764	5,856	10	OK
TP20	480	8,215	5,605	8,215	1,232	9,447	10	OK
TCUA	480	8,598	7,111	8,598	1,290	9,887	10	OK
TCUB	480	7,798	6,960	7,798	1,170	8,968	10	OK
UPS-A	480	24,511	20,798	24,511	3,677	28,188	35	OK
UPS-B	480	19,683	15,206	19,683	2,952	22,635	25	OK
BUSWAY A	208	5,641	5,787	5,787	868	6,655	10	OK
BUSWAY B	208	5,438	5,587	5,587	838	6,425	10	OK
FIRE PUMP	480	2,626	1,519	2,626	394	3,020	5	OK
PL11 DISC	208	4,510	4,529	4,529	679	5,208	10	OK
PL10 DISC	208	4,654	4,788	4,788	718	5,506	10	OK
TP20 GUTTER	208	4,913	5,247	5,247	787	6,034	10	OK
CH10	480	24,032	20,005	24,032	3,605	27,637	35	OK
CL10	208	7,274	6,308	7,274	1,091	8,366	10	OK
CL11	208	6,175	5,085	6,175	926	7,101	10	OK
CL12	208	5,777	4,640	5,777	867	6,644	10	OK
CL13	208	4,006	4,362	4,362	654	5,017	10	OK
CL14	208	3,413	2,313	3,413	512	3,925	10	OK
CUL1A	208	4,219	3,676	4,219	633	4,851	10	OK
CUL1B	208	4,035	3,508	4,035	605	4,640	10	OK
LS-H10	480	21,343	16,962	21,343	3,201	24,544	25	OK
LS-H11	480	17,132	12,432	17,132	2,570	19,702	22	OK
PH20	480	8,573	5,653	8,573	1,286	9,859	10	OK
PH21	480	7,819	5,089	7,819	1,173	8,992	10	OK
PL10	208	3,061	2,544	3,061	459	3,520	10	OK
PL11	208	2,020	1,448	2,020	303	2,323	10	OK
PL20	208	4,239	4,060	4,239	636	4,875	10	OK

CALCULATION ASSUMPTIONS:
A. "Available Fault Current" is the larger of three-phase and line-to-ground faults.
B. "Selection Current" is "Available Fault Current" multiplied by an arbitrary safety factor of 1.15.
C. Utility short circuit data from ComEd (34,240A @ 480V).
D. Feeder lengths for equipment are measured per plans along probable routes.

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UTILITY AND END USE METERING MATRIX

END USE	METERS/DEVICE/CALCULATION	SYMBOL/DESCRIPTION	INTERVAL	VALUE(S)
FANS	SUM OF FAN VFD OUTPUTS	AHU-1: SF-1 VFD	15 MIN	KW, KWH
		AHU-1: SF-2 VFD	15 MIN	KW, KWH
		AHU-1: RF-1 VFD	15 MIN	KW, KWH
		AHU-1: RF-2 VFD	15 MIN	KW, KWH
		AHU-2: SF-1 VFD	15 MIN	KW, KWH
		AHU-2: SF-2 VFD	15 MIN	KW, KWH
		AHU-2: RF-1 VFD	15 MIN	KW, KWH
		AHU-2: RF-2 VFD	15 MIN	KW, KWH
		AHU-2: EW-2 VFD	15 MIN	KW, KWH
		AHU-3: SF-1 VFD	15 MIN	KW, KWH
		AHU-3: SF-2 VFD	15 MIN	KW, KWH
		AHU-3: RF-1 VFD	15 MIN	KW, KWH
		AHU-3: RF-2 VFD	15 MIN	KW, KWH
	SUM OF DEDICATED FAN COIL BREAKERS	FC BREAKERS IN PANEL CL10	15 MIN	KW, KWH
	SUM OF COMPUTER ROOM UNIT FAN BREAKERS	CRU BREAKERS IN PANELS DP-CUH1A & 1B	15 MIN	KW, KWH
	SUM OF DEDICATED EXHAUST FAN BREAKERS	EF BREAKERS IN PANELS CL13 & PL20	15 MIN	KW, KWH
PUMPING	SUM OF PUMP VFD OUTPUTS	GEOTHERMAL PUMP P-1 VFD	15 MIN	KW, KWH
		GEOTHERMAL PUMP P-2 VFD	15 MIN	KW, KWH
		CHILLED WATER PUMP P-3 VFD	15 MIN	KW, KWH
		CHILLED WATER PUMP P-4 VFD	15 MIN	KW, KWH
		HEATING WATER PUMP P-5 VFD	15 MIN	KW, KWH
		HEATING WATER PUMP P-6 VFD	15 MIN	KW, KWH
		BOILER CIRC PUMP P-7 VFD	15 MIN	KW, KWH
		DOM. HOT WATER PUMP P-8 ECM	15 MIN	KW, KWH
INTERIOR LIGHTING	SUM OF DEDICATED LIGHTING PANELS (MINUS SUM OF EXTERIOR LIGHTING SUBPANEL)	BREAKER FEEDING PANEL LS-H10	15 MIN	KW, KWH
		BREAKER FEEDING PANEL CH10	15 MIN	KW, KWH
		BREAKER FEEDING PANEL PH21	15 MIN	KW, KWH
		MINUS BREAKER FEEDING PANEL LS-H11	15 MIN	KW, KWH
EXTERIOR LIGHTING	DEDICATED EXTERIOR LIGHTING PANEL	BREAKER FEEDING PANEL LS-H11	15 MIN	KW, KWH
HEATING/COOLING	SUM OF DEDICATED HEAT PUMP BREAKERS	HP BREAKERS IN PANEL DP-CH11	15 MIN	KW, KWH
	HEAT PUMP EFFICIENCY	HEAT PUMP HP-1	60 MIN	COP
	CHILLED WATER BTU METER	BTU METER IN MECH ROOM 01650	15 MIN	KBTU
	HEATING WATER BTU METER	BTU METER IN MECH ROOM 01650	15 MIN	KBTU
	GEOTHERMAL BTU METER	BTU METER IN MECH ROOM 01650	15 MIN	KBTU
	SUM OF DEDICATED BOILER BREAKERS	HP BREAKERS IN PANEL DP-CH11	15 MIN	KW, KWH
DOMESTIC HOT WATER	SUM OF DEDICATED WATER HEATER BREAKERS	WH BREAKERS IN PANEL DP-CL10	15 MIN	KW, KWH
HEAT TRACE	SUM OF DEDICATED HEAT TRACE BREAKERS	HT BREAKERS IN PANELS CL10 & PL20	15 MIN	KW, KWH
PLUG LOAD	SUM OF UPS SYSTEMS AND DEDICATED RECEPTACLE PANELS	BREAKER FEEDING TC1 (CL10, CL11, CL12, CL14)	15 MIN	KW, KWH
		BREAKER FEEDING TC2 (CL13)	15 MIN	KW, KWH
		BREAKER FEEDING TP20 (PL10, PL11, PL20)	15 MIN	KW, KWH
		UPS A	15 MIN	KW, KWH
		UPS B	15 MIN	KW, KWH
HUMIDIFICATION	SUM OF DEDICATED HUMIDIFICATION EQUIPMENT BREAKERS	HUMIDIFIER BREAKERS IN PANEL DP-CH10	15 MIN	KW, KWH
		HUMIDIFIER BREAKER IN PANEL PH20	15 MIN	KW, KWH
HVAC SYSTEMS	CONVERT VENTILATION VENTILATION, PUMPING, COOLING, HEATING, AND HUMIDIFICATION END USES TO BTU'S AND SUM TO PROVIDE TOTAL HVAC SYSTEM...	N/A	60 MIN	KBTU
TOTAL ELECTRICITY	DEDICATED ELECTRICITY METER	UTILITY PROVIDED METER	15 MIN	KW, KWH
	ADD MAIN SERVICE AND GENERATOR TOGETHER	OWNER METER AT MAIN SERVICE	15 MIN	KW, KWH
	PV + UTILITY IS EQUIVALENT TO OWNER METER	METER AT GENERATOR BREAKER	15 MIN	KW, KWH
		METER AT PHOTOVOLTAIC BREAKER	15 MIN	KW, KWH
POTABLE WATER	DEDCIATED WATER METER	UTILITY PROVIDED METER	15 MIN	GAL
IRRIGATION	WATER SUBMETER	UTILITY PROVIDED METER	15 MIN	GAL
GENERATOR FUEL CONSUMPTION	FUEL SUBMETER	FUEL METER PROVIDED WITH INTEGRAL GENERATOR BELLY TANK	15 MIN	GAL
GLOBAL DATA	GLOBAL OA TEMP SENSOR	SENSOR	15 MIN	TEMP (OF)
	GLOBAL OA HUMIDITY SENSOR	SENSOR	15 MIN	% RH
	GLOBAL C02 SENSOR	SENSOR	15 MIN	PPM

BUILDING AUTOMATION SYSTEM NOTES:

GENERAL (TYPICAL FOR ALL EQUIPMENT LISTED BELOW): POINT NAMES AND DEVICE NAMES SHALL BE WRITABLE IN THE EQUIPMENT SUPPLIER'S BACNET INTERFACE DEVICE SO THE NAMES CAN BE CHANGED TO THE LAKE COUNTY STANDARD. DEVICES THAT DO NOT SUPPORT WRITEABLE DEVICE AND POINT NAMES ARE NOT ALLOWED IN THE WORK. IF THERE ARE POINTS IN THE DEVICE THAT DO NOT APPLY TO THE WORK, THE EQUIPMENT SUPPLIER SHALL WORK ON SITE WITH THE LAKE COUNTY CONTROLS CONSULTANT TO IDENTIFY THESE POINTS THAT DO NOT APPLY TO THE WORK. THEY SHALL BE DELETED FROM THE EQUIPMENT SUPPLIER'S BACNET INTERFACE DEVICE IF THEY ARE NOT USED IN THE WORK. SEE DIVISION 25 FOR BACNET AND NETWORKING DETAILS. ELECTRICAL SHALL PROVIDE AN IP DROP TO THE BACNET/IP DEVICE IN GOLD CONDUIT C/W A PULL WIRE SO DIVISION 27 CAN INSTALL PURPLE CAT 6 CABLE TO THE LAKE COUNTY STANDARD FROM THE DEVICE TO DESIGNATED PATCH PANEL. ALL NON-IP BAS WIRING SHALL BE IN BLUE CONDUIT.

A. TRIP UNITS: THE BASIS OF DESIGN IS THE SCHNEIDER MICROLOGIC P SERIES. ENERGY ONLY TRIP UNITS ARE NOT ALLOWED IN THE WORK. LOCATE THE BREAKER CONTROL MODULES IN A DISTRIBUTION EQUIPMENT COMPARTMENT THAT IS SUITED FOR LOW VOLTAGE (120 VAC) SO THE MODULES CAN BE SERVICED WITHOUT HAVING TO SHUT DOWN THE DISTRIBUTION EQUIPMENT. THE MODBUS COMMUNICATIONS WIRING FROM THE TRIP UNITS TO THE BREAKER CONTROL MODULES SHALL BE INSTALLED IN A WIRING CHASE BUILT FOR USE IN THE DISTRIBUTION EQUIPMENT. EQUIPMENT SUPPLIER IS ALSO RESPONSIBLE FOR PROVIDING A MODBUS TO BACNET/IP GATEWAY TO CONVERT THE MODBUS REGISTERS TO BACNET AVS, BVS AND MSVS. SEE DIVISION 25 FOR BACNET AND NETWORKING DETAILS. NOTE THAT THE BACNET/IP GATEWAY SHALL BE A FACTORY AUTHORIZED PRODUCT PROVIDED BY THE TRIP UNIT SUPPLIER. PROVIDE PROOF OF THIS DURING THE SUBMITTAL PROCESS. THIRD PARTY GATEWAYS THAT ARE NOT FACTORY AUTHORIZED GATEWAYS ARE NOT ALLOWED IN THE WORK.

B. ELECTRIC METERS: THE BASIS OF DESIGN IS THE SCHNEIDER ION 7650 WITH SAG/SWELL OPTION. LOCATE THE MODBUS METER MODULES IN A DISTRIBUTION EQUIPMENT COMPARTMENT THAT IS SUITED FOR LOW VOLTAGE (120 VAC) SO THE MODULES CAN BE SERVICED WITHOUT HAVING TO SHUT DOWN THE DISTRIBUTION EQUIPMENT. THE MODBUS COMMUNICATIONS WIRING FROM THE METERS TO THE BREAKER CONTROL MODULES SHALL BE INSTALLED IN A WIRING CHASE BUILT FOR USE IN THE DISTRIBUTION EQUIPMENT. EQUIPMENT SUPPLIER IS ALSO RESPONSIBLE FOR PROVIDING A MODBUS TO BACNET/IP GATEWAY TO CONVERT THE MODBUS REGISTERS TO BACNET AVS, BVS AND MSVS. SEE DIVISION 25 FOR BACNET AND NETWORKING DETAILS. NOTE THAT THE BACNET/IP GATEWAY SHALL BE A FACTORY AUTHORIZED PRODUCT PROVIDED THE METER SUPPLIER. PROVIDE PROOF OF THIS DURING THE SUBMITTAL PROCESS. THIRD PARTY GATEWAYS THAT ARE NOT FACTORY AUTHORIZED GATEWAYS ARE NOT ALLOWED IN THE WORK.

C. ATS'S: THE BASIS OF DESIGN IS THE CATERPILLAR ATC 300+ SERIES. ATS EQUIPMENT SUPPLIER SHALL PROVIDE A MODBUS TO BACNET/IP GATEWAY TO CONVERT THE MODBUS REGISTERS TO BACNET AVS, BVS AND MSVS. SEE DIVISION 25 FOR BACNET AND NETWORKING DETAILS. NOTE THAT THE BACNET/IP GATEWAY SHALL BE A FACTORY AUTHORIZED PRODUCT PROVIDED BY THE EQUIPMENT SUPPLIER. PROVIDE PROOF OF THIS DURING THE SUBMITTAL PROCESS. THIRD PARTY GATEWAYS THAT ARE NOT FACTORY AUTHORIZED GATEWAYS ARE NOT ALLOWED IN THE WORK. SEE DIVISION 25 FOR DETAILS ON POINTS LISTS TO BE PROVIDED AND NETWORKING REQUIREMENTS. BACNET INTERFACE DEVICE SHALL BE POWERED FROM THE ATS SUPERCAP CIRCUIT OR SIMILAR DEVICE SO THE BACNET INTERFACE DEVICE STAYS LIVE DURING THE 10 SECOND TRANSFER OF POWER FROM COMMERCIAL TO DEG POWER.

D. UPS'S: THE BASIS OF DESIGN IS THE EATON 9350 SERIES WITH THE ENVIRONMENTAL MONITORING OPTION. UPS EQUIPMENT SUPPLIER SHALL PROVIDE A BACNET/IP GATEWAY TO CONVERT THE PROPRIETARY INCOMM POINTS TO BACNET AVS, BVS AND MSVS. SEE DIVISION 25 FOR BACNET AND NETWORKING DETAILS. NOTE THAT THE BACNET/IP GATEWAY SHALL BE A FACTORY AUTHORIZED PRODUCT PROVIDED BY THE UPS SUPPLIER. PROVIDE PROOF OF THIS DURING THE SUBMITTAL PROCESS. THIRD PARTY GATEWAYS THAT ARE NOT FACTORY AUTHORIZED GATEWAYS ARE NOT ALLOWED IN THE WORK. SEE DIVISION 25 FOR DETAILS ON POINTS LISTS TO BE PROVIDED AND NETWORKING REQUIREMENTS. BACNET INTERFACE DEVICE SHALL BE POWERED FROM THE ATS SUPERCAP CIRCUIT OR SIMILAR DEVICE SO THE BACNET INTERFACE DEVICE STAYS LIVE DURING THE 10 SECOND TRANSFER OF POWER FROM COMMERCIAL TO DEG POWER.

E. SPD'S SPD SHALL COME WITH AN AUX CONTACT TO BE PICKED UP BY DIVISION 25 CONTRACTOR SO SURGE EVENTS CAN BE MONITORED. WIRE CONTACTS FROM SPD TO AN EXTERNAL 1900 BOX SO DIVISION 25 CAN WORK WITHOUT ARC FLASH GEAR. ALL NON-IP BAS WIRING SHALL BE IN BLUE CONDUIT.

F. LIGHTING CONTROLLERS: THE BASIS OF DESIGN IS WATTSTOPPER. LIGHTING EQUIPMENT SUPPLIER SHALL PROVIDE A BACNET/IP GATEWAY TO EXPOSE THE BACNET MS/TP POINTS TO BACNET AVS, BVS AND MSVS IN THE TRIDIUM BACNET/IP DEVICE. SUPPORT FOR THE LIGHTING OUTPUT OBJECT TYPE EXTENSIONS TO SSPC 135 IS NOT REQUIRED. SEE DIVISION 25 FOR BACNET AND NETWORKING DETAILS. NOTE THAT THE BACNET/IP GATEWAY SHALL BE A FACTORY AUTHORIZED PRODUCT PROVIDED BY THE EQUIPMENT SUPPLIER. PROVIDE PROOF OF THIS DURING THE SUBMITTAL PROCESS. THIRD PARTY GATEWAYS THAT ARE NOT FACTORY AUTHORIZED GATEWAYS ARE NOT ALLOWED IN THE WORK. SEE DIVISION 25 FOR DETAILS ON POINTS LISTS TO BE PROVIDED AND NETWORKING REQUIREMENTS. DIVISION 25 SHALL USE THE LIGHTING CONTROLLER OCCUPANCY/VACANCY SENSORS TO PROVIDE STANDBY OCCUPANCY TEMPERATURE SETBACK AND SET-UP CONTROL PER CALIFORNIA TITLE 24 REQUIREMENTS. IMPLEMENT THE – 2 DEG F SETBACK AND + 2DEG SET-UP STRATEGY WHEN THE ROOM IS DEEMED TO BE UNOCCUPIED FOR A MINIMUM OF 30 MINUTES. RETURN TO THE USER SPECIFIED SETPOINT WHEN THE OCCUPANCY/VACANCY SENSOR INDICATES THAT THE ROOM IS OCCUPIED.

G. FIRE ALARM CONTROL PANEL (FACP) UL 864 BACNET/IP GATEWAY: THE BASIS OF DESIGN IS JCI/SIMPLEX 4100U. FACP SUPPLIER SHALL PROVIDE A BACNET/IP GATEWAY TO EXPOSE THE PROPRIETARY POINTS TO BACNET AVS, BVS AND MSVS IN THE FIELDSERVER OR EQUAL BACNET/IP DEVICE. SUPPORT FOR THE LIFE SAFETY OBJECT TYPE EXTENSIONS TO SSPC 135 IS NOT REQUIRED. SEE DIVISION 25 FOR BACNET AND NETWORKING DETAILS. NOTE THAT THE BACNET/IP GATEWAY SHALL BE A FACTORY AUTHORIZED PRODUCT PROVIDED BY THE UPS SUPPLIER. PROVIDE PROOF OF THIS DURING THE SUBMITTAL PROCESS. THIRD PARTY GATEWAYS THAT ARE NOT FACTORY AUTHORIZED GATEWAYS ARE NOT ALLOWED IN THE WORK. SEE DIVISION 25 FOR DETAILS ON POINTS LISTS TO BE PROVIDED AND NETWORKING REQUIREMENTS. ALL POINTS SHALL BE READ ONLY TO MEET UL CHAIN OF CUSTODY REQUIREMENTS.

BUILDING AUTOMATION SYSTEM NOTES (GENERATOR):

A. DIESEL ENGINE GENERATOR (DEG). CONTROLLER SHALL BE A BACNET/IP SINGLE DEVICE CONTROLLER TYPE OF BACNET INTERFACE DEVICE. THIRD PARTY GATEWAYS THAT ARE NOT FACTORY AUTHORIZED GATEWAYS ARE NOT ALLOWED IN THE WORK. NOTE THAT THE BACNET/IP GATEWAY SHALL BE A FACTORY AUTHORIZED PRODUCT PROVIDED BY THE EQUIPMENT SUPPLIER. PROVIDE PROOF OF THIS DURING THE SUBMITTAL PROCESS. SEE DIVISION 25 FOR DETAILS ON THE BACNET OBJECT LIST TO BE PROVIDED AS BACNET AVS, BVS AND MSVS BY THE EQUIPMENT SUPPLIER. POINT NAMES AND DEVICE NAMES SHALL BE WRITABLE IN THE EQUIPMENT SUPPLIER'S BACNET INTERFACE DEVICE SO THE NAMES CAN BE CHANGED TO THE LAKE COUNTY STANDARD. DEVICES THAT DO NOT SUPPORT WRITEABLE DEVICE AND POINT NAMES ARE NOT ALLOWED IN THE WORK. IF THERE ARE POINTS IN THE DEVICE THAT DO NOT APPLY TO THE WORK, THE EQUIPMENT SUPPLIER SHALL WORK ON SITE WITH THE LAKE COUNTY CONTROLS CONSULTANT TO IDENTIFY THESE POINTS THAT DO NOT APPLY TO THE WORK. THEY SHALL BE DELETED FROM THE EQUIPMENT SUPPLIER'S BACNET INTERFACE DEVICE IF THEY ARE NOT USED IN THE WORK. SEE DIVISION 25 FOR BACNET AND NETWORKING DETAILS. ELECTRICAL SHALL PROVIDE AN IP DROP TO THE BACNET/IP DEVICE IN GOLD CONDUIT C/W A PULL WIRE SO DIVISION 27 CAN INSTALL PURPLE CAT 6 CABLE TO THE LAKE COUNTY STANDARD FROM THE DEVICE TO DESIGNATED PATCH PANEL.

B. DIESEL ENGINE GENERATOR (DEG) EQUIPMENT SUPPLIER SHALL PROVIDE A MODBUS TO BACNET/IP GATEWAY TO CONVERT THE MODBUS REGISTERS TO BACNET AVS, BVS AND MSVS. THE GENERATOR BACNET SINGLE DEVICE CONTROLLER SHALL COME WITH THE EQUIVALENT OF A CATERPILLAR EMCP-4 CONTROLLER OR APPROVED EQUAL. BACNET INTERFACE DEVICE SHALL BE POWERED FROM THE DEG BATTERY CIRCUIT OR SIMILAR DEVICE SO THE BACNET INTERFACE DEVICE STAYS LIVE DURING THE 10 SECOND STARTUP OF THE DEG. THE CONTROLLER SHALL COME C/W AN EMBEDDED LINUX WEBSERVER FOR CONFIGURATION. ALL OTHER DATA SHALL BE TRANSMITTED OVER THE BACNET/IP NETWORK. SEE DIVISION 25 FOR DETAILS.

Regional Operations and Communications Facility

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I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed
PROFESSIONAL ENGINEER
under the laws of the State of **ILLINOIS**

License Number: **BRADLEY R. JOHANNSEN 062.060077** Date **12/30/2022**

Revisions		
Description	Date	Num
Revision 1	**2/17/2023**	**1**

Comm: **213106**
Date: **12/30/2022**
Drawn: **N.DEFRANCESCO**
Check: **B.JOHANNSEN**

METERING AND BAS DETAILS

Scale:

E5.02