VCPS - New School

210 12th Street NE, Valley City, ND 58072
Project #: 24-028
Addendum 03
03/30/2026

THIS ADDENDUM MODIFIES, AMENDS, AND SUPPLEMENTS PARTS OF THE CONTRACT DOCUMENTS AND SHALL BECOME A PART OF THE PLANS AND SPECIFICATIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONSTRUCTION MANAGER TO NOTIFY ALL SUBCONTRACTORS AND SUPPLIERS FOR THE VARIOUS PARTS OF THE WORK OF ANY CHANGES OR MODIFICATIONS CONTAINED IN THIS ADDENDUM. RECEIPT OF THIS ADDENDUM SHALL BE NOTED ON THE PROJECT BID FORM.

General Items

- Bid Date: April 2nd, 2026 at 2pm
- 09 6466 Wood Athletic Flooring – Gymnasium flooring adjusted to standard one-year warranty.

Prior Approvals

This product has been approved as acceptable contingent upon compliance with the specifications and drawings, and acceptable installation. Contractors may consider quotation from same in preparing their bid proposals:

ARCHITECTURAL

ITEM	MANUFACTURER	APPROVED	NOT APPROVED
12 6613 Bleachers	Kodiak 2400 Bleachers	X	
11 6623 Gymnasium Equipment	Gill Athletics Goal Posts	X	
10 1419 Dim Letter Signage	Inpro + Gemini Signage	X	
11 5313 Lab Fume Hoods	Mott Manufacturing	X	
	Rockwood Segmental Retaining wall	X	
10 2800 Toilet and Miscellaneous Accessories	Saniflow baby Changing table	X	
08 7100 Door Hardware	Rockwood 570 - Dust Proof Strike	X	
08 7100 Door Hardware	Rockwood 2840 - Automatic Flush Bolt	X	
08 7100 Door Hardware	Rockwood 2942 - Automatic Flush Bolt Set	X	
08 7100 Door Hardware	Rockwood 2849 Constant Latching Bolt (Metal Door)	X	
08 7100 Door Hardware	Rockwood 2949 Constant Latching Bolt (Wood Door)	X	
08 7100 Door Hardware	Rockwood 2600 Series Bar coordinator	X	
08 7100 Door Hardware	Rockwood 2601AB, 2601C Mounting bracket	X	
08 7100 Door Hardware	Sargent PE80 Series Exit Devices - Wide Stile, Push Pad PE80 Series	X	
08 7100 Door Hardware	Sargent PE80 Series Exit Devices - ET Trim series	X	
08 7100 Door Hardware	Sargent PE80 Series Exit Devices - 814/810 Pull Trim	X	
08 7100 Door Hardware	Norton Rixson 6000 Series Electrohydraulic Automatic Operator	X	
08 7100 Door Hardware	Norton 502 -Wall-mount Actuator, 4-3/4” Square		X
08 7100 Door Hardware	Norton 503 - Mullion-mount Actuator		X
08 7100 Door Hardware	Norton 504 - Double Vestibule Actuator, 4-3/4” Square		X
08 7100 Door Hardware	Rixson 900 Series Magnetic Holders	X	
08 7100 Door Hardware	AQD4 Series Switching Power Supply	X	

VCPS - New School

210 12th Street NE, Valley City, ND 58072
Project #: 24-028
Addendum 03
03/30/2026

MECHANICAL APPROVED:

22 3000	Water Heaters	State Industries
22 4000	Flush Valves	American Standard
22 4000	Faucets	American Standard
23 2114	Expansion Tanks	Caleffi
23 2114	Air Separators	Caleffi
23 2114	Hose Kits and Valves	Pro Hydronic Specialties
23 3100	Ducts for Kitchen Exhaust Applications	Metal Fab
23 3700	Louvers	Pottorff, United Enertech, Nailor
23 5216	Condensing Hot Water Boilers	Patterson Kelley
23 7313	Indoor Air Handling Units	VTS
23 7413	Packaged Outdoor Air Handling Units	Carrier, Annex Air, Valent
23 8126	Small Capacity Split Systems	Lennox

MECHANICAL MATERIALS NOT APPROVED:

22 3000	Water Heaters	Bock
23 0923	Direct-Digital Control System for HVAC	Distech by Harris Mountain West
23 5216	Condensing Hot Water Boilers	Camus, Superior Boiler

ELECTRICAL APPROVED:

26 51 00	Light Fixture Type EM1R	**Lithonia:ERE**
	Light Fixture Type G9	Lithonia:JHBL
	Light Fixture Type G9E	Lithonia:JHBL
	Light Fixture Type L22	Mark:Slot 2
		NeoRay:Define
	Light Fixture Type L33	Lumenwerx:VIA Splash
		Axis:Extend 4
	Light Fixture Type L34	Lumenwerx:VIA Splash
		Axis:Extend 4
	Light Fixture Type L44	Mark:Slot 1
	Light Fixture Type L98	Mark:Slot 2
		NeoRay:Define
	Light Fixture Type L99	Mark:Slot 2
		NeoRay:Define
	Light Fixture Type V2	Lithonia:FEM LED
		Metalux:Vaportite
	Light Fixture Type AK11	Failsafe:FLR2
	Light Fixture Type D99	Spectrum:RDF04
	Light Fixture Type N7	Axis:Beam 3
	Light Fixture Type Q11	Beamever:Linio Neaon 1617
	Light Fixture Type S3	AFX:Tonya

VCPS - New School

210 12th Street NE, Valley City, ND 58072
Project #: 24-028
Addendum 03
03/30/2026

Specifications

00 0110 – Table of Contents

1. Add section 11 6833 Athletic Field Equipment.
2. Removed Section 08 8853 Security Glazing

00 4126 – Bid Form

1. Reissued this addendum.

01 1101.1 – Contract Categories

1. Reissued this addendum.

05 4000 – Cold-Formed Metal Framing

1. Reissued this addendum to add information about entry canopy trellis z-girts and additional items.

05 5000 – Metal Fabrications

1. Reissued this addendum to eliminate verbiage about entry canopy trellis z-girls.

08 7100 – Door Hardware

1. Reissued this addendum to adjust hardware at doors in smoke barrier and rated walls.

08 8000 – Glazing

1. Reissued this addendum to adjust GL-1 information, add GL-2 Fire Rated Glazing, and move SLG-5 Security Laminated Glazing to this section.

08 8853 – Security Glazing

1. Removed this addendum.

11 6833 – Athletic Field Equipment

1. Issued this addendum to add football goal posts.

12 2400 – Window Shades.

1. Added SWF Contract to approved fabric manufacturers.
2. Removed paragraph 2.02.B.2.b to eliminate references to double roller brackets.

12 3600 – Countertops

1. Reissued to reference plumbing drawings for sinks.

22 4000 – PLUMBING FIXTURES

1. Specification information added for the following fixtures: S-7, S-8, S-9, and S-10.

23 0923 – DIRECT-DIGITAL CONTROL SYSTEM FOR HVAC

1. Alternate #15: Alternate Automatic Temperature Control Contractor added.

28 1301 – Electronic Access Control System

1. Entire section issued this addendum.

VCPS - New School

210 12th Street NE, Valley City, ND 58072
Project #: 24-028
Addendum 03
03/30/2026

Drawings

G001 – GENERAL NOTES / DRAWING INDEX

1. Reissued to track reissued sheets.

G002 – Code Study

1. Reissued this addendum to add smoke barrier at mechanical room, and 1 hr ratings under stairs.
2. Adjusted total building occupants.

G003 – Code Study

1. Reissued this addendum to continue smoke barrier at science, and add 1 hr ratings under stairs.
2. Adjusted exiting occupants at staff lounge.

CIVIL

C200 – General Notes & Legend

1. Revised quantities

C400 – Overall Site Plan - School

1. Added landscape curb
2. Added landscape curb notes
3. Revised highway guardrail notes

C600 – Grading Plan - School

1. Added alternate patio grading

C700 – Erosion & Sediment Control Plan

1. Revised seeding area
2. Revised quantities
3. Added landscape mulch

STRUCTURAL

S002 – SCHEDULE SHEET

1. Update Column / Pad Footing Schedule as shown.
   NOTE: These revisions apply to all sheets, even if the specific foundation plan sheet is not reissued as part of this addendum.

S102A – Foundation Plan – Area A

1. Update connecting link area as shown including updating continuous wall footing sizes, adding four steel columns, and adding section cut 5/S303.
2. Update Column / Pad Footing Schedule as shown.

S102B – framing Plan – Level 01 – Area B

1. Add beam reactions as shown.

S102C – Framing Plan – Level 01 – Area c

2. Adjust beam location as shown from Grid cB.

VCPS - New School

210 12th Street NE, Valley City, ND 58072
Project #: 24-028
Addendum 03
03/30/2026

S102D – ROOF framing Plan – LOW ROOF – Area D

1. Add beam reactions as shown.

S103A – FRAMING PLAN – LEVEL 02 – AREA A

1. Update connecting link area as shown including keynotes for roof joists and deck, adding three steel beams, and adding section cuts 13-17/S507.
2. Add Keynote 13 for CFS joist framing.

S103B – ROOF FRAMING PLAN – LOW ROOF – AREA B

1. Update beam reactions as shown.
2. Update Keynote 12 for front entry canopy framing.

S104A – ROOF FRAMING PLAN – HIGH ROOF – AREA A

1. Update beam reaction to precast as shown.
2. Update section cut number to be 26/S504.

S104B – ROOF FRAMING PLAN – HIGH ROOF – AREA B

1. Update section cut along Grid K to be 11/506.
2. Update section cut along Grid L to be 6/S506.

S104D – ROOF FRAMING PLAN – HIGH ROOF – AREA D

1. Update section cut along Grid E to be 11/506.
2. Update section cut along Grid k to be 11/S506.

S111 – SNOW DRIFT LOADING PLAN

1. Add Drift D4 to connecting link roof.

S303 – Foundation Details

1. Add Pier Detail P4
2. Add detail 5/S303.

S304 – Foundation Details- full height

1. Details 1-3/S304 – Update wall reinforcing and footing size as shown.
2. Details 4-5/S304 – Update footing to show correct size as shown on plans.
3. Detail 6/S304 – Update wall reinforcing and footing size as shown; add continuous HSS3x3
4. Detail 7/S304 – Updated top of pier elevation and add continuous HSS3x3.

S305 – Foundation Details- full height

1. Details 1-3/S305 – Update wall reinforcing as shown.
2. Details 5/S305 – Update footing to show correct size as shown on plans.

S501 – FRAMING DETAILS

1. Detail 9/S501 – Update moment connection as shown.

S504 – ROOF FRAMING DETAILS

1. Details 22-23/S504 – Add beam reaction to precast.
2. Detail 26/S504 – Renumber detail and add joist reaction to precast.

VCPS - New School

210 12th Street NE, Valley City, ND 58072
Project #: 24-028
Addendum 03
03/30/2026

S505 – ROOF FRAMING DETAILS

1. Detail 2/S505 – Remove detail
2. Detail 22/S505 – Update steel angle brace size.

S506 – ROOF FRAMING DETAILS

1. Detail 6/S506 – Update detail to be roof framing condition along Grid L at south end of commons.
2. Detail 11/S506 – Renumber previous detail 6/S506.

S507 – CFS / ROOF FRAMING DETAILS

1. Relabel sheet as shown.
2. Details 12-17/S507 – Add new framing details for connecting link.

ARCHITECTURAL

AD101E – Demo Main Level 01 - Area E

1. Reissued to adjust demo foundation note to align with structural.

A002 – Site Plan - Football Turf

1. Reissued this addendum to adjust turf assembly note.
2. Added football goal post sleeve.

A091 – Wall Assemblies

1. Reissued to add UL rating notes.

A100B – Lower Level 00 - Area B

1. Reissued this addendum to add smoke barrier at mechanical room.
2. Added or adjusted miscellaneous wall tags and keynotes for additional clarifications.

A101A – Main Level 01 - Area A

1. Reissued this addendum to shift storefronts because of column locations and add new storefront type in Vestibule E100.
2. Added or adjusted miscellaneous tags and keynotes for additional clarifications. Switched custodial room elevation references.

A204 – Exterior Elevations

1. Reissued this addendum to show new storefront S21.

A322 – Circulation Sections & Enlarged Plans

1. Reissued this addendum to clarify wall rating extents.

A323 – Circulation Sections & Enlarged Plans

1. Reissued this addendum to clarify wall rating extents and add wall tags.

A402 – Enlarged Plans & Elevations - Restrooms & Mudrooms

1. Reissued this addendum to remove incorrect hatch at 10/A402.
2. Adjusted text note at Mudrooms for total locker counts to match what is drawn.

A424 – Details - Interior Plan Details

1. Reissued this addendum to add detail 15/A424 noting caulk joints required at all gyp to precast transitions.
2. Added caulk joint notes at other relevant details on sheet.

A506 – Details - Roof Details

1. Reissued this addendum to adjust z-girt details at entry canopy trellis.

A601 – Door Schedule

1. Reissued this addendum to add smoke and fire rating requirements.

A603 – Exterior Storefront and Curtainwall Elevations

1. Reissued this addendum to add GL-2 to the glazing schedule for fire rated glazing.
2. Adjusted storefront S10 to be GL-4.
3. Added storefront S21 at Vestibule E100.

A604 – Interior Storefront Elevations

1. Reissued this addendum to add GL-2 to the glazing schedule for fire rated glazing. Adjusted storefront SP to have GL-2.

A610 – Finish Schedule

1. Revised installation patterns for LVT-1 and LVT-2 from herringbone to 1/3rd offset to match drawings.
2. Revised product style for RWS-1 and RWS-3 from Urban Shade to Mecho/5 System to align with the spec.
3. Clarified LOCK-4 and LOCK-5 to have sloped top to match drawings.

MECHANICAL

P201C – MAIN LEVEL SEGMENT C – PLUMBING

1. Plumbing fixture tags revised in the following rooms: Sci Lab C102, Chem Lab C104, Sci Lab C108.

M200B – LOWER LEVEL SEGMENT B – MECHANICAL PIPING

1. Fin tube enclosure FTR0-1 extended to the platform edge under the stair.

M300B – LOWER LEVEL SEGMENT B - HVAC

1. Mechanical Room B005 – Smoke damper has been added to ductwork being served by TF-6.
2. Mechanical Room B005 – Smoke damper has been added to ductwork serving R3 diffusers.
3. Transfer duct added for School Store B012.
4. Fire dampers added for ducts serving School Store B012

M301D – MAIN LEVEL SEGMENT D - HVAC

1. Ductwork size revised for louver LVR-2

M700 – MECHANICAL SCHEDULES

1. Length of enclosure revised for fin radiation FTR0-1.
2. Schedule revised for louver LVR-2.

ELECTRICAL

E002 – SITE PLAN – ELECTRICAL

1. Added fiber optic conduit location.

VCPS - New School

210 12th Street NE, Valley City, ND 58072
Project #: 24-028
Addendum 03
03/30/2026

E101E – MAIN LEVEL SEGMENT E – ELECTRICAL DEMOLITION

1. Now showing existing Jefferson Elementary utility transformer.

E202A – UPPER LEVEL SEGMENT A – LIGHTING

1. Added sheet note L5.

E300A – LOWER LEVEL SEGMENT A – POWER

1. Added Gym AV panel.
2. Added receptacle location.
3. Corrected sheet note W16.
4. Added sheet note W20.

E300B – LOWER LEVEL SEGMENT B – POWER

1. Updated circuiting.
2. Added missing mechanical equipment FA devices.

E300D – LOWER LEVEL SEGMENT D – POWER

1. Updated circuiting.
2. Corrected sheet notes.

E301A – MAIN LEVEL SEGMENT A – POWER

1. Updated circuiting.

E301B – MAIN LEVEL SEGMENT B – POWER

1. Updated circuiting.

E302A – UPPER LEVEL SEGMENT A – POWER

1. Removed unused Sheet Notes.
2. Updated circuiting.

E400A – LOWER LEVEL SEGMENT A – TELECOMMUNICATIONS

1. Located Gym AV equipment rack.
2. Added data location.
3. Added sheet note T7.

E401B – MAIN LEVEL SEGMENT B – TELECOMMUNICATIONS

1. Added control connection.

E401E – MAIN LEVEL SEGMENT E – TELECOMMUNICATIONS

1. Updated General Note A.

E401F – MAIN LEVEL SEGMENT F – TELECOMMUNICATIONS

1. Updated General Note A.

E500B – LOWER LEVEL SEGMENT B – ELECTRONIC SAFETY & SECURITY

1. Added General Note A.
2. Added fire/smoke damper devices.

VCPS - New School

210 12th Street NE, Valley City, ND 58072
Project #: 24-028
Addendum 03
03/30/2026

E501C – MAIN LEVEL SEGMENT C – ELECTRONIC SAFETY & SECURITY

1. Removed unused Sheet Notes.
2. Added General Note A.
3. Added fire/smoke damper devices.

E730 –POWER DETAILS

1. Updated Riser Diagram.
2. Updated Transformer schedule.

E740 – SYSTEMS DETAILS

1. Updated Telecomm riser.
2. Added Fire/Smoke damper detail.
3. Updated door rough-in details.
4. Updated typical Comm. Outlet detail.

E741 – SYSTEMS DETAILS

1. Updated Commons AV riser diagram.

E820 – LIGHTING SCHEDULES

1. Update light fixture schedule.

E830 –POWER SCHEDULES

1. Updates to all schedules.

E831 –POWER SCHEDULES

1. Updates to all panel schedules.

E832 –POWER SCHEDULES

1. Updates to all panel schedules.

E900 – ALTERNATE 2 – ELECTRICAL

1. Clarified alternate scope.
2. Corrected sheet note.

END OF ADDENDUM 03

SECTION 00 0110
TABLE OF CONTENTS

DIVISION 27 -- COMMUNICATIONS: SEE VOLUME 2
DIVISION 28 -- ELECTRONIC SAFETY AND SECURITY: SEE VOLUME 2

DIVISION 31 -- EARTHWORK: SEE VOLUME 2

DIVISION 32 -- EXTERIOR IMPROVEMENTS: SEE VOLUME 2

DIVISION 33 -- UTILITIES: SEE VOLUME 2

Legend:

Architect	ICON Architectural Group
Architectural Hardware Consultant	Allegion
Civil Engineer	Lowry Engineering
Foodservice Consultant	Foodservice Concept Design
Geotechnical Engineer	American Engineering Testing, Inc.
Structural Engineers	ICON Architectural Group
MEPT Engineers	CMTA

END OF SECTION

SUBCONTRACTOR BID FORM

Project: **Valley City Public Schools**
New School
210 12th Street NE, Valley City, ND

Submitted By:
Company:_____
Address:_____
Bidding Contact:_____
Email Address: _____
Phone:_____ Fax:_____

Submitted To:
Lance Monson
Construction Engineers Inc.
200 North 69th Street
Grand Forks, ND 58203
email to:LanceM@ConstructionEngineers.com
Fax: 701-772-1808

OFFER:

Having examined the place of work and all matters referred to in the Contract Documents prepared by ICON Architectural Group, for the above referenced project, we, the undersigned, hereby offer to enter into a Contract for furnish all labor, materials, equipment and services required to perform the work associated with the following:

BASE BID (Including sales/use tax):

Contract Category _____ Lump Sum **$**_____

Contract Category _____ Lump Sum **$**_____

Contract Category _____ Lump Sum **$**_____

Combined Bid for Multiple Contract Categories (Including sales/use tax):

Contract Category _____ & _____ Lump Sum **$**_____

Sales Tax – List the amount of ND sales/use tax **INCLUDED** in your base bid above **$**_____

For material bids only – attach additional information to this bid form as needed. Amount will need to be included as an item in schedule of values for successful bidders.

Additional Cost to provide a Performance & Payment Bond **$**_____

Attach additional breakdowns of sales tax and bond costs if bidding multiple categories and alternates

ALTERNATES: *See spec section 01 2300 for detailed descriptions of alternates.*

Alternate 1 – Jefferson Admin Office + Restroom (ADD/DEDUCT) $_____

Alternate 2 – STEAM Classroom (ADD/DEDUCT) $_____

Alternate 3 – Parking Lot (ADD/DEDUCT) $_____

Alternate 4 – Wenger Cabinets (ADD/DEDUCT) $_____

Alternate 5 – Acoustical Ceiling Panels (ADD/DEDUCT) $_____

SUBCONTRACTOR BID FORM (continued)

Alternate 6A – Concrete Patio South of the Commons (ADD/DEDUCT) $_____

Alternate 6B – Extended Concrete Patio South of the Commons (ADD/DEDUCT) $_____

Alternate 7 – Exterior Rope Lighting (ADD/DEDUCT) $_____

Alternate 8 – Monument on South Side (ADD/DEDUCT) $_____

Alternate 9A – A La Carte Food Service Equipment (ADD/DEDUCT) $_____

Alternate 9B – A La Carte Food Service Counters (ADD/DEDUCT) $_____

Alternate 10 – Gym Wrestling Mat Lifts (ADD/DEDUCT) $_____

Alternate 11 – Exterior Precast Wall Finish (ADD/DEDUCT) $_____

Alternate 12 – Area C Classrooms (ADD/DEDUCT) $_____

Alternate 13 – Weight Room (ADD/DEDUCT) $_____

Alternate 14 – VC Exterior Signage at Music (ADD/DEDUCT) $_____

Alternate 15 – Alternate Automatic Temperature Controls (ADD/DEDUCT) $_____

Temperature Controls Vendor included in Alternate 15 _____

Voluntary Alternate (ADD/DEDUCT) $_____

Description _____

_____

UNIT PRICES: *See spec section 00 4322 for detailed descriptions of unit prices.*

Unit Price #1 - Remove/Recompact Uncontrolled Fill $_____/CY

Unit Price #2 - Removal of Unusable Fill/Import Replacement $_____/CY

BID CLARIFICATIONS:

_____

_____

_____

ADDENDA:

The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the above pricing.

Addendum #_____ Dated _____ Addendum #_____ Dated _____

Addendum #_____ Dated _____ Addendum #_____ Dated _____

ACKNOWLEDGEMENTS: *For labor & material bids only -- does not apply to material only bids.*

Initial to acknowledge the Contract Documents noted below have been reviewed:

Subcontract Agreements _____ Initials Attachment A – Project Safety Requirements___ Initials

BY SIGNING THIS DOCUMENT I CERTIFY THAT I AM AN OWNER OR OFFICER OF THE COMPANY, AND I SWEAR THAT MY COMPANY MEETS ALL THE CRITERIA LISTED ABOVE.

IN SUBMITTING THIS BID, IT IS UNDERSTOOD THAT THE CONSTRUCTION MANAGER AND THE OWNER RESERVE THE RIGHT TO HOLD ALL BIDS FOR A PERIOD OF 45 DAYS AFTER BID DATE AND TO REJECT ANY AND ALL BIDS AND WAIVE ANY FORMALITIES OR IRREGULARITIES.

Dated this _____day of_____2026.

Company: _____

Signature of Authorized Officer: _____

Printed Name: _____

Title: _____

CONTRACT CATEGORY SCOPE CLARIFICATIONS
VALLEY CITY PUBLIC SCHOOLS – NEW SCHOOL

Addendum #1 - Items indicated in Red
Addendum #2 - Items indicated in Green
Addendum #3 - Items indicated in Blue

TABLE OF CONTENTS

CONTRACT CATEGORY DESCRIPTION(S)

CC #00A - <u>GENERAL REQUIREMENTS PERTAINING TO ALL CONTRACT CATEGORIES</u>

a. All Contractors and Suppliers are responsible for reviewing all plan documents in addition to all categories in this Scope Clarification prior to submitting their proposal.
b. Definitions
    i. Furnish or Supply – to source or otherwise make available a material or service.
    ii. Install or Erect – to place or fix in place ready for use.
    iii. Provide – to furnish or supply a material or service and install or erect.
c. It is the intent of each Contract Category scope of work and responsibility for the Contractor bidding to provide a complete operational assembly/system, unless specifically indicated otherwise.
d. Unless noted otherwise, all labor and material for each specification section is to be included for each Contract Category.
e. Each Contractor is required to coordinate their work with other Contractors, as directed by the Construction Manager, without additional compensation.
f. Each Contractor is required to manage their suppliers and subcontractors. The bidding contractor should be the single source contact for the CM for all work included in that Contract Category.
g. All Contract Categories are tied to Specification Divisions.
    i. 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS and
    ii. 01 - GENERAL REQUIREMENTS
h. All Contract Categories are tied to and shall comply with the General (G) Drawing Sheets and associated UL Assembly requirements.
i. All Contractors are responsible for coordination and review of shop drawings (as applicable to their work) and obtaining field verifications.
j. Field verify and inspect existing conditions and substrates to receive work prior to installation, field verify dimensions that will affect the layout or performance of your work, and confirm preparatory work is complete and acceptable to receive work under your contract category.
k. Contractors requiring embeds or provisions for anchors cast into work by others, are responsible to provide embeds and detailed layout drawings.
l. Each Contractor is responsible for clean-up of debris, rubbish and other similar items resulting from their operations on a daily basis.
m. Each Contractor is responsible for their own working platforms, scaffolding, and equipment necessary to access work. The Contractor is responsible for the repair of all Contractor caused damage incurred by their crew(s) and/or subcontractor(s).
n. The site will be set up for minimal parking by the construction trades. All contractors are responsible for any costs associated with offsite parking.
o. All bids to be submitted on the bid form included in the specifications.
p. It is the responsibility of the contractor doing the excavation work to call for utility locates for their scope of work.
q. Construction Manager will provide dumpster(s) for typical construction debris accumulated under the work of this contract unless noted otherwise. Materials requiring special disposal requirements to be removed by Contractor.
r. Construction Manager will provide temporary portable toilets.

s. **Conflicts and Duplication in Work:** In the case of a duplication of scope responsibility either on Drawings, Specification, or Contract Category Descriptions, the Contractor is responsible to bid the work as called out regardless of potential oversight duplications.
    i. In the case of duplication, the Construction Manager will make the final decision as to which Contract Category will complete the work and the appropriate cost adjustment will be made.

t. **Special Coordination and Scheduling Required:** Contractor acknowledges that the performance of their Contract Category must be closely interfaced with the performance of others and that multiple mobilizations may be required.
    i. Maintain punctuality and compliance with agreed upon deliveries.
    ii. Comply with Project Schedule.
    iii. Maintain communication with Construction Manager to ensure work sequences are followed to allow all contract categories to continue work.
    iv. Provide required "after-hours" shift work to maintain Project Schedule where indicated or required to maintain Project Schedule or to accommodate Owner's on-going operations.
    v. Provide any costs needed to perform work in accordance with the project schedule. No additional charges will be allowed for work being completed within the timeframe shown on the preliminary project schedule.

u. **Document Management and Control Procedures:** Ensure on-site contractor's personnel have current contract documents, including, but is not limited to, Special Requirements, Specifications, Drawings and clarifications (RFI's and ASI's) and other modifications (CCD's and field orders) affecting the Work.
    i. Ensure field personnel are familiar with requirements of Contract Documents.
    ii. Contractors shall have an established document control procedure to ensure compliance.

v. **Coordinate Layout and Clearances:** Coordinate space requirements and installation for items that are indicated diagrammatically on Documents.
    i. Follow routing indicated for pipes, ducts and wiring, place runs parallel with line of building. In finished areas, unless expressly indicated otherwise, conceal pipes, ducts and wiring within construction. Coordinate locations of plumbing and electrical fixtures and electrical outlets with finish elements.
    ii. Use space efficiently to maximize accessibility for other installations, maintenance and repairs.
    iii. Installing entities shall modify their installations, if needed, to eliminate conflicts and achieve effective coordination of systems and work.
    iv. Contractor's failure to exercise coordination responsibilities constitutes a waiver of claims for an increase in Contract Sum if design modifications are required to resolve conflicts that might have been avoided by complying with requirements of this obligation.

w. **Delivery and Receiving of Materials:** Provide labor and equipment necessary to receive materials, unload, inspect, sort, and distribute materials to individual work areas. Store materials and equipment in an organized manner as not to obstruct other trades and the normal day-to-day operation of this project.
    i. All Contractors are responsible for, and costs associated with unloading, staging, and appropriate storage of their material, to include material they will be installing but supplied by others.
    ii. Coordinate storage as allowed on site with the Construction Manager.
    iii. Schedule deliveries to minimize on-site storage and coordinate with Construction Manager Site Supervision.

iv. Provide flagmen for operation in contact with public traffic for deliveries.
v. Construction Manager reserves the right to remove or relocate Contractor materials and/or equipment stored on site by request to the Contractor or at the expense of the Contractor if necessary.

x. **Acceptance of Substrates and Existing Conditions:** Starting work constitutes acceptance of existing conditions, preparatory work and substrates that may affect the performance of your work.
y. **Finish protection:** Each Contractor shall provide necessary protection of immediate and adjacent surfaces during the progression of their work.
   i. Interior scaffolding and karts utilized on finished floors must use rubber, locking wheels.
   ii. Contractors may not utilize finished substrates such as countertops or sills to set tools, materials, or containers of any form.
z. Work Restrictions:
   i. Contractor's Field Offices: As directed by Construction Manager.
   ii. Construction Staging Area: As directed by Construction Manager.
      1. Site will have limited space for laydown and staging. All deliveries and on-site storage to be made in coordination with Construction Engineers
   iii. Egress and Access Routes: Do not obstruct existing access and egress from adjacent Site areas or portions of existing facilities which are to be operational during Construction.
   iv. Limit activities to Construction Limits**:** Notify Construction Manager if work activities are required outside of construction limits.
   v. Hot Work Permits: Work activities using and causing sparks and open flame must be coordinated with Construction Manager Site Supervision and special procedures shall be complied with as directed by Construction Manager.
   vi. Work in Occupied Areas: Work in occupied areas of the facility must be coordinated with Construction Manager Site Supervision who will coordinate with Owner's Representative.
   vii. Working Hours: Conduct Work during normal working hours unless expressly agreed to by Construction Manager and the Owner.
      1. Standard five-day work week (Monday through Friday) is required. A four-day ten-hour schedule is not acceptable unless approved by the Construction Manager.
   viii. Tobacco Free Site: Project Site is a "tobacco free" zone; there is absolutely no smoking, or use of tobacco products of any kind are prohibited on the Owner's Property.
   ix. Noise Restrictions: Do not use audio equipment such as radio's, tape players, compact disc or MP-3 players on Site.
      1. Radio headphones shall not be permitted.
      2. Maintain a level of conduct and decorum consistent with the environment in which the Work is being performed.
   x. Warranty: Contractor or supplier warrants that irrespective of the specification of the materials and equipment in the Plans and Specifications, the materials and equipment furnished by the applicable contractor or material supplier are appropriate for the purposes specified and are safe for the applications implicit in the Plans and Specifications.
   xi. Additional Work: No additional compensation for claimed additional work will be authorized without advanced written authorization from the Construction Manager.

CC #01A - <u>GENERAL CONSTRUCTION (performed by Construction Manager)</u>

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all General Construction work, including but not limited to the following:
b. Include an allowance of **TWO THOUSAND (2,000) skilled carpentry man hours** to be utilized by Construction Manager. Man hours are to include all wages, payroll taxes, fringe benefits, small tools, Contractor's overhead, and profit.
c. Provide an allowance of **ONE THOUSAND (1,000) general labor man hours** to be utilized by Construction Manager. Man hours are to include all wages, payroll taxes, fringe benefits, small tools, Contractor's overhead, and profit.
d. Demolish/remove the following items:
    i. All items that are built into or attached to the building.
    ii. Flooring - where scheduled and not noted to be removed by the asbestos contractor.
    iii. Mastic and base in locations where flooring is removed by this contract.
    iv. Ceiling tiles and grid for the walls to be demolished.
    v. Ceiling tiles and grid for the installation of new walls.
    vi. Doors, glass, and storefront components noted.
    vii. Existing veneer at exterior of building for installation of new construction.
    viii. All items indicated as save for salvage.
e. Provide any shoring required to complete the work of the contract.
f. Provide all saw cutting, and wall or slab removals where noted.
g. Provide dumpsters for the lawful disposal of all demo items.
h. Ceiling tiles in areas scheduled to remain shall be removed and re-installed by the Contract Category installing their building system (i.e. fire protection, mechanical, electrical).
i. Mechanical, plumbing, and electrical items will be removed by others.
j. Provide and install the following items:
    i. In-wall blocking and backing for items installed by this Category.
        1. Include backing for TV wall brackets installed by Owner.
        2. Include backing for foodservice equipment (reference QF501)
        3. Include backing for miscellaneous metals (e.g. Handrails, roof ladders, etc.)
    ii. Wood roof and window blocking.
    iii. Interior joint sealants as applicable to work scope.
    iv. Expansion joints and covers.
        1. Expansion joint at cooler.
    v. FRP as scheduled.
    vi. Visual display surfaces.
    vii. Signage – Building and Site.
    viii. Toilet compartments.
    ix. Toilet, bath and laundry accessories.
    x. Wall and door protection.
    xi. Corner guards.
    xii. Fire extinguishers and cabinets.
    xiii. Metal lockers.
    xiv. Wood base support for lockers.
    xv. Flag poles
    xvi. Standards and shelving
    xvii. Site Benches and Bike Racks
    xviii. Concrete splash blocks

xix. Z-girts and channels at front entry trellis.

k. Install the following items, supplied by others:
   i. All Owner furnished contractor installed (OFCI) items as indicated.
   ii. Relocate playground equipment and playground border as specified.
   iii. Relocation of existing kiln as noted.
   iv. Remove existing netting at discus area
   v. Grout sills at elevator opening.
   vi. Core and install volleyball inserts, supplied by CC #11B.
l. Provide all fasteners required to complete all carpentry work installations.
m. Provide field measurements for items installed by this Contract Category.
n. Provide and maintain floor protection utilizing overlapped Ram Board with taped seams (or equivalent floor protection material). Remove and dispose of floor protection after utilization.
o. Provide temporary shelters for winter conditions.
p. Provide access panels to be installed by CC #09A.
q. Include allowance for additional access panels not indicated of $7,500.
r. Progressive and final cleanup of the General Construction work.
s. Generally covered by specification sections as follows:
   i. Division 02 – Existing Conditions
   ii. 06 1000 – Rough Carpentry
   iii. 06 8316 – Fiberglass Reinforced Paneling
   iv. 07 9200 – Joint Sealants (As Applicable)
   v. 07 9513.16 – Exterior Expansion Joint Cover Assemblies
   vi. Division 10 – Specialties
   vii. 10 7316.13 – Metal Canopies

CC #01B - <u>SURVEYING</u>

a. Establish benchmark for the building construction.
b. Provide survey stakes for actual building corners with a 10’ offset.
c. Provide survey stakes for building grid lines.
d. Provide stakes for all utility lines with 15’ offsets every 25’.
e. Provide final grading elevation stakes on a 25’ grid.
f. Provide survey stakes for all new site paving.
g. Provide survey stakes for all new site lighting.
h. Provide survey stakes for curb & gutter.
i. Provide control points on site for contractor layout coordination
j. Verify foundation and anchor bolt placement following completion of concrete foundations. Assume three mobilizations.
k. Generally covered by specification sections as follows:
   i. 01 4000 – Quality Requirements

CC #01C – <u>TESTING & INSPECTIONS</u>

a. Soil compaction testing, proctor tests, excavation observations.
b. Concrete cylinders, rebar inspection.
c. Masonry grout and mortar testing, rebar inspections.
d. Structural steel welding observations.

e. Reference Sheet ~~S004~~ S003 – Special Inspections & Testing
f. Floor Flatness/Levelness at Gym Floor, Polished Concrete, and RSF areas.
g. Generally covered by specification sections as follows:
    i. 01 4000 – Quality Requirements

CC #01D – <u>TEMPORARY & PERMANENT FENCING</u>

a. Provide temporary fencing as indicated on the drawings and specifications.
b. Provide gate(s) as indicated. Each gate is to be a minimum of 16'-0" wide.
c. Temporary posts spacing to be a maximum of 15'-0" on center.
d. Provide diagonal post bracing at all corners.
e. Removal of all temporary fencing and gates at the completion of the project.
f. Temporarily remove existing fence at track area and reinstall after completion of new turf. (Figure 50' of removal and reinstall)
g. Include additional mobilization to remove portion of pounded fence at playground and replace with ballasted fence panels per site logistics plan.
h. Progressive and final cleanup of the Contractor's work.
i. Generally covered by specification sections as follows:
    i. 01 5000 – Temporary Facilities and Controls
    ii. 32 3119 – Decorative Metal Fences

CC #03A - <u>BUILDING CONCRETE</u>

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Building Concrete work, including but not limited to the following:
b. All cast-in-place concrete work including shop drawings, formwork, reinforcement (rebar and wire mesh) and accessories.
c. All concrete associated expansion joint materials, membranes, vapor barriers, waterproofing, and caulking/sealants.
d. Provide and install the following items:
    i. Foundation insulation as indicated.
    ii. Rigid insulation below the slab as indicated.
    iii. Waterproofing on the new and existing foundation walls as indicated.
    iv. Vapor barrier under slab (All seams to and penetrations to be sealed with tape).
e. Subgrade will be prepared, by others, within ± 2 inches, include all work from subgrade to finish floor.
f. Finish grading of the concrete subgrade by this Contractor. Include placement of finish sand fill to meet plan subgrade elevations. Materials provided by others.
g. Protect and maintain foundation bearing soils in suitable condition after excavation by others.
h. Set and install all embedded steel, anchor bolts and sleeves provided by others. Coordinate installation of sleeves with respective MEP Contractors.
i. Set steel decking on stoops as indicated to include setting any angles that may be required. Decking and angles to be provided by the Steel Contract Category.
j. Contractor to include all work associated with tie-ins to existing footings and foundations.
k. Isolation at steel columns, if any.
l. Concrete work for all pad and strip footings.
m. Cure and seal all concrete slabs.

n. Pan fill concrete stairs.
o. Provide concrete topping slab on hollow core precast.
p. Install bollards, bollard material provided by others.
q. Assist in the installation of trench drains provided by Mechanical Contractor.
r. Include concrete retaining wall at gridline A.
s. Site concrete is by others.
t. Install embed plates provided by Precast Supplier.
u. Mechanical and electrical slabs and housekeeping pads by others.
v. Heated concrete charges and winter condition costs for all cold weather concrete placements.
w. Provide frost/freezing protection for all concrete placements.
x. Provide alternate pricing to provide porosity inhibiting admixture (i.e. BarrierOne PIA) which shall include an adhesion warranty letter at Gymnasium floors.
y. S001 Concrete Note 15 - Provide Allowance for additional rebar.
z. Coordinate walk-in cooler floor slab with food service contractor.
aa. Waterproof and install insulation at foundations upon completion of foundations so backfilling can take place. Include added mobilizations necessary to complete extending waterproofing and insulation up past base of precast as detailed after precast installation.
bb. Coordinate placement and requirements of slabs to be polished concrete with CC#09H – Concrete Polishing
cc. Meet concrete tolerance requirements at wood gym floor per specification section 09 6466 (+/- 1/8" in radius of 10').
dd. Provide on-going dewatering of excavations.
ee. Install blockouts and sleeves for mechanical and electrical penetrations. Blockout and sleeve material, along with layout for these materials, are to be provided by others.
ff. Provide necessary puddling and vibrating of slabs in rooms scheduled for Polished Concrete to ensure a uniform look when polished.
gg. Coordinate recessed cooler slab and floor slab with CC #11A – Food Service Equipment.
~~hh. Provide shovel guard precast and associated rigid insulation as indicated in 2/A502 and 16/a212~~
    ~~i. Include exterior column box benches as indicated in 1 and 2/a508~~ (Moved to 04A)
ii. Provide welding of rebar to steel where required in the field (ref. 8/S502, etc.)
jj. Provide concrete bases for flag poles. Include excavation, reinforcing, concrete, and installation of embedded flag pole sleeve. (Flag pole sleeve provided by others.)
kk. Where plans show the option of strip footing or thickened slab at masonry walls, such as detail 16/S301, thickened slab should be included.
ll. Provide cast in lumber sleepers at stair treads as indicated (ref. 9, 10, 11/A326)
mm. Include drilling/excavation for install. Include hydrovac as required at transformer pad and other underground conflicts.
nn. Provide shop drawing showing proposed layout of construction joints and sawcut control joints in concrete slabs for review and approval by construction manager and architect.
oo. Provide concrete bases for goal posts. Include excavation, reinforcing, concrete, installation of embedded ground sleeve, and setting of vertical posts. (Goal post sleeves and vertical posts provided by others.)
pp. Concrete Testing is by the Construction Manager. Provide assistance, if required, to the testing company.
qq. Progressive and final cleanup of the Contractor's work.
rr. Generally covered by specification sections as follows:
    i. 03 0516 – Underslab Vapor Barrier

ii. 03 1000 – Concrete Forming and Accessories
iii. 03 2000 – Concrete Reinforcing
iv. 03 3000 – Cast-in-Place Concrete
v. 07 1300 – Sheet Waterproofing
vi. 07 2100 – Thermal Insulation (as applicable)
vii. 07 2600 – Vapor Retarder
viii. 07 9200 – Joint Sealants (as applicable)
ix. 11 6833 – Athletic Field Equipment

CC #03B – PRECAST CONCRETE

a. Provide supervision, layout, shop drawings, labor, material, equipment, and other incidental costs to complete all Architectural Precast Concrete work, including but not limited to the following:
b. Engineering and shop drawings.
c. Hollow core where indicated.
d. Trucking and transportation and permitting.
e. Provide and install all grouting and embedment plates.
f. Provide embed weld plates for installation in foundations by cast in place concrete scope.
g. Provide all caulking of wall panels on both interior and exterior sides.
h. Provide and install weld plates, bearing pockets, and anchorage to structure.
i. Provide ~~installation of~~ conduit, electrical boxes, and any other embedded items as indicated.
j. Provide and install helical piers or other means of bracing as needed for temporary support of precast concrete. Coordinate locations of piers with U/G MEP work. Verify with CM prior to placement.
k. Include multiple mobilizations (2 minimum).
l. Provide mock-up wall panel as specified.
m. Hold out precast panels as necessary in coordination with structural steel erection.
n. Provide DEDUCT alternate for hollow core erection by others.
o. Provide price for Alternate #11 (Exterior precast wall finish).
p. Provide final clean of precast wall panels at project completion
q. Achieve fire rating indicated in documents (utilize Metacaulk joint strip or similar firestop strip as necessary in panel joints)
r. Progressive and final cleanup of the Contractor's work.
s. Generally covered by specification sections as follows:
   i. ~~03 4100 – Precast Structural Concrete~~
   ii. 03 4113 – Precast Hollow Core Planks
   iii. 03 4500 – Precast Architectural Concrete
   iv. 07 9200 – Joint Sealants (as applicable)

CC #04A - MASONRY

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Masonry work, including but not limited to the following:
b. Concrete Unit Masonry (Concrete Block, CMU) and all accessories.
c. CMU reinforcement including wall reinforcement and reinforcing steel (rebar).
d. Temporary top of wall bracing as required.
e. Concrete grout at CMU – all required filled cells and reinforcing.

f. Installation of items embedded in masonry, including steel lintels and shelf angles.
g. Thru-wall flashing, weeps, and damp proofing.
h. Openings for all devices installed in masonry.
i. Fire stopping of all masonry walls that key to the deck.
j. Masonry beam pockets.
k. Toothing of masonry to tie into existing conditions.
l. Include setting lintels and bearing plates for new openings in existing walls.
m. Receive, unload, install, and grout hollow metal frames built into masonry.
n. All CMU to be cleaned, rubbed, pointed, and ready to receive finishes.
o. Masonry cleaning.
p. Heating charges and winter condition costs for all cold weather masonry placements.
q. Provide frost/freezing protection for all masonry placements.
r. Include ADD alternate for heat and shelter costs for the installation of all brick and stone veneer if needed.
s. Drill and epoxy dowels as detailed per 16/S301.
t. Include bases for lockers per 4 and 5/A421. Provide embedded 2x4 wood sleepers as indicated.
u. Provide shovel guard precast (PC-4) and all associated rigid insulation, flashing, etc. as indicated in 2/A502 and 16/A212.
    i. Include exterior column box benches as indicated in 1 and 2/A508.
    ii. Coordinate finish with Precast Wall Supplier to match (PC-3) finish.
v. Provide acoustical insulation and acoustical sealant at top of wall (ref. 12/A422)
w. Progressive and final cleanup of the Contractor's work. All interior areas broom cleaned.
x. Generally covered by specification sections as follows:
    i. 03 4500 – Precast Architectural Concrete (As applicable)
    ii. Division 04 - Masonry.
    iii. 07 2100 – Thermal Insulation (as applicable)
    iv. 07 2700 – Air Barriers (As applicable)
    v. 07 9200 – Joint Sealants (as applicable)

CC #05A - <u>STRUCTURAL STEEL AND METAL FABRICATION (*SUPPLY)*</u>

a. Engineer, fabricate, and deliver all structural steel framing, embedded plates, steel beam bearing plates, roof opening frames, mechanical equipment support frames and other items defined as structural steel.
b. Engineer, fabricate, and deliver:
    i. All shear stud connectors, deformed bar anchors, anchor rods, expansion bolts, and other incidental items of structural steel required to be built into concrete or masonry and attached to the structural frame.
    ii. All miscellaneous and ornamental steel, steel stairs, handrails, guardrails, catwalks, catwalk rails, roof ladders, pipe bollards, supports, anchorage, and accessories for miscellaneous metal and ornamental metal work.
    iii. All steel roof deck, steel floor deck, and related accessories.
c. Provide shop drawings and erection drawings.
d. Provide setting diagrams, templates, instructions, and directions for installation of anchorages, which are to be embedded in concrete or masonry.
e. Provide engineering of all delegated connection designs indicated.
f. Supply the following items:

i. All decking and angles for stoops as indicated.
ii. All entrance canopy materials structural components. Light gauge materials by others.
iii. Insulation for flutes in acoustical decking.
iv. Bent plate and anchors at all non-bearing CMU wall locations (per detail 19/S501)
v. Structural steel supports for curtain wall assemblies

g. Shop priming of all structural steel and ferrous metal fabrications.
h. Anchor bolt shop drawings to be submitted within **ten (10) days** of contract award.
i. Include anticipated timeline for remaining shop drawings.
j. Include anticipated timeline for anchor bolts delivery following return of approved shop drawings.
k. Include anticipated timeline for embedded metal fabrications following return of approved shop drawings.
l. Include anticipated timeline for structural and all other items following return of approved shop drawings.
m. Coordinate sequence and deliveries with CM and CC #05B.
n. Expedite shop drawing and delivery of Stairs 2 & 3 for construction access.
o. Provide drilled bolt holes in structure for equipment such as operable partitions, wrestling mat lifts, divider curtains, etc.
p. S001 Structural Steel Note 16 - Provide Allowance for additional 1 ton of material.
q. No time extensions will be allowed for re-submittals of shop drawings.
r. Include extra nut at each anchor bolt for column levelling.
s. Generally covered by specification sections as follows:
i. 05 1200 – Structural Steel Framing
ii. 05 2100 – Steel Joist Framing
iii. 05 3100 – Steel Decking
iv. 05 5000 – Metal Fabrications
v. 05 5100 – Metal Stairs
vi. 05 5133 – Metal Ladders
vii. 05 5213 – Pipe & Tube Railings
viii. ~~05 5700~~ 05 7300 – Decorative Metal Railings
~~ix. 10 7316.13 – Metal Canopies~~

CC #05B - <u>STRUCTURAL STEEL AND METAL FABRICATION (INSTALL)</u>

a. Provide supervision, skilled labor, and equipment necessary to install/erect all Structural Steel Framing, Steel Decking, and Metal Fabrications. Installation of items embedded in concrete or masonry are NOT included in this Contract Category.
b. Welding must be performed by a skilled welder with a current certification for the work being performed.
c. Owner/CM will engage a qualified independent testing agency to inspect field welds and high-strength bolted connections in accordance with the specifications.
d. Provide field verification measurements for all miscellaneous metals and other materials installed by this contract category.
e. Provide all grouting below steel bearing and base plates.
f. Install the following items:
i. All hand rails and guard rails.
ii. Roof ladders.

iii. Miscellaneous roof deck accessories, according to deck manufacturer's written instructions, to provide a complete deck installation.
iv. Entrance canopies and stairs.
v. Roof sump pans, sump plates, and reinforcing channels or zees in ribs to span between supports and weld.

g. Touchup painting of abraded areas, welds, and rust spots on prime painted and galvanized metals.
h. Provide temporary shoring before placing metal deck panels, if required, to meet deflection limitations and prevent overloading due to construction loads.
i. Provide and maintain temporary railing at all roofs, mezzanines, and raised floors. Remove railing only once directed by construction manager.
j. Include unloading of all steel deliveries.
k. Adequately clean steel of dirt & debris as necessary prior to install.
l. Provide ADD alternate to install Precast Hollow Core Planks.
m. Provide early install of Stairs 2 & 3 for construction access.
n. Install bent plate and anchors at all non bearing CMU wall locations (per detail ~~19~~ 18/S501)
o. Provide all temporary power supply for welders and any other equipment to the extent required for this trade's scope of work.
p. Installation of all closures at openings and edges in decking.
q. Fall protection required 100% of the time when working above 6' - per Construction Engineers project safety requirements.
r. Provide core drilling in concrete as required for installation of handrails and other metals.
s. Progressive and final cleanup of the Contractor's work. All interior areas broom cleaned.
t. Generally covered by specification sections as follows:
    i. 05 1200 – Structural Steel Framing
    ii. 05 2100 – Steel Joist Framing
    iii. 05 3100 – Steel Decking
    iv. 05 5000 – Metal Fabrications
    v. 05 5100 – Metal Stairs
    vi. 05 5133 – Metal Ladders
    vii. ~~05 5700~~ 05 7300 – Decorative Metal Railings
    viii. 10 7316.13 – Metal Canopies

CC #06A - <u>CARPENTRY</u>

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Carpentry work, including but not limited to the following:
b. Provide and install the following items:
    i. In-wall blocking and backing for items installed by this CC#.
c. Install the following items, supplied by others:
    i. Casework and woodwork.
    ii. Solid surface window sills.
    iii. Wood trim.
    iv. Doors and hardware.
    v. Plastic laminate/wood wall panels
    vi. Brackets.
    vii. Music Education Storage Casework (Alt. 4)

d. Install all brackets supporting products installed, including in-wall (Concealed) brackets. Coordinate to install concealed brackets prior to drywall.
e. Include install of wood trim WDT-1 at lockers.
f. Include install of SLAT-1 Wall.
g. Provide all fasteners required to complete all carpentry work installations.
h. Provide, document, and communicate all field measurements for items installed by this Contract Category.
i. Hollow metal door frames installed by (09A) metal framing contractor in metal stud framed walls and by (04A) masonry contractor in CMU walls. This work scope responsible to ensure they are plumb and level when installed, and after drywall installation. All other hollow metal frames are to be installed by this subcontractor (I.e. precast ~~and masonry~~ openings).
j. Fill HM door frames installed with low expansion spray foam insulation as indicated in architectural details.
k. Include readjustment of doors and hardware following building air balancing and immediately prior to building turnover.
l. Receive, offload, inventory, sort, and store all materials provided by Others and installed by this Contract Category.
m. Include install of wood caps and wood treads at stairs as indicated.
n. Include install of metal trim associated with millwork (i.e. MTLP-8, 9, 10).
o. Provide anti-slip tape at wood stair treads.
p. Install plastic laminate wall paneling as indicated (PLAM-4 & PLAM-5)
q. Install countertop and PLAM-1 at glass display cases and glass display shelving as indicated (e.g. 11/A410, 7/A415, 8/A421, 9/A421, etc.). Glass windows and glass shelving by Others.
r. Install bench tops throughout - wood or solid surface (e.g. 10/A322, 1/A502) along with backing required.
s. Progressive and final cleanup of the Contractor's work.
t. Generally covered by specification sections as follows:
    i. 06 1000 – Rough Carpentry (As Applicable)
    ii. 06 2000 – Finish Carpentry
    iii. 06 4100 – Architectural Wood Casework
    iv. 07 9200 – Joint Sealants (As Applicable)
    v. 08 1113 – Hollow Metal Doors and Frames
    vi. 08 1416 – Flush wood Doors
    vii. 08 7100 – Door Hardware
    viii. 12 3600 – Countertops
    ix. 12 3551 – Music Education Storage Casework (Alt. 4)

CC #06B - <u>ARCHITECTURAL CASEWORK (SUPPLY)</u>

a. Provide all casework.
b. Provide all countertops and vanity tops to include all build-up materials and brackets for countertops.
c. Provide early coordination and delivery of in-wall concealed brackets.
d. ~~Provide all simulated stone countertops~~.
e. Provide and install all solid surface, quartz, and solid phenolic compact countertops.
f. Provide solid surface window sills as noted.
g. Provide wall paneling, chair rail, wainscot, and wood trim as noted.

i. Include supply of wood trim (WDT-1) at lockers.
ii. Include supply of Slat-1 Wall materials.

h. Provide complete system to include wall framing, sheathing, and surfacing at reception desk.
i. Provide templating for complex geometry situations. Basic field measurements shall be provided by others.
j. Provide full shop drawings for all components to be provided.
k. All woodwork provided shall be pre-finished.
l. Provide pricing to Alternate #4.
m. All materials are to include tax and freight costs for delivery to the job site.
n. Include supply of wood caps and wood treads at stairs as indicated.
o. Include supply of metal trim associated with millwork (e.g. MTLP-8, 9, 10).
p. Furnish plastic laminate wall paneling as indicated (PLAM-4 & PLAM-5)
q. Furnish all elements (including countertop & PLAM-1) at display cases except glazing and glass shelving (e.g. 11/A410, 7/A415, 8/A421, 9/A421, etc.). Glazing and glass at display cases by CC #08C.
r. Furnish bench tops throughout - wood or solid surface (e.g. 10/A322, 1/A502).
s. Provide TAC-1 at display case, and TAC-2 at reception desks.
t. Generally covered by specification sections as follows:
    i. 06 4100 – Architectural Wood Casework
    ii. 12 3600 – Countertops
    iii. 12 3551 – Music Education Storage Casework (Alt. 4)

CC #07A – MEMBRANE ROOFING

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Roofing work, including but not limited to the following:
b. Provide and install the following:
    i. EPDM Roofing.
    ii. Tapered roof insulation.
    iii. Protection board.
    iv. Manufactured roof cants.
    v. Pre-finished metal flashing.
    vi. Counter flashing.
    vii. Overflow scuppers.
    viii. Roof expansion joint assemblies.
    ix. Roof hatches, rails (if any), and walk path materials.
c. Provide manufacturer's warranty.
d. Coordinate with MEP trades on the install of roof curbs and boots for penetrations.
e. Install acoustical insulation provided by others in flutes at acoustical decking prior to install of roofing.
f. Provide sawcutting for reglets as indicated or required.
g. Special attention is called to the Mechanical, Electrical, and Structural drawings. Note penetrations that may not be on the Architectural Roof Drawings.
h. Provide and maintain OSHA approved temporary guardrails and fall protection as required.
i. Provide snow removal on roof and cold weather application as necessary to maintain schedule.
j. Progressive and final cleanup of the Contractor's work.
k. Generally covered by specification sections as follows:

i. 07 5300 – Elastomeric Membrane Roofing
ii. 07 6200 – Sheet Metal Flashing and Trim
iii. 07 7100 – Roof Specialties
iv. 07 7200 – Roof Accessories
v. 07 9513.16 – Exterior Expansion Joint Cover Assemblies

CC #07B - JOINT SEALANTS / FIRESTOPPING

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Caulking and Firestopping work, including but not limited to the following:
b. Masonry control joints.
c. Hollow core precast and topping slab to columns.
d. Casework, countertops, and window sills.
e. Metal stair stringers adjacent to walls.
f. Provide mineral wool and sealant at top of wall at smoke partitions as indicated in detail 5/A422.
g. Firestopping at rated wall assemblies. Mechanical, electrical, and plumbing penetrations to be rated by installing trades. This scope responsible for top, bottom, and edge of wall as necessary.
h. Hollow metal frames to wall assemblies – both sides and tops.
i. Joint sealant at all gypsum to precast joints.
j. Progressive and final cleanup of the Contractor's work.
k. Generally covered by specification sections as follows:
    i. 07 8400 – Firestopping
    ii. 07 9200 – Joint Sealants

CC #07C - METAL WALL PANELS

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Metal Panel work, including but not limited to the following:
b. Provide full shop drawings of systems and samples for approval.
c. Provide field measurements.
d. Roof blocking is by others.
e. Provide and install the following items:
    i. Concealed caulking and counter flashing of all installed components.
    ii. Caulking required at metal panels, including to dissimilar materials.
    iii. Zee furring and insulation at metal panels.
    iv. Weather/Air barriers behind metal panels.
    v. Soffit and fascia.
    vi. Visible sealants for all installed components where indicated.
    ~~vii. Aluminum z-girts and channels at front entry trellis.~~
    viii. Provide all sheet metal trims and flashings (excluding window sills).
f. Provide weather/Air barrier product that is capable of being applied at the average temperature when the work will be required. Include cold weather application as necessary.
g. Provide all clips and fasteners required to install panels.
h. Coordinate install with MEP items installed within Metal Panels.
i. Provide and install gutters, conductor heads, and downspouts throughout.
j. Provide flashing at precast opening heads as indicated. Notch 2x nailer as necessary. (ref. 3/A504).
k. Progressive and final cleanup of the Contractor's work.
l. Generally covered by specification sections as follows:

i. 05 4000 – Cold Formed Metal Framing (Zee furring)
ii. 07 2100 – Thermal Insulation (As applicable)
iii. 07 2700 – Air Barriers (As applicable)
iv. 07 4213 – Metal Wall and Soffit Panels
v. 07 4213.23 – Metal Composite Material Wall Panels
vi. 07 6200 – Sheet Metal Flashing and Trim
vii. 07 9200 – Joint Sealants

CC #07D – SPRAY FOAM INSULATION

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Spray Foam Insulation work, including but not limited to the following:
b. Insulate all wall and ceiling assemblies as noted in the plans and specifications.
c. Provide and install the following:
    i. Spray foam insulation.
    ii. Any insulation that is not concealed with gypsum board must be coated with intumescent paint by this contractor.
d. Progressive and final cleanup of the Contractor's work.
e. Generally covered by specification sections as follows:
    i. 07 2119 – Foamed-In-Place Insulation

CC #08A - DOORS AND HARDWARE (SUPPLY)

a. Furnish all hollow metal frames, hollow metal doors, wood doors, and finish hardware.
b. Provide complete shop drawing for all frames, doors, and hardware provided.
c. All doors and frames to be factory machined, ready for installation, including trim kits and cutouts for openings.
d. Provide a keying schedule that incorporates the Owner's existing keying schedule.
e. Supply cylinders for aluminum entrance doors.
f. Provide (12) temporary cores and keys for use during construction
g. All wood doors shall be supplied pre-finished.
h. Hollow metal frames to include two spreader bars.
i. Verify with the Architect the stop locations for glass thickness.
j. Furnish a commercial key box(es) per note 21 on a100b and a101f
k. Furnish silencers at all door frames.
l. Furnish all fasteners for the glazing stops in sidelights, transom lights, borrowed lights, and door glazing kits.
m. Supply power supplies for electrified hardware as needed for a functioning system. Include relays as necessary for integration with systems such as fire alarm, security, door operator control, etc.
n. All hardware should be packaged together based on door it will be installed on. Provide labeling on all hardware with corresponding door number.
o. All materials are to include tax and freight costs for delivery to job site.
p. Furnish wide thresholds at all doors supplied by this contract category at Gymnasium D010 (ref. 9/A424).
q. Generally covered by specification sections as follows:
    i. 08 1113 – HM Doors & Frames
    ii. 08 1416 – Wood Doors
    iii. 08 7100 – Hardware

CC #08B - OVERHEAD, COILING, AND SECTIONAL DOORS

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Overhead, Coiling, and Sectional Doors, including but not limited to the following:
b. Provide field measurements.
c. Provide full shop drawings for all components to be provided.
d. Coordinate with Electrical Contractor for any power requirements.
e. Provide support steel as required for doors provided by this contract category (ref. 20 & 21/A423).
f. Progressive and final cleanup of the Contractor's work.
g. Generally covered by specification sections as follows:
    i. 08 3323 – Overhead Coiling Doors
    ii. 08 3326 – Overhead Coiling Grilles
    iii. 08 3613 – Sectional Doors

CC #08C - ALUMINUM STOREFRONT, CURTAIN WALL, GLASS AND GLAZING

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Aluminum Storefront, Curtain Wall, Glass, and Glazing work, including but not limited to the following:
b. Provide all interior aluminum windows and glazing.
c. Provide door hardware for openings provided under this Contract Category. Cylinders to be provided and installed by others.
d. Provide and install the following items:
    i. Sill flashing.
    ii. Glazing kits in doors.
    iii. Glass and glazing in hollow metal frames.
    iv. Power assist door operators.
    v. Interior and exterior caulking of all assemblies.
e. Provide semi-rigid and/or spray foam insulation at curtain wall and/or storefront assemblies for a complete system as per manufacturer recommendations.
f. Include aluminum closures with insulation between vertical mullions and abutting walls as indicated (reference 15/A424).
g. Temporarily install plywood in lieu of glass at 8 exterior windows for CM to vent temporary heaters. Return at completion of project to remove plywood and install glazing. These glass panels are to be stored off site during construction.
h. Coordinate install of aluminum doors to be installed late in the project to minimize damage. Include mobilization accordingly.
i. Field measure all openings.
j. Provide glass at display cases and glass display shelving as indicated (e.g. 11/A410, 7/A415, 8/A421, 9/A421, 5/A411, 1/A413, etc.). Include all components for these to operate as a complete system (cables, brackets, shelves, sliding doors, hardware, etc.). TAC-1 panels, PLAM-1 panels, and countertop by Others.
k. Provide wide thresholds at all doors by this contract category at Gymnasium D010 (ref. 9/A424)
l. Progressive and final cleanup of the Contractor's work.
m. Generally covered by specification sections as follows:
    i. 07 9200 – Joint Sealants

ii. 08 4313 – Aluminum Framed Storefronts
iii. 08 4413 – Glazed Aluminum Curtain Walls
iv. 08 4500 – Translucent Wall and Roof Assemblies
v. 08 7100 – Door Hardware (as applicable)
vi. 08 8000 – Glazing
vii. 08 8813 – Fire Rated Glazing
~~viii. 08 8853 – Security Glazing~~
ix. 10 1213 – Glass Display Shelves

CC #09A - <u>GYPSUM BOARD ASSEMBLIES</u>

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Structural Metal Stud Framing and Gypsum Board Assemblies work, including but not limited to the following:
b. Engineering of all structural framed metal stud walls. Provide design calculations to Construction Manager for review.
c. Provide any welding of studs if required by Metal Stud Engineer.
d. Installation of all hollow metal frames in metal stud walls, frames provided by others.
e. Fill all HM door frames with low expansion spray foam insulation per architectural details.
f. Provide and install all the following items:
    i. Structural and non-structural metal stud framing.
    ii. All hat channel, sealants, ceiling suspension system assemblies, and/or metal furring required.
    iii. Soffit framing as indicated on drawings.
    iv. All building insulation and acoustical insulation at metal stud assemblies.
    v. Acoustical sealants per wall assembly details.
    vi. All interior, exterior, abuse resistant, and moisture resistant sheetrock as scheduled.
    vii. Cement board (Durock) at walls to receive tile.
    viii. Install access panels indicated (Provided by CC #01A)
    ix. All exterior gypsum sheathing.
    x. All taping and fire taping.
    xi. Joint sealants as applicable to work scope.
    xii. All fasteners required for the installation of work in this Contract Category.
g. Return drywall to windows in gypsum assemblies.
h. Provide control joints.
i. Finish walls to level required by plans and specifications.
j. Patch existing walls prior to paint.
k. Insulate all wall and ceiling assemblies as noted in the plans and specifications.
l. Provide and install the following:
    i. Acoustic insulation.
    ii. Sealed vapor barriers at exterior walls and ceiling.
m. Submit coordination drawing showing proposed locations of control joints for review and approval by construction manager and architect.
n. Include unloading and staging of hollow metal door frames (supplied by others).
o. Provide steel bracing at all partial height steel stud walls every 5'-0" OC unless otherwise indicated (ClarkDietrich PWxx or approved equal).

p. Include additional (40) labor hours of drywall repair as directed by Construction Engineers and tracked with T&M tickets.
q. Coordinate with paint contractor to spot touchup following application of prime coat.
r. Provide for offloading and stocking of all materials provided under this Contract Category.
s. Provide labeling of rated walls as specified.
t. Progressive and final cleanup of Contractor's work.
u. Generally covered by specification sections as follows:
    i. 05 4000 – Cold Formed Metal Framing
    ii. 06 1600 – Sheathing
    iii. 07 0553 – Fire and Smoke Assembly Identification
    iv. 07 2100 – Thermal Insulation
    v. 07 2600 – Vapor Retarders
    vi. 07 9200 – Joint Sealants
    vii. 08 3100 – Access Doors and Panels
    viii. 09 2116 – Gypsum Board Assemblies

CC #09B - <u>TILE</u>

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Tile work, including but not limited to the following:
b. Provide floor preparation as necessary.
c. Grouting of tile – use epoxy grout where scheduled.
d. Provide crack isolation and/or waterproofing membranes, if required.
e. Provide all accessories, including thresholds and transition strips.
f. Provide special detailing around floor drains to ensure desired results.
g. All sealants associated with tile work and sealants from tile to dissimilar materials.
h. Provide extra materials as noted.
i. Minor floor prep shall be provided as needed.
j. Provide slope mortar bed as indicated at showers
k. Progressive and final cleanup of Contractor's work.
l. Generally covered by specification sections as follows:
    i. 09 0561 – Common Work Results for Flooring Preparation
    ii. 09 3~~1~~000 – Tiling

CC #09C - <u>ACOUSTIC CEILINGS</u>

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Acoustic Ceiling work, including but not limited to the following:
b. Provide ACT, grid assemblies, and suspension material as required for installation of acoustic ceilings.
c. Special attention is called to the Mechanical and Electrical drawings. Note ceiling devices that may not be on the reflected ceiling plans.
d. Provide washable and moisture resistant tiles if noted.
e. Provide rated ceiling where indicated, including enclosures at penetrations to maintain rating.
f. Provide insulation above ceiling tiles where shown or specified.
g. Provide joint sealants as applicable to work scope.
h. Provide extra materials as noted.

i. Drill tapcon fasteners or similar to hollow core plank when fastening to hollow core. Shooting in fasteners to hollow core is not permitted.
j. Install hold down clips on all acoustical ceiling panels within 20' of exterior doors and per documents.
k. Provide acoustical decorative panels (SCU, SWU) as indicated in documents.
l. Include additional (20) labor hours for ceiling tile repairs as directed by Construction Engineers and tracked with T&M tickets.
m. Provide price for alternate #5 (Acoustic ceiling panels).
n. Progressive and final cleanup of Contractor's work.
o. Generally covered by specification sections as follows:
    i. 07 9200 – Joint Sealants
    ii. 09 5100 – Acoustical Ceilings
    iii. 09 5423 – Linear Metal Ceilings
    iv. 09 5426 – Suspended Wood Ceilings
    v. 09 8400 – Acoustical Decorative Panels

CC #09D - <u>RESILIENT FLOORING AND CARPET</u>

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Resilient Flooring, Carpet, and Resilient Base work, including but not limited to the following:
b. Provide all materials required to install flooring and base items as indicated in the room finish schedule.
c. For existing areas, immediately upon award, communicate any requirements from flooring suppliers regarding the use of chemical mastic removal, cures, and/or any other floor preparation that may negatively affect the product and/or ability to provide warranty of the material.
d. Existing carpet and VCT to be removed by others.
e. Include all transitions between dissimilar flooring materials.
f. Minor floor prep shall be provided.
g. Include heat welding as specified.
h. Provide extra materials as noted.
i. Testing of new and existing floors to ensure compatibility with adhesives and proper moisture content.
j. Progressive and final cleanup of Contractor's work.
k. Generally covered by specification sections as follows:
    i. 09 0561 – Common Work Results for Flooring Preparation
    ii. 09 6500 – Resilient Base and Accessories
    iii. 09 6566 – Resilient Athletic Flooring
    iv. 09 6813 – Tile Carpeting

CC #09E - <u>RESINOUS FLOORING</u>

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Resinous Flooring work, including but not limited to the following:
b. Floor prep shall be provided.
c. Receive and offload all materials provided and installed by this Contract Category.
d. Progressive and final cleanup of Contractor's work.

e. Generally covered by specification sections as follows:
    i. 09 0561 – Common Work Results for Flooring Preparation
    ii. 09 6700 – Fluid-Applied Flooring

CC #09F - <u>WOOD ATHLETIC FLOORING</u>

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Wood Athletic Flooring work, including but not limited to the following:
b. Provide concrete floor preparation as necessary.
c. Install anchor plane assemblies for floor mounted sports equipment supplied by others.
d. Provide vapor proofing for concrete slab-on-grade.
e. Check moisture content, with approved meter, of concrete slab-on-grade and flooring materials to verify conformance with the specifications and manufacturer's requirements.
f. Provide all sleepers/nailers, subflooring, underlayment, felt, finished flooring, and any accessories requires to provide for a complete wood gymnasium floor system.
g. Provide floor base associated with the wood flooring.
h. Provide all sanding and finishing of the wood flooring.
i. Layout and provide all game lines and patterns as indicated on the drawings.
j. Provide and maintain floor protection during all phases of work and upon floor drying. Remove floor protection when directed by the Construction Manager.
k. Progressive and final cleanup of Contractor's work.
l. Generally covered by specification sections as follows:
    i. 09 0561 – Common Work Results for Flooring Preparation
    ii. 09 6466– Wood Athletic Flooring
    ~~iii. 09 9300 – Staining and Transparent Finishing~~

CC #09G - <u>PAINTING, COATING, AND WALL COVERING</u>

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Painting, Coating, and Wall Covering work, including but not limited to the following:
b. Paint all interior & exterior exposed steel structures, lintels, and railings as noted on the drawings. Clean and prep prior to painting.
c. Clean and prepare all existing walls prior to painting to include filling and patching dings and deficiencies at walls and ceilings.
d. Paint walls, soffits, and ceilings as indicated on the Room Finish Schedule.
e. Wood doors to be factory finished by others.
f. Paint existing walls that have been patched due to renovation from corner of wall to corner of wall.
g. Provide sealing of concrete in rooms scheduled for sealed concrete finish. Include vacuum and wet mop of substrate prior to application.
h. Application of finish paint to any surface will indicate this Contractor's acceptance of the surface as being properly prepared for finish paint. Exceptions will be made for damage caused by other trades after final paint coat has been applied.
i. Prior to painting, provide protection to adjacent surfaces of dissimilar finishes.
j. Assure proper protection of items not to receive paint (sprinkler heads, data cables, etc.). Remove protection after completion of painting.
k. Provide extra VWC materials as noted.

l. Coordinate with (CC #09A) gypsum assemblies contractor to allow for spot touchups following application of prime coat.
m. Include additional (100) labor hours of paint touchups as directed by Construction Engineers and tracked with T&M tickets
n. Provide attic stock product as indicated - Provide new, unopened containers only. Dispose of extra product appropriately.
o. Progressive and final cleanup of the Contractor's work.
p. Generally covered by specification sections as follows:
    i. 03 3511 – Concrete Floor Finishes
    ii. 09 7200 – Wall Coverings
    iii. 09 9123 – Interior Painting (MPI Standards)
    ~~iv. 09 9300 – Staining and Transparent Finishing~~
    v. 09 9600 – High-Performance Coating (MPI Standards)

CC #09H - <u>CONCRETE POLISHING</u>

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Concrete Polishing work, including but not limited to the following:
b. Floor prep shall be provided.
c. Floor polishing and finishing.
d. Receive and offload all materials provided and installed by this Contract Category.
e. Application of finish product to any surface will indicate this Contractor's acceptance of the surface as being properly prepared.
f. Coordinate placement and requirements of slabs to be polished concrete with CC#03A – Building Concrete
g. Provide mock-ups as specified.
h. Progressive and final cleanup of Contractor's work.
i. Generally covered by specification sections as follows:
    i. 03 3536 – Polished Concrete Floor Finishing

CC #10A – <u>OPERABLE PARTITIONS</u>

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Operable Partition work, including but not limited to the following:
b. Provide field measurements.
c. Provide all components necessary to provide a complete functional system.
d. Progressive and final cleanup of the Contractor's work.
e. Generally covered by specification sections as follows:
    i. 10 2239 – Operable Partitions

CC #11A - <u>FOOD SERVICE EQUIPMENT</u>

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Food Service Equipment work, including but not limited to the following:
b. Provide new equipment.
c. Start-up all new equipment to ensure proper function.
d. Provide Owner training in use of new equipment.

e. Provide install of Owner provided existing equipment as specified.
f. Provide complete roofing system at walk-in cooler. (Expansion Joint by Others)
g. Cut reglet as required to connect roof structure to building.
h. Leave doors off of walk-in cooler and freezer until epoxy flooring installation is complete. Store doors off site in interim.
i. Roof rails or curbs for cooler/freezer condensing units to be provided by this contract category.
j. Provide above ceiling support structure as needed for kitchen exhaust hood
k. Progressive and final cleanup of the Contractor's work.
l. Generally covered by specification sections as follows:
    i. 11 4000 – Food Service Equipment

CC #11B - GYMNASIUM EQUIPMENT

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Gymnasium Equipment work, including but not limited to the following:
b. Provide Section 116623 – Gymnasium Equipment – complete.
c. Provide Gymnasium Dividers – complete.
d. Provide and install new goal posts as indicated at turf field.
    i. Concrete bases and setting of vertical posts by CC #03A
e. Provide volleyball post inserts for install by CC #01A.
f. Include install of scoreboards noted as OFCI. Coordinate hook-ups with Electrical Contractor.
g. Provide pricing for wrestling mat lift under Alternate #10.
h. Provide wall padding throughout (notice wall padding is indicated in rooms outside of the gymnasium as well, e.g. keynote 13 on A700C and A701C)
i. Progressive and final cleanup of Contractor's work.
j. Generally covered by specification sections as follows:
    i. 11 6623 – Gymnasium Equipment
    ii. 11 6833 – Athletic Field Equipment

CC #12A - WINDOW TREATMENTS

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Window Treatment work, including but not limited to the following:
b. Provide field measurements.
c. Multiple mobilizations to job site.
d. Provide all components necessary to provide a complete functional system.
e. Assure that shade breaks line up with window mullions as best as possible. Shade breaks at glazing shall not be permitted unless approved in advance.
f. Progressive and final cleanup of the Contractor's work.
g. Generally covered by specification sections as follows:
    i. 12 2400 – Window Shades

CC #12B - BLEACHER SEATING

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Auditorium Seating work, including but not limited to the following:
b. Provide field measurements.

c. Provide full shop drawings for all components to be provided.
d. Multiple mobilizations to job site.
e. Progressive and final cleanup of the Contractor's work.
f. Generally covered by specification sections as follows:
    i. 12 6613 – Bleachers

CC #14A - ELEVATOR

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Elevator work, including but not limited to the following:
b. Provide all required permits to complete the work of this Contract Category.
c. Engineer, fabricate and deliver all elevator components.
d. Coordinate with all other contractors for complete functional systems.
e. Provide all core drilling required for the work of this Contract Category.
f. Provide miscellaneous metal components not shown on the architectural drawings, but required by code or required for the installation of your work.
g. Provide Owner training in use of new equipment.
h. The sample contract included in the specifications will be the contract executed with the selected elevator contractor.
i. Include an allowance of 20 hours of Elevator Operator time for other trades to utilize the elevator or work within the shaft.
j. Elevator contractor shall be responsible for all hoisting and unloading of their own equipment /materials.
k. Participate in fire alarm testing at project completion. Coordinate with fire alarm contractor for pre-testing and have representative on site for final fire alarm testing with AHJ.
l. Provide all inserts for the elevator shaft.
m. Progressive and final cleanup of the Contractor's work.
n. Generally covered by specification sections as follows:
    i. 14 2100 – Electric Traction Elevators

CC #21A - FIRE SUPPRESSION

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Fire Suppression work, including but not limited to the following:
b. Coordinate all fire protection installation with General, Plumbing, Ventilation, and Electrical contractors. Install all fire protection piping as high as possible. Provide all offsets to keep fire protection tight to the structure of ductwork above. Offset fire protection piping to avoid beams and installations by other trades.
c. Provide fire caulking/firestopping of all penetrations through fire rated assemblies.
d. Provide joint sealants as applicable to scope of work.
e. Provide all required permits to complete the work of this Contract Category.
f. Engineer, fabricate, and deliver all fire suppression components.
g. Coordinate with Mechanical and Electrical Contractors for complete functional systems.
h. Provide all core drilling required for the work of this Contract Category.
i. All exposed piping shall be provided ready to receive paint.

j. Remove and re-install ceiling tiles as required to complete installation work included in this Contract Category. Any ceiling tile or grid damaged during construction shall be replaced with new by this contractor.
k. Contractor to make penetrations to existing walls and/or ceilings for installation of new fire protection piping, sprinkler heads, equipment, etc.. Provide escutcheons at wall/ceiling penetrations. Patch walls and/or ceilings to match existing.
l. Provide dry system for unheated spaces, as necessary.
m. Provide Owner training in use of new equipment.
n. Provide ADD alternate for the supply and installation of a fire pump, if necessary.
o. Coordinate system disturbances/outages with Construction Manager and Owner.
p. Verify available water pressure and notify CM if inadequate.
q. Provide all access doors and panels required for access to equipment & valves related to this Contract Category.
r. Include labelling of all firestopped penetrations through rated assemblies.
s. Progressive and final cleanup of the Contractor's work.
t. Generally covered by specification sections as follows:
    i. 07 8413 – Penetration Firestopping
    ii. 07 9200 – Joint Sealants
    iii. 08 3100 – Access Doors and Panels
    iv. Division 21

CC #22A/23A - <u>PLUMBING AND HVAC</u>

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Mechanical and Plumbing work, including but not limited to the following:
b. Provide fire caulking/firestopping of all penetrations through fire rated assemblies.
c. Provide joint sealants as applicable to scope of work.
d. Include acoustical sealants at penetrations where required by wall assembly
e. Provide all required permits to complete the work of this Contract Category.
f. Provide required testing, such as pressure and disinfection testing of newly installed water services.
g. Demolition of existing mechanical and plumbing items as noted.
h. Remove and re-install ceiling tiles to complete installation work included in this Contract Category. Any ceiling tile or grid damaged during construction shall be replaced with new by this contractor.
i. Provide piping from interior of building to utility connections 5 feet outside of building.
j. Provide flange at water service for fire suppression system connection.
k. Provide all core drilling required for the work of this Contract Category.
l. Provide $20,000 allowance for set up and take down of temporary heating equipment, including any required permits.
m. Provide all controls and control wiring for mechanical equipment.
n. Provide all mechanical louvers, factory finished.
o. Provide all piping and duct insulation.
p. Provide all hoisting equipment needed to set all rooftop equipment after erection of all steel, precast, and installation of roofing.
q. Provide all mechanical pads required for equipment in this Contract Category.
r. Provide all mechanical pads and enclosures for ground mounted air handling units.
s. Provide and install all mechanical curbs and boots required.
t. Provide Owner training in use of new equipment.

u. Provide all gas piping from the meter inside the building.
v. Ductwork in room(s) with exposed, painted ceilings shall be provided ready to receive paint.
w. Provide rain leaders as construction progresses to limit water within incomplete building.
x. Provide all access doors and panels required for access to equipment & valves related to this Contract Category.
y. Provide all water/glycol for the mechanical system.
z. Provide finish sealants at all fixtures.
aa. Assure conformance with specified ceiling heights and allow room for access to equipment requiring access for maintenance. Coordinate in advance if any conflicts exist or if any deviations are required.
bb. Coordinate and provide start-up, testing & balancing, and adjustment of system to meet manufacturer and specified requirements prior to completion.
cc. Provide temporary accommodations to run air handlers during construction for finishes or provide temporary climate control with utilization of temporary equipment.
dd. Where penetrations are made at hollow core – coordinate with supplier to avoid cable strands. Coordinate in advance for large penetrations.
ee. Provide roof/floor opening sizes and layouts dimensioned from gridline.
ff. Provide and install Sump pit. Tie into drain tile installed by Others. Coordinate install of Sump Pit with CC #03A Building Concrete.
gg. Provide blockout/sleeve materials and layout for penetrations through foundation walls. Install of blockouts/sleeves by (CC #03A) concrete contractor.
hh. Include head and sill flashing as indicated (16. & 26/A504)
ii. Include VFD's as necessary for equipment provided under this category.
jj. Provide fume hood(s) as indicated.
kk. Include labelling of all firestopped penetrations through rated assemblies.
ll. Coordinate system disturbances/outages with Construction Manager and Owner.
mm. Include installation of equipment provided by others in food service area (reference schedule on QF101)
nn. Provide cutting of openings in roof and floor decking as required for work of this contract category
oo. Progressive and final cleanup of the Contractor's work.
pp. Generally covered by specification sections as follows:
    i. 07 8413 – Penetration Firestopping
    ii. 07 9200 – Joint Sealants
    iii. 08 3100 – Access Doors and Panels
    iv. 11 5313 – Laboratory Fume Hoods
    v. Division 22
    vi. Division 23

CC #26A - <u>ELECTRICAL AND LOW VOLTAGE</u>

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Electrical work, including but not limited to the following:
b. Provide fire caulking/firestopping of all penetrations through fire rated assemblies.
c. Provide joint sealants as applicable to scope of work.
d. Include acoustical sealants at penetrations where required by wall assembly
e. Provide all required permits to complete the work of this Contract Category.
f. Provide sufficient temporary lighting.

g. Provide all trenching for site lights.
h. Provide all electrical pads required for equipment in this Contract Category.
i. Provide generator and transformer pads. Assure coordination & compliance with utility company requirements.
j. Demolition of existing electrical, fire alarm, and communication items indicated on the Electrical Demolition Plan.
k. Provide safe and legal disposal of all removed fixtures.
l. Coordinate installation of new electrical service with local utility company. Any costs associated with getting new service into the building but not directly billed to the Owner shall be provided by this Contract Category.
m. Provide all core drilling required for the work of this Contract Category.
n. Remove and re-install ceiling tiles as required to complete installation work included in this Contract Category. Any ceiling tile or grid damaged during construction shall be replaced with new by this contractor.
o. Provide all data wiring and terminations.
p. Provide all fire alarm components noted.
q. Provide all clock system and public address system components, including adjustments to existing systems.
r. Provide materials and services required as noted in lighting plan.
s. Provide all concrete curbs required.
t. All controls and control wiring for mechanical equipment are by others.
u. Provide Owner training in use of new equipment.
v. Provide alternate for the wiring associated with a fire pump, if necessary.
w. Assist in set up and take down of temporary heating equipment.
x. Provide all access doors and panels required for access to equipment & valves related to this Contract Category.
y. Provide all related digging, forming, proper locating, and placement of exterior light fixtures and poles, including concrete bases.
z. Provide all trenching, excavation, backfill and compaction for interior and exterior conduits required in this Contract Category.
aa. Provide core drilling for all underground electrical through foundations as necessary.
bb. TV mounts to be provided and installed by Owner. Coordinate with rough-ins as necessary.
cc. Coordinate and provide start-up, testing, and adjustment of system to meet manufacturer and specified requirements prior to completion.
dd. Furnish, install, and remove temporary electrical power at locations necessary to be used by other multiple trades to complete their scope of work.
ee. Furnish, install, and remove temporary lighting throughout the building. Light shall be adequate to allow other trades to complete their work.
ff. Provide coordination with operable window shades to assure proper rough-in locations and connections.
gg. Assure compliance to the overall schedule provided to allow required completion of activities associated with this Contract Category. Assure necessary overtime hours and manpower is provided to meet the requirement of the overall schedule. Provide dedicated crews and manpower when multiple simultaneous tasks must take place under this Contract Category.
hh. Provide labeling at all receptacles to match breakers and also indicate emergency power and/or GFCI protection.

ii. Drill tapcon fasters or similar to hollow core plank when fastening to hollow core for light fixtures. Shooting in fasteners is not permitted.
jj. Include provisions for and hook-up of scoreboards noted as OFCI.
kk. Include labelling of all firestopped penetrations through rated assemblies.
ll. Coordinate system disturbances/outages with Construction Manager and Owner.
mm. Provide wire guards at devices where indicated.
nn. Progressive and final cleanup of the Contractor's work.
oo. Generally covered by specification sections as follows:
    i. 07 8413 – Penetration Firestopping
    ii. 07 9200 – Joint Sealants
    iii. 08 3100 – Access Doors and Panels
    iv. Divisions 26, 27, & 28

CC #31A - <u>EARTHWORK</u>

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Sitework, including but not limited to the following:
b. Erosion control, soil stabilization, slope protection and their maintenance until final stabilization and acceptance by the Construction Manager. This package includes all work required to abide by the requirements of the Storm Water Pollution Prevention Plan (SWPPP) associated with only this Project and approved by the State of North Dakota. The Construction Manager will be responsible for acquiring the SWPPP Permit. Any fines levied due to lack of erosion control and maintenance will be the responsibility of this Contractor.
c. Construction of temporary roads, parking areas, and lay down areas as indicated on the Site Logistics Plan. Maintenance of all temporary roads and hardstand areas, including grading, dust control, and snow removal. At project completion and as directed by the Construction Manager, remove all temporary hardstand surfaces and return areas to original condition.
d. Temporary grassing to all disturbed areas and its maintenance.
e. Contractor shall be responsible for coordinating with all utility companies for the location of buried and overhead utilities prior to excavation whether shown on the plans or not shown, as necessary to accommodate proposed construction.
f. Provide and arrange barricades and signage to accommodate site work and facilitate traffic control as required to perform this scope of work.
g. Contractor shall maintain vehicle and pedestrian access to private and public areas at all times.
h. Provide daily street cleaning during construction periods in which earthwork activities occur.
i. Provide and pay for all temporary utilities necessary for the scope of work within this Contract Category.
j. Contractor shall maintain the pavement section with construction methods that will maintain the integrity of the subgrade during subsequent pavement placement operations within ± 1 inch.
k. Site preparation, site clearing, site demolition, removal of existing trees and landscaping as indicated and protection of existing trees and landscaping as indicated. Contractor shall replace any trees or shrubs that are damaged and not deemed for removal with similar size and species at the expense of the Contractor.
l. Restore all areas to preconstruction conditions or better.
m. Demolish existing site items as scheduled within the site demolition plan.

n. Pavement removal – Full depth saw cut to all pavement to be removed. Sawcut at existing joints to facilitate concrete removal. Sawcut existing pavement to allow clean tie-in to adjacent surfaces or new pavement.
o. Lawful offsite disposal of all debris as a result of this Contractor's work.
p. Import approved topsoil, bedding and structural fill materials as necessary.
q. Unsuitable soils shall be removed underneath all foundation concrete and replaced with structural fill materials, over excavate as required.
r. Excavate, haul off site, and lawfully dispose of all unsuitable soils that will not be reused on the Project Site.
s. All sitework grading.
t. Structural excavation, backfill, and compaction for all building foundations, concrete slab-on-grade, and site concrete.
u. Provide excavation for retaining wall.
v. Provide and install drain tile around the new foundation and elevator pit for connection into sump pits as required. Backfill with appropriate material once installed. Coordinate connection with CC #22/23A.
w. Provide and install drain tile at the new turf field.
x. Provide and place aggregate base materials for areas scheduled for all site pavement, roadway, sidewalk and curbs.
y. Provide and stockpile sand cushion materials within building footprint to be spread out by CC #03A.
z. Provide and place all geotextile fabric and thrust blocks required under this scope of work.
aa. Provide any geotextile fabric required beneath the aggregate base.
bb. Provide geotextile fabric under parking and drive areas.
cc. Dewatering of site and excavations.
dd. Include costs to provide frost free structural fill materials for backfill if this work is to be completed in winter conditions.
ee. Provide bridging indicated at track to turf field and maintain as necessary. Assure appropriate protection to existing track. Provide removal upon completion.
ff. All stockpiled topsoil should be assumed to be trucked off site and trucked back to the site once it can be spread for the final placement.
gg. Provide curb cuts as indicated. Coordinate with CM.
hh. Multiple crews as necessary to work on building foundations and turf related earthwork concurrently.
ii. Assure provisions to complete bus loop revision summer of 2026.
jj. All work for the new school shall be in accordance with the Geotechnical Report prepared by AET dated 11/21/2025.
kk. All work at Hanna Field shall be in accordance with the Geotechnical Report prepared by Terracon dated 11/01/2016.
~~ll. Provide and install pressure treated 2" x 4" Wood Nailer at artificial turf field per detail (3/C902).~~
mm. Provide highway guardrail with embedded beams as indicated.
nn. Include provisions as per specification section 01 5000 - Temporary Facilities and Controls (site logistics plan).
oo. Provide and place all subgrade (rock, etc.) at new synthetic field turf. Coordinate with CC #09I – Synthetic Turf.
pp. Progressive and final cleanup of the Contractor's work.
qq. Generally covered by specification sections as follows:
    i. Divisions 31, 32, and 33 (See Civil Sheets)

CC #32A - ASPHALT PAVING

a. Provide supervision, layout, shop drawings, labor, material, equipment, and other incidental items of cost to complete all Bituminous / Asphalt Paving work, including but not limited to the following:
b. All Site bituminous paving including parking lots and driveways.
c. Provide fine grading of base materials installed by others.
d. Provide asphalt paving in parking areas.
e. Provide pavement striping.
~~f. Provide sealants at paved areas.~~
g. Include multiple mobilizations per construction schedule.
h. Assure provisions to complete bus loop revision summer of 2026.
i. Progressive and final cleanup of the Contractor's work.
j. Generally covered by specification sections as follows:
    i. Division 32 – Bituminous Pavement (See Civil Sheets)

CC #32B - SITE CONCRETE

a. Provide supervision, layout, shop drawings, labor, material, equipment, and other incidental items of cost to complete all Site Concrete work, including but not limited to the following:
b. All site concrete work including parking areas, driveways, concrete walks, curb and gutter, walkways, ramps, pads, and steps with forming, reinforcement, and accessories.
c. Provide fine grading of base materials installed by others.
d. Provide keyways as indicated.
e. Provide all reinforcing and dowels as shown/specified.
f. Provide all detectable inserts/surfaces in concrete pavement.
g. Provide all saw cutting of concrete in patterns indicated.
h. Provide and install all expansion joint and sealants at control joints included in this Contract Category.
i. Provide any tooling patterns in concrete shown.
j. Price alternate for providing concrete pavement in lieu of asphalt pavement in parking areas. Include striping as indicated on plans.
k. Assure provisions to complete bus loop revision summer of 2026.
l. Price alternate for providing concrete pavement in lieu of asphalt pavement in parking areas. Include striping as indicated on plans.
m. Concrete testing is by the Construction Manager. Provide assistance if required, to the testing company.
n. Progressive and final cleanup of the Contractor's work.
o. Generally covered by specification sections as follows:
    i. Division 32 – Concrete Paving (See Civil Sheets)

CC #32C - LANDSCAPING

a. Provide supervision, layout, shop drawings, labor, material, equipment, and other incidental items of cost to complete all Landscaping ~~and Irrigation~~ work, including but not limited to the following:
b. Provide and backfill retaining wall, include supply of the fill materials to backfill the wall.
c. Excavation of the retaining wall shall be by others.

d. Provide and install rock in areas indicated.
e. Provide and install mulch in areas indicated.
f. Provide and install all plantings.
g. Repair areas damaged by construction by seeding.
    i. Include unit rate for additional seeding beyond the extents indicated.
h. Maintain seeded/sodded areas after planting for the duration indicated in specifications.
    i. Include Alternate Add price to provide on-going watering for establishment of seeding up until 2nd mowing is completed.
i. Provide segmented block retaining walls as indicated.
j. Topsoil to be placed by others. Include fine grading of top soil.
k. Provide temporary watering of landscaping and plantings as required.
l. Progressive and final cleanup of the Contractor's work.
m. Generally covered by specification sections as follows:
    i. Division 32 – Landscaping & Seeding (See Civil Sheets)

CC #32D – SYNTHETIC TURF

a. Provide supervision, layout, shop drawings, labor, material, equipment and other incidental items of cost to complete all Synthetic Turf work, including but not limited to the following:
b. Field verify existing conditions and sub grade prior to start.
c. Provide and install nailer board at perimeter of turf field.
d. Include all Sythetic Turf and installation accessoried for a complete system.
e. Coordinate elevation of turf fill in to allow final product to be level with the perimeter elevations.
f. Provide and place base materials necessary above finishing stone indicated.
g. Provide and paint striping on turf as indicated.
h. Include (1) mobilization and labor for a return trip after the first year of operation to correct any settling within the turf field area.
i. Progressive and final cleanup of the Contractor's work.
j. Generally covered by specification sections as follows:
    i. 32 1813 – Synthetic Grass Surfacing

CC #33A - UTILITIES

a. Provide supervision, layout, shop drawings, labor, material, equipment, and other incidental items of cost to complete all Utilities work, including but not limited to the following:
b. Contractor shall be responsible for coordinating with all utility companies for the location of buried utilities prior to excavation whether shown on the plans or not shown, as necessary to accommodate proposed construction.
c. Remove existing sanitary sewer lines and manholes as indicated on the drawings. Include removal/replacing inverts and core drilling holes in existing manholes.
d. Contractor to include removal or filling abandoned lines with CDF.
e. Contractor to include all exterior sanitary sewer, water main, and storm water work within 5 feet of the building and according to the Utility Plan. Include all trenching, backfill, and compaction. Contractor must coordinate elevations with Plumbing contractor.
f. Contractor to include gate valves, tapping tees and any other components required to make connections to existing piping.
g. Provide all bedding materials for utility piping.

h. Tie into existing structures as noted.
i. Contractor to include exploratory work as necessary to confirm invert elevations.
j. Provide barricades and signage, and arrange to close streets as required to complete the contracted work.
k. Pavement removal – Full depth saw cut all pavement to be removed. Sawcut at existing joints to facilitate concrete removal as required. Sawcut existing pavement, as required, to allow clean tie-in to adjacent surfaces or new pavement. Contractor to include patching of existing streets, sidewalks, bike paths, and curbs as required for any utility tie-in connections, if necessary.
l. Provide daily street cleaning during construction periods in which utility activities occur.
m. Provide and pay for all temporary utilities necessary for the scope of work within this Contract Category.
n. Provide required testing, such as pressure and disinfection testing, of newly installed water services.
o. Provide cleaning of utilities if required.
p. Includes restoration of disturbed areas, to include compaction of trenches, re-spreading of topsoil, and seeding of grass to previous condition.
q. Utility excavations to be shielded and/or shored as necessary.
r. Remove and haul off site excess spoils associated with utility work.
s. Assure multiple crews as necessary to work on Building and Field Turf related utilities concurrently to meet schedule requirements.
t. Maintain OSHA required clearances from overhead power lines.
u. Design and submit a traffic control plan for work taking place within City streets.
v. Progressive and final cleanup of the Contractor's work.
w. Generally covered by specification sections as follows:
    i. Division 31 – Earthwork (See Civil Sheets)
    ii. Division 33 – Utilities (See Civil Sheets)

SECTION 05 4000
COLD-FORMED METAL FRAMING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Formed steel stud exterior wall and interior wall framing.

B. Formed steel joist and purlin framing and bridging.

1.02 RELATED REQUIREMENTS

1.03 REFERENCE STANDARDS

A. AISI S100 - North American Specification for the Design of Cold-Formed Steel Structural Members; 2016, with Supplement (2020).

B. AISI S201 - North American Standard for Cold-Formed Steel Framing - Product Data; 2017.

C. AISI S240 - North American Standard for Cold-Formed Steel Structural Framing; 2015, with Errata (2020).

D. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.

E. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.

F. ASTM A780/A780M - Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings; 2020.

G. ASTM A1003/A1003M - Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members; 2015.

H. ASTM C1007 - Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories; 2020 (Reapproved 2024).

I. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

J. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer; 2004.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordinate with work of other sections that is to be installed in or adjacent to metal framing systems, including but not limited to structural anchors, cladding anchors, utilities, insulation, and firestopping.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Product Data: Provide data on cold-formed steel structural members; include material descriptions and base steel thickness.

C. Product Data: Provide manufacturer's data on factory-made connectors and mechanical fasteners, showing compliance with requirements.

D. Shop Drawings: Indicate component details, framed openings, bearing, anchorage, loading, welds, and type and location of fasteners, and accessories or items required of related work.

1. Indicate stud and roof joist layout.
2. Describe method for securing studs to tracks and for bolted framing connections.

E. Design Data:
   1. Shop drawings signed and sealed by a professional structural engineer.
   2. Design calculations sufficient to demonstrate compliance with design criteria; signed and sealed by a professional structural engineer in the State of North Dakota.

F. Evaluation Service Reports: Provide reports indicating compliance with specified requirements for cold-formed steel structural members.

1.06 QUALITY ASSURANCE

A. See Section 01 4000 - Quality Requirements for additional requirements.

B. Designer Qualifications: Design framing system under direct supervision of a professional structural engineer experienced in designing this work and licensed in the State in which the Project is located.

C. Installer Qualifications: Company specializing in performing the work of this section with minimum three years experience.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Structural Framing:
   1. CEMCO: www.cemcosteel.com/#sle.
   2. ClarkDietrich: www.clarkdietrich.com/#sle.
   3. Jaimes Industries: www.jaimesind.com/#sle.
   4. MarinoWARE: www.marinoware.com/#sle.
   5. SCAFCO Corporation: www.scafco.com/#sle.
   6. Steel Construction Systems: www.steelconsystems.com/#sle.
   7. The Steel Network, Inc: www.SteelNetwork.com/#sle.
   8. Substitutions: See Section 01 6000 - Product Requirements.

B. Connectors:
   1. ClarkDietrich: www.clarkdietrich.com/#sle.
   2. MarinoWARE: www.marinoware.com/#sle.
   3. Simpson Strong-Tie: www.strongtie.com/#sle.
   4. Substitutions: See Section 01 6000 - Product Requirements.

2.02 PERFORMANCE REQUIREMENTS

A. Design Requirements: Design cold-formed framing systems, components and connectors to withstand specified design loads in compliance with ICC (IBC), ASCE 7, AISI S100, and AISI S240.

B. Design Criteria: As indicated on the drawings.
   1. Live load deflection meeting the following, unless otherwise indicated:
      a. Roofs: Maximum vertical deflection under live load of 1/360 of span.
      b. Exterior Walls: Maximum horizontal deflection under wind load of 1/240 of span.
      c. Design nonaxial loadbearing framing to accommodate not less than 3/4 in vertical deflection.
   2. Able to tolerate movement of components without damage, failure of joint seals, undue stress on fasteners, or other detrimental effects when subject to seasonal or cyclic day/night temperature ranges.
   3. Able to accommodate construction tolerances, deflection of building structural members, and clearances of intended openings as called out in drawings.

C. Fabrication:
   1. Shop-fabricate cold-formed framing systems and connectors to the greatest extent possible.
   2. Deliver to project site in largest practical sections.

2.03 MATERIALS

A. Material and Product Requirements Criteria: AISI S201.

B. Steel Sheet: ASTM A1003/A1003M, subject to the ductility limitations indicated in AISI S240.
   1. Structural Grade: As required to meet design criteria.

2.04 STRUCTURAL FRAMING COMPONENTS

A. Wall Studs and Track Sections: AISI S240; c-shaped studs and u-shaped track sections in stud-matching nominal width and compatible height.
   1. Thickness and Depth: Depth as indicated on the drawings; thickness and structural grade as required to meet design criteria.

B. Joists: AISI S240; c-shaped studs and u-shaped track sections in stud-matching nominal width and compatible height
   1. Thickness and Depth: Depth as indicated on drawings; thickness and structural grade as required to meet specified design criteria.

C. Purlins: AISI S240; manufactured Z-shaped, stiffened-lip sections.
   1. Corrosion Protection Coating Designation: CP 90 in accordance with AISI S240.
   2. Thickness and Depth: Depth as indicated on drawings; thickness and structural grade as required to meet specified design criteria.

2.05 CONNECTIONS

A. Structural Performance: Maintain load and movement capacity required by applicable building code and specified design criteria.

B. Movement Connections: Provide mechanical anchorage devices that accommodate movement using slotted holes, shouldered screws or screws and anti-friction or stepped bushings, while maintaining structural performance of framing. Provide movement connections where indicated on drawings.

C. Fixed Connections: Provide nonmovement devices for tie-down to foundation, floor-to-floor tie-down, roof-to-wall tie-down, joist hangers, gusset plates, and stiffeners.

D. Bridging Connections: Provide mechanical load-transferring devices that accommodate wind load torsion and weak axis buckling induced by axial compression loads. Provide bridging connectors where indicated on the drawings.

2.06 MISCELLANEOUS CONNECTIONS

A. Self-Drilling, Self-Tapping Screws, Bolts, Nuts and Washers: Hot-dip galvanized per ASTM A153/A153M.

B. Anchorage Devices: Powder actuated.

C. Welding: Comply with AWS D1.1/D1.1M.

2.07 SHEATHING

A. Wall Sheathing: See Section 06 1600.

2.08 ACCESSORIES

A. Bracing, Furring, Bridging: Formed sheet steel, thickness determined for conditions encountered; finish to match framing components.

B. Galvanizing Repair: Touch up bare steel with zinc-rich paint in compliance with ASTM A780/A780M.

C. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces are ready to receive work.

B. Verify field measurements and adjust installation as required.

3.02 PREPARATION

A. Structural Wall Foundations: For gaps between wall bottom track and top of foundation 1/4 inch or greater, level substrate with loadbearing shims or grout between track and foundation.

3.03 INSTALLATION - GENERAL

A. Install structural members and connections in compliance with ASTM C1007.

3.04 INSTALLATION OF STUDS

A. Install wall studs plumb and level.

B. Construct corners using minimum of three studs. Install double studs at wall openings, door and window jambs.

C. Install load-bearing studs full length in one piece. Splicing of studs is not permitted.

D. Install load-bearing studs; brace, and reinforce to develop full strength and achieve design requirements.

E. Coordinate placement of insulation in multiple stud spaces made inaccessible after erection.

F. Install intermediate studs above and below openings to align with wall stud spacing.

G. Provide deflection allowance in stud track, directly below horizontal building framing at non-loadbearing framing.

H. Attach cross studs to studs for attachment of fixtures anchored to walls.

I. Install framing between studs for attachment of mechanical and electrical items, and to prevent stud rotation.

3.05 INSTALLATION OF JOISTS AND PURLINS

A. Install framing components in accordance with manufacturer's instructions.

3.06 INSTALLATION OF WALL SHEATHING

A. Install wall sheathing with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using self-tapping screws.

3.07 FIELD QUALITY CONTROL

A. See Section 01 4000 - Quality Requirements, for additional requirements.

3.08 TOLERANCES

A. Studs - Vertical Alignment (Plumbness): 1/960 of span or 1/8 inch in 10 ft, in accordance with ASTM C1007.

B. Studs - Maximum Variation from True Position: 1/8 inch in accordance with ASTM C1007.

C. Stud Spacing: 1/8 inch from the designated spacing, provided that the cumulative error does not exceed the requirements of the finishing materials in accordance with ASTM C1007.

END OF SECTION 05 4000

SECTION 05 5000
METAL FABRICATIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Shop fabricated steel items, including:
   1. Support for ceiling-hung MEP items
   2. Support for overhead door components
   3. Overhead door jamb plates

B. Miscellaneous angles, channels, tubes, plates, brackets and fasteners, as required to complete the project, including but not limited to:
   1. Shelf angles
   2. Jamb angles and plates
   3. Loose angle lintels
   4. Edger for depressed slabs.

C. Slotted Channel Adjustable Framing System

D. Anchor bolts, steel pipe sleeves, slotted-channel inserts, and wedge-type inserts indicated to be cast into concrete or built into unit masonry.

~~E. Aluminum sunshade girts and connections.~~

1.02 RELATED REQUIREMENTS

A. Section 03 3000 - Cast-in-Place Concrete: Placement of metal fabrications in concrete.

B. Section 03 4500 - Precast Architectural Concrete: Placement of metal fabrication in precast architectural concrete.

C. Section 04 2000 - Unit Masonry: Placement of metal fabrications in masonry.

D. Section 05 1200 - Structural Steel Framing: Structural steel column anchor bolts.

E. Section 05 2100 - Steel Joist Framing: Structural joist bearing plates, including anchorage.

F. Section 05 3100 - Steel Decking: Bearing plates for metal deck bearing, including anchorage.

G. Section 05 5100 - Metal Stairs.

H. Section 05 5213 - Pipe and Tube Railings.

I. Section 05 7300 - Decorative Metal Railings: steel railings.

J. Section 06 1000 - Rough Carpentry: concealed blocking or substrate for items specified in this section.

K. Section 09 9123 - Interior Painting: Paint finish.

L. Section 09 9600 - High-Performance Coatings: finish indicated as "HPC"

1.03 REFERENCE STANDARDS

A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel.

B. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.

C. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.

D. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.

E. ASTM A283/A283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates.

F. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength.

G. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.

H. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

I. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength.

J. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination.

K. AWS D1.1/D1.1M - Structural Welding Code - Steel.

L. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer.

M. SSPC-Paint 20 - Zinc-Rich Coating (Type I - Inorganic, and Type II - Organic).

N. SSPC-SP 2 - Hand Tool Cleaning.

~~O. ASTM B308/B308M – Standard Specification for Aluminum-Alloy 6061-T6 Standard Structural Profiles.~~

~~P. AWS D1.2/D1.2M – Structural Welding Code – Aluminum; 2014, with Errata (2020).~~

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Shop Drawings: provide for fabricated items listed in 1.01A and 1.01E above.

1. Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.
2. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.
3. Where installing items to existing precast concrete, concrete or masonry, propose connections not detailed for structural engineer approval.

1.05 QUALITY ASSURANCE

A. Design members and connections under direct supervision of a Professional Structural Engineer experienced in design of this Work and licensed in the State in which the Project is located.

B. Fabricate steel items in accordance with AISC "Steel Construction Manual."

~~C. Fabricate aluminum items in accordance with Aluminum Association "Aluminum Construction Manual."~~

PART 2 PRODUCTS

2.01 MATERIALS - STEEL

A. Recycled Content: Provide steel products with a recycled content of not less than 25 percent.

B. Steel Sections: ASTM A36/A36M.

C. Steel Tubing: ASTM A500/A500M Grade B cold-formed structural tubing.

D. Plates: ASTM A283/A283M.

E. Pipe: ASTM A53/A53M, Grade B Schedule 40, black finish.

F. Slotted Channel Framing: ASTM A653/A653M, Grade 33.

G. Slotted Channel Fittings: ASTM A1011/A1011M.

H. Bolts, Nuts, and Washers: ASTM A307, galvanized to ASTM A153/A153M where connecting galvanized components.

I. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.

J. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.

K. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.

L. Anchoring Devices:
   1. Anchor Rods: Anchor rods used with structural steel members shall be plain steel rods conforming to ASTM F1554 (Grade 36), complete with suitable nuts and washers, unless noted otherwise.
   2. Expansion Bolts: Expansion anchors shall consist of one-piece wedge type carbon steel anchor bolts with heavy-duty nuts and washers. All components shall be zinc plated in accordance with ASTM B633.
      a. Structural Applications
         1) Acceptable products must have a valid and current ICC report, as listed at www.icc-es.org <http://www.icc-es.org>.
      b. Non-Structural Applications
         1) Acceptable Manufacturers and products: Hilti Fastening Systems- Kwik Bolt III Anchor; ITW Red Head Mechanical Anchoring Systems - Trubolt Wedge Anchor; Powers Fastening Inc - Power-Stud Anchor; (or approved equivalent)
   3. Epoxy Adhesive Anchoring System: Epoxy anchoring shall consist of a threaded rod and the epoxy adhesive cartridge.
      a. Structural Applications
         1) Acceptable products must have a valid and current ICC report, as listed at www.icc-es.org <http://www.icc-es.org>.
      b. Non-Structural Applications
      c. Acceptable Manufacturers and products: Hilti Fastening System - HIT RE 500; ITW Red Head Adhesive Anchoring Systems - Epcon C6 Adhesive; Powers Fastening Inc. - PE1000+; (or approved equivalent.

M. Grout: Non-shrink, non-metallic aggregate type, complying with ASTM C 1107/C 1107M and capable of developing a minimum compressive strength of 5,000 psi at 28 days.

2.02 FABRICATION

A. General: Provide steel framing and supports not specified in other Sections as needed to complete the work.

B. Fabricate units from steel shapes, plates, bars of welded construction unless otherwise indicated. Fabricate to sizes, shapes and profiles indicated and as necessary to receive adjacent construction.

C. Fit and shop assemble items in largest practical sections, for delivery to site.

D. Fabricate items with joints tightly fitted and secured.

E. Continuously seal joined members by continuous welds, where welding is indicated.

F. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

G. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.

H. Furnish components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

I. Welded Joints: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings. Weld corners and seams continuously where visible or where exposed to moisture, even if intermittent or stitch welds are structurally adequate, and to comply with the following:

1. Exterior Components: Continuously seal joined pieces by continuous welds. Drill condensate drainage holes at bottom of members at locations that will not encourage water intrusion.
2. Interior Components: Continuously seal joined pieces by continuous welds.
3. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

2.03 FABRICATED ITEMS

A. Ledge Angles, Shelf Angles, Channels, and Plates Not Attached to Structural Framing: For support of metal decking and other non-structural members; prime paint finish.
   1. Items used at the exterior to be galvanized.

B. Lintels: As detailed or as scheduled in Structural Notes; prime paint for field finish.
   1. Size loose lintels to provide bearing length at each side of opening to be 1/12 its length, but not less 8 inches, unless noted otherwise.
   2. Fabricate loose steel lintels from steel angles and shapes of size indicated for openings and recesses in masonry walls at locations indicated. Fabricate in single lengths for each opening unless otherwise indicated. Weld adjoining members together to form a single unit where indicated.

C. Door Frames for Overhead Door Openings: Steel plate and angle sections; thickness and depths as detailed; galvanized finish for High Performance Coating finish.

D. Support Framing for Overhead Door Operator: angles, unistrut or as recommended by manufacturer.

E. Support for Ceiling-hung MEP items: As detailed, prime paint finish. If not detailed, use slotted channel adjustable framing system

F. Slotted Channel Framing: Fabricate channels and fittings from structural steel complying with the referenced standards; factory-applied, rust-inhibiting thermoset acrylic enamel finish.
   1. Product: System of channel members and bolted connections fabricated to support loads without welded connections.
   2. Fittings and accessories shall be fabricated from hot rolled, pickled and oiled steel plates meeting the requirements of ASTM A 575.
   3. Nuts and screws shall be Unified and American coarse screw thread meeting the requirements of ASTM A 576 GR1015 (nut), and ASTM A 307 and SAE J429 GR2 (screw).
   4. Nuts and screws shall be electro-galvanized (EG) coated to commercial standards meeting the requirements of ASTM B 633 Type III SC1 finish.
   5. Finish: Adjustable framing shall be pre-finished with Unistrut's Perma-Green II; B-Line's Dura Green; or equal. All miscellaneous accessories, brackets, and fittings shall match framing.
   6. Manufacturer: Unistrut Corporation Unistrut; B-Line Systems, Inc. Powerstruct; or equal.

2.04 FINISHES - STEEL

A. Prime paint steel items.
   1. Exceptions: Galvanize items to be embedded in concrete, items to be imbedded in masonry, and concealed exterior items.
   2. Exceptions: Do not prime surfaces in direct contact with concrete, where field welding is required, and items to be covered with sprayed fireproofing.

B. Prepare surfaces to be primed in accordance with SSPC-SP2.

C. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.

D. Prime Painting: One coat.

E. Galvanizing of Structural Steel Members: Galvanize after fabrication to ASTM A123/A123M requirements. Provide minimum 1.7 oz/sq ft galvanized coating.

F. Galvanizing of Non-structural Items: Galvanize after fabrication to ASTM A123/A123M requirements.

2.05 FABRICATION TOLERANCES

A. Squareness: 1/8 inch maximum difference in diagonal measurements.

B. Maximum Offset Between Faces: 1/16 inch.

C. Maximum Misalignment of Adjacent Members: 1/16 inch.

D. Maximum Bow: 1/8 inch in 48 inches.

E. Maximum Deviation From Plane: 1/16 inch in 48 inches.

~~2.06 MATERIALS - ALUMINUM~~

~~A. Aluminum Sections: ASTM B308/B308M-95a and shall be Aluminum Association (AA) Designation 6061-T6 alloy or as otherwise specified.~~

~~B. Finish: All aluminum items shall be anodized. After forming and welding operations, and before assembly, each piece of aluminum shall be finished (anodized) in accordance with the following Aluminum Association Designations:~~
~~1. Structural shapes and bars: AA-M10C11C21A41, with minimum 0.8 mil coating.~~

~~C. Welding Materials: AWS D1.2/D1.2M; type required for materials being welded.~~

~~D. Protection: Surfaces in contact with concrete, grout (except epoxy grout), mortar, steel (except stainless steel), or buried in the ground shall be protected with a heavy coating of Bitumastic 300M, as manufactured by Kop-Coat, Inc. or approved equal.~~

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive work.

B. Examine substrates and site area for conditions that might prevent satisfactory installation.

C. Verify that dimensions of supporting structure are within plus/minus 1/8 inch of dimensions shown on shop drawings.

D. Verify that all adjacent painting, roofing, masonry work, and other work that might damage prefinished items has been completed prior to installation.

3.02 PREPARATION

A. Clean and strip primed steel items to bare metal where site welding is required.

B. Furnish setting templates to the appropriate entities for steel items required to be cast into concrete or embedded in masonry.

C. Remove all mill scale, rust, grease, foreign matter and surface imperfections from steel components that will be painted to ensure a smooth, even appearance of finish.

3.03 INSTALLATION

A. Install premanufactured items in accordance with manufacturer's installation instructions.

B. Install items plumb and level, accurately fitted, free from distortion or defects.

C. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.

D. Anchor units to structure as indicated on the drawings.

E. Field weld components as indicated on shop drawings.
1. Perform field welding in accordance with AWS D1.1/D1.1M.

F. Obtain approval prior to site cutting or making adjustments not scheduled.

G. After erection, prime welds, abrasions, and surfaces not shop primed or galvanized, except surfaces to be in contact with concrete.

H. Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction. Provide threaded fasteners for use with concrete and masonry inserts, toggle bolts, through bolts, lag bolts, wood screws, and other connectors. Grout voids as required to result in secure installation.

I. Touch-up damaged finish coating using material provided by manufacturer to match original coating.

~~J. Where the contact of dissimilar metals may cause electrolysis or where aluminum will come in contact with concrete, mortar or plaster, the contact surface of the metals shall be separated using not less than one coat of zinc chromate primer and one heavy coat of aluminum pigmented asphalt paint on each surface; or where deemed necessary by the Engineer of Record, not less than one course of asphalt saturated cotton fabric cemented to both metals with flashing cement, shall be used. Finished works shall be cleaned and excess cement removed.~~

3.04 TOLERANCES

A. Maximum Variation From Plumb: 1/4 inch per story or 10 feet, non-cumulative.

B. Maximum Offset From True Alignment: 1/4 inch in 10 feet.

C. Maximum Out-of-Position: 1/4 inch in 48 inches.

3.05 CLEANING

A. Clean exterior surfaces of dust and debris; follow manufacturer's cleaning instructions for the finish used.

3.06 PROTECTION

A. Protect items after installation to prevent damage due to other work until Date of Substantial Completion

END OF SECTION

SECTION 08 71 00
DOOR HARDWARE

PART 1 - GENERAL

1.1 CONDITIONS

A. Conditions of the contract (General and Supplementary Conditions) and Division 01 - General Requirements, govern the work of this section.

B. This section includes all material and related service necessary to furnish all finish hardware indicated on the drawings or specified herein.

C. Furnish UL listed hardware for all labeled and 20 min. openings in conformance with the requirements for the class of opening scheduled. Underwriters' requirements shall have precedence over specification where conflicts exist.

D. All work shall be in accordance with all applicable state and local building codes. Code requirements shall have precedence over this specification where conflicts exist.

1.2 WORK INCLUDED

A. This section includes the following:

1. Furnish door hardware specified herein, listed in the hardware schedule, and/or required by the drawings.
2. Cylinders for Aluminum Doors
3. Thresholds and Weather-stripping (Aluminum frame seals to be provided by aluminum door supplier)
4. Electro-Mechanical Devices

B. Where items of hardware are not definitely or correctly specified and are required for the intended service, such omission, error or other discrepancy should be directed to the Architect prior to the bid date for clarification by addendum. Otherwise furnish such items in the type and quantity established by this specification for the appropriate service intended.

1.3 RELATED WORK IN OTHER SECTIONS

A. This section includes coordination with related work in the following sections:

1. Division 06 Section "Finish Carpentry".
2. Division 08 Section "Hollow Metal Doors and Frames".
3. Division 08 Section "Wood Doors"
4. Division 08 Section "Aluminum Entrances and Storefronts"
5. Division 26 Section “Electrical”
6. Division 28 Section "Electronic Safety and Security".

1.4 REFERENCES

A. Publications of agencies and organizations listed below form a part of this specification section to the extent referenced.

1. DHI - Recommended Locations for Builders' Hardware.
2. NFPA 80 - Standards for Fire Doors and Windows.
3. NFPA 101 - Code for Safety to Life from Fire in Buildings and Structures.
4. UL - Building Material Directory.
5. DHI - Door and Hardware Institute
6. WHI - Warnock Hersey
7. BHMA - Builders Hardware Manufacturers Association
8. ANSI – American National Standards Institute
9. IBC- International Building Code (as adopted and amended by local building code)

1.5 SUBMITTALS

A. Within ten days after award of contract, submit detailed hardware schedule in quantities as required by Division 01 - General Requirements.

B. Schedule format shall be consistent with recommendations for a vertical format as set forth in the Door & Hardware Institute's (DHI) publication "Sequence and Format for the Hardware Schedule". Hardware sets shall be consolidated to group multiple door openings which share similar hardware requirements. Schedule shall include the following information:

1. Door number, location, size, handing, and rating.
2. Door and frame material, handing.
3. Degree of swing.
4. Manufacturer
5. Product name and catalog number
6. Function, type and style
7. Size and finish of each item
8. Mounting heights
9. Explanation of abbreviations, symbols, etc.
10. Numerical door index, indicating the hardware set/ group number for each door.

C. When universal-type door closers are to be provided, the schedule shall indicate the application method to be used for installation at each door: (regular arm, parallel arm, or top jamb).

D. The schedule will be prepared under the direct supervision of a certified Architectural Hardware Consultant (AHC), or certified Door Hardware Consultant (DHC) employed by the hardware distributor. The hardware schedule shall be signed and embossed or stamped with the DHI certification seal of the supervising AHC or DHC. The supervising AHC or DHC shall attend any meetings related to the project when requested by the architect.

E. Check the specified hardware for suitability and adaptability to the details and surrounding conditions.

F. Review drawings from related trades as required to verify compatibility with specified hardware. Indicate unsuitable or incompatible items, and proposed substitutions in the hardware schedule.

G. Provide documentation for all hardware to be furnished on labeled fire doors indicating compliance with positive pressure fire testing UL 10C.

H. Furnish manufacturers' catalog data for each item of hardware in quantities as required by Division 01 - General Requirements.

I. Submit a sample of each type of hardware requested by the architect. Samples shall be of the same finish, style, and function as specified herein. Tag each sample with its permanent location so that it may be used in the final work.

J. Furnish with first submittal, a list of required lead times for all hardware items.

K. After final approved schedule is returned, transmit corrected copies for distribution and field use in quantities as required by Division 01 - General Requirements.

L. Furnish approved hardware schedules, template lists, and pertinent templates as requested by related trades.

M. Furnish necessary diagrams, schematics, voltage and amperage requirements for all electro-mechanical devices or systems as required by related trades. Wiring diagrams shall be opening-specific and include both a riser diagram and point to point diagram showing all wiring terminations.

N. After receipt of approved hardware schedule, Hardware supplier shall initiate a meeting including the owner’s representative to determine keying requirements. Upon completion of initial key meeting, hardware supplier shall prepare a proposed key schedule with symbols and abbreviations as set forth in the door and hardware institute’s publication “Keying Procedures, Systems, and Nomenclature”. Submit copies of owner approved key schedule for review and

field use in quantities as required by Division 01 - General Requirements. Wiring diagrams shall be included in final submittals transmitted for distribution of field use.

1.6 QUALITY ASSURANCE

A. Manufacturers and model numbers listed are to establish a standard of function and quality. Similar items by approved manufacturers that are equal in design, function, and quality may be considered for prior approval of the architect, provided the required data and physical samples are submitted for approval as set forth in Division 01 - General Requirements.

B. Where indicated in this specification, products shall be independently certified by ANSI for compliance with relevant ANSI/BHMA standards A156.1 - A156.36 – Standards for Hardware and Specialties. All products shall meet or exceed certification requirements for the respective grade indicated within this specification. Supplier shall provide evidence of certification when requested by the architect.

C. Obtain each type of hardware (hinges, latch & locksets, exit devices, closers, etc.) from a single manufacturer, although several may be indicated as offering products complying with requirements.

D. Electrical drawings and electrical specifications are based on the specific electrified hardware components specified in hardware sets. When electronic hardware components other than those indicated in hardware sets are provided, the supplier shall be responsible for all costs incurred by the design team and their consultants to review and revise electrical drawings and electrical specifications. Supplier shall also be responsible for any additional costs associated with required changes in related equipment, materials, installation, or final hook up to ensure the system will operate and function as indicated in the construction documents, including hardware set operational / functional descriptions.

E. All hardware items shall be manufactured no earlier than 6 months prior to delivery to site.

F. Installation of hardware shall be installed or directly supervised and inspected by a skilled installer certified by the manufacturer of locksets, door closers, and exit devices used on the project, or with not less than 3 years' experience in successful completion of projects similar in size and scope.

G. Provide hardware for all labeled fire doors, which complies with positive pressure fire testing UL 10C.

H. Comply with all applicable provisions of the standards referenced within section 1.4 of this specification.

I. Hardware supplier shall participate when requested to meet with the contractor and or architect to inspect any claim for incorrect or non-functioning materials; following such inspection, the hardware supplier shall provide a written statement documenting the cause and proposed remedy for any unresolved items.

1.7 DELIVERY, STORAGE AND HANDLING

A. Hardware supplier shall deliver hardware to the job site unless otherwise specified.

B. All hardware shall be delivered in manufacturers' original cartons and shall be clearly marked with set and door number.

C. Contractor shall receive all hardware and provide secure and proper protection of all hardware items to avoid delays caused by lost or damaged hardware. Contractor shall report shortages to the Architect and hardware supplier immediately after receiving material at the job site.

D. Coordinate with related trades under the direction of the contractor for delivery of hardware items necessary for factory installation.

1.8 PRE-INSTALLATION MEETING

A. Schedule a hardware pre-installation meeting on site to review and discuss the installation of continuous hinges, locksets, door closers, exit devices, overhead stops, and electromechanical door hardware.

B. Meeting attendees shall be notified 7 days in advance and shall include: Architect, Contractor, Door Hardware Installers (including low voltage hardware), Manufacturer's representatives for above hardware items, and any other affected subcontractors or suppliers.

C. All attendees shall be prepared to distribute installation manuals, hardware schedules, templates, and physical hardware samples.

1.9 WARRANTY

A. All hardware items shall be warranted against defects in material and workmanship as set forth in Division 01 - General Requirements.

B. Repair, replace, or otherwise correct deficient materials and workmanship without additional cost to owner.

PART 2 - PRODUCTS

2.1 FASTENERS

A. All exposed fasteners shall be Phillips head or as otherwise specified and shall match the finish of adjacent hardware. All fasteners exposed to the weather shall be non-ferrous or stainless steel. Furnish correct fasteners to accommodate surrounding conditions.

B. Coordinate required reinforcements for doors and frames. Seek architect approval prior to furnishing through-bolts. Furnish through-bolts as required for materials not readily reinforced.

2.2 BUTT HINGES

A. Acceptable manufacturers and respective catalog numbers:

	Ives	Stanley	Hager	McKinney
1. Standard Weight, Plain Bearing	5PB1	F179	****	T2714
2. Standard Weight, Ball Bearing	5BB1	BB179	BB1279	TB2714
3. Standard Weight, Ball Bearing, Non-Ferrous	5BB1	FBB191	BB1191	TB2314
4. Heavy Weight, Ball Bearing	5BB1HW	FBB168	BB1168	T4B3786
5. Heavy Weight, Ball Bearing, Non-Ferrous	5BB1HW	FBB199	BB1199	T4B3386

B. Hinges shall be independently certified by ANSI for compliance with ANSI A156.1 (2006). Hinges shall meet or exceed the following ANSI grade requirements as indicated below:

1. Standard Weight, Plain Bearing Hinges: Grade 3
2. Standard Weight, 2 Ball Bearing Hinges: Grade 2
3. Heavy Weight, 4 Ball Bearing Hinges: Grade 1

C. Unless otherwise specified, furnish the following hinge quantities for each door leaf.

1. 3 hinges for doors up to 90 inches.
2. 1 additional hinge for every 30 inches on doors over 90 inches.
3. 4 hinges for Dutch door applications.

D. Unless otherwise specified, top and bottom hinges shall be located as specified in Division 08 Section "Hollow Metal Doors and Frames". Intermediate hinges shall be located equidistant from others.

E. Unless otherwise specified, furnish hinge weight and type as follows:

1. Standard-weight plain-bearing hinges or ball-bearing hinges for interior openings up to 36 inches wide without a door closer.
2. Standard weight ball bearing hinges for interior openings 36 to 40 inches wide without a door closer and for interior openings up to 40 inches wide with a door closer.

3. Heavyweight, ball bearing hinges for interior openings over 40 inches wide with a door closer and for all interior vestibule doors.
4. Heavyweight stainless steel ball bearing hinges for all exterior openings unless otherwise listed in groups.
5. Heavyweight 5” height ball bearing hinges for all doors that have an automatic operator.

F. Unless otherwise specified, furnish hinges for exterior doors, fabricated from brass, bronze, or stainless steel. Unless otherwise specified, hinges for interior doors may be fabricated from steel.

G. Unless otherwise specified, furnish hinges in the following sizes:

1. 5" x 5" 2-1/4" thick doors
2. 4-1/2" x 4-1/2" 1-3/4" thick doors
3. 3-1/2" x 3-1/2" 1-3/8" thick doors

H. Furnish hinges with width to accommodate trim and allow for 180-degree swing.

I. Unless otherwise specified, furnish hinges with flat button tips with non-rising pins. Furnish non-removable pin (NRP) hinges at all reverse-handed doors that are furnished with lockable hardware.

J. Unless otherwise specified, furnish all hinges to template standards.

2.3 CONTINUOUS GEARED HINGES

A. Acceptable manufacturers and respective catalog numbers:

	Ives	Hager	Pemko	Stanley
1. Full Mortise	112HD	780-112HD	FMSLFHD	661HD

B. Hinges shall be independently certified by ANSI for compliance with ANSI A156.26, Grade 1 (2012).

C. Continuous hinges shall be geared type hinge providing full height door support up to 600 lbs.

D. Hinge shall be non-handed with symmetrical template hole pattern and factory drilled.

E. Hinge to be able to carry Warnock Hersey Int. or UL for fire rated doors and frames up to 90 minutes.

F. Provide machine screws for doors which have been reinforced to accept machine screws.

G. Note: Fire label for doors and frames should be placed on the header and top rail of fire rated doors and frames.

2.4 POWER TRANSFERS

A. Acceptable manufacturers and respective catalog numbers:

	Von Duprin	ASSA
1. Concealed Ten Wire	EPT-10	CEPT-10

B. Door cords shall be armored cable with screw on caps.

C. Concealed power transfers shall be concealed in the door and frame when the door is closed.

D. Concealed power transfers shall have a steel tube to protect wires from being cut.

E. Concealed power transfers with spring tubes shall be rejected.

F. Concealed power transfers shall be supplied with a mud box to house all terminations.

2.5 FLUSH BOLTS AND DUST PROOF STRIKES

A. Acceptable manufacturers and respective catalog numbers:

	Ives	Trimco	Hager
1. Dust Proof Strike	DP2	3910	280X
2. Auto Flush Bolt (Metal Door)	FB31P	3810	292D

3. Auto Flush Bolt (Wood Door)	FB41P	3815L	291D
4. Constant Latching Bolt (Metal Door)	FB51P	3820	293D
5. Constant Latching Bolt (Wood Door)	FB61P	3825L	294D

B. Unless otherwise specified, provide 12" rods for manual flush bolts for door 7'6" or less, 24" top rods for doors over 7'6" to 8'6".

C. Unless otherwise specified, provide doors over 8'6" with automatic top bolts.

D. Provide automatic flush bolts where required to maintain fire door listing and or egress requirements on pairs of doors.

E. All flush-bolt applications shall be UL listed to be installed with top flush-bolt only. Provide auxiliary fire bolt as required for fire rated openings where less bottom bolt has been specified.

F. Provide all bottom flush bolts with non-locking dust proof strikes.

2.6 EXIT DEVICES

A. Acceptable manufacturers and respective catalog numbers:

	Von Duprin	Detex
1. Wide Stile, Push Pad	99 Series	Advantex (Wide Stile)
2. Wide Stile, Electric Latch Retraction	QEL 99 Series	Advante-ER x (Wide Stile)
3. Lever Trim	996 Series	“D/DM” Trim
4. Pull Trim	990 Series	“C” Trim

A. Exit devices shall be independently certified by ANSI for compliance with ANSI A156.3, Grade 1 (2008).

B. Obtain exit devices from a single manufacturer, although several may be indicated as offering products complying with requirements.

C. All exit devices shall be equipped with a sound-dampening feature to reduce touch pad return noise.

D. Quiet Electric Latch Retraction shall be accomplished using a motor driven assembly, and shall incorporate the following features:

1. Motor shall retract both the push pad assembly and latchbolt.
2. Automatic calibration of latch throw and pull.
3. Built-in time delay.
4. On-board installation and troubleshooting diagnostics built into power supply and device.
5. Retry mode if device does not pull on the first try.

E. On full glass doors there shall be no exposed fasteners on the back of the mechanism visible through the glass.

F. All exit devices shall be provided with flush end caps to reduce potential damage from impact.

G. All exit devices shall be provided with dead-locking latch bolts to ensure security.

H. All exit devices shall be U.L. listed for accident hazard. Exit device for use on fire doors shall also be U.L. listed for fire exit hardware.

I. Provide optional strikes, special length rods, and adapter plates to accommodate door and frame conditions. Provide narrow style series devices in lieu of wide stile series devices where optional strikes will not accommodate door and frame conditions.

J. Coordinate with related trades to ensure adequate clearance and reinforcement is provided in doors and frames. Provide through bolts as required.

K. Refer to hardware groups for exit device applications utilizing the option of: "less bottom rod and floor strike" (LBR)

L. All exit devices shall be provided with trim designs to match other lever and pull designs used on the project.

M. Provide glass bead kits as required to accommodate door conditions. Screws shall not be visible through full glass doors.

N. Where specified, provide compatible keyed mullions with cylinder for pairs of doors.

O. Provide Von Duprin #154 or equivalent mullion stabilizers at all doors with removable mullions.

P. Provide reinforced crossbars for all traditional style exit devices applied to doors over 36" wide.

2.7 LOCKS AND LATCHES

A. Acceptable manufacturers and respective catalog numbers:

	Schlage	Sargent
1. Grade 1 Mortise	L Series 17A	8200 LNP
2. Grade 1 Cylindrical	ND Series SPA	10X Line LP
3. Small Case Mortise Deadbolt	L400 Series	4870 Series

B. Bored locks shall be independently certified by ANSI for compliance with ANSI A156.2 (2011).

C. Mortise locks shall be independently certified by ANSI for compliance with ANSI A156.13 (2012).

D. Unless otherwise specified, all locks and latches have:

1. 2-3/4" Backset
2. 1/2" minimum throw latchbolt
3. 1" throw deadbolt
4. ANSI A115.2 strikes

E. Provide guarded latch bolts for all locksets and latch bolts with throw to maintain fire rating of both single and paired door assemblies.

F. Provide strike with lip length adequate to clear surrounding trim.

G. Provide wrought boxes for strikes at inactive doors, wood frames, and metal frames without integral mortar covers.

H. Provide temperature control modules for electrified locks to limit transfer of heat to door lever.

2.8 PULLS, PUSH BARS, PUSH/PULL PLATES

A. Acceptable manufacturers and respective catalog numbers:

	Ives	Burns	Hager
1. Offset Door Pull (1" dia., 10" CTC)	8190-0	39C	12J
2. Offset Pull / Push-Bar (1" dia., 10" CTC Pull)	9190-0	422 x 39C	159
3. Push Plate (.050 6"X 16")	8200 6" X 16"	56	30S 6 x 16
4. Pull Plate (1" dia., 10" CTC - .050" X 4" X 16")	8303-0 4" X 16"	5426C	34J 4 x 16

A. Adjust dimensions of push plates to accommodate stile and rail dimensions, lite and louver cutouts, and adjacent hardware. Where required by adjacent hardware, push plates shall be factory drilled for cylinders or other mortised hardware. All push plates shall be beveled on 4 sides and counter sunk.

B. When mounting straight pull on a wide stile door will prevent access to key cylinder, mount pull offset from cylinder location to allow access to cylinder.

C. Where possible, provide back-to-back, and concealed mounting for pulls and push bars. Push bar length shall be 3" less door width, or center of stile to center of stile for stile & rail or full glass doors.

2.9 COORDINATORS

A. Acceptable manufacturers and respective catalog numbers:

	Ives	Trimco	Hager
1. Bar Coordinator	COR x FL	3094	297D x 297F
2. Mounting Bracket	MB Series	3095/3096	297 Series

B. Provide coordinators at all pairs of doors having automatic flush bolts and closers on the inactive leaf, and for pairs of doors having vertical rod/mortise exit device combinations with overlapping astragals.

C. Provide appropriate filler bars, closer mounting brackets, carry bars, and special top latch preparations as required by adjacent hardware.

2.10 CLOSERS

A. Acceptable manufacturers and respective catalog numbers:

	LCN	Norton
1.	4050A / 4050A EDA	R7500 / PR7500

B. Door closers shall be independently certified by ANSI for compliance with ANSI A156.4, Grade 1 (2013).

C. Obtain door closers from a single manufacturer, although several may be indicated as offering products complying with requirements.

D. Provide extra heavy-duty arm (EDA / HD) when closer is to be installed using parallel arm mounting.

E. Hardware supplier shall coordinate with related trades to ensure aluminum frame profiles will accommodate specified door closers.

F. Closers shall use aluminum cylinders.

G. Closers for fire-rated doors shall be provided with temperature stabilizing fluid that complies with standards UL10C.

H. Unless otherwise specified, all door closers shall have full covers and separate adjusting valves for sweeps, latch, and backcheck.

I. Provide closers for all labeled doors. Provide closer series and type consistent with other closers for similar doors specified elsewhere on the project.

J. Provide closers with adjustable spring power. Size closers to ensure exterior and fire rated doors will consistently close and latch doors under existing conditions. Size all other door closers to allow for reduced opening force not to exceed 5 lbs.

K. Install closers on the room side of corridor doors, stair side of stairways and interior side of exterior doors.

L. Closers shall be furnished with all mounting brackets and cover plates as required by door and frame conditions and by adjacent hardware.

M. Door closers shall be provided with a powder coat finish to provide superior protection against the effects of weathering. Powder coat finish shall successfully pass a 100-hour salt spray test.

2.11 LOW ENERGY ELECTRO-HYDRAULIC AUTOMATIC OPERATORS

A. Acceptable manufacturers and respective catalog numbers:

	LCN
1. Electro-Hydraulic Operator	4640
2. Wall-mount Actuator, 4-3/4” Square	8310-853
3. Mullion-mount Actuator	8310-818
4. Double Vestibule Actuator, 4-3/4” Square	8310-855

B. Low energy operators shall be independently certified by ANSI for compliance with ANSI A156.19 (2002).

C. Where low kinetic energy, as defined by ANSI/BHMA Standard A156.19, power operators are indicated for doors required to be accessible to the disabled, provide electrically powered operators complying with the ADA for opening force and time to close standards.

D. The closing action shall be controlled by modern type cast iron door closer cylinder filled with a flat viscosity fluid, stable from +120F to -30F that would require no seasonal adjustments. The closer shall have field adjustable spring power; have two independent closing speed adjustment valves, and hydraulic back-check.

E. Full closing force shall be provided when the power or assist cycle ends.

F. All power operator systems shall include the following features and functions:
   1. Provisions for separate conduits to carry high and low voltage wiring in compliance with the National Electrical Code, section 725-31.
   2. The operator will be designed with an electronically controlled mechanical clutching mechanism to prevent damage to the operator if the system is actuated while the door is latched or if the door is forced closed during the opening cycle.
   3. All covers, mounting plates and arm systems shall be powder coated and successfully pass a minimum of 100 hours testing as outlined in ANSI/BHMA Standard A156.18.
   4. UL listed for use on labeled doors.
   5. All operators shall be non-handed with spring power over a range of at least four sizes; either 1 through 4 or 2 through 5.
   6. The power operator shall incorporate microprocessor controlled digital controls including factory default memory settings, on-board diagnostics, non-volatile memory, and integrated delay and relay for controlling door release devices.
   7. Provisions in the control box or module shall provide control {inputs and outputs) for; electric strike delay, auxiliary contacts, sequential operation, fire alarms systems, actuators, swing side sensors, and stop side sensors.
   8. Exterior actuator switches shall be weather resistant and mount on a single gang electrical box furnished by Division 26.

G. All electrically powered operators shall include the following features or functions:
   1. When an obstruction or resistance to the opening swing is encountered, the operator will pause at that point, then attempt to continue opening the door. If the obstruction or resistance remains, the operator will again pause the door.
   2. Easily accessible main power and maintain hold open switches will be provided on the operator.
   3. An electronically controlled clutch to provide adjustable opening force.
   4. A microprocessor to control all motor and clutch functions.
   5. An on-board power supply capable of delivering both 12V and 24V outputs up to a maximum of 1.0 ampere combined load.
   6. All input and output power wiring shall be protected by slow blow fuses. These fuses shall be easily replaceable without special tools or component replacement.
   7. If electrical failure occurs, the unit shall operate as a standard door closer.

H. Power Operators shall be warranted by the manufacturer to be free from defects in material and workmanship for a period of two years.

2.12 KICK PLATES AND MOP PLATES

A. Furnish protective plates as specified in hardware groups.

B. Where specified, provide 10" kick plates, 34" armor plates, and 4" mop plates. Unless otherwise specified, metal protective plates shall be .050" thick; plastic plates shall be 1/8" thick.

C. Protective plates shall be 2" less door width, or 1" less door width at pairs. All protective plates shall be beveled on 4 sides and counter sunk.

D. Protection plates over 16" shall not be provided for labeled doors unless specifically approved by door manufacturers listing. When protection plates over 16” are provided for labeled doors, the plate shall be labeled.

E. Where specified, provide surface mounted door edges. Edges shall butt to protective plates. Provide edges with cutouts as required adjacent hardware.

F. Adjust dimensions of protection plates to accommodate stile and rail dimensions, lite and louver cutouts, and adjacent hardware. Where required by adjacent hardware, protection plates shall be factory drilled for cylinders or other mortised hardware.

2.13 OVERHEAD STOPS

A. Acceptable manufacturers and respective catalog numbers:

	Glynn-Johnson	Rixson	Sargent
1. Heavy Duty Surface Mount	GJ900 Series	9 Series	590
2. Heavy Duty Concealed Mount	GJ100 Series	1 Series	690

B. Unless otherwise specified, furnish GJ900 series overhead stop for hollow metal or 1-3/4” solid core doors equipped with regular arm surface type closers that swing more than 140 degrees before striking a wall, for hollow metal or 1-3/4” solid core doors that open against equipment, casework, sidelights, or other objects that would make wall bumpers inappropriate, and as specified in hardware groups.

C. Furnish sex bolt attachments for wood and mineral core doors unless doors are supplied with proper reinforcing blocks.

D. Provide special stop only (“SE” suffix) overhead stops when used in conjunction with electronic hold open closers.

E. Do not provide holder function for labeled doors.

2.14 WALL STOPS AND HOLDERS

A. Acceptable manufacturers and respective catalog numbers:

	Ives	Hager	Burns
1. Wrought Convex Wall Stop	WS406CVX	232W	570
2. Wrought Concave Wall Stop	WS406CCV	236W	575
3. Automatic Wall Holder	WS40	326W	533

B. Furnish a stop or holder for all doors.

C. Provide concave style wall stop at all adjacent integral push button locks; provide convex style wall stop at all other locations.

D. Where wall stops are not applicable, furnish overhead stops.

E. Furnish floor stops only where specified in hardware sets.

F. Do not provide holder function for labeled doors.

2.15 MAGNETIC HOLD OPENS

A. Acceptable manufacturers and respective catalog numbers:

	LCN	ABH	Edwards
1. Wall Holder	SEM 7800	2000	1500

B. Magnetic hold opens shall be independently certified by ANSI for compliance with ANSI A156.15, Grade 1 (2006).

C. Magnetic holder housing and armature shall be constructed of die-cast zinc.

D. Where wall conditions do not permit the armature to reach the magnet, provide extensions.

E. Provide proper voltage and power consumption as required by Division 16.

F. Coordinate electrical requirements and mounting locations with related trades.

2.16 WEATHERSTRIP, GASKETING

A. Acceptable manufacturers and respective catalog numbers:

	Zero	Pemko	NGP	Reese
1. Weatherstrip	429	2891_PK	700NA	755

2.	Adhesive Gasket	188	S88	5050	797
3.	Mullion Seal/Silencer	8780	5110	5100N	628
4.	Meeting Edge Seals	8193	18041	9605	959
5.	Automatic Door Bottom	369	***	***	***
6.	Sweep (Brush)	8192	18061_NB	B606	964
7.	Sweep (Neoprene)	39	315_N	200N	323
8.	Sweep w/ drip	8198	345_N	C627	354
9.	Drip Cap	142	346	16	R201

B. Weatherstrip and gasketing shall be independently certified by ANSI for compliance with ANSI A156.22 (2005).

C. Where specified in the hardware groups, furnish the above products unless otherwise detailed in groups.

D. Provide weatherstripping all exterior doors and where specified in hardware sets.

E. Provide intumescent and other required edge sealing systems as required by individual fire door listings to comply with positive pressure standards UL 10C.

F. Provide Zero 188 smoke gaskets at all fire rated doors and smoke and draft control assemblies.

G. Provide gasketing for all meeting edges on pairs of fire doors. Gasketing shall be compatible with astragal design provided by door supplier as required for specific fire door listings.

2.17 THRESHOLDS

A. Acceptable manufacturers and respective catalog numbers:

	Zero	Pemko	NGP	Reese
1. Saddle Threshold	8655	171	425	S205
2. Thermal Break Saddle Threshold	625	252X3_ FG	8425	S471
3. Half Saddle Threshold	1675	****	325	S245
4. Saddle Threshold (Inswing)	653	169	****	****
5. Saddle Threshold (Interior)	63	151	411	S263

A. Thresholds shall be independently certified by ANSI for compliance with ANSI A156.21 (2001).

B. Hardware supplier shall verify finish floor conditions and provide proper threshold as required to provide a smooth transition between finished floor surfaces.

C. Unless otherwise specified or detailed, provide threshold as follows:

1. Provide Zero 8655 or similar saddle threshold for exterior openings with finished floor height transition of ¼" or less.
2. Provide Zero 1675 or similar half-saddle threshold for exterior openings with finished floor height transition of ¼" to ½".
3. Provide Zero 653 or similar narrow saddle threshold for exterior doors that swing into the building.
4. Provide Zero 63 or similar low-rise saddle threshold for interior openings when specified with a door sweep or automatic door bottom.

2.18 POWER SUPPLIES

A. Acceptable manufacturers and respective catalog numbers:

	Von Duprin
1. Power Supply	PS900 Series

B. All power supplies shall have the following features:

1. 12/24 VDC Output, field selectable.
2. Class 2 Rated power limited output.
3. Universal 120-240 VAC input.
4. Low voltage DC regulated and filtered.

5. Polarized connector for distribution boards.
6. Fused primary input.
7. AC input and DC output monitoring circuit w/LED indicators.
8. Cover mounted AC Input indication.
9. Tested and certified to meet UL294.
10. NEMA 1 enclosure.
11. Hinged cover w/lock down screws.
12. High voltage protective cover.

C. All power supplies shall incorporate fused distribution boards.

D. All electro-mechanical systems requiring fail safe circuits shall be capable of interfacing with the fire alarm system to cut power to appropriate system components. Unless already provided in another system component, all power supplies utilized in fail safe circuits shall include an integral relay which when connected to the N/C fire alarm contact will cut power to all openings connected to the individual power supply. Power supply, unless otherwise specified, will automatically reset itself when fire alarm relay returns to normal state following a fire alarm.

2.19 DOOR POSITION SWITCHES

A. Acceptable manufacturers and respective catalog numbers:

	Schlage Electronics	GEI	Sargent
1. Concealed	679 Series	1076W	3287

2.20 FINISHES AND BASE MATERIALS

A. Unless otherwise indicated in the hardware groups or herein, hardware finishes shall be applied over base metals as specified in the following finish schedule:

HARDWARE ITEM	BHMA FINISH
1. Butt Hinges: Exterior	630 (US32D - Satin Stainless Steel)
2. Butt Hinges: Interior	652 (US26D - Satin Chromium)
3. Continuous Hinges	630 (US32D - Satin Stainless Steel)
4. Flush Bolts	626 (US26D - Satin Chromium)
5. Exit Devices	626 (US26D - Satin Chromium)
6. Locks and Latches	626 (US26D - Satin Chromium)
7. Pulls and Push Plates/Bars	630 (US32D - Satin Stainless Steel)
8. Coordinators	600 (Prime painted or mill alum.)
9. Closers	689 (Powder Coat Aluminum)
10. Protective Plates	630 (US32D - Satin Stainless Steel)
11. Overhead Stops	630 (US32D - Satin Stainless Steel)
12. Wall Stops and Holders	630 (US32D - Satin Stainless Steel)
13. Thresholds	719 (Mill Aluminum)
14. Weather-strip, Sweeps Drip Caps	Aluminum Anodized
15. Magnetic Holders	689 (Powder Coat Aluminum)
16. Miscellaneous	626 (US26D - Satin Chromium)

2.21 KEYING

A. Provide all cylinders in keyways as required to accommodate Owners existing key system.

B. All locks under this section shall be keyed as directed by the owner to an existing Best Master Key System.

C. Furnish a total of 2 keys per cylinder. Actual cut keys to be determined by owner.

D. Master keys, control keys, and change keys shall be delivered by registered mail to the owner. Construction keys shall be delivered to the contractor.

2.22 KEY CABINETS

A. Acceptable manufacturers and respective catalog numbers:

Lund Key Control Telkee

1. 1200-1205 AA M228-2480 RWC-AWC

B. Furnish 1 each model 1200 or 1205 AA key cabinet with a capacity 1.5 times the number of key sets.

C. Provide one key cabinet with at least one hook for each key set, plus additional hooks for 50% expansion.

D. Furnish key cabinet complete with cam lock, permanent key tags, and change key cards.

E. Hardware supplier shall prepare all key change index records, tag all keys and place permanent file keys in cabinet.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Prior to installation of hardware, installer shall examine door frame installation to ensure frames have been set square and plumb. Installer shall examine doors, door frames, and adjacent wall, floor, and ceiling for conditions, which would adversely affect proper operation and function of door assemblies. Do not proceed with hardware installation until such deficiencies have been corrected.

3.2 INSTALLATION

A. Before hardware installation, general contractor/construction manager shall coordinate a hardware installation seminar with a 1 week notice to all parties involved. The seminar is to be conducted on the installation of hardware, specifically of locksets, closers, exit devices, continuous hinges and overhead stops. Manufacturer's representative of the above products to present seminar. Seminar to be held at the job site and attended by installers of hardware (including low voltage hardware) for aluminum, hollow metal and wood doors. Training to include use of installation manuals, hardware schedule, templates and physical products samples.

B. Provide blocking or reinforcement for all hardware mounted to drywall construction, including wall mounted door stops and holders.

C. Shim doors as required to maintain proper operating clearance between door and frame.

D. Install all hardware in accordance with the approved hardware schedule and manufacturer’s instructions for installation and adjustment.

E. Set units level, plumb and true to the line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.

F. Drill and countersink units which are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accord with industry standards.

G. Drill appropriate size pilot holes for all hardware attached to wood doors and frames.

H. Unless otherwise specified, locate all hardware in accordance with the recommended locations for builders hardware for standard doors and frames as published by the Door and Hardware Institute.

I. Use only fasteners supplied by or approved by the manufacturer for each respective item of hardware.

J. Conceal push and pull bar fasteners where possible. Do not install through bolts through push plates.

K. Install hardware on UL labeled openings in accordance with manufacturer's requirements to maintain the label.

L. Apply self-adhesive gasketing on frame stop at head & latch side and on rabbet of frame at hinge side.

M. Install hardware in accordance with supplemental "S" label instructions on all fire rated openings.

N. Install wall stops to contact lever handles or pulls. Do not mount wall stops on casework, or equipment.

O. Where necessary, adjust doors and hardware as required to eliminate binding between strike and latchbolt. Doors should not rattle.

P. Overhead stops used in conjunction with electrified hold open closers shall be templated and installed to coincide with engagement of closer hold open position.

Q. Install door closers on corridor side of lobby doors, room side of corridor doors, and stair side of stairways.

R. Adjust spring power of door closers to the minimum force required to ensure exterior and fire rated doors will consistently close and latch doors under existing conditions. Adjust all other door closers to ensure opening force does not exceed 5 lbs.

S. Adjust "sweep", "latch", & "back check" valves on all door closers to properly control door throughout the opening and closing cycle. Adjust total closing speed as required to comply with all applicable state and local building codes.

T. Install "hardware compatible" (bar stock) type weatherstripping continuously for an uninterrupted seal. Adjust templating for parallel-arm door closers, exit devices, etc., as required to accommodate weatherstripping.

U. Unless otherwise specified or detailed, install thresholds with the bevel in vertical alignment with the outside door face. Notch and closely fit thresholds to frame profile. Set thresholds in full bed of sealant.

V. Compress sweep during installation as recommended by sweep manufacturer to facilitate a water-resistant seal.

W. Deliver to the owner one complete set of installation and adjustment instructions, and tools as furnished with the hardware.

3.3 FIELD QUALITY CONTROL

A. After installation has been completed, the hardware supplier for locksets, door closers, exit devices and overhead stops shall check the project and verify compliance with installation instructions, adjustment of all hardware items, and proper application according to the approved hardware schedule. Hardware supplier shall submit a list of all hardware that has not been installed correctly.

B. After installation has been completed, the hardware supplier shall meet with the owner to explain the functions, uses, adjustment, and maintenance of each item of hardware. Hardware supplier shall provide the owner with a copy of all wiring diagrams. Wiring diagrams shall be opening-specific and include both a riser diagram and point to point diagram showing all wiring terminations.

3.4 ADJUSTMENT AND CLEANING

A. At final completion, and when H.V.A.C. equipment is in operation, installer shall make final adjustments to and verify proper operation of all door closers and other items of hardware. Lubricate moving parts with type lubrication recommended by the manufacturer.

B. All hardware shall be left clean and in good operation. Hardware found to be disfigured, defective, or inoperative shall be repaired or replaced.

3.5 HARDWARE SCHEDULE

A. The following schedule of hardware groups is intended to describe opening function. The hardware supplier is cautioned to refer to the preamble of this specification for a complete description of all materials and services to be furnished under this section.

147290 OPT0451824 VERSION 3

HW SET: 01

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	PASSAGE SET	ND10S	SCH
1	EA	WALL STOP	WS406	IVE

FUNCTION: (F75) PASSAGE LATCH. LATCH RETRACTED BY LEVER EITHER SIDE. BOTH LEVERS ALWAYS UNLOCKED.

HW SET: 02

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	ENTRANCE/OFFICE LOCK	ND50	SCH
1	EA	WALL STOP	WS406	IVE

FUNCTION: (F82) OFFICE LOCK. OUTSIDE LEVER LOCKED/UNLOCKED BY OUTSIDE KEY. INSIDE BUTTON LOCKS OUTSIDE LEVER UNTIL UNLOCKED BY OUTSIDE KEY OR BY TURNING INSIDE LEVER. INSIDE LEVER ALWAYS UNLOCKED.

HW SET: 03

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	CLASSROOM LOCK	ND70	SCH
1	EA	WALL STOP	WS406	IVE

FUNCTION: (F84) CLASSROOM LOCK. LATCH RETRACTED BY LEVER EITHER SIDE. OUTSIDE KEY LOCKS/UNLOCKS OUTSIDE LEVER. INSIDE LEVER ALWAYS UNLOCKED.

HW SET: 04

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	CLASSROOM LOCK	ND70	SCH
1	EA	OH STOP	90S	GLY

FUNCTION: (F84) CLASSROOM LOCK. LATCH RETRACTED BY LEVER EITHER SIDE. OUTSIDE KEY LOCKS/UNLOCKS OUTSIDE LEVER. INSIDE LEVER ALWAYS UNLOCKED.

HW SET: 05

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	CLASSROOM LOCK	ND70	SCH
1	EA	WALL STOP	WS406	IVE
1	EA	PERIMETER GASKETING	870	ZER
1	EA	DOOR BOTTOM	369A	ZER

FUNCTION: (F84) CLASSROOM LOCK. LATCH RETRACTED BY LEVER EITHER SIDE. OUTSIDE KEY LOCKS/UNLOCKS OUTSIDE LEVER. INSIDE LEVER ALWAYS UNLOCKED.

HW SET: 06

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	CLASSROOM LOCK	ND70	SCH
1	EA	OH STOP	90S	GLY
1	EA	PERIMETER GASKETING	870	ZER
1	EA	DOOR BOTTOM	369A	ZER

FUNCTION: (F84) CLASSROOM LOCK. LATCH RETRACTED BY LEVER EITHER SIDE. OUTSIDE KEY LOCKS/UNLOCKS OUTSIDE LEVER. INSIDE LEVER ALWAYS UNLOCKED.

HW SET: 07

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	CLASSROOM LOCK	ND70	SCH
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	KICK PLATE	8400 10"	IVE
1	EA	WALL STOP	WS406	IVE
1	EA	PERIMETER SEAL	188S (AT RATED DOORS)	ZER

FUNCTION: (F84) CLASSROOM LOCK. LATCH RETRACTED BY LEVER EITHER SIDE. OUTSIDE KEY LOCKS/UNLOCKS OUTSIDE LEVER. INSIDE LEVER ALWAYS UNLOCKED.

HW SET: 08

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	CLASSROOM LOCK	ND70	SCH
1	EA	OH STOP	90S	GLY
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	KICK PLATE	8400 10"	IVE
1	EA	PERIMETER SEAL	188S (AT RATED DOORS)	ZER

FUNCTION: (F84) CLASSROOM LOCK. LATCH RETRACTED BY LEVER EITHER SIDE. OUTSIDE KEY LOCKS/UNLOCKS OUTSIDE LEVER. INSIDE LEVER ALWAYS UNLOCKED.

HW SET: 09

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	CLASSROOM LOCK	ND70	SCH
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	KICK PLATE	8400 10"	IVE
1	EA	WALL STOP/HOLDER	WS40	IVE
1	EA	PERIMETER SEAL	188S (AT RATED DOORS)	ZER

FUNCTION: (F84) CLASSROOM LOCK. LATCH RETRACTED BY LEVER EITHER SIDE. OUTSIDE KEY LOCKS/UNLOCKS OUTSIDE LEVER. INSIDE LEVER ALWAYS UNLOCKED.
DOOR HELD OPEN BY AUTOMATIC MECHANICAL WALL HOLDER.

HW SET: 10

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	FLUSH BOLT	CONSTANT LATCHING (TOP BOLT)	IVE
1	EA	CLASSROOM LOCK	ND70	SCH
2	EA	WALL STOP	WS406	IVE

FUNCTION: (F84) CLASSROOM LOCK. LATCH RETRACTED BY LEVER EITHER SIDE. OUTSIDE KEY LOCKS/UNLOCKS OUTSIDE LEVER. INSIDE LEVER ALWAYS UNLOCKED.

HW SET: 11

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	FLUSH BOLT	CONSTANT LATCHING (TOP BOLT)	IVE
1	EA	CLASSROOM LOCK	ND70	SCH
2	EA	OH STOP & HOLDER	90H	GLY
2	EA	ARMOR PLATE	8400 34"	IVE

FUNCTION: (F84) CLASSROOM LOCK. LATCH RETRACTED BY LEVER EITHER SIDE. OUTSIDE KEY LOCKS/UNLOCKS OUTSIDE LEVER. INSIDE LEVER ALWAYS UNLOCKED.

HW SET: 12

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	CORRIDOR LOCK W/ OUTSIDE INDICATOR	ND73 OS-OCC	SCH
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	KICK PLATE	8400 10"	IVE
1	EA	WALL STOP	WS406	IVE

FUNCTION: (F90) CORRIDOR LOCK. OUTSIDE KEY LOCKS/UNLOCKS OUTSIDE LEVER. INSIDE PUSH BUTTON LOCKS OUTSIDE LEVER UNTIL INSIDE LEVER IS TURNED OR DOOR IS CLOSED. INSIDE LEVER ALWAYS UNLOCKED.
OUTSIDE INDICATOR DISPLAYS OCCUPIED/VACANT STATUS.

HW SET: 13

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	CLASSROOM SECURITY	ND78	SCH
1	EA	KICK PLATE	8400 10"	IVE
1	EA	WALL STOP/HOLDER	WS40	IVE

FUNCTION: CLASSROOM SECURITY LOCK. LATCH RETRACTED BY LEVER EITHER SIDE. INSIDE OR OUTSIDE KEY LOCKS/UNLOCKS OUTSIDE LEVER. INSIDE LEVER ALWAYS UNLOCKED. INSIDE INSTRUCTION ROSE IDENTIFIES KEY ROTATION DIRECTION FOR RAPID LOCKDOWN. DOOR HELD OPEN BY AUTOMATIC MECHANICAL WALL HOLDER.

HW SET: 14

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	STOREROOM LOCK	ND80	SCH
1	EA	WALL STOP	WS406	IVE
1	EA	SURFACE CLOSER	4050A / 4050A EDA (AT RATED DOORS)	LCN
1	EA	PERIMETER SEAL	188S (AT RATED DOORS)	LCN

FUNCTION: (F86) STOREROOM LOCK. FIXED OUTSIDE TRIM - OUTSIDE KEY OR INSIDE LEVER RETRACTS LATCH. INSIDE LEVER ALWAYS UNLOCKED.

HW SET: 15

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	STOREROOM LOCK	ND80	SCH
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	KICK PLATE	8400 10"	IVE
1	EA	WALL STOP	WS406	IVE

FUNCTION: (F86) STOREROOM LOCK. FIXED OUTSIDE TRIM - OUTSIDE KEY OR INSIDE LEVER RETRACTS LATCH. INSIDE LEVER ALWAYS UNLOCKED.

HW SET: 16

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	STOREROOM LOCK	ND80	SCH
1	EA	OH STOP	90S	GLY
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	KICK PLATE	8400 10"	IVE

FUNCTION: (F86) STOREROOM LOCK. FIXED OUTSIDE TRIM - OUTSIDE KEY OR INSIDE LEVER RETRACTS LATCH. INSIDE LEVER ALWAYS UNLOCKED.

HW SET: 17

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	STOREROOM LOCK	ND80	SCH
1	EA	KICK PLATE	8400 10"	IVE
1	EA	WALL STOP	WS406	IVE

FUNCTION: (F86) STOREROOM LOCK. FIXED OUTSIDE TRIM - OUTSIDE KEY OR INSIDE LEVER RETRACTS LATCH. INSIDE LEVER ALWAYS UNLOCKED.

HW SET: 18

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	STOREROOM LOCK	ND80	SCH
1	EA	OH STOP	90S	GLY
1	EA	KICK PLATE	8400 10"	IVE

FUNCTION: (F86) STOREROOM LOCK. FIXED OUTSIDE TRIM - OUTSIDE KEY OR INSIDE LEVER RETRACTS LATCH. INSIDE LEVER ALWAYS UNLOCKED.

HW SET: 19

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	FLUSH BOLT	CONSTANT LATCHING (TOP BOLT)	IVE
1	EA	STOREROOM LOCK	ND80	SCH
2	EA	OH STOP & HOLDER	90H	GLY

FUNCTION: (F86) STOREROOM LOCK. FIXED OUTSIDE TRIM - OUTSIDE KEY OR INSIDE LEVER RETRACTS LATCH. INSIDE LEVER ALWAYS UNLOCKED.

HW SET: 20

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	FLUSH BOLT	CONSTANT LATCHING (TOP BOLT)	IVE
1	EA	STOREROOM LOCK	ND80	SCH
2	EA	OH STOP & HOLDER	90H	GLY
2	EA	ARMOR PLATE	8400 34"	IVE

FUNCTION: (F86) STOREROOM LOCK. FIXED OUTSIDE TRIM - OUTSIDE KEY OR INSIDE LEVER RETRACTS LATCH. INSIDE LEVER ALWAYS UNLOCKED.

HW SET: 21

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	INSTITUTION LOCK	ND82	SCH
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	KICK PLATE	8400 10"	IVE
1	EA	FIRE/LIFE WALL MAG	SEM7800	LCN
1	EA	LOCKDOWN RELAY	BY SECURITY SUPPLIER	B/O

FUNCTION: (F87) INSTITUTION LOCK. BOTH LEVERS FIXED - KEY EITHER SIDE RETRACTS LATCH.
ELECTRONIC HOLDER RELEASED BY LOCKDOWN SWITCH TO AUTOMATICALLY CLOSE AND LOCK DOOR.

HW SET: 22

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	INSTITUTION LOCK	ND82	SCH
1	EA	FIRE/LIFE HOLDER	4040SEH	LCN
1	EA	SURFACE CLOSER	4050A CUSH	LCN
1	EA	KICK PLATE	8400 10"	IVE
1	EA	LOCKDOWN RELAY	BY SECURITY SUPPLIER	B/O

FUNCTION: (F87) INSTITUTION LOCK. BOTH LEVERS FIXED - KEY EITHER SIDE RETRACTS LATCH.
ELECTRONIC HOLDER RELEASED BY LOCKDOWN SWITCH TO AUTOMATICALLY CLOSE AND LOCK DOOR.

HW SET: 23

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	POWER TRANSFER	EPT10	VON
1	EA	EU STOREROOM LOCK	ND80EU	SCH
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	KICK PLATE	8400 10"	IVE
1	EA	WALL STOP	WS406	IVE
1	EA	CREDENTIAL READER	BY SECURITY SUPPLIER	B/O
1	EA	DOOR POSITION SWITCH	679	SCE
1	EA	POWER SUPPLY	PS902 900-2RS	VON
1	EA	WIRING DIAGRAMS	RISER AND POINT-TO-POINT	

FUNCTION: ELECTRIFIED STOREROOM LOCK - FAIL SECURE. LATCH BOLT RETRACTED BY KEY. INSIDE LEVER ALWAYS UNLOCKED.
OUTSIDE LEVER UNLOCKED BY ELECTRONIC ACCESS CONTROL SYSTEM. UPON LOSS OF POWER, OUTSIDE LEVER REMAINS LOCKED.

HW SET: 23A

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	POWER TRANSFER	EPT10	VON
1	EA	STOREROOM LOCK	LV9080	SCH
1	EA	KEY CYLINDER	AS REQUIRED	
1	EA	ELECTRIC STRIKE	6211 FSE	VON
1	EA	SURF. AUTO OPERATOR	4642	LCN
2	EA	ACTUATOR, WALL OR JAMB MOUNT	8310-853 OR 8310-818 AS REQD (VERIFY TYPE AND MOUNTING LOCATION)	LCN
1	EA	WALL STOP	WS406	IVE
1	EA	CREDENTIAL READER	BY SECURITY SUPPLIER	B/O
1	EA	DOOR POSITION SWITCH	679	SCE
1	EA	POWER SUPPLY	PS902 900-2RS	VON
1	EA	WIRING DIAGRAMS	RISER AND POINT-TO-POINT	

FUNCTION: (F07) STOREROOM LOCK. FIXED OUTSIDE TRIM - OUTSIDE KEY RETRACTS LATCH. INSIDE LEVER ALWAYS UNLOCKED. AUXILIARY LATCH DEADLOCKS LATCH BOLT WHEN DOOR IS CLOSED.
ELECTRIC STRIKE RELEASED BY CREDENTIAL READER / ELECTRONIC ACCESS CONTROL SYSTEM FOR PUSH/PULL OPERATION.
OUTSIDE ACTUATOR AUTOMATICALLY OPENS DOOR ONLY WHILE LATCH IS RETRACTED.
INSIDE ACTUATOR RETRACTS LATCH AND AUTOMATICALLY OPENS DOOR AT ALL TIMES.

HW SET: 25

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	POWER TRANSFER	EPT10	VON
1	EA	EU ELR MORTISE LOCK	L9696EU	SCH
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	KICK PLATE	8400 10"	IVE
1	EA	WALL STOP	WS406	IVE
2	EA	CREDENTIAL READER	BY SECURITY SUPPLIER	B/O
1	EA	REMOTE RELEASE SWITCH	BY SECURITY SUPPLIER	B/O
1	EA	DOOR POSITION SWITCH	679	SCE
1	EA	POWER SUPPLY	PS902 900-2RS	VON
1	EA	WIRING DIAGRAMS	RISER AND POINT-TO-POINT	

FUNCTION: ELECTRIFIED STOREROOM LOCK WITH ELECTRONIC LATCH RETRACTION - FAIL SECURE.
LATCH RETRACTED BY KEY EITHER SIDE.
(RECEPTION SIDE) LEVER ALWAYS FIXED/INOPERATIVE.
LATCH ELECTRICALLY RETRACTED BY ELECTRONIC ACCESS CONTROL SYSTEM FOR MOMENTARY ACCESS FROM RECEPTION TO CIRCULATION.
(CIRCULATION SIDE) LEVER LOCKED/UNLOCKED BY ELECTRONIC ACCESS CONTROL SYSTEM.
UPON LOSS OF POWER OR SIGNAL FROM LOCKDOWN SWITCH, LATCH EXTENDS AND BOTH LEVERS REMAINS LOCKED.

HW SET: 26

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	POWER TRANSFER	EPT10	VON
1	EA	ELEC PANIC HARDWARE	QEL-99-EO	VON
1	EA	90 DEG OFFSET PULL	8190 10"	IVE
1	EA	OH STOP	100S	GLY
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	DOOR POSITION SWITCH	679	SCE
1	EA	POWER SUPPLY	PS902 900-2RS	VON
1	EA	WIRING DIAGRAMS	RISER AND POINT-TO-POINT	

FUNCTION: EXIT-ONLY PANIC HARDWARE WITH ELECTRIC LATCH RETRACTION. FIXED OUTSIDE TRIM. INSIDE PUSH PAD RETRACTS LATCH FOR EGRESS.
LATCH ELECTRICALLY RETRACTED BY ELECTRONIC ACCESS CONTROL SYSTEM FOR PUSH/PULL OPERATION.

HW SET: 27

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	POWER TRANSFER	EPT10	VON
1	EA	ELEC PANIC HARDWARE	QEL-99-EO	VON
1	EA	90 DEG OFFSET PULL	8190 10"	IVE
1	EA	OH STOP	100S	GLY
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	RAIN DRIP	142	ZER
1	EA	WEATHERSTRIPPING	BY DOOR SUPPLIER	B/O
1	EA	DOOR SWEEP	8198	ZER
1	EA	THRESHOLD	AS REQUIRED	ZER
1	EA	DOOR POSITION SWITCH	679	SCE
1	EA	POWER SUPPLY	PS902 900-2RS	VON
1	EA	WIRING DIAGRAMS	RISER AND POINT-TO-POINT	

FUNCTION: EXIT-ONLY PANIC HARDWARE WITH ELECTRIC LATCH RETRACTION. FIXED OUTSIDE TRIM. INSIDE PUSH PAD RETRACTS LATCH FOR EGRESS.
LATCH ELECTRICALLY RETRACTED BY ELECTRONIC ACCESS CONTROL SYSTEM FOR PUSH/PULL OPERATION.

HW SET: 28

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	POWER TRANSFER	EPT10	VON
1	EA	FIRE EXIT HARDWARE	9927-EO-F-LBR	VON
1	EA	ELEC FIRE EXIT HARDWARE	QEL-9927-NL-F-LBR	VON
1	EA	KEY CYLINDER	AS REQUIRED	
2	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
2	EA	KICK PLATE	8400 10"	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7800	LCN
1	EA	PERIMETER SEAL	188S	ZER
1	EA	MEETING STILE SEAL	8193 (1 EA LEAF)	ZER
1	EA	CREDENTIAL READER	BY SECURITY SUPPLIER	B/O
2	EA	DOOR POSITION SWITCH	679	SCE
1	EA	POWER SUPPLY	PS902 900-2RS	VON
1	EA	WIRING DIAGRAMS	RISER AND POINT-TO-POINT	
1	EA	N/C FIRE ALARM RELAY	BY FIRE ALARM CONTRACTOR	B/O
1	EA	LOCKDOWN RELAY	BY SECURITY SUPPLIER	B/O

FUNCTION: NIGHT LATCH PANIC HARDWARE WITH ELECTRIC LATCH RETRACTION. FIXED OUTSIDE TRIM - LATCH RETRACTED BY KEY. INSIDE PUSH PAD RETRACTS LATCH FOR EGRESS.
LATCH ELECTRICALLY RETRACTED BY ELECTRONIC ACCESS CONTROL SYSTEM FOR PUSH/PULL OPERATION.
ELECTRONIC HOLDER TO RELEASE UPON ACTUATION OF FIRE ALARM SYSTEM OR SIGNAL FROM LOCKDOWN SWITCH.

HW SET: 30

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	POWER TRANSFER	EPT10	VON
1	EA	PANIC HARDWARE	LD-9927-EO-LBR	VON
1	EA	ELEC PANIC HARDWARE	QEL-9927-NL-LBR	VON
1	EA	KEY CYLINDER	AS REQUIRED	
2	EA	SURFACE CLOSER	4050A SHCUSH	LCN
2	EA	ARMOR PLATE	8400 34"	IVE
1	EA	CREDENTIAL READER	BY SECURITY SUPPLIER	B/O
2	EA	DOOR POSITION SWITCH	679	SCE
1	EA	POWER SUPPLY	PS902 900-2RS	VON
1	EA	WIRING DIAGRAMS	RISER AND POINT-TO-POINT	

FUNCTION: NIGHT LATCH PANIC HARDWARE WITH ELECTRIC LATCH RETRACTION. FIXED OUTSIDE TRIM - LATCH RETRACTED BY KEY. INSIDE PUSH PAD RETRACTS LATCH FOR EGRESS.
LATCH ELECTRICALLY RETRACTED BY ELECTRONIC ACCESS CONTROL SYSTEM FOR PUSH/PULL OPERATION.
DOOR HELD OPEN BY SELECTABLE CLOSER ARM HOLDER.

HW SET: 31

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	POWER TRANSFER	EPT10	VON
1	EA	ELEC PANIC HARDWARE	QEL-99-NL-OP	VON
1	EA	KEY CYLINDER	AS REQUIRED	
1	EA	90 DEG OFFSET PULL	8190 10"	IVE
1	EA	SURF. AUTO OPERATOR	4642	LCN
2	EA	ACTUATOR, WALL OR JAMB MOUNT	8310-853 OR 8310-818 AS REQD (VERIFY TYPE AND MOUNTING LOCATION)	LCN
1	EA	WALL STOP	WS406	IVE
1	EA	CREDENTIAL READER	BY SECURITY SUPPLIER	B/O
1	EA	DOOR POSITION SWITCH	679	SCE
1	EA	POWER SUPPLY	PS902 900-2RS	VON
1	EA	WIRING DIAGRAMS	RISER AND POINT-TO-POINT	

FUNCTION: NIGHT LATCH PANIC HARDWARE WITH ELECTRIC LATCH RETRACTION. FIXED OUTSIDE TRIM - LATCH RETRACTED BY KEY. INSIDE PUSH PAD RETRACTS LATCH FOR EGRESS.
LATCH ELECTRICALLY RETRACTED BY CREDENTIAL READER / ELECTRONIC ACCESS CONTROL SYSTEM FOR PUSH/PULL OPERATION.
OUTSIDE ACTUATOR AUTOMATICALLY OPENS DOOR ONLY WHILE LATCH IS RETRACTED.
INSIDE ACTUATOR RETRACTS LATCH AND AUTOMATICALLY OPENS DOOR AT ALL TIMES.

HW SET: 32

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	POWER TRANSFER	EPT10	VON
1	EA	ELEC PANIC HARDWARE	QEL-99-NL-OP	VON
1	EA	KEY CYLINDER	AS REQUIRED	
1	EA	90 DEG OFFSET PULL	8190 10"	IVE
1	EA	OH STOP	100S	GLY
1	EA	SURF. AUTO OPERATOR	4642	LCN
2	EA	ACTUATOR, WALL OR JAMB MOUNT	8310-853 OR 8310-818 AS REQD (VERIFY TYPE AND MOUNTING LOCATION)	LCN
1	EA	CREDENTIAL READER	BY SECURITY SUPPLIER	B/O
1	EA	DOOR POSITION SWITCH	679	SCE
1	EA	POWER SUPPLY	PS902 900-2RS	VON
1	EA	WIRING DIAGRAMS	RISER AND POINT-TO-POINT	

FUNCTION: NIGHT LATCH PANIC HARDWARE WITH ELECTRIC LATCH RETRACTION. FIXED OUTSIDE TRIM - LATCH RETRACTED BY KEY. INSIDE PUSH PAD RETRACTS LATCH FOR EGRESS.
LATCH ELECTRICALLY RETRACTED BY CREDENTIAL READER / ELECTRONIC ACCESS CONTROL SYSTEM FOR PUSH/PULL OPERATION.
OUTSIDE ACTUATOR AUTOMATICALLY OPENS DOOR ONLY WHILE LATCH IS RETRACTED.
INSIDE ACTUATOR RETRACTS LATCH AND AUTOMATICALLY OPENS DOOR AT ALL TIMES.

HW SET: 33

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	POWER TRANSFER	EPT10	VON
1	EA	ELEC PANIC HARDWARE	QEL-99-NL-OP	VON
1	EA	KEY CYLINDER	AS REQUIRED	
1	EA	90 DEG OFFSET PULL	8190 10"	IVE
1	EA	OH STOP	100S	GLY
1	EA	SURF. AUTO OPERATOR	4642	LCN
2	EA	ACTUATOR, WALL OR JAMB MOUNT	8310-853 OR 8310-818 AS REQD (VERIFY TYPE AND MOUNTING LOCATION)	LCN
1	EA	RAIN DRIP	142	ZER
1	EA	WEATHERSTRIPPING	BY DOOR SUPPLIER	B/O
1	EA	DOOR SWEEP	8198	ZER
1	EA	THRESHOLD	AS REQUIRED	ZER
1	EA	CREDENTIAL READER	BY SECURITY SUPPLIER	B/O
1	EA	DOOR POSITION SWITCH	679	SCE
1	EA	POWER SUPPLY	PS902 900-2RS	VON
1	EA	WIRING DIAGRAMS	RISER AND POINT-TO-POINT	

FUNCTION: NIGHT LATCH PANIC HARDWARE WITH ELECTRIC LATCH RETRACTION. FIXED OUTSIDE TRIM - LATCH RETRACTED BY KEY. INSIDE PUSH PAD RETRACTS LATCH FOR EGRESS.
LATCH ELECTRICALLY RETRACTED BY CREDENTIAL READER / ELECTRONIC ACCESS CONTROL SYSTEM FOR PUSH/PULL OPERATION.
OUTSIDE ACTUATOR AUTOMATICALLY OPENS DOOR ONLY WHILE LATCH IS RETRACTED.
INSIDE ACTUATOR RETRACTS LATCH AND AUTOMATICALLY OPENS DOOR AT ALL TIMES.

HW SET: 34

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	POWER TRANSFER	EPT10	VON
1	EA	ELEC PANIC HARDWARE	QEL-99-NL-OP	VON
1	EA	KEY CYLINDER	AS REQUIRED	
1	EA	90 DEG OFFSET PULL	8190 10"	IVE
1	EA	OH STOP	100S	GLY
1	EA	SURF. AUTO OPERATOR	4642	LCN
2	EA	ACTUATOR, WALL OR JAMB MOUNT	8310-853 OR 8310-818 AS REQD (VERIFY TYPE AND MOUNTING LOCATION)	LCN
1	EA	RAIN DRIP	142	ZER
1	EA	WEATHERSTRIPPING	BY DOOR SUPPLIER	B/O
1	EA	DOOR SWEEP	8198	ZER
1	EA	THRESHOLD	AS REQUIRED	ZER
1	EA	2-WAY COMMUNICATION SYSTEM	BY SECURITY SUPPLIER	B/O
1	EA	CREDENTIAL READER	BY SECURITY SUPPLIER	B/O
1	EA	DOOR POSITION SWITCH	679	SCE
1	EA	POWER SUPPLY	PS902 900-2RS	VON
1	EA	WIRING DIAGRAMS	RISER AND POINT-TO-POINT	

FUNCTION: NIGHT LATCH PANIC HARDWARE WITH ELECTRIC LATCH RETRACTION. FIXED OUTSIDE TRIM - LATCH RETRACTED BY KEY. INSIDE PUSH PAD RETRACTS LATCH FOR EGRESS.
LATCH ELECTRICALLY RETRACTED BY CREDENTIAL READER / ELECTRONIC ACCESS CONTROL SYSTEM FOR PUSH/PULL OPERATION.
OUTSIDE ACTUATOR AUTOMATICALLY OPENS DOOR ONLY WHILE LATCH IS RETRACTED.
INSIDE ACTUATOR RETRACTS LATCH AND AUTOMATICALLY OPENS DOOR AT ALL TIMES.

HW SET: 34A

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	POWER TRANSFER	EPT10	VON
1	EA	ELEC PANIC HARDWARE	QEL-99-NL	VON
1	EA	KEY CYLINDER	AS REQUIRED	
1	EA	SURFACE CLOSER	4050A SCUSH	LCN
1	EA	ARMOR PLATE	8400 34"	IVE
1	EA	RAIN DRIP	142	ZER
1	SET	GASKETING	429 (MOUNT PRIOR TO CLOSER)	ZER
1	EA	DOOR SWEEP	8198	ZER
1	EA	THRESHOLD	AS REQUIRED	ZER
1	EA	2-WAY COMMUNICATION SYSTEM	BY SECURITY SUPPLIER	B/O
1	EA	CREDENTIAL READER	BY SECURITY SUPPLIER	B/O
1	EA	DOOR POSITION SWITCH	679	SCE
1	EA	POWER SUPPLY	PS902 900-2RS	VON
1	EA	WIRING DIAGRAMS	RISER AND POINT-TO-POINT	

FUNCTION: NIGHT LATCH PANIC HARDWARE WITH ELECTRIC LATCH RETRACTION. FIXED OUTSIDE TRIM - LATCH RETRACTED BY KEY. INSIDE PUSH PAD RETRACTS LATCH FOR EGRESS.
LATCH ELECTRICALLY RETRACTED BY CREDENTIAL READER / ELECTRONIC ACCESS CONTROL SYSTEM FOR PUSH/PULL OPERATION.

HW SET: 35

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	POWER TRANSFER	EPT10	VON
1	EA	REMOVABLE MULLION	KR4954 STAB	VON
3	EA	IC CYLINDER	AS REQUIRED	SCH
1	EA	PANIC HARDWARE	CD-99-EO	VON
1	EA	ELEC PANIC HARDWARE	QEL-99-NL-OP	VON
2	EA	90 DEG OFFSET PULL	8190 10"	IVE
2	EA	OH STOP	100S	GLY
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	SURF. AUTO OPERATOR	4642	LCN
2	EA	ACTUATOR, WALL OR JAMB MOUNT	8310-853 OR 8310-818 AS REQD (VERIFY TYPE AND MOUNTING LOCATION)	LCN
1	EA	RAIN DRIP	142	ZER
1	EA	MULLION SEAL	8780	ZER
1	EA	WEATHERSTRIPPING	BY DOOR SUPPLIER	B/O
2	EA	DOOR SWEEP	8198	ZER
1	EA	THRESHOLD	AS REQUIRED	ZER
1	EA	CREDENTIAL READER	BY SECURITY SUPPLIER	B/O
2	EA	DOOR POSITION SWITCH	679	SCE
1	EA	POWER SUPPLY	PS902 900-2RS	VON
1	EA	WIRING DIAGRAMS	RISER AND POINT-TO-POINT	

FUNCTION: NIGHT LATCH PANIC HARDWARE WITH ELECTRIC LATCH RETRACTION. FIXED OUTSIDE TRIM - LATCH RETRACTED BY KEY. INSIDE PUSH PAD RETRACTS LATCH FOR EGRESS.
LATCH ELECTRICALLY RETRACTED BY CREDENTIAL READER / ELECTRONIC ACCESS CONTROL SYSTEM FOR PUSH/PULL OPERATION.
OUTSIDE ACTUATOR AUTOMATICALLY OPENS DOOR ONLY WHILE LATCH IS RETRACTED.
INSIDE ACTUATOR RETRACTS LATCH AND AUTOMATICALLY OPENS DOOR AT ALL TIMES.

HW SET: 36

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	POWER TRANSFER	EPT10	VON
1	EA	REMOVABLE MULLION	KR4954 STAB	VON
1	EA	PANIC HARDWARE	CD-99-EO	VON
1	EA	ELEC PANIC HARDWARE	QEL-99-NL-OP	VON
3	EA	KEY CYLINDER	AS REQUIRED	
2	EA	90 DEG OFFSET PULL	8190 10"	IVE
2	EA	OH STOP	100S	GLY
2	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	RAIN DRIP	142	ZER
1	EA	WEATHERSTRIPPING	BY DOOR SUPPLIER	B/O
2	EA	DOOR SWEEP	8198	ZER
1	EA	THRESHOLD	AS REQUIRED	ZER
1	EA	CREDENTIAL READER	BY SECURITY SUPPLIER	B/O
2	EA	DOOR POSITION SWITCH	679	SCE
1	EA	POWER SUPPLY	PS902 900-2RS	VON
1	EA	WIRING DIAGRAMS	RISER AND POINT-TO-POINT	

FUNCTION: NIGHT LATCH PANIC HARDWARE WITH ELECTRIC LATCH RETRACTION. FIXED OUTSIDE TRIM - LATCH RETRACTED BY KEY. INSIDE PUSH PAD RETRACTS LATCH FOR EGRESS.
LATCH ELECTRICALLY RETRACTED BY CREDENTIAL READER / ELECTRONIC ACCESS CONTROL SYSTEM FOR PUSH/PULL OPERATION.

HW SET: 37

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	PANIC HARDWARE	LD-99-EO	VON
1	EA	SURFACE CLOSER	4050A SCUSH	LCN
1	EA	KICK PLATE	8400 10"	IVE
2	EA	PERIMETER SEAL	188S (1 ROW EA AT STOP & RABBET)	ZER
1	EA	DOOR SWEEP	39	ZER
1	EA	THRESHOLD	63	ZER

FUNCTION: EXIT ONLY PANIC HARDWARE - NO OUTSIDE TRIM. INSIDE PUSH PAD RETRACTS LATCH FOR EGRESS.

HW SET: 39

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	PANIC HARDWARE	LD-99-L-2SI	VON
2	EA	KEY CYLINDER	AS REQUIRED	
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	KICK PLATE	8400 10"	IVE
1	EA	WALL STOP/HOLDER	WS40	IVE

FUNCTION: CLASSROOM SECURITY PANIC HARDWARE.
INSIDE PUSH PAD RETRACTS LATCH FOR FREE EGRESS.
OUTSIDE LEVER LOCKED/UNLOCKED BY OUTSIDE KEY OR BY INSIDE CENTER-CASE CYLINDER.
INDICATOR ON INSIDE CENTER CASE DISPLAYS LOCKED/UNLOCKED STATUS.

HW SET: 40

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	PANIC HARDWARE	LD-99-L-2SI	VON
2	EA	KEY CYLINDER	AS REQUIRED	
1	EA	SURFACE CLOSER	4050A SHCUSH	LCN
1	EA	KICK PLATE	8400 10"	IVE

FUNCTION: CLASSROOM SECURITY PANIC HARDWARE.
INSIDE PUSH PAD RETRACTS LATCH FOR FREE EGRESS.
OUTSIDE LEVER LOCKED/UNLOCKED BY OUTSIDE KEY OR BY INSIDE CENTER-CASE CYLINDER.
INDICATOR ON INSIDE CENTER CASE DISPLAYS LOCKED/UNLOCKED STATUS.

HW SET: 41

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	FIRE EXIT HARDWARE	99-L-F-2SI	VON
2	EA	KEY CYLINDER	AS REQUIRED	
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	KICK PLATE	8400 10"	IVE
1	EA	WALL STOP	WS406	IVE
1	EA	PERIMETER SEAL	188S	ZER
	EA	N/C FIRE ALARM RELAY	BY FIRE ALARM CONTRACTOR	B/O

FUNCTION: CLASSROOM SECURITY PANIC HARDWARE.
INSIDE PUSH PAD RETRACTS LATCH FOR FREE EGRESS.
OUTSIDE LEVER LOCKED/UNLOCKED BY OUTSIDE KEY OR BY INSIDE CENTER-CASE CYLINDER.
INDICATOR ON INSIDE CENTER CASE DISPLAYS LOCKED/UNLOCKED STATUS.
ELECTRONIC HOLDER TO RELEASE UPON ACTUATION OF FIRE ALARM SYSTEM.

HW SET: 42

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	FIRE EXIT HARDWARE	9927-EO-F-LBRAFL	VON
1	EA	FIRE EXIT HARDWARE	9927-L-F-2SI-LBR	VON
1	EA	KEY CYLINDER	AS REQUIRED	
2	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
2	EA	KICK PLATE	8400 10"	IVE
2	EA	WALL STOP	WS406	IVE
1	EA	PERIMETER SEAL	188S	ZER
2	EA	MEETING STILE SEAL	8193 (1 EA LEAF)	ZER

FUNCTION: CLASSROOM SECURITY PANIC HARDWARE.
INSIDE PUSH PAD RETRACTS LATCH FOR FREE EGRESS.
OUTSIDE LEVER LOCKED/UNLOCKED BY OUTSIDE KEY OR BY INSIDE CENTER-CASE CYLINDER.
INDICATOR ON INSIDE CENTER CASE DISPLAYS LOCKED/UNLOCKED STATUS.

HW SET: 43

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	PANIC HARDWARE	LD-9927-EO-LBR	VON
1	EA	PANIC HARDWARE	LD-9927-L-2SI-LBR	VON
1	EA	KEY CYLINDER	AS REQUIRED	
2	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
2	EA	KICK PLATE	8400 10"	IVE
2	EA	WALL STOP/HOLDER	WS40	IVE
2	EA	PERIMETER SEAL	188S (1 ROW EA AT STOP AND RABBET)	ZER
2	EA	MEETING STILE SEAL	328 (1 EA LEAF)	ZER
2	EA	DOOR SWEEP	39	ZER
1	EA	THRESHOLD	63	ZER

FUNCTION: CLASSROOM SECURITY PANIC HARDWARE.
INSIDE PUSH PAD RETRACTS LATCH FOR FREE EGRESS.
OUTSIDE LEVER LOCKED/UNLOCKED BY OUTSIDE KEY OR BY INSIDE CENTER-CASE CYLINDER.
INDICATOR ON INSIDE CENTER CASE DISPLAYS LOCKED/UNLOCKED STATUS.

HW SET: 44

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	FIRE EXIT HARDWARE	9927-EO-F-LBRAFL	VON
1	EA	FIRE EXIT HARDWARE	9927-L-F-LBR	VON
1	EA	KEY CYLINDER	AS REQUIRED	
2	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
2	EA	KICK PLATE	8400 10"	IVE
2	EA	FIRE/LIFE WALL MAG	SEM7800	LCN
1	EA	PERIMETER SEAL	188S	ZER
2	EA	MEETING STILE SEAL	8193 (1 EA LEAF)	ZER
1	EA	N/C FIRE ALARM RELAY	BY FIRE ALARM CONTRACTOR	B/O

FUNCTION: CLASSROOM PANIC HARDWARE.
INSIDE PUSH PAD RETRACTS LATCH FOR FREE EGRESS.
OUTSIDE LEVER LOCKED/UNLOCKED BY OUTSIDE KEY.
ELECTRONIC HOLDER TO RELEASE UPON ACTUATION OF FIRE ALARM SYSTEM.

HW SET: 45

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	PANIC HARDWARE	LD-9927-L-LBR	VON
1	EA	PANIC HARDWARE	LD-9927-EO-LBR	VON
1	EA	KEY CYLINDER	AS REQUIRED	
2	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
2	EA	ARMOR PLATE	8400 34"	IVE
2	EA	WALL STOP/HOLDER	WS40	IVE

FUNCTION: CLASSROOM PANIC HARDWARE.
INSIDE PUSH PAD RETRACTS LATCH FOR FREE EGRESS.
OUTSIDE LEVER LOCKED/UNLOCKED BY OUTSIDE KEY.

HW SET: 46

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	PANIC HARDWARE	LD-99-NL	VON
1	EA	KEY CYLINDER	AS REQUIRED	
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	KICK PLATE	8400 10"	IVE
1	EA	WALL STOP	WS406	IVE
1	EA	PERIMETER SEAL	188S	ZER

FUNCTION: NIGHT LATCH EXIT HARDWARE. FIXED OUTSIDE TRIM - LATCH RETRACTED BY KEY.
INSIDE PUSH PAD RETRACTS LATCH FOR FREE EGRESS.

HW SET: 47

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	PANIC HARDWARE	LD-99-NL	VON
1	EA	KEY CYLINDER	AS REQUIRED	
1	EA	SURFACE CLOSER	4050A / 4050A EDA ~~4050A SCUSH~~	LCN
1	EA	KICK PLATE	8400 10"	IVE
1	EA	PERIMETER SEAL	188S	ZER

FUNCTION: NIGHT LATCH EXIT HARDWARE. FIXED OUTSIDE TRIM - LATCH RETRACTED BY KEY. INSIDE PUSH PAD RETRACTS LATCH FOR FREE EGRESS.

HW SET: 48

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	PANIC HARDWARE	CD-99-NL	VON
2	EA	KEY CYLINDER	AS REQUIRED	
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	KICK PLATE	8400 10"	IVE
1	EA	WALL STOP/HOLDER	WS40	IVE

FUNCTION: NIGHT LATCH EXIT HARDWARE. FIXED OUTSIDE TRIM - LATCH RETRACTED BY KEY. INSIDE PUSH PAD RETRACTS LATCH FOR FREE EGRESS.
LATCH DOGGED BY INSIDE CYLINDER FOR PUSH/PULL OPERATION.
DOOR HELD OPEN BY AUTOMATIC MECHANICAL WALL HOLDER.

HW SET: 49

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	PANIC HARDWARE	CD-9927-DT-LBR	VON
1	EA	PANIC HARDWARE	CD-9927-NL-LBR	VON
3	EA	KEY CYLINDER	AS REQUIRED	
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
2	EA	KICK PLATE	8400 10"	IVE
2	EA	WALL STOP/HOLDER	WS40	IVE

FUNCTION: NIGHT LATCH PANIC HARDWARE. FIXED OUTSIDE TRIM - LATCH RETRACTED BY KEY. INSIDE PUSH PAD RETRACTS LATCH FOR EGRESS.
LATCH DOGGED BY INSIDE CYLINDER FOR PUSH/PULL OPERATION.
DOOR HELD OPEN BY AUTOMATIC MECHANICAL WALL HOLDER.

HW SET: 50

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	REMOVABLE MULLION	KR4954	VON
1	EA	PANIC HARDWARE	LD-99-EO	VON
1	EA	PANIC HARDWARE	LD-99-NL	VON
2	EA	KEY CYLINDER	AS REQUIRED	
2	EA	SURFACE CLOSER	4050A SCUSH	LCN
1	EA	RAIN DRIP	142	ZER
1	SET	GASKETING	429 (MOUNT PRIOR TO CLOSER)	ZER
1	EA	MULLION SEAL	8780	ZER
2	EA	DOOR SWEEP	8198	ZER
1	EA	THRESHOLD	AS REQUIRED	ZER
2	EA	DOOR POSITION SWITCH	679	SCE

FUNCTION: NIGHT LATCH PANIC HARDWARE. FIXED OUTSIDE TRIM - LATCH RETRACTED BY KEY. INSIDE PUSH PAD RETRACTS LATCH FOR EGRESS.

HW SET: 51

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	PANIC HARDWARE	CD-99-NL-OP	VON
2	EA	KEY CYLINDER	AS REQUIRED	
1	EA	90 DEG OFFSET PULL	8190 10"	IVE
1	EA	OH STOP & HOLDER	100HP	GLY
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN

FUNCTION: NIGHT LATCH PANIC HARDWARE. FIXED OUTSIDE TRIM - LATCH RETRACTED BY KEY. INSIDE PUSH PAD RETRACTS LATCH FOR EGRESS.
LATCH DOGGED BY INSIDE CYLINDER FOR PUSH/PULL OPERATION.
DOOR HELD OPEN BY AUTOMATIC MECHANICAL OVERHEAD HOLDER.

HW SET: 52

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	PANIC HARDWARE	CD-9947-EO	VON
1	EA	PANIC HARDWARE	CD-9947-NL-OP	VON
3	EA	KEY CYLINDER	AS REQUIRED	
2	EA	90 DEG OFFSET PULL	8190 10"	IVE
1	EA	OH STOP & HOLDER	100HP	GLY
2	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	WALL STOP/HOLDER	WS40	IVE

FUNCTION: NIGHT LATCH PANIC HARDWARE. FIXED OUTSIDE TRIM - LATCH RETRACTED BY KEY. INSIDE PUSH PAD RETRACTS LATCH FOR EGRESS.
LATCH DOGGED BY INSIDE CYLINDER FOR PUSH/PULL OPERATION.
DOOR HELD OPEN BY AUTOMATIC MECHANICAL OVERHEAD HOLDER.

HW SET: 53

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	PUSH/PULL BAR	9190 10"	IVE
1	EA	OH STOP	100S	GLY
1	EA	SURF. AUTO OPERATOR	4642	LCN
2	EA	ACTUATOR, WALL OR JAMB MOUNT	8310-853 OR 8310-818 AS REQD (VERIFY TYPE AND MOUNTING LOCATION)	LCN

FUNCTION: PUSH/PULL.
INSIDE OR OUTSIDE ACTUATOR AUTOMATICALLY OPENS DOOR.

HW SET: 55

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
2	EA	PUSH/PULL BAR	9190 10"	IVE
2	EA	OH STOP	100S	GLY
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	SURF. AUTO OPERATOR	4642	LCN
2	EA	ACTUATOR, WALL OR JAMB MOUNT	8310-853 OR 8310-818 AS REQD (VERIFY TYPE AND MOUNTING LOCATION)	LCN
2	EA	PERIMETER SEAL	188S	ZER

FUNCTION: PUSH/PULL.
INSIDE OR OUTSIDE ACTUATOR AUTOMATICALLY OPENS DOOR.

HW SET: 56

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HINGE	AS REQUIRED	IVE
1	EA	CLASSROOM DEAD LOCK	L463 XB11-720	SCH
1	EA	PUSH PLATE	8200 6" X 16"	IVE
1	EA	PULL PLATE	8303 10" 4" X 16"	IVE
1	EA	SURFACE CLOSER	4050A / 4050A EDA	LCN
1	EA	KICK PLATE	8400 10"	IVE
1	EA	WALL STOP	WS406	IVE

FUNCTION: (E06091) CLASSROOM DEAD LOCK. OUTSIDE KEY EXTENDS OR RETRACTS DEADBOLT. INSIDE TURN CAN ONLY RETRACT DEADBOLT.

HW SET: 57

QTY		DESCRIPTION	CATALOG NUMBER	MFR
	EA	HARDWARE	BY DOOR SUPPLIER	B/O

END OF SECTION

SECTION 08 8000
GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Insulating glass units.

B. Glazing units.

C. Laminated glass interlayers (SLG-5).

D. Glazing compounds.

1.02 RELATED REQUIREMENTS

A. Section 06 4100 - Architectural Wood Casework: Cabinets with requirements for glass shelves and glazed doors.

B. Section 07 2700 - Air Barriers.

C. Section 07 9200 - Joint Sealants: Sealants for other than glazing purposes.

D. Section 08 1113 - Hollow Metal Doors and Frames: Glazed lites in doors and borrowed lites.

E. Section 08 1416 - Flush Wood Doors: Glazed lites in doors.

F. Section 08 4313 - Aluminum-Framed Storefronts

G. Section 08 4413 - Glazed Aluminum Curtain Walls

H. Section 08 8813 - Fire-Rated Glazing.

1.03 REFERENCE STANDARDS

A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials.

B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test.

C. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers.

D. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.

E. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass.

F. ASTM C1193 - Standard Guide for Use of Joint Sealants.

G. ASTM C1376 - Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass.

H. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings.

I. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation.

J. GANA (GM) - GANA Glazing Manual.

K. GANA (SM) - GANA Sealant Manual.

L. NFRC 300 - Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Product Data on Insulating Glass Unit and Glazing Unit Glazing Types: Provide structural, physical and environmental characteristics, size limitations, special handling and installation requirements.

1. On mirror glass: mastic, and edge trim (if indicated).

C. Product Data on Glazing Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements, and identify available colors.

D. Samples: Submit two samples 12 by 12 inch in sizeof each type of insulated glass units showing coloration and thermal spacer design.

E. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

A. Perform Work in accordance with GANA (GM) for glazing installation methods.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years of documented experience.

C. Installer Qualifications: Company specializing in performing work of the type specified and approved by manufacturer.

1.06 FIELD CONDITIONS

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

B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

C. Store products in manufacturer's unopened packaging until ready for installation.

1.07 WARRANTY

A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.

B. Insulating Glass Units: Provide a ten (10) year manufacturer warranty to include coverage for seal failure, interpane dusting or misting, including replacement of failed units.

C. Laminated Glass: Provide a five (5) year manufacturer warranty to include coverage for delamination, including providing products to replace failed units.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Glass Fabricators:
1. Oldcastle; www.obe.com
2. Viracon, Inc: www.viracon.com.
3. Substitutions: See Section 01 6000 - Product Requirements.

B. Float Glass Manufacturers:
1. Cardinal Glass Industries: www.cardinalcorp.com/#sle.
2. Guardian Glass, LLC: www.guardianglass.com.
3. Pilkington North America Inc: www.pilkington.com/na/#sle.
4. **BASIS OF DESIGN:** PPG Industries, Inc: www.ppgideascapes.com.
5. Substitutions: See Section 01 6000 - Product Requirements.

C. Laminated Glass Manufacturers:
1. Cardinal Glass Industries: www.cardinalcorp.com/#sle.
2. Dreamwalls by Gardner Glass Products; Laminated Glass: www.dreamwalls.com/#sle.
3. Tecnoglass; Laminated Glass: www.tecnoglass.com/#sle.
4. Thompson I.G., LLC; Laminated Glass: www.thompsonig.com/#sle.
5. Viracon, Architectural Glass segment of Apogee Enterprises, Inc: www.viracon.com/#sle.
6. Kuraray, Trosifol, SentryGlas: www.trosifol.com/applications-products/products/sentryglas/#sle.
7. Substitutions: See Section01 6000-Product Requirements.

2.02 PERFORMANCE REQUIREMENTS - EXTERIOR GLAZING ASSEMBLIES

A. Provide type and thickness of exterior glazing assemblies to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of glass.
   1. Design Pressures: See Structural Notes in Drawings.
   2. Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions, and maximum lateral deflection of supported glass.
   3. Provide glass edge support system sufficiently stiff to limit the lateral deflection of supported glass edges to less than 1/175 of their lengths under specified design load.
   4. Glass thicknesses listed are minimum.

B. Weather-Resistive Barrier Seals: Provide completed assemblies that maintain continuity of building enclosure water-resistive barrier, vapor retarder, and/or air barrier.
   1. In conjunction with weather barrier related materials described in other sections, as follows:
      a. Air Barriers: See Section 07 2700.
   2. To utilize inner pane of multiple pane insulating glass units for continuity of vapor retarder and/or air barrier seal.
   3. To maintain a continuous vapor retarder and/or air barrier throughout glazed assembly from glass pane to heel bead of glazing sealant.

C. Thermal and Optical Performance: Provide exterior glazing products with performance properties as indicated. Performance properties are in accordance with manufacturer's published data as determined with the following procedures and/or test methods:
   1. Center of Glass U-Value: Comply with NFRC 100 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.
   2. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program.
   3. Solar Optical Properties: Comply with NFRC 300 test method.

2.03 GLASS MATERIALS

A. Float Glass: Provide float glass based glazing unless otherwise indicated.
   1. Kind HS - Heat-Strengthened Type: Complies with ASTM C1048.
   2. Kind FT - Fully Tempered Type: Complies with ASTM C1048.
   3. Fully Tempered Safety Glass: Complies with ANSI Z97.1 or 16 CFR 1201 criteria for safety glazing used in hazardous locations.

B. Laminated Glass: Float glass laminated in accordance with ASTM C1172.
   1. Laminated Safety Glass: Complies with ANSI Z97.1 - Class B or 16 CFR 1201 – Category I impact test requirements.

2.04 INSULATING GLASS UNITS

A. Manufacturers:
   1. PPG Industries, Inc: www.ppgideascapes.com.
   2. Viracon, Apogee Enterprises, Inc: www.viracon.com.
   3. Substitutions: See Section 01 6000 - Product Requirements.

B. Insulating Glass Units: Types as indicated.
   1. Durability: Certified by an independent testing agency to comply with ASTM E2190.
   2. Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or magnetic sputter vapor deposition (soft-coat) type coatings on flat glass; coated vision glass, Kind CV; coated overhead glass, Kind CO; or coated spandrel glass, Kind CS.
   3. Glass Edges: Seamed, no exceptions.
   4. Warm-Edge Spacers: Low conductivity thermoplastic and stainless steel.
      a. Spacer Width: As required for specified insulating glass unit.
      b. Spacer Height: Manufacturer's standard.
      c. Products:

1) Technoform Glass Insulation; TGI-Spacer: www.glassinsulation.us/#sle.
2) Substitutions: See Section 01 6000 - Product Requirements.

5. Spacer Color: match framing color, no exceptions.
6. Edge Seal:
   a. Dual-Sealed System: Provide polyisobutylene sealant as primary seal applied between spacer and glass panes, and silicone, polysulfide, or polyurethane sealant as secondary seal applied around perimeter.
   b. Single-Sealed Systems prohibited
7. Color: Black.
8. Purge interpane space with dry air, hermetically sealed.

C. Type GL-1 - Insulating Glass Units: Vision glass, double glazed.
1. Applications: typical exterior.
2. Description: Solarban 60 on Solarbronze 6mm (2), 1/2" air space filled with argon, 6mm clear, Low-E (4).
3. Space between lites filled with argon.
4. Outboard Lite: Fully tempered float glass, 1/4 inch thick, minimum.
   a. Tint: Bronze.
   b. Coating: Solarban 60 on #2 surface.
5. Inboard Lite: Fully tempered float glass, 1/4 inch thick, minimum.
   a. Tint: Clear with Low-E on #4 such as Energy Advantage Low-E.
6. Total Thickness: 1 inch.
7. Visible Light Transmittance (VLT): 42 percent, minimum.
8. Thermal Transmittance (U-Value), Winter Nighttime - Center of Glass: 0.29, maximum.
9. Thermal Transmittance (U-Value), Winter Daytime - Center of Glass: 0.27, maximum.
10. Shading Coefficient: 0.32, maximum.
11. Solar Heat Gain Coefficient (SHGC): 28 percent, maximum.
12. Visible Light Reflectance, Outside: 7 percent, maximum.
13. Glazing Method: Dry glazing method, gasket glazing.

D. Type GL-2 - NOT USED.

2.05 GLAZING UNITS

A. Type GL-3 - Monolithic Interior Vision Glazing: non-fire-rated.
1. Applications: Interior glazing unless otherwise indicated.
2. Glass Type: Fully tempered float glass.
3. Tint: Clear.
4. Thickness: 1/4 inch, nominal.
   a. Provide 3/8-inch where spans exceed 6 feet
   b. Provide 1/2-inch where spans exceed 8 feet
5. Glazing Method: Dry glazing method, gasket glazing.

B. Type SLG-5 – Security Glazing: Laminated glass, 3-Ply.
1. Applications: Locations as indicated on drawings.
2. Tint: Clear.
3. Total Thickness: 9/16 inch.
4. Outer Lite: 1/4 inch tempered glass.
5. Interlayer: 0.060 inch Ionoplast such as SentryGlass.
6. Inside Lite: 1/4 inch tempered glass.

2.06 GLAZING COMPOUNDS

A. Butyl Sealant: Single component; ASTM C920 Grade NS, Class 12-1/2, Uses M and A, Shore A hardness of 10 to 20; black color.

B. Manufacturers:
1. Bostik Inc: www.bostik-us.com.
2. Dow Corning Corporation: www.dowcorning.com/construction.

3. Momentive Performance Materials, Inc: www.momentive.com.
4. Pecora Corporation: www.pecora.com.
5. GE Plastics: www.geplastics.com.
6. Substitutions: See Section 01 6000 - Product Requirements.

2.07 ACCESSORIES

A. Setting Blocks: Silicone, with 80 to 90 Shore A durometer hardness; ASTM C864 Option II. Length of 0.1 inch for each square foot of glazing or minimum 4 inch x width of glazing rabbet space minus 1/16 inch x height to suit glazing method and pane weight and area.

B. Glazing Gaskets: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C864 Option I; color black.

C. Glazing Clips: Manufacturer's standard type.

2.08 FABRICATION

A. Fabricate glass and other glazing products in sizes required to glaze openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with recommendations of product manufacturer and reference glazing standard as required to comply with system performance requirements.

PART 3 EXECUTION

3.01 VERIFICATION OF CONDITIONS

A. Verify that openings for glazing are correctly sized and within tolerances, including those for size, squareness, and offsets at corners.

B. Verify that the minimum required face and edge clearances are being provided.

C. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and support framing is ready to receive glazing system.

D. Verify that sealing between joints of glass framing members has been completed effectively.

E. Proceed with glazing system installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Clean contact surfaces with appropriate solvent and wipe dry immediately before glazing. Remove coatings that are not tightly bonded to substrates.

B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.

C. Prime surfaces scheduled to receive sealant where required for proper sealant adhesion.

3.03 INSTALLATION, GENERAL

A. Install glazing in compliance with written instructions of glass, gaskets, and other glazing material manufacturers, unless more stringent requirements are indicated, including those in glazing referenced standards.

B. Install glazing sealants in accordance with ASTM C1193, GANA (SM), and manufacturer's instructions.

C. Do not exceed edge pressures around perimeter of glass lites as stipulated by glass manufacturer.

D. Set glass lites of system with uniform pattern, draw, bow, and similar characteristics.

E. Set glass lites in proper orientation so that coatings face exterior or interior as indicated.

F. Prevent glass from contact with any contaminating substances that may be the result of construction operations such as, and not limited to the following; weld splatter, fire-safing, plastering, mortar droppings, and paint.

3.04 INSTALLATION - DRY GLAZING METHOD (GASKET GLAZING)

A. Application - Exterior and/or Interior Glazed: Set glazing infills from either the exterior or the interior of the building.

B. Place setting blocks at 1/4 points with edge block no more than 6 inch from corners.

C. Rest glazing on setting blocks and push against fixed stop with sufficient pressure on gasket to attain full contact.

D. Install removable stops without displacing glazing gasket; exert pressure for full continuous contact.

3.05 CLEANING

A. Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.

B. Remove nonpermanent labels immediately after glazing installation is complete.

C. Clean glass and adjacent surfaces after sealants are fully cured.

D. Clean glass on both exposed surfaces not more than 4 days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.

3.06 PROTECTION

A. After installation, mark pane with an 'X' by using removable plastic tape or paste; do not mark heat absorbing or reflective glass units.

B. Remove and replace glass that is damaged during construction period prior to Date of Substantial Completion.

END OF SECTION

SECTION 11 6833
ATHLETIC FIELD EQUIPMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Football field equipment.

1.02 RELATED REQUIREMENTS

A. Section 03 3000 - Cast-in-Place Concrete: Footings for field equipment.

1.03 ABBREVIATIONS

A. FIFA - Federation Internationale de Football Association; www.fifa.com.

B. NFHS - National Federation of State High School Associations; www.nfhs.com and www.nfhs.org.

1.04 REFERENCE STANDARDS

A. ASTM B26/B26M - Standard Specification for Aluminum-Alloy Sand Castings; 2018, with Editorial Revision.

B. ASTM B108/B108M - Standard Specification for Aluminum-Alloy Permanent Mold Castings; 2025.

C. ASTM B179 - Standard Specification for Aluminum Alloys in Ingot and Molten Forms for Castings from All Casting Processes; 2018.

1.05 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meetings: Convene a meeting one week before starting this work to discuss coordination between various installers.

1.06 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide athletic field equipment manufacturer's product data indicating materials of construction, compliance with specified standards, installation procedures, and necessary safety limitations.

C. Shop Drawings: Submit detailed scale drawings showing athletic field equipment and perimeter layout.

D. Samples: Submit color chart for each item that color must be selected showing full range of colors and finishes.

E. Maintenance Data: Submit manufacturer's recommended maintenance instructions and list of replaceable parts for each athletic field equipment item, along with supplier's address and phone number.

F. Manufacturer's Qualification Statement.

G. Installer's Qualification Statement.

H. Executed Warranty.

1.07 QUALITY ASSURANCE

1.08 DELIVERY, STORAGE, AND HANDLING

A. Deliver, handle, and store equipment on project site in accordance with manufacturer's recommendations.

B. Store materials in a dry, covered area, and elevated above grade.

1.09 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

B. Provide manufacturer's standard warranty. Complete forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Athletic Field Equipment:
   1. Arizona Courtlines, INC,(ACI)
   2. ADP Lemco, Inc: www.adplemco.com/#sle.
   3. Grand Slam Safety, LLC: www.grandslamsafety.com/#sle.
   4. Gill Athletics: www.gillathletics.com.
   5. Substitutions: See Section 01 6000 - Product Requirements.

2.02 ATHLETIC FIELD EQUIPMENT - GENERAL

A. High School Sports: Provide equipment that complies with NFHS requirements.

B. Mount supporting posts in concrete footings, unless otherwise indicated, refer to Section 03 3000 for additional concrete footing installation requirements.

2.03 FOOTBALL FIELD EQUIPMENT

A. High School Goal Post: Football goal post with single support post, crossbar and two uprights.
   1. Uprights: 4 inch outside diameter aluminum tubes with powder coating. Top at 30 feet above grade and clearance between uprights of 23 feet - 4 inch; mount wind flags to top of each upright.
   2. Crossbar: 6-5/8 inch outside diameter aluminum tube with powder coating; mount with 10 feet of clearance above grade.
   3. Support post: 6-5/8 inch outside diameter aluminum tube with powder coating.
   4. Powder Coat Color: Architect to select from Manufacturer's standard colors.

B. Football Goal Post Padding: Wrap-around pad for goal supporting post, using hook and loop fastener straps for attachment around post.
   1. Pad Height: 6 feet.
   2. Padding Material: High density urethane foam, at least 4 inch thick with 18 ounce mildew resistant and ultraviolet (UV) resistant coated vinyl.
   3. Color: Architect to select from manufacturer's standard colors..

2.04 MATERIALS

A. Cast Aluminum: ASTM B26/B26M, ASTM B108/B108M, or ASTM B179.

B. Powder Coating for Aluminum: Thermoset polyester or TGIC (triglycidyl isocyanurate) powder in compliance with AAMA 2604/2605.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that athletic field equipment footings have been installed in proper locations and at proper elevations.

B. Verify location of underground utilities and facilities in athletic field equipment area; damage to underground utilities and facilities will be repaired at Contractor's expense.

3.02 PREPARATION

A. Stake layout of athletic field equipment perimeter in accordance with approved shop drawings before starting any work.
   1. Verify that athletic field perimeters do not overlap hard surfaces, whether currently installed or not.
   2. Verify that athletic fields are free of obstructions.
   3. If conflicts or obstructions are found, notify Architect.
   4. Do not proceed with this work until revised drawings have been provided, showing corrected layout, and that any obstructions have been removed or corrections to layout have been made.

3.03 INSTALLATION

A. Install concrete footings with top surface a minimum of 1/2 inch below required subgrade elevation and slope top to drain, unless otherwise indicated.

B. Install athletic field equipment in accordance with manufacturer's instructions, and rules and regulations of specified athletic association indicated for this work.

C. Install athletic field equipment without sharp points, edges, or protrusions; entanglement hazards or pinch, crush, or shear points.

3.04 CLEANING

A. Clean athletic field equipment of construction materials, dirt, stains, filings, and blemishes due to shipment or installation; clean in accordance with manufacturer's instructions, using cleaning agents as recommended by manufacturer.

B. Clean athletic field area of excess construction materials, debris, and waste.

C. Remove excess and waste material and dispose of off-site in accordance with requirements of authorities having jurisdiction.

3.05 PROTECTION

A. Protect installed products until Date of Substantial Completion.

B. Replace damaged products before Date of Substantial Completion.

END OF SECTION 11 6833

SECTION 12 2400
WINDOW SHADES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Interior manual roller shades (RWS1, RWS3).

B. Interior motorized roller shades (RWS2).

C. Motor controls.

1.02 RELATED REQUIREMENTS

A. Section 06 1000 - Rough Carpentry: Concealed wood blocking for attachment of headrail brackets.

B. Division 26: Finish requirements for wall controls specified in this section.

C. Division 28: Audio-video systems, for interface with motorized window shades.

1.03 REFERENCE STANDARDS

A. NFPA 70 - National Electrical Code.

B. NFPA 701 - Standard Methods of Fire Tests for Flame Propagation of Textiles and Films.

C. UL 325 - Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems.

D. WCMA A100.1 - Standard for Safety of Window Covering Products.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Where motorized shades are to be controlled by control systems provided under other sections, coordinate the work with other trades to provide compatible products.
   2. Coordinate the work with other trades to provide rough-in of electrical wiring as required for installation of hardwired motorized shades.

B. Preinstallation Meeting: Convene one week prior to commencing work related to products of this section; require attendance of affected installers.

C. Sequencing:
   1. Do not fabricate shades until field dimensions for each opening have been taken with field conditions in place.
   2. Do not install shades until final surface finishes and painting are complete.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide manufacturer's standard catalog pages and data sheets, including materials, finishes, fabrication details, dimensions, profiles, mounting requirements, and accessories.
   1. Motorized Shades: Include power requirements and standard wiring diagrams for specified products.

C. Shop Drawings: Include shade schedule indicating size, location and keys to details, head, jamb and sill details, mounting dimension requirements for each product and condition, and operation direction.
   1. Motorized Shades: Provide schematic system riser diagram indicating component interconnections. Include requirements for interface with other systems.

D. Selection Samples: Include full chainset of fascia color options.
   1. Motorized Shades: Include finish selections for controls.

E. Verification Samples: Minimum size 6 inches square, representing actual materials, color and pattern.

F. Project Record Documents: Record actual locations of control systems and show interconnecting wiring.

G. Operation and Maintenance Data: List of all components with part numbers, sources of supply, and operation and maintenance instructions; include copy of shop drawings.

H. Warranty: Submit sample of manufacturer's warranty and documentation of final executed warranty completed in Owner's name and registered with manufacturer.

1.06 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than ten years of documented experience.

B. Installer Qualifications: Company specializing in performing work of this type with shading systems of similar size and type.
   1. Manufacturer's authorized representative.
   2. Factory training and demonstrated experience.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver shades in manufacturer's unopened packaging, labeled to identify each shade for each opening.

B. Handle and store shades in accordance with manufacturer's recommendations.

1.08 FIELD CONDITIONS

A. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.09 WARRANTY

A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.

B. Provide manufacturer's warranty from Date of Substantial Completion, covering the following:
   1. Shade Hardware: twenty-five years.
   2. Electric Motors: One year.
   3. Electronic Control Equipment: One year.
   4. Fabric: twenty-five years.
   5. Aluminum and Steel Coatings: five years.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Interior Manually Operated Roller Shades:
   1. Draper, Inc; Clutch Operated FlexShade: www.draperinc.com/#sle.
   2. Hunter Douglas Architectural: www.hunterdouglasarchitectural.com/#sle.
   3. Levolor: www.commercial.levolor.com/#sle.
   4. Lutron Electronics Co., Inc: www.lutron.com/#sle.
   5. **BASIS OF DESIGN:** MechoShade Systems LLC; Mecho/5 System : www.mechoshade.com/#sle.
   6. SWFcontract, a division of Springs Window Fashions, LLC.: www.swfcontract.com/#sle.
   7. Substitutions: See Section 01 6000 - Product Requirements.

B. Interior Motorized Roller Shades, Motors and Motor Controls:
   1. Draper, Inc; Motorized FlexShade: www.draperinc.com/#sle.
   2. Hunter Douglas Architectural: www.hunterdouglasarchitectural.com/#sle.
   3. Levolor: www.commercial.levolor.com/#sle.
   4. Lutron Electronics Co., Inc: www.lutron.com/#sle.
   5. **BASIS OF DESIGN:** MechoShade Systems LLC; Electroshade: www.mechoshade.com/#sle.
   6. SWFcontract, a division of Springs Window Fashions, LLC: www.swfcontract.com/#sle.
   7. Substitutions: See Section 01 6000 - Product Requirements.

2.02 ROLLER SHADES

A. General:
1. Provide shade system components that are easy to remove or adjust without removal of mounted shade brackets.
2. Provide shade system that operates smoothly when shades are raised or lowered.
3. Motorized Shades: Motor system housed inside roller tube, controlling shade movement via motor controls indicated; listed or recognized to UL 325.
   a. Comply with NFPA 70.
   b. Electrical Components: Listed, classified, and labeled as suitable for the purpose intended. Where applicable, system components to be FCC compliant.
   c. Motors: Size and configuration as recommended by manufacturer for the type, size, and arrangement of shades to be operated; integrated into shade operating components and concealed from view; fully compatible with controls to be installed.

B. Roller Shades:
1. Description - Interior Roller Shades: Single ~~and double~~ roller, manual and motorized fabric window shade system complete with mounting brackets, roller tubes, hembars, hardware, and accessories.
   a. Drop Position: Regular roll.
   b. Roll Direction: Roll down, closed position is at window sill.
   c. Mounting:
      1) Manual Shades: Window jamb mounted- inside, between jambs. Field verify prior to ordering.
      2) Motorized Shades: Wall mounted.
   d. Size: As indicated on drawings.
   e. Fabric: As indicated in Finish Schedule
2. Brackets and Mounting Hardware: As recommended by manufacturer for mounting indicated and to accommodate shade fabric roll-up size and weight.
   a. Material: Stamped steel.
   b. ~~Double Roller Brackets: Configured for light-filtering and room-darkening shades in one opening.~~
      1) ~~Light-Filtering Fabric: Room-side of opening.~~
      2) ~~Room-Darkening Fabric: Glass-side of opening.~~
   c. Multiple Shade Operation: Provide hardware as necessary to operate more than one shade using a single clutch operator.
3. Roller Tubes: As required for type of shade operation.
   a. Material: Extruded aluminum, baked enamel; color from manufacturer's standards.
   b. Size: As recommended by manufacturer; selected for suitability for installation conditions, span, and weight of shades.
   c. Fabric Attachment: Utilize extruded channel in tube to accept vinyl spline welded to fabric edge.
4. Hembars: Designed to maintain bottom of shade straight and flat.
   a. Style: Full wrap fabric covered bottom bar, flat profile with heat sealed closed ends.
   b. Room-Darkening Shades: Provide a slot in bottom bar with wool-pile light seal.
5. Manual Operation for Interior Shades:
   a. Clutch Operator: Manufacturer's standard material and design, permanently lubricated.
   b. Drive Chain: Continuous loop, beaded ball chain with restraining device, 95 lb minimum breaking strength; comply with WCMA A100.1. Provide upper and lower limit stops.
   c. Chain Retainer:
      1) Chain tensioning device complying with WCMA A100.1.
6. Accessories:

a. Fascia: Extruded aluminum, size as required to conceal shade mounting, attachable to brackets without exposed fasteners; baked enamel finish.
   1) Color: to be selected from manufacturer's standard options.
   2) Profile: Square/rectangular.
b. End Caps: Provide manufacturer's standard end caps to cover exposed ends of brackets.
c. Fasteners: Noncorrosive, and as recommended by shade manufacturer.

2.03 SHADE FABRIC

A. Fabric: Non-flammable, color-fast, impervious to heat and moisture, and able to retain its shape under normal operation.
   1. Manufacturers:
      a. Draper, Inc: www.draperinc.com
      b. Lutron Electronics Co., Inc: www.lutron.com/#sle.
      c. **BASIS OF DESIGN:** MechoShade Systems LLC: www.mechoshade.com/#sle.
      d. Mermet Corporation: www.mermetusa.com/#sle.
      e. Phifer, Inc: www.phifer.com/#sle.
      f. SWFcontract, a division of Springs Window Fashions, LLC.: www.swfcontract.com/#sle.
      g. Substitutions: See Section 01 6000 - Product Requirements.
   2. Performance Requirements:
      a. Flammability: Pass NFPA 701 large and small tests.
      b. Fungal Resistance: No growth when tested according to ASTM G21.
   3. Light-Filtering Fabric
      a. Openness Factor: As indicated in Finish Schedule.
      b. Color: As indicated in Finish Schedule.
   4. Room-Darkening Fabric:
      a. Openness Factor: zero (black-out)
      b. Color: as indicated in Finish Schedule
   5. Fabrication:
      a. Fabric Orientation: Railroaded, fabric is turned 90 degrees off the roll.
      b. If height of opening requires multiple panels of railroaded fabric, use manufacturer's standard sewn seams.

2.04 MOTOR CONTROLS

A. Unless specifically indicated to be excluded, provide all required equipment, conduit, boxes, wiring, connectors, hardware, supports, accessories, software, system programming, etc. as necessary for a complete operating system that provides the control intent indicated.

B. Provide all components and connections necessary to interface with other systems as indicated.

C. Digital Network Controls:
   1. Intelligent Motors and Devices: Identifiable over network without separate interface.
   2. Provide suitable interface modules as indicated or as required for connection to standard (nonintelligent) motors and devices.
   3. Capable of reprogrammed control without requiring wiring modifications.
   4. Capable of assigning shade motors to shade groups/sub-groups.
   5. Capable of storing programmable open and close limits and minimum of three intermediate preset stop positions for each shade.
   6. Capable of aligning adjacent shades within accuracy of plus/minus 0.25 inch.
   7. Provide 10 year nonvolatile power failure memory for system configuration settings.

D. Manual Controls:
   1. Control Functions:

a. Open: Automatically open controlled shade(s) to fully open position when button is pressed.
b. Close: Automatically close controlled shade(s) to fully closed position when button is pressed.
c. Raise: Raise controlled shade(s) only while button is pressed.
d. Lower: Lower controlled shade(s) only while button is pressed.
e. Presets: For selection of predetermined shade positions.
f. Multiple Shade Groups: Provide individual controls for each shade group as indicated.

2. Wall Controls: Provided by shade manufacturer.
   a. Finish: To be selected by Architect.

2.05 ROLLER SHADE FABRICATION

A. Field measure finished openings prior to ordering or fabrication.

B. Dimensional Tolerances: Fabricate shades to fit openings within specified tolerances.
   1. Vertical Dimensions: Fill openings from head to sill with 1/2 inch space between bottom bar and window stool.
   2. Horizontal Dimensions - Inside Mounting: Provide symmetrical light gaps on both sides of shade not to exceed 1/2 inch total.

C. At openings requiring continuous multiple shade units with separate rollers, locate roller joints at window mullion centers; butt rollers end-to-end.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine finished openings for deficiencies that may preclude satisfactory installation.

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

C. Start of installation shall be considered acceptance of substrates.

3.02 PREPARATION

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

B. Coordinate with window installation and placement of concealed blocking to support shades.

3.03 INSTALLATION

A. Install in accordance with manufacturer's instructions and approved shop drawings, using mounting devices as indicated.

B. Replace shades that exceed specified dimensional tolerances at no extra cost to Owner.

C. Adjust level, projection, and shade centering from mounting bracket. Verify there is no telescoping of shade fabric. Ensure smooth shade operation.

3.04 SYSTEM STARTUP

A. Motorized Shade System: Provide services of a manufacturer's authorized representative to perform system startup.

3.05 CLEANING

A. Clean soiled shades and exposed components as recommended by manufacturer.

B. Replace shades that cannot be cleaned to "like new" condition.

3.06 CLOSEOUT ACTIVITIES

A. See Section 01 7800 - Closeout Submittals, for closeout submittals.

B. See Section 01 7900 - Demonstration and Training, for additional requirements.

C. Demonstration: Demonstrate operation and maintenance of window shade system to Owner's personnel.

3.07 PROTECTION

A. Protect installed products from subsequent construction operations.

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

END OF SECTION

SECTION 12 3600
COUNTERTOPS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Countertops for architectural cabinet work and wall hung tops:
   1. Plastic Laminate (PLAM#).
   2. Solid Surface (SSF#).
   3. Quartz (QTZ#).
   4. Solid Phenolic (SPC#).

B. Solid-surface window sills and wall caps (SSF#).

C. Accessories, including:
   1. Grommets.
   2. Support brackets.

1.02 RELATED REQUIREMENTS

A. Section 06 1000 - Rough Carpentry: Concealed blocking

B. Section 06 4100 - Architectural Wood Casework: Coordination.

C. Section 22 4000 - Plumbing Fixtures: Undermount and drop-in Sinks, trim and connections.

1.03 REFERENCE STANDARDS

A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition.

C. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards.

D. ISFA 2-01 - Classification and Standards for Solid Surfacing Material.

E. ISFA 3-01 - Classification and Standards for Quartz Surfacing Material.

F. NEMA LD 3 - High-Pressure Decorative Laminates.

G. NSI (DSDM) - Dimensional Stone Design Manual, Version VIII.

H. PS 1 - Structural Plywood.

1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Specimen warranty.

C. Shop Drawings: Complete details of materials and installation ; combine with shop drawings of cabinets and casework specified in other sections.

D. Verification Samples: For each finish product specified, minimum size 6 inches square, representing actual product, color, and patterns.

E. Test Reports: Chemical resistance testing, showing compliance with specified requirements.

1.05 QUALITY ASSURANCE

A. Perform work in accordance with AWI/AWMAC Architectural Woodwork Quality Standards Illustrated, as indicated below.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver countertops until painting and similar operations that could damage countertops have been completed in installation areas.

B. Store products in manufacturer's unopened packaging until ready for installation.

C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.07 FIELD CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

B. Field Measurements: Where countertops are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1.08 WARRANTY

A. Correct defective work within a five year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 COUNTERTOPS

A. Plastic Laminate Countertops: High-pressure decorative laminate (HPDL) sheet bonded to substrate.
   1. Laminate Sheet: NEMA LD 3, Grade HGS, 0.048 inch nominal thickness.
      a. Manufacturers:
         1) Formica Corporation: www.formica.com.
         2) Panolam Industries International, Inc Nevamar: www.nevamar.com.
         3) Panolam Industries International, Inc Pionite[<>]: www.pionitelaminates.com.
         4) **BASIS OF DESIGN**: Wilsonart: www.wilsonart.com.
         5) Substitutions: See Section 01 6000 - Product Requirements.
      b. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.
      c. Finish: As indicated in Finish Schedule.
      d. Surface Color and Pattern: As indicated in Finish Schedule.
   2. Exposed Edge Treatment: Molded PVC edge with T-spline, sized to completely cover edge of panel.
      a. Color: To match laminate.
   3. Back and End Splashes: Same material, same construction.
   4. Fabricate in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 11 - Countertops, Custom Grade.
   5. Skirts: As indicated on drawings.
   6. Sinks: See Plumbing.

B. Solid Phenolic Compact Type Countertops (SPC#): Self-supporting flat panel based on thermosetting resins, homogeneously reinforced with cellulose fibers and manufactured under high pressure. The panels have a pigmented resin core with a decorative surface that is electron-beam cured.
   1. Worksurfaces: Solid phenolic composite chemical resistant panels
      a. Manufacturers:
         1) Arborite: www.arborite.com/#sle.
         2) **BASIS OF DESIGN:** Durcon; www.durcon.com
         3) Formica Corporation: www.formica.com/#sle.
         4) Panolam Industries International, Inc: www.panolam.com/#sle.
         5) Trespa: www.trespa.com.
         6) Wilsonart: www.wilsonart.com/#sle.
         7) Substitutions: See Section 01 6000 - Product Requirements.
      b. Panel Thickness: 1 inch.
      c. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.

d. Core Color: Black.
e. Finish: Matte or suede, gloss rating of 5 to 20.
f. Surface Color and Pattern: As indicated in Finish Schedule.

2. Exposed Edge Treatment: Standard 1/8 inch chamfered edge; exposed corners shall be eased slightly for safety.
3. Back and End Splashes: Same material, same construction; 4 inches high unless otherwise indicated.
4. Sinks: See Plumbing.
5. Fabricate in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 11 - Countertops, Custom Grade.

C. Solid Surfacing Countertops (SSF#): Solid surfacing sheet or plastic resin casting over continuous substrate.
1. Flat Sheet Thickness: 1/2 inch, minimum.
2. Solid Surfacing Sheet and Plastic Resin Castings: Complying with ISFA 2-01 and NEMA LD 3; acrylic or polyester resin, mineral filler, and pigments; homogenous, non-porous and capable of being worked and repaired using standard woodworking tools; no surface coating; color and pattern consistent throughout thickness.
a. Manufacturers:
1) Avonite Surfaces: www.avonitesurfaces.com.
2) **BASIS OF DESIGN**: Dupont; Corian: www.corian.com.
3) Formica Corporation: www.formica.com.
4) LG Hausys America, Inc; HI-MACS 12mm: www.lghausysusa.com/#sle.
5) Wilsonart: www.wilsonart.com.
6) Substitutions: See Section 01 6000 - Product Requirements.
b. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.
c. Sinks and Bowls: Integral castings; minimum 3/4 inch wall thickness.
d. Finish on Exposed Surfaces: Smooth, 5 mm radius edges.
e. Color and Pattern: As indicated in Finish Schedule.
3. Other Components Thickness: 1/2 inch, minimum. Grade A Plywood.
4. Exposed Edge Treatment: Edge profile as indicated on drawings.
5. Back and End Splashes: Same sheet material, square top; minimum 4 inches high, unless otherwise noted on drawings.
6. Aprons: As indicated on drawings.
7. Sinks: See Plumbing.
8. Fabricate in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 11 - Countertops, Premium Grade.

D. Solid Surfacing Window Sills and Wall Caps (SSF#): 1/2-inch thick solid surfacing material, adhesively joined with inconspicuous seams and eased 5mm radius edges.

E. Natural Quartz and Resin Composite Countertops (QTZ#): Sheet or slab of natural quartz and plastic resin over continuous substrate.
1. Flat Sheet Thickness: As indicated in Finish Schedule.
2. Natural Quartz and Resin Composite Sheets, Slabs and Castings: Complying with ISFA 3-01 and NEMA LD 3; orthophthalic polyester resin, mineral filler, and pigments; homogenous, non-porous and capable of being worked and repaired using standard stone fabrication tools; no surface coating; color and pattern consistent throughout thickness.
a. Manufacturers:
1) Cambria Company LLC: www.cambriausa.com/#sle.
2) Dal-Tile Corporation: www.daltile.com/#sle.
3) Caesarstone; www.caesarstone.com
4) Corian: Quartz; www.corianquartz.com
5) MSI; www.msisurfaces.com
6) Silestone; www.silestone-usa.com

7) **BASIS OF DESIGN:** Wilsonart; Quartz Select: www.wilsonart.com/#sle.
8) Substitutions: See Section 01 6000 - Product Requirements.

b. Factory fabricate components to the greatest extent practical in sizes and shapes indicated; comply with NSI (DSDM).
c. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.
d. Finish on Exposed Surfaces: Eased, polished.
1) See Interior Finish Schedule for additional requirements.
e. Color and Pattern: As indicated in Finish Schedule.

3. Back and End Splashes: Same sheet material, edges, thickness and height as detailed.
4. Fabricate in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 11 - Countertops, Premium Grade.

2.02 MATERIALS

A. Wood-Based Components:
1. Wood fabricated from old growth timber is not permitted.

B. Plywood for Supporting Substrate: PS 1 Exterior Grade, A-C veneer grade, minimum 5-ply; minimum 3/4 inch thick; join lengths using metal splines.

C. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.

D. Joint Sealant: Mildew-resistant silicone sealant, clear.

E. Low-Profile Countertop Support Brackets: 1/8-inch thick steel countertop/shelf support bracket, with low profile vertical support arm and upper extension; packaged in pairs.
1. Mounting: Concealed, in-wall
2. Capacity: 1000 lbs per pair, minimum.
3. Depth: as indicated in drawings or as appropriate for countertop depth.
4. Width: 1-1/2 or 2 inches
5. Finish: As selected by Architect from manufacturer's standard range.
a. To be field-painted to match adjacent wall finish unless noted otherwise.
6. Fasteners: 3/8” -- 16 x 3 bolt, included with bracket.
7. Product: A&M Hardware: Concealed or Hybrid Workstation Brackets; or approved equivalent.

F. Workstation Brackets: Fixed, L-shaped, corner reinforced, face-of-wall mounting.
1. Materials: Formed steel shapes.
a. Finish: Manufacturer's standard, factory-applied, primer.
2. Products:
a. A&M Hardware, Inc; Standard Brackets: www.aandmhardware.com/#sle.
b. Substitutions: See Section 01 6000 - Product Requirements.

G. Grommets: Standard 2-1/2-inch molded plastic grommets for cut-outs with matching plastic flip-top caps with slot for wire passage.
1. Locations: As indicated in Drawings.
2. Color: As selected by Architect from manufacturer's full range.
3. Manufacturer: Doug Mockett EDP Series or approved equivalent.

2.03 FABRICATION

A. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
1. Join lengths of tops using best method recommended by manufacturer.
2. Fabricate to overhang fronts and ends of cabinets 1 inch except where top butts against cabinet or wall.
a. Rout a 1/8 inch drip groove at underside of exposed overlapping edges, set back 1/2 inch from face of edge.

3. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.

B. Provide back/end splash where indicated on drawings.
1. Secure to countertop with concealed fasteners and with contact surfaces set in waterproof glue.
2. Height: 4 inches, unless otherwise indicated.

C. Solid Surfacing: Fabricate tops and wall panels up to 144 inches long in one piece; join pieces with adhesive sealant in accordance with manufacturer's recommendations and instructions.

D. Wall-Mounted Counters: Provide skirts, aprons, and braces as indicated on drawings, finished to match.

E. Solid Surface Sills: Fabricate up to 144 inches (3657 mm) long in one piece; join pieces with adhesive sealant in accordance with manufacturer's recommendations and instructions.

PART 3 EXECUTION

3.01 EXAMINATION

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

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

C. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

3.02 PREPARATION

A. Clean surfaces thoroughly prior to installation.

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

3.03 INSTALLATION

A. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.

B. Attach plastic laminate countertops using screws with minimum penetration into substrate board of 5/8 inch.

C. Seal joint between back/end splashes and vertical surfaces.
1. Where applied cove molding is not indicated use specified sealant.

3.04 TOLERANCES

A. Variation From Horizontal: 1/8 inch in 10 feet, maximum.

B. Offset From Wall, Countertops: 1/8 inch maximum; 1/16 inch minimum.

C. Field Joints: 1/8 inch wide, maximum.

3.05 CLEANING

A. Clean countertops surfaces thoroughly.

3.06 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION

SECTION 22 40 00 - PLUMBING FIXTURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Flush valve water closets.
B. Wall hung urinals.
C. Lavatories.
D. Sinks.
E. Showers.
F. Eye wash fountains.
G. Electric water coolers.
H. Bottle fillers.
I. Mop sinks.
J. Utility sinks.

1.2 REFERENCE STANDARDS

A. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.
B. ASHRAE Std 18 - Methods of Testing for Rating Drinking-Water Coolers with Self-Contained Mechanical Refrigeration; 2008 (Reaffirmed 2013).
C. ASME A112.6.1M - Floor-Affixed Supports for Off-the-Floor Plumbing Fixtures for Public Use; 1997 (Reaffirmed 2017).
D. ASME A112.18.1 - Plumbing Supply Fittings; 2024.
E. ASME A112.19.3 - Stainless Steel Plumbing Fixtures; 2022.
F. ASME A112.19.5 - Flush Valves and Spuds for Water Closets, Urinals, and Tanks; 2022.
G. ASSE 1014 - Performance Requirements for Backflow Prevention Devices for Hand-Held Showers; 2020.
H. ASSE 1070 - Performance Requirements for Water Temperature Limiting Devices; 2020.
I. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.
J. NSF 61 - Drinking Water System Components - Health Effects; 2017.
K. NSF 372 - Drinking Water System Components - Lead Content; 2016.

1.3 SUBMITTALS

A. See Division 01 – Administrative Requirements, for submittal procedures.
B. Shop Drawings:
   1. Product Data: Provide catalog illustrations of fixtures, sizes, rough-in dimensions, utility sizes, trim, and finishes.
C. Closeout Documents:
   1. Manufacturer's Instructions: Indicate installation methods and procedures.
   2. Maintenance Data: Include fixture trim exploded view and replacement parts lists.
   3. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.

1.5 REGULATORY REQUIREMENTS

A. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., as suitable for the purpose specified and indicated.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Accept fixtures on-site in factory packaging. Inspect for damage.

B. Protect installed fixtures from damage by securing areas and by leaving factory packaging in place to protect fixtures and prevent use.

1.7 WARRANTY

A. Provide five year manufacturer warranty for electric water cooler.

PART 2 PRODUCTS

2.1 GENERAL REQUIREMENTS

A. Potable Water Systems: Provide plumbing fittings and faucets that comply with NSF 61 and NSF 372 for maximum lead content; label pipe and fittings.

B. This Contractor shall submit a portfolio showing fixtures and trimmings to the Architect for his approval.

2.2 **FIXTURE SUPPORT AND FASTENINGS**

A. All fixtures shall be securely anchored independent of finished wall.

B. Fastening to masonry walls shall be by brass bolts or machine screws in lead sleeve type anchorage units, or 1/4 inch brass expansion bolts of sufficient length to extend at least 3 inches into solid masonry.

C. Fastening to wood partitions shall be by the use of round head brass wood screws. Wood screws shall go into solid wood, such as wood inserts, floor joists, studs, or 2" x 6" set between studs.

D. Fixture fastening with steel stud partitions shall be done by bolting or welding a 3/8" x 6" wide steel plate to studs and extending the plate one stud beyond the first and last fixture mounting points or provide an equivalent rigid mounting frame in wall. Fixture carriers shall be provided where noted.

E. All water supply pipe stubs through walls to shower heads and to flush valves shall be securely anchored within the wall or plumbing space.

2.3 **ACCESSORIES**

A. Carriers:

1. See Fixtures

B. Stops

1. Manufacturers:
   a. Brass Craft
   b. McGuire

2. Faucet, stop valves, traps, etc., shall be heavy cast brass. Water lines to all individual fixtures shall be equipped with high grade chromium plated brass compression stop valves. Each individual fixture shall be provided with valves on the supply line.
   a. Stop valves shall be similar to Brass Craft KTCR19X C, 1/4 turn ball valve, chrome plated, with Tee handle.
   b. Stop valves with dual outlets for coffee makers, dishwashers, etc., shall be similar to Brass Craft CR1901LR1, Multi turn compression valves.

C. Undercounter Dishwashers shall be connected via approved air gap fitting.

2.4 **MANUFACTURERS**

A. China Fixtures
   1. American Standard, Kohler, Sloan, Zurn Commercial or approved equal.
B. Fixture Carriers
   1. Josam, Wade, Smith, Zurn, Watts or approved equal.
C. Flush Valves:
   1. Sloan, Zurn, Toto, Hydrotek (8200 Model Only) or approved equal.
D. Lavatory Trim:
   1. T & S Brass, Chicago Faucet, Zurn Commercial, Hydrotek, or approved equal.
E. Sink Trim:
   1. T & S Brass, Chicago Faucet, Zurn Commercial, or approved equal.
F. Seats:
   1. Bemis, Beneke, Church, Toto or approved equal.
G. Sinks:
   1. Elkay, Just, or approved equal.
H. Electric Water Coolers:
   1. Halsey Taylor, Elkay, Murdock or approved equal.
I. Bottle Fillers:
   1. Elkay or approved equal.
J. EW:
   1. Haws, Bradley, Stingray, Speakman, or approved equal.
K. Shower Valve:
   1. Leonard, Symmons, Zurn Temp-Gard, Chicago, Moen Commercial, or approved equal.
L. Mop Basins and Utility Sinks:
   1. Fiat, Swan, Zurn Jonespec, Mustee, Acorn, or approved equal.
M. Washer Trim:
   1. Oatey or approved equal.
N. Thermostatic Mixing Valves:
   1. Leonard, Lawler, Caleffi, Watts Regulator, Powers, or approved equal.
O. Trap Wraps:
   1. Brocar, Truebro, Plumberex, Lav-Guard, Proflo or an approved equal.

2.5 **FIXTURES**

A. NSF International certified sinks shall be used in all food prep areas.
B. L-1, Lavatory:
   1. Lavatory: Kohler Ladena, undermount, Vitreous china, less overflow.
   2. Trim: Sloan Optima EAF-150-ISM, battery operated, 0.5 gpm, aerator, perforated strainer, 1-1/4" brass tailpiece.
   3. Thermostatic Mixing Valve: Lawler TMM-1070-LPM, Lead Free, ASSE 1070 Certified, bronze body point of use mixing valve with 3/8” inlet and outlet compression connections, inlet check valves with stainless steel screen, and mounting bracket.
   4. Supplies: 3/8" angle supplies flexible tube riser, brass stops, chromed finish.
   5. Trap: 1-1/4" adjustable cast brass "P" trap.
   6. Trap Guard: Truebro Lav Guard 2, P-trap and wall supplies insulation kit.
C. WC-1, Water Closet:
   1. Closet: Kohler Kingston K-84325, Wall hung, Flush valve, vitreous china, siphon jet, elongated bowl, fully glazed trapway, 1-1/2" top spud, bolt caps, 1.6 or 1.28 gallon flush.
   2. Flush Valve: Sloan Royal 111 SMO-1.6, battery operated sensor flush valve, 1.6 gallons per flush..
   3. Seat: Bemis 1955SSCT white solid plastic, check hinge, self-sustaining, stainless steel hinge posts, open front, less cover.

4. Carrier: Josam, Wade, Zurn, or Smith. Note: For applications with wide chase or where the wall thickness exceeds 8” provide manufacturer’s bolt and nipple support.
5. Mounting: Refer to Architectural wall section for mounting height.

D. U-1, Urinal:

1. Urinal: Kohler Freshman K-4989-T, Wall hung, flush valve, vitreous china, siphon jet, 3/4" top spud, integral flushing rim, universal carrier.
2. Flush Valve: Sloan Royal 186 SMO-0.5, battery operated sensor flush valve, 0.5 gallon flush.
3. Carrier: Josam, Wade, Zurn, Watts or Smith.
4. Mounting: Refer to Architectural wall section for mounting height.

E. SH-1, Shower:

1. Provide floor drain in tiled floor drain. Refer to section 22 1006 - Plumbing Piping Specialties.
2. Trim: Moen Commercial T9375, single lever control, pressure balancing anti-scald valve with ¼ turn stops and 2.5 gpm shower head.
3. Mounting: Refer to Architectural elevation.

F. SH-2, Shower:

1. Provide floor drain in tiled floor drain. Refer to section 22 1006 - Plumbing Piping Specialties.
2. Trim: Moen Commercial T9375, single lever control, pressure balancing anti-scald valve with ¼ turn stops and 2.5 gpm shower head. Provide Moen 3360 diverter valve and second 2.5 gpm shower head for ADA shower operation.
3. Mounting: Refer to Architectural elevation.

G. S-1, Sink:

1. Sink: Elkay LRAD1919, Countertop, single compartment, type 304, 18-8 stainless steel, 18 gauge, self-rimming, back ledge.
2. Trim: Chicago Faucet 895-317E73-RGD2AB gooseneck spout, wristblade handles, 1.0 GPM non-aerating outlet, LK-35 stainless steel basket strainer.
3. Trap: Chrome plated cast brass "P" trap.
4. Supplies: 3/8" angle supplies with flexible tube riser, brass stops, chromed finish.
5. Size: 19-1/2" x 19" with 16" x 13-1/2" x 6" bowl.
6. Trap Guard: Truebro Lav Guard Model 102 E-Z, P-trap and wall supplies insulation kit.

H. S-2, Sink:

1. Sink: Elkay LRAD3122, Countertop, single compartment, type 304, 18-8 stainless steel, 18 gauge, self-rimming, back ledge.
2. Trim: Chicago Faucet 895-317E73-RGD2AB gooseneck spout, wristblade handles, 1.0 GPM non-aerating outlet, LK-35 stainless steel basket strainer.
3. Trap: Chrome plated cast brass "P" trap.
4. Supplies: 3/8" angle supplies with flexible tube riser, brass stops, chromed finish.
5. Size: 31" x 22" with 28" x 16" x 6" bowl.
6. Trap Guard: Truebro Lav Guard Model 102 E-Z, P-trap and wall supplies insulation kit.

I. S-3, Sink:

1. Sink: Elkay LRAD3122, Countertop, single compartment, type 304, 18-8 stainless steel, 18 gauge, self-rimming, back ledge.
2. Trim: Chicago Faucet 895-317E73-RGD2AB gooseneck spout, wristblade handles, 1.0 GPM non-aerating outlet, LK-35 stainless steel basket strainer.
3. Trap: Chrome plated cast brass "P" trap.
4. Provide with under-sink plaster trap.
5. Supplies: 3/8" angle supplies with flexible tube riser, brass stops, chromed finish.
6. Size: 31" x 22" with 28" x 16" x 6" bowl.
7. Trap Guard: Truebro Lav Guard Model 102 E-Z, P-trap and wall supplies insulation kit.

J. S-4, Sink:

1. Sink: Elkay LR3122, Countertop, single compartment, type 304, 18-8 stainless steel, 18 gauge, self-rimming, back ledge.
2. Trim: Chicago Faucet 895-317E73-RGD2AB gooseneck spout, wristblade handles, 1.0 GPM non-aerating outlet, LK-35 stainless steel basket strainer.
3. Trap: Chrome plated cast brass "P" trap.

4. Supplies: 3/8" angle supplies with flexible tube riser, brass stops, chromed finish.
5. Size: 31" x 22" with 28" x 16" x 7-5/8" bowl.
6. Trap Guard: Truebro Lav Guard Model 102 E-Z, P-trap and wall supplies insulation kit.

K. S-5, Sink:

1. Sink: Elkay LR3122, Countertop, single compartment, type 304, 18-8 stainless steel, 18 gauge, self-rimming, back ledge.
2. Trim: Chicago Faucet 895-317E73-RGD2AB gooseneck spout, wristblade handles, 1.0 GPM non-aerating outlet, LK-35 stainless steel basket strainer.
3. Trap: Chrome plated cast brass "P" trap.
4. Provide with under-sink plaster trap.
5. Supplies: 3/8" angle supplies with flexible tube riser, brass stops, chromed finish.
6. Size: 31" x 22" with 28" x 16" x 7-5/8" bowl.
7. Trap Guard: Truebro Lav Guard Model 102 E-Z, P-trap and wall supplies insulation kit.

L. S-6, Sink:

1. Sink: Elkay LRAD3319, Countertop, double compartment, type 304, 18-8 stainless steel, 18 gauge, self-rimming, back ledge.
2. Trim: Chicago Faucet 434-ABCP, deck-mounted high arc kitchen faucet with pull-down spout, single hole mount, 1.5 GPM dual-pattern outlet.
3. Trap: Chrome plated cast brass "P" trap.
4. Supplies: 3/8" angle supplies with flexible tube riser, brass stops, chromed finish.
5. Size: 33" x 19-1/2" with two 14" x 14" x 6" bowls.
6. Trap Guard: Truebro Lav Guard Model 102 E-Z, P-trap and wall supplies insulation kit.

M. S-7, Sink:

1. Sink: Orion ARLS-14ADA, laboratory sink, ADA depth, virgin high-density polyethylene with integral flange, stainless steel mounting ring for above counter mounting.
2. Trim: Chicago Faucet 895-317E73-RGD2AB gooseneck spout, wristblade handles, 1.0 GPM non-aerating outlet, LK-35 stainless steel basket strainer.
3. Trap: Chrome plated cast brass "P" trap.
4. Supplies: 3/8" angle supplies with flexible tube riser, brass stops, chromed finish.
5. Size: 18" x 12" x 6".
6. Trap Guard: Truebro Lav Guard Model 102 E-Z, P-trap and wall supplies insulation kit.

N. S-8, Sink:

1. Sink: Orion ARLS-18, laboratory sink, virgin high-density polyethylene with integral flange, stainless steel mounting ring for above counter mounting.
2. Trim: Chicago Faucet 895-317E73-RGD2AB gooseneck spout, wristblade handles, 1.0 GPM non-aerating outlet, LK-35 stainless steel basket strainer.
3. Trap: Chrome plated cast brass "P" trap.
4. Supplies: 3/8" angle supplies with flexible tube riser, brass stops, chromed finish.
5. Size: 25" x 15" x 10".
6. Trap Guard: Truebro Lav Guard Model 102 E-Z, P-trap and wall supplies insulation kit.

O. S-9, Sink:

1. Sink: Orion ARLS-14ADA, laboratory sink, ADA depth, virgin high-density polyethylene with integral flange, stainless steel mounting ring for above counter mounting.
2. Trim: Chicago Faucet 895-317E73-RGD2AB gooseneck spout, wristblade handles, 1.0 GPM non-aerating outlet, LK-35 stainless steel basket strainer.
3. Point of use acid neutralizer: Similar to Striem LB-2, 2.1 gallon capacity, top and side inlet, polyethylene construction, max operating temperature of 140F.
4. Supplies: 3/8" angle supplies with flexible tube riser, brass stops, chromed finish.
5. Size: 18" x 12" x 6".
6. Trap Guard: Truebro Lav Guard Model 102 E-Z, P-trap and wall supplies insulation kit.

P. S-10, Sink:

1. Sink: Orion ARLS-18, laboratory sink, virgin high-density polyethylene with integral flange, stainless steel mounting ring for above counter mounting.

2. Trim: Chicago Faucet 895-317E73-RGD2AB gooseneck spout, wristblade handles, 1.0 GPM non-aerating outlet, LK-35 stainless steel basket strainer.
3. Point of use acid neutralizer: Similar to Striem LB-2, 2.1 gallon capacity, top and side inlet, polyethylene construction, max operating temperature of 140F.
4. Supplies: 3/8" angle supplies with flexible tube riser, brass stops, chromed finish.
5. Size: 25" x 15" x 10".
6. Trap Guard: Truebro Lav Guard Model 102 E-Z, P-trap and wall supplies insulation kit.

Q. US-1, Utility Sink:
1. Sink: Mustee Model 18F, floor mounted, single compartment molded stone, chrome plated strainer(s) with plug.
2. Trim: Chicago Faucet #895-L5VBXKCP ceramic disk cartridge, hose end swing spout with vacuum breaker.
3. Trap: Chrome plated cast brass "P" trap.

R. EWC-1, Electric Water Cooler with Bottle Filler
1. Elkay # EZSTL8WSLK, dual height, wall hung water cooler and bottle filling station, touch controls front and side,stainless steel top and cabinet. Bottle filler shall be sensor activated.
2. Cooler shall have the capacity to cool 8 GPH to 50°F with inlet water at 80°F and 90°F room temperature. Compressor shall be 1/6 HP, 120 volt. Tank shall be lead-free. Provide Flexi-Guard, stainless steel Safety Bubbler.

S. BF-1, Bottle Filler
1. Elkay # LZWSM8K, in-wall bottle filling station, sensor activated, stainless steel.
2. Cooler shall have the capacity to cool 8 GPH to 50°F with inlet water at 80°F and 90°F room temperature. Compressor shall be 1/6 HP, 120 volt. Tank shall be lead-free. Provide Flexi-Guard, stainless steel Safety Bubbler.

T. EW-1, Emergency Eye Wash
1. Speakman SE-490 stainless steel receptor with spray head. Push action stay open ball valve, stainless steel push flag and wall brace, universal emergency eye-wash sign.
2. Furnish and install a Leonard Model EXL-300-LF, thermostatic mixing valve for each eye wash. Controller shall be rough bronze finished thermostatic mixing valve with thermometer and inlet check valves. Discharge temperature shall be set at 85°F. All exposed mixing valves shall be chrome plated. Provide stops and check valves for installation. Provide stainless steel wall box with lockable door suitable for 4-inch wall. Mount at eye level adjacent to eyewash unit.

U. MB-1, Mop Basin:
1. Basin: Fiat Model SB2424 Berkeley Terrazzo mop basin, 3" stainless steel drain body with dome strainer.
2. Trim: Chicago Faucet #897-CP ceramic disk cartridge, service sink faucet with vacuum breaker, 3/4" hose thread spout, adjustable wall brace, pail hook. Furnish 31” garden hose.
3. Provide horizontal swing, Y-pattern check valves similar to Nibco #T/S-413 to be installed in hot and cold supply lines.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that walls and floor finishes are prepared and ready for installation of fixtures.

B. Verify that electric power is available and of the correct characteristics.

C. Confirm that millwork is constructed with adequate provision for the installation of counter top lavatories and sinks.

3.2 PREPARATION

A. Rough-in fixture piping connections in accordance with minimum sizes indicated in fixture rough-in schedule for particular fixtures.

3.3 INSTALLATION

A. Install each fixture with trap, easily removable for servicing and cleaning.
B. Provide chrome plated rigid or flexible supplies to fixtures with handle stops, reducers, and escutcheons.
C. Install components level and plumb.
D. Install and secure fixtures in place with wall carriers and bolts.
E. Solidly attach water closets to floor with lag screws. Lead flashing is not intended to hold fixture in place.
F. Where fixtures come in contact with floor or wall, joint shall be sealed with silicone caulking of color to match fixture.
G. Provide stainless steel wall escutcheon on waste pipe through the wall for lavatories and sinks.
H. For all flush valves installed in ADA installations, coordinate space for service of flush valve with grab bars.
I. For connection to residential dishwasher, provide stainless steel braided hose from stop valve to dishwasher connection.

3.4 INTERFACE WITH WORK OF OTHER SECTIONS

A. Review millwork shop drawings. Confirm location and size of fixtures and openings before rough-in and installation.
B. Kitchen Equipment:
    1. Equipment furnished by the Kitchen Equipment Supplier/Contractor shall have rough-ins and accessories, provided by this contractor. Final mounting and connections including indirect connections shall also be provided by this contractor.
    2. Coordinate with them for a complete system including shut-offs, risers, tail piece, traps, etc.
    3. Connections may included but not be limited to cold water, hot water, waste, vent, and gas.
    4. Kitchen equipment hand sinks shall be provided with ASSE 1070 thermostatic mixing valve by this contractor unless otherwise coordinated with the Kitchen Equipment Supplier/Contractor.
C. Lab Equipment
    1. Equipment furnished by the Lab Equipment Supplier/Contractor shall have rough-ins and accessories, provided by this contractor. Final mounting and connections including indirect connections shall also be provided by this contractor.
    2. Coordinate with the Lab Equipment Supplier/Contractor for a complete system including shut-offs, risers, tail piece, traps, etc.
    3. Connections may included but not be limited to cold water, hot water, waste, vent, and gas.

3.5 ADJUSTING

A. Adjust stops or valves for intended water flow rate to fixtures without splashing, noise, or overflow.

3.6 CLEANING

A. Clean plumbing fixtures and equipment.

3.7 PROTECTION

A. Protect installed products from damage due to subsequent construction operations.
B. Do not permit use of fixtures by construction personnel.
C. Repair or replace damaged products before Date of Substantial Completion.

END OF SECTION

SECTION 23 09 23 - DIRECT-DIGITAL CONTROL SYSTEM FOR HVAC

PART 1 GENERAL

1.1 SECTION INCLUDES

A. System description.
B. Operator interface.
C. Web browser interface.
D. Controllers.
E. Power supplies and line filtering.
F. BACNET capabilities.
G. System software.

1.2 REFERENCE STANDARDS

A. ASHRAE Std 135 - BACnet - A Data Communication Protocol for Building Automation and Control Networks; 2024, with Errata (2025).
B. MIL-STD-810 - Environmental Engineering Considerations and Laboratory Tests; 2019h, with Editorial Revision (2022).
C. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
D. UL (DIR) - Online Certifications Directory; Current Edition.

1.3 ADMINISTRATIVE REQUIREMENTS

A. The Automatic Temperature Controls Contractor shall coordinate with the project Balancing Contractor & Chemical Treatment Contractor for control software access necessary to facilitate the balancing & flushing processes. The Automatic Temperature Controls Contractor shall allow full building system software access to the project balancing contractor during construction and project commissioning as necessary. The Automatic Temperature Controls Contractor shall provide an override button available to the Balancing and Chemical Treatment Contractor that will drive open all control valves for the purpose of flushing & balancing the hydronic system(s). All water coils shall be opened to the system prior to the air system start-up to ensure proper mixing of gylcol throughout the piping system. The Automatic Temperature Controls Contractor shall provide up to 12 hours of assistance for navigation and use of software as required.

1.4 SUBMITTALS

A. See Division 01 – Administrative Requirements, for submittal procedures.
B. Shop Drawings:
    1. Product Data and Shop Drawings: Contractor shall provide shop drawings or other submittals on all hardware, software, and installation to be provided. No work may begin on any segment of this project until submittals have been reviewed and approved for conformity with the design intent. When manufacturer's cut sheets apply to a product series rather than a specific product, the data specifically applicable to the project shall be highlighted or clearly indicated by other means. Each submitted piece of literature and drawings shall clearly reference the specification and/or drawing that the submittal is to cover. General catalogs shall not be accepted as cut sheets to fulfill submittal requirements. Submittals shall include:
    2. Direct Digital Control System Hardware:
        a. A complete bill of materials of equipment to be used shall be listed indicating quantity, manufacturer, model number, and other relevant technical data.

b. Manufacturer's description and technical data, such as performance curves, product specification sheets, and installation/maintenance instructions shall be included for all relevant items including but not limited to: direct digital controller and all controller panels; transducers/transmitters; sensors including accuracy data; actuators; valves; relays/switches; control panels; power supply; batteries; operator workstation equipment; wiring; wiring diagrams and layouts for each control panel; Schematic diagrams for all field sensors and controllers with floor plans of all sensor locations and control hardware.

3. Central System Hardware and Software
   a. A complete bill of material of equipment used indicating quantity, manufacturer, model number, and other relevant technical data.

   b. Manufacturer's description and technical data, such as product specification sheets and installation/maintenance instructions shall be included for all relevant items including but not limited to: central processing unit (CPU); monitors; keyboard; uninterruptible power supply; interface equipment between CPU and control panels; operating system software; operator workstation software; color graphic software; and third-party software.

   c. A schematic diagram for all control wiring, communication wiring and power wiring shall be provided. Provide a schematic drawing of the central system installation. Label all cables and ports with computer manufacturers' model numbers, function and data link protocol(s). Show all interface wiring to the control system.

   d. Provide detailed riser diagrams of wiring between central control unit, operator workstation(s), routers, gateways and all control panels.

   e. A list of the color graphic screens shall be provided. For each screen, provide a conceptual layout of pictures and data, and show or explain which other screens can be directly accessed.

4. Controlled Systems:
   a. A schematic diagram of each controlled system. The schematics shall have all control points/objects labeled and with point/object names shown or listed. The schematics shall graphically show the location of all control elements in the system.

   b. A schematic wiring diagram for each controlled system. Each schematic shall have all elements labeled. Where a control element is the same as that shown on the control system schematic, it shall be labeled with the same name. All terminals shall be labeled

   c. An instrumentation list for each controlled system. Each element of the controlled system shall be listed in table format. The table shall show element name, type of device, manufacturer, model number, and product data sheet number.

   d. A mounting, wiring, and routing plan view drawing. The drawing shall be done in ¼" scale. The design shall take into account HVAC, electrical and other systems' design and elevation requirements. The drawing shall show the specific location of all concrete pads and bases and any special wall bracing for panels to accommodate this work

   e. A complete description of the operation of the control system, including sequences of operation. The description shall include and reference a schematic diagram of the controlled system.

f. A point/object list for each system controller including inputs and outputs (I/O), point/object number, the controlled device associated with the I/O point/object, and the location of the I/O device. Software flag points/objects, alarm points/objects, etc.

C. Closeout Documents:

1.5 QUALITY ASSURANCE

A. Perform work in accordance with NFPA 70.

B. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum three years of documented experience.

C. Installer Qualifications: Company specializing in performing work of the type specified and with minimum three years of documented experience.

D. Direct digital control panels shall comply with Federal Communications Commission (FCC) Regulation, Part 15, Subpart J, for Class A computing devices.

E. All wiring shall be in accordance with the current National Electrical Code and all local electrical codes.

F. Products Requiring Electrical Connection: Listed and classified by UL (DIR) as suitable for purpose specified and indicated.

PART 2 PRODUCTS

2.1 Manufacturers

A. Trane

B. Alternate #15: Provide price for alternative automatic temperature controls contractor

2.2 **SYSTEM DESCRIPTION**

A. Automatic temperature control field monitoring and control system using field programmable micro-processor based units.

B. Base system on distributed system of fully intelligent, stand-alone controllers, operating in a multi-tasking, multi-user environment on token passing network, with central and remote hardware, software, and interconnecting wire and conduit.

C. Include computer software and hardware, operator input/output devices, control units, local area networks (LAN), sensors, control devices, actuators.

D. Controls for variable air volume terminals, radiation, reheat coils, unit heaters, fan coils, and the like when directly connected to the control units. Individual terminal unit control is specified in Section 23 09 13.

E. Provide control systems consisting of thermostats, control valves, dampers and operators, indicating devices, interface equipment and other apparatus and accessories required to operate mechanical systems, and to perform functions specified.

F. Include installation and calibration, supervision, adjustments, and fine tuning necessary for complete and fully operational system.

2.3 OPERATOR INTERFACE

A. Furnish a PC-based workstation. The workstation shall reside on the same Ethernet protocol network as the Building Controllers. The workstation information access shall use the BACnet protocol.

B. Provide a Windows PC-based laptop for use by the owner for access to DDC controls. The computer shall be new and current with today's standards (i.e. memory capacity, proccessing speed, etc.) and with enough hard drive capacity for 10 years of trending data. A two-button mouse also will be provided. Furnish all required serial (USB), and network communication ports, and all cables for proper system operation. The PC shall have aminimum 13-inch screen for laptops. Coordinate computer requirements with owner prior to purchasing.

C. Furnish a concurrent multi-tasking operating system that is coordinated with the owner to comply with their network requirements. The operating system also shall support the use of other common software applications that operate under Microsoft Windows. Examples include Microsoft Excel, Microsoft Word, and Microsoft Access.

D. The operator workstation software shall be a graphical user interface (GUI). The system shall allow display of up to 10 dynamic and animated graphic screens at once for comparison and monitoring of system status. Provide a method for the operator to easily move between graphic displays and change the size and location of graphic displays on the screen. The system graphics shall be able to be modified while on-line. An operator with the proper password level shall be able to add, delete, or change dynamic objects on a graphic. Dynamic objects shall include analog and binary values, dynamic text, static text, and animation files. Graphics shall have the ability to show animation by shifting image files based on the status of the object.

E. Custom graphic files shall be created with the use of a graphics generation package furnished with the system. The graphics generation package shall be a graphically based system that uses the mouse to create and modify graphics. The graphics generation package also shall provide the capability of capturing or converting graphics from other programs such as Visio or AutoCAD.

F. Furnish a complete library of standard HVAC equipment graphics such as chillers, boilers, air handlers, terminals, fan coils, and unit ventilators. This library also shall include standard symbols for other equipment including fans, pumps, coils, valves, piping, dampers, and ductwork. The library shall be furnished in a file format compatible with the graphics generation package program. Graphics shall be created by drag-and-drop selection of graphic symbols and drag-and-link with BACnet objects with dynamic and interactive display fields.

G. Each workstation shall provide operator interface and off line storage of system information. Provide the following applications at each workstation:

1. Each workstation shall store on the hard disk a copy of the current database of each Building Controller. This database shall be updated whenever an operator initiates a save command. A system operator with the proper password clearance shall be able to save the database from any system panel. The operator shall be able to clear a panel database via the network and may initiate a download of a specified database to any panel in the system from the network.
2. The workstation software shall provide a method of configuring the system. This shall allow for future system changes or additions by users under proper password protection. Each operator shall be required to log on to the system with a user name and password in order to view, edit, add, or delete data. System security shall be selectable for each operator. The system supervisor shall have the ability to set passwords and security levels for all other operators. Each operator password shall be able to restrict the functions accessible to viewing and/or changing each system application.
3. Any object in the system shall be configurable to alarm in and out of normal state. The operator shall be able to configure the alarm limits, alarm limit differentials, states, and reactions for each object in the system. Alarm messages shall alert the operator in such a way that the operator will be able to recognize the source, location, and nature of the alarm without relying upon acronyms or other mnemonics. The operator shall be able to determine (by object) what, if any, actions are to be taken during an alarm.
4. The operator shall be able to define a custom trend log for any data object in the system. Trend data shall be sampled and stored on the Building Controller panel, and be archived on the hard disk for use in spreadsheets and standard database programs. The operator shall be able to view all system alarms and change of states from any location in the system. Events shall be listed chronologically. An operator with the proper security level may acknowledge and clear alarms.
5. Provide a method for the operator to view, and edit if applicable, the status of any object and property in the system. The status shall be available by menu, on graphics, or through custom programs.

H. Each PC workstation shall support editing of all system applications. Provide editors for each application at the PC workstation. The applications shall be downloaded and executed at one or more of the controller panels.

1. Provide an editor for each type of application that shall allow the operator to view and change the configuration, name, control parameters, and set points for all controllers.
2. An editor for the scheduling application shall be provided at each workstation. Provide a method of selecting the desired schedule and month. This shall consist of a monthly calendar for each schedule. Exception schedules and holidays shall be shown clearly on the calendar. Provide a method for allowing several related objects to follow a schedule. The start and stop times for each object shall be adjustable from this master schedule.
3. Provide the tools to create, modify, and debug custom application programming. The operator shall be able to create, edit, and download custom programs at the same time that all other system applications are operating. The system shall be fully operable while custom routines are edited, compiled, and downloaded.

2.4 WEB BROWSER INTERFACE

A. The system shall be capable of supporting an unlimited number of clients using a standard Web browser. The Web browser software shall run on any operating system and system configuration that is supported by the Web browser. Systems that require specific machine requirements in terms of processor speed, memory, etc., in order to allow the Web browser to function with the BAS, shall not be acceptable. The Web browser shall provide the same view of the system, in terms of graphics, schedules, calendars, logs, etc., and provide the same interface methodology as is provided by the Graphical User Interface. Systems that require different views or that require different means of interacting with objects such as schedules, or logs, shall not be permitted.

B. The Web browser client shall support user log-on identification and password. Security using Java authentication and encryption techniques to prevent unauthorized access shall be implemented.

C. Graphical screens developed for the GUI shall be the same screens used for the Web browser client. Any animated graphical objects supported by the GUI shall be supported by the Web browser interface. HTML programming shall not be required to display system graphics or data on a Web page. HTML editing of the Web page shall be allowed if the user desires a specific look or format. Storage of the graphical screens shall be in the Server, without requiring any graphics to be stored on the client machine. Systems that require graphics storage on each client PC are not acceptable.

D. Real-time values displayed on a Web page shall update automatically without requiring a manual “refresh” of the Web page.

E. Users shall have administrator-defined access privileges. Depending on the access privileges assigned, the user shall be able to modify common application objects, such as schedules, calendars, and set points in a graphical manner. Holidays shall be set by using a graphical calendar, without requiring any keyboard entry from the operator.

F. No entry of text shall be required for Commands to start and stop binary objects.

G. The system shall provide the capability to specify a user’s (as determined by the log-on user identification) home page. Provide the ability to limit a specific user to just their defined home page. From the home page, links to other views, or pages in the system shall be possible, if allowed by the system administrator.

H. Graphic screens on the Web Browser client shall support hypertext links to other locations on the Internet or on Intranet sites, by specifying the Uniform Resource Locator (URL) for the desired link.

2.5 CONTROLLERS

A. SUPERVISORY NETWORK CONTROLLERS:

1. Supervisory network controllers shall be used to manage and schedule global control strategies on the network and communicate with the local Operator’s Workstation. A minimum of one (1) supervisory network controller shall be used for the direct digital control system. Each supervisory network controller shall include its own microprocessor, program and data memory, power supply, network communications module, and battery. Supervisory network controllers may also include input/output modules and shall be capable of sharing its point and data information with other controllers on the network.

B. EQUIPMENT CONTROLLERS:

1. Equipment controllers shall be used to control all large HVAC equipment such as air handling units, central heating plant equipment, central cooling plant equipment, etc. A minimum of one (1) equipment controller shall be used for each air handling unit.
2. Each equipment controller shall include its own microprocessor, program and data memory, power supply, input/output modules, and battery. All program and data memory shall be read/write random access memory (RAM) type with battery backup. The battery shall be self-charging and capable of supporting all memory within the controller for a minimum of seventy-two (72) hours if commercial power to the unit is interrupted. Upon the resumption of normal power, the runtime control software shall analyze the status of all controlled equipment, compare it with normal occupancy scheduling, and turn equipment on or off as necessary to resume normal operation.
3. Each equipment controller shall be capable of sharing point and data information with other controllers, such that control sequences or control loops executing in one controller may receive input signals from sensors connected to other controllers on the network. If the network communication link fails or the originating controller malfunctions, the control loop shall continue to function using the last value received from the failed controller. Failure of one controller shall have no other effect upon any of the other controllers in the network.
4. This contractor shall provide a NEMA 1 enclosure for any controllers furnished.
5. Terminal unit controllers shall be used to control all small HVAC terminal unit equipment such as variable air volume boxes, dual duct boxes, heat pumps, fan coil units, unit ventilators, terminal coils, etc. A minimum of one (1) terminal unit controller shall be used for each terminal unit.

C. TERMINAL UNIT CONTROLLERS:

1. Terminal unit controllers shall be used to control all small HVAC terminal unit equipment such as variable air volume boxes, dual duct boxes, heat pumps, fan coil units, unit ventilators, terminal coils, etc. A minimum of one (1) terminal unit controller shall be used for each terminal unit.
2. This contractor shall provide a NEMA 1 enclosure for any controllers furnished.
3. Each terminal unit controller shall include its own microprocessor, program and data memory, power supply, input/output modules, and battery. All program and data memory shall be read/write random access memory (RAM) type with non-volatile memory similar to EEPROM (Electrically Erasable Programmable Read-Only memory). Upon the resumption of normal power, the runtime control software shall analyze the status of all controlled equipment, compare it with normal occupancy scheduling, and turn equipment on or off as necessary to resume normal operation.
4. Each terminal unit controller shall be capable of sharing point and data information with other controllers, such that control sequences or control loops executing in one controller may receive input signals from sensors connected to other controllers on the network. If the network communication link fails or the originating controller malfunctions, the control loop shall continue to function using the last value received from the failed controller. Failure of one controller shall have no other effect upon any of the other controllers in the network.

2.6 POWER SUPPLIES AND LINE FILTERING

A. Power Supplies:

1. Provide UL listed control transformers with Class 2 current limiting type or over-current protection in both primary and secondary circuits for Class 2 service as required by the NEC.
2. Limit connected loads to 80 percent of rated capacity.
3. Match DC power supply to current output and voltage requirements.
4. Unit to be full wave rectifier type with output ripple of 5.0 mV maximum peak to peak.
5. Regulation to be 1 percent combined line and load with 100 microsecond response time for 50 percent load changes.
6. Provide over-voltage and over-current protection to withstand a 150 percent current overload for 3 seconds minimum without trip-out or failure.
7. Operational Ambient Conditions: 32 to 120 degrees F.
8. EM/RF meets FCC Class B and VDE 0871 for Class B and MIL-STD-810 for shock and vibration.
9. Line voltage units UL recognized and CSA approved.

B. Power Line Filtering:

1. Provide external or internal transient voltage and surge suppression component for all workstations and controllers.
2. Minimum surge protection attributes:
   a. Dielectric strength of 1000 volts minimum.
   b. Response time of 10 nanoseconds or less.
   c. Transverse mode noise attenuation of 65 dB or greater.
   d. Common mode noise attenuation of 150 dB or greater at 40 to 100 Hz.

2.7 BACNET CAPABILITIES

A. BACnet Interoperability Building Blocks (BIBBS) for each DDC system component (network or system level controller) proposed. BACnet is not required for unitary or equipment controllers.

B. Communication shall be through a translator/gateway that maintains the BACnet protocol.

C. The unitary or equipment controller supplier shall provide a list confirming their support for all mandatory data, and identifying which optional network variables and configuration properties they support.

D. Certification shall be verified through the BIBBS statement for the BACnet Certification Authority.

E. BACnet shall communicate over an Ethernet connection at the system level and conform to ASHRAE Std 135.

F. Contractor shall map all available Bacnet points for each applicable piece of equipment at discretion of project engineer and owner.

2.8 SYSTEM SOFTWARE

A. All necessary runtime control software to form a complete operating system as described in this specification shall be provided. The software programs specified in this section shall be provided as an integral part of the direct digital controllers and shall not be dependent upon any higher level computer for execution.

B. The runtime control software in the equipment controllers and terminal unit controllers shall have the ability to perform the following pre-tested control algorithms and control functions:

1. Control Loops (two-position, proportional, PI, PID)
2. Outdoor Air Reset Control
3. Minimum On/Off Times
4. Random Start Delay
5. Night Setback/Setup Control
6. Simultaneous Heating/Cooling Lockout
7. Point History Collection
8. Alarm Reporting
9. Change of Value Reporting

C. Point History Collection shall provide a record of value of analog I/O points over the last 72 hours, at 30-minute intervals, and a record of the last 50 status changes for binary type points with the capability of archiving data after that.

D. Runtime control software in the supervisory network controllers shall have the ability to perform any or all of the following system and energy management routines:

1. Time of Day, Calendar Based, and Holiday Scheduling
2. Trending
3. Optimum Start and Stop
4. Peak Demand Limiting
5. Chiller Plant Optimization

E. All programs shall be executed automatically without the need for operator intervention, and shall be flexible enough to allow user customization. Programs shall be applied to building equipment as described in the Sequence of Operation.

F. Custom Process Programming Capability: Runtime control software shall be able to execute custom, job-specific processes defined by the user, to automatically perform calculations and special control routines.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that conditioned power supply is available to the control units and to the operator work station. Verify that field end devices, wiring, and pneumatic tubing is installed prior to installation proceeding.

3.2 INSTALLATION

A. Install control units and other hardware in position on permanent walls where not subject to excessive vibration.

B. Install software in control units and in operator work station. Implement all features of programs to specified requirements and appropriate to sequence of operation. Refer to Section 23 09 93.

C. Provide required line voltge wiring including breakers, conductors, conduit, transfromers, disconnects and all required accessories to support control systems.

D. Provide conduit and electrical wiring in accordance with Division 26. Electrical material and installation shall be in accordance with appropriate requirements of Division 26.

E. Controllers shall be mounted in NEMA 1 enclosures near the equipment served. If multiple controllers are installed in a single enclosure, the controller shall be noted as to the location and equipment served along with a tag on the controlled equipment as to the location of the controller if not within the same room.

F. VFD’s shall be mounted by this contractor. Line voltage to and from the VFD will be by others. Locate VFD’s with disconnects in location as shown on plan or within visual sight of the motor in which the VFD serves.

G. Install software in direct digital control panels and Operator’s Workstation. Implement all features of programs to specified requirements and appropriate to sequence of operation.

H. Connect and configure equipment and software to achieve the sequence of operation specified.

I. Verify location of room sensors, thermostats, humidistats, and other exposed control sensors with plans and room details before installation. Locate 48 inches above floor.

J. Install averaging elements in ducts and plenums in crossing or zigzag pattern.

K. Install damper motors on outside of duct in warm areas, not where exposed to outdoor temperatures.

L. Install labels and nameplates to identify control components including the following:

1. Control cabinet nameplates
2. Control valve tags
3. Control damper labels
4. Sensor tags

3.3 **CONNECTION TO OWNER’S DATA SYSTEM**

A. This contractor shall be responsible for the installation of all data wiring, conduit, terminations, etc., to connect the temperature controls system into the owner’s data network. This contractor shall coordinate the location of the data system connection point, network protocols, and network address with the owner’s IT personnel before starting work.

B. If multiple data connections are required (i.e., multiple ATC panel locations), the ATC contractor shall be responsible for each of the connections necessary.

C. All costs associated with the installation of the required data connections shall be borne by this contractor.

3.4 **BACNET CONNECTIONS TO OTHER EQUIPMENT**

A. This contractor shall coordinate the BACnet protocol and all wiring between the temperature control system and furnished equipment manufacturer.

B. This contractor shall coordinate the connection protocol (MS/TP of IP) with the equipment manufacturer and/or supplier.

C. This contractor shall be responsible for the installation of all data wiring, conduit, terminations, etc., to connect the temperature controls system into equipment control panel. This contractor shall coordinate the location of the data system connection point, network protocols, and network address before starting work.

D. All costs associated with the installation of the required data connections shall be borne by this contractor.

3.5 ELECTRICAL WIRING AND CONNECTIONS

A. Installation of raceways, boxes, cabinets, wire and cable shall meet or exceed NEC, latest edition.

B. All cabling in mechanical rooms, down walls to thermostat boxes, and any exposed areas (i.e. gymnasiums, auditoriums, etc) shall be housed in conduit. Areas above concealed ceiling spaces without conduit on the cabling shall have wiring supported from structure above, Wire will not be allowed to lay free on the ceiling/space.

C. Provide electrical conduit seals to close off openings into the electrical boxes behind any thermostat or sensor. This shall include sealing the conduit after wiring installation. Contractor shall evaluate each box location and insulate the inside of the box if necessary.

D. All conduit installed as part of the temperature controls system shall be Blue in color.

E. Control wiring when installed above the ceiling shall be furnished with a plenum rated jacket. Wiring may be placed in cable tray where available.

F. Fasten flexible conductors, bridging cabinets and doors, neatly along hinge side; protect against abrasion. Tie and support conductors neatly.

G. Number-code or color-code conductors except local individual room controls, for future identification and servicing of control system.

H. Connect electrical components to wiring systems and to ground as indicated and instructed by manufacturer. Tighten connectors and terminals, including screws and bolts, according to equipment manufacturer's published torque tightening values for equipment connectors. Where manufacturer's torque requirements are not indicated, tighten connectors and terminals according to tightening requirements specified in UL 486A.

I. Connect manual reset limit controls independent of manual control switch positions. Automatic duct heater resets may be connected in interlock circuit of power controllers.

J. Connect HAND-OFF-AUTO selector switches to override automatic interlock controls when switch is in HAND position.

3.6 MANUFACTURER'S FIELD SERVICES

A. Start and commission systems. Allow sufficient time for start-up and commissioning prior to placing control systems in permanent operation.

3.7 DEMONSTRATION AND INSTRUCTIONS

A. Demonstrate complete and operating system to Owner.

B. Manufacturer's Field Services: Provide the services of a factory-authorized service representative to demonstrate and train Owner's maintenance personnel as specified below.

C. Train Owner's maintenance personnel on procedures and schedules related to startup and shutdown, troubleshooting, servicing, and preventive maintenance.

D. Provide operator training on data display, alarm and status descriptors, requesting data, execution of commands, and request of logs. Schedule training with Owner with at least 7 days' notice.

3.8 MAINTENANCE

A. Provide service and maintenance of energy management and control systems for one years from Date of Substantial Completion.

B. Provide two complete inspections, one in each season, to inspect, calibrate, and adjust controls as required, and submit written reports.

C. Provide complete service of systems, including call backs. Make minimum of four complete normal inspections of approximately two hours duration in addition to normal service calls to inspect, calibrate, and adjust controls, and submit written reports.

3.9 COMMISSIONING

A. Manufacturer's Field Services: Provide the services of a factory-authorized service representative to start control systems.

B. Test and adjust controls and safeties. Recalibrate all sensors where wiring lengths effect sensor readings.

C. Replace damaged or malfunctioning controls and equipment.

D. Start, test, and adjust control systems.

E. Demonstrate compliance with requirements.

F. Adjust, calibrate, and fine tune circuits and equipment to achieve sequence of operation specified.

END OF SECTION

SECTION 28 13 01 - ELECTRONIC ACCESS CONTROL SYSTEM

PART 1 GENERAL

1.1 SECTION INCLUDES

A. A complete and fully functional access control system. Including but not limited to the following components.
   1. PoE cable.
   2. Cable connecting hardware, patch panels, and cross connects.
   3. Cable management system.
   4. Cabling identification products.
   5. Grounding.
   6. Pathways.

B. Access control system software.

C. Badging software.

D. Remote management software.

1.2 RELATED DOCUMENTS

A. Drawings, addenda and general provisions of Contract, including General and Supplementary Conditions and Division-01 Specification Sections, apply to this and all other sections of Division 26, 27, and 28.

B. Division 07 (Section 07 8400) - Firestopping.

C. Division 08 - Door Hardware.

D. See Section 26 0500 Common Work Results for Electrical for hangars and supports.

E. See Section 26 0553 Identification for Electrical Systems.

F. See Section 27 0528 Pathways For Communications Systems

G. See Section 27 1000 Communication Structured Cabling Systems.

1.3 REFERENCES

A. NPFA 70 - National Electrical Code.

B. UL 294.

C. UL 1076.

D. IEEE, RS 170 variable standard.

E. RoHS.

1.4 SYSTEM DESCRIPTION

A. The card access system shall be installed on a TCP/IP 10/100/1000 network architecture. The software shall enable PC communication to system controllers over LAN and/or WAN using Ethernet protocol. The software shall allow all system functions to be performed when controllers are communicating with the server PC.

B. System processing shall be distributed to the local device level to ensure that a failure of central system or LAN / WAN connection does not disable system.

C. System software shall allow remote access to view events, run reports, and edit card holder data base. This capability shall be a browser based feature and shall not require special software to be loaded onto the remote PC.

D. The SMS shall be able to seamlessly interface with and monitor intelligent system controllers, reader interface modules, I/O panels, burglar alarm panels, burglar alarm panel receivers, biometric devices, personal protection devices, intercom systems, fire alarm panels (secondary monitoring only), building management systems and digital/network video recorders and software.

E. The SMS shall be able to communicate with intelligent system controllers via RS-485, RS-232, TCPIP/Ethernet.

F. Communication: There shall be no single point of failure within the system where communication or decision making is compromised.

1.5 SCOPE OF WORK

A. Install and integrate a completely functional Access Control, and related security hardware including power supplies, UPSs, server/client software, licenses, related security hardware and Owner Furnished Equipment as specified and as detailed on Drawings.

B. Configure local access panels in various telecommunications rooms to communicate with one another
   1. Enter security system databases hardware configuration.
   2. Test security system communication and operation in accordance with the specification.
   3. Train operators and the system managers.

C. The Work shall include but not be limited to the following in addition to the equipment required:
   1. Engineering: Including all required design drawings, operation (run) sheets, instruction manuals, control layout, step-by-step user guide, etc.
   2. Pre-Installation: Work performed on the Installer's premises including all fabrication, modification, assembly, rack wiring, etc.
   3. Installation: Including all onsite installation and wiring, shop drawing, coordination and supervision, testing, checkout, Owner training, etc., performed on the Owner's premises.
   4. General and Administrative: Including all shipping, insurance, and guarantees.

D. All equipment and materials not specifically addressed on the drawings or in this document and required to provide complete and functional access control system shall be provided in a level of quality consistent with other specified items.
   1. Battery backup within equipment racks and wall fields.

E. Coordinate layout and installation of Access Control Systems equipment with Owner's security representative

F. Training: as noted in Part 3 of this specification.

1.6 QUALITY ASSURANCE

A. Contractor Qualifications
   1. Demonstrate at least three (3) years of experience in the fabrication, programming, assembly, and installation of Access Control systems of similar magnitude and quality as specified for the subject job. Submit documentation to this effect with the bid response. Be an authorized sales and service center for all listed components and offerings in this specification.
   2. Provide the following items:
      a. List of all technical personnel factory certified on the specified products.
      b. Letter of approval from the manufacturer indicating compliance with qualification requirements.

c. Training certificates for design, engineering and installation of the proposed products.

B. Identify any Owner Furnished Equipment assumed in the Bid Proposal to be installed and integrated under this contract. Identify all assumed Owner Furnished equipment within each room/space type that will be required to complete the access control systems installation.

C. Furnish Products listed and classified by UL as suitable for purpose specified and indicated.

D. Test and verify structured cabling installed to support the access control system.

E. Manufacturer's Most Current Products:

1. Supply only the manufacturer's latest developed product. In cases where product development surpasses the criteria of the specification, inform the Architect and make the newer product available to the project at no additional cost. In no case shall discontinued or obsolete equipment be acceptable. The same requirement applies to software programs developed/updated during the warranty period.
2. Should a manufacturer discontinue a specified product, provide the manufacturer's recommended replacement at no additional cost to the owner. Should the manufacturer have no direct replacement product, the access control contractor shall propose a product of equal or greater specification from an alternate manufacturer at no additional cost to the owner.
3. Should a product recall by a specified manufacturer require temporary or permanent replacement of a product specified under this section, notify the Architect at the earliest possible time and arrange to replace the product in question as quickly as possible.

1.7 WARRANTY

A. The system warranty shall be for twenty-four (24) months from the date of final acceptance. Provide all equipment, material, and labor required to uphold a full system warranty at no charge to the Owner. All manufacturers' equipment warranties shall be activated in the Owner's name and shall commence on the date of final acceptance. In the case of modified equipment, the manufacturer's warranty is normally voided. In such cases, provide the Owner with a warranty equivalent to that of the original manufacturer.

B. No additional charges shall be allowed for maintenance performed during the Warranty period.

C. Provide a total of six (6) one day visits per year, or a total of sixty-four (64) engineering/ service labor hours to conduct preventive maintenance and Owner directed system adjustments.

D. Respond with an onsite technician within 24 hours of a service call (including Saturdays and Sundays) for all equipment and system failures.

E. Replace or repair, at no cost to the owner, any failed equipment hardware or software installations required to provide full system operations.

F. During the warranty period, advise the Owner in writing each time any routine software and firmware updates become available, giving the Owner the opportunity to upgrade the software/hardware should they so desire at no additional cost. Provide any necessary system modifications after installation of these updates to maintain a fully functioning system.

G. Provide updates to firmware during service period. Provide any necessary system modifications after installation of these updates to maintain a fully functioning system.

H. The warranty period for any part which has a warranty by the manufacturer of longer than 24 months shall be for the longer period. Provide a copy of the manufacturer's warranty period statement for all major access control system components.

1.8 MAINTENANCE AND SERVICE

A. Submit the costs for a one year service contract, renewable for up to three years, which shall commence with the completion of the two year warranty period. These contracts shall be fixed cost, and can be accepted at the option of the Owner.

B. The service contract shall include all of the services provided during the warranty period, including complete replacement or repair of defective equipment.

1.9 SUBMITTALS FOR REVIEW

A. Submit according requirements of Division 01 and Section 26 0000 - Electrical General Requirements.

B. Provide Bill of Materials corresponding with equipment catalog data sheets. Include a listing of component quantities, equipment manufacturers, model numbers, and description of each component being supplied, and the specification paragraph or drawing sheet that corresponds to the product. If this information is missing the submittals will be returned marked Revise and Resubmit.

C. Provide manufacturer's catalog data for each piece of equipment specified.

D. Shop Drawings: Provide system wiring diagram showing each device and wiring connection required. Including conductor / cabling requirements. Drawings shall include:

1. Title sheet with symbols legend.
2. Floor plans showing locations of all devices including alarm detectors, contacts, card readers, and controllers. Indicate to which controller each component is connected. Indicate the devices each component works with (e.g. door strike, fire alarm contact, door operator).
3. System riser diagram and system block (one-line) diagram indicating equipment connections with identifiers matching those on the Bill of Material or with catalog numbers.
4. Component wiring / connection diagrams. Include detailed description of how each system device is connected.
5. Coordination drawings showing elevations of walls where controllers will be installed.
6. Detailed written sequence of operation for each unique installation.
7. Scanned drawings will not be accepted.

E. Submit alphanumeric labeling scheme.

1.10 SUBMITTALS FOR CLOSEOUT

A. Submit according to the requirements of Division 1 and Section 26 0100 - Common Work Results for Electrical Systems.

B. Provide Operation and Maintenance Manuals.

1. Equipment manufacturer's operation and service manuals for each make and model of equipment.
2. System Operation Manual. Produce a manual specifically for the subsystems detailed herein. The manual shall describe all procedures necessary to activate each system to provide for the functional requirements, except as specifically excluded by the Owner. This section shall provide a simple "How-to" users guide for the procedures needed to operate System Operation Manual. Produce a manual specifically for the subsystems detailed herein. The manual shall describe all procedures necessary to activate each system to provide for the functional requirements, except as specifically excluded by the Owner. This section shall provide a simple "How-to" users guide for the procedures needed to operate

3. Warranty:
   a. Provide list and dates of activation of equipment warranties

   b. Provide original manufacturers' certificates

C. As-Built Drawings: Indicate final locations of all devices, wiring diagrams, and final settings.

D. Software
   1. Software Passwords Schedule (i.e., a spreadsheet listing the manufacturer, model number and location in the Facility, of each piece of access control equipment, the software for which is password protected).
   2. Provide to Owner's Representative as a secure document separate from Operating and Maintenance Manuals and As-Built Drawings.

E. Editable Control System Code: Provide the final control system code in an editable format.

F. Provide 8 ½ x 11 Instruction cards, approved by the Owner. Laminate step-by-step instructions outlining system operations for the access control system. Provide editable file of card to Owner.

PART 2 PRODUCTS

2.1 SOFTWARE

A. Manufacturers:
   1. Kerri Doors.Net.
   2. KeyScan Aurora
   3. C-Cure 800/8000

B. Substitutions: According to requirements of Division 01 and Section 26 0000.

C. The Application Server shall be able to communicate with all supported hardware Gateways simultaneously.

D. System Capacities
   1. Doors: 65,536
   2. Four state supervised inputs: 254,976
   3. Relay outputs: 254,464
   4. Cardholders: 750,000

E. The software shall have the capability to automatically discover and configure in its database all controllers, expansion boards, interface boards, and readers attached to the system, as well as having the capability to configure them manually.

F. Schedule support - The software shall have the ability to configure schedules as follows:
   1. Time schedules per Controller: 255 with the following interval characteristics:
      a. Start/stop intervals per schedule: 12

      b. Day of week selection

      c. Holiday types: 8

   2. Holidays
      a. Holiday types - Each holiday shall support a type designation and a start date plus the number of days for the holiday to be enforced.

b. Holidays shall have the ability to be configured to extend into the following week, month, or year as desired 8.

c. Holidays per type: 32

G. Program Compatibility:
1. The software shall provide a multitasking-type environment that allows other Windows compatible programs to run on Client and Server computers concurrently without interrupting or disturbing communications with hardware controllers or operation of the software.
2. The software shall alert a user to security events as required while other concurrent programs are running.

H. Database:
1. The system software shall be capable of stand-alone or Client-Server networked operations utilizing open system architecture and a 32-bit bit ODBC-compliant database.
2. Database structure: Microsoft® SQL Server Express or Microsoft® SQL Server, selectable upon installation with appropriate database drivers automatically installed.
3. Cluster environment: Capable of operating in a Microsoft SQL cluster environment where two redundant servers utilize a shared database cluster.
4. Location separation capability:
a. Isolation of the ACS database from the application

b. Hosting of application and database in separate geographical locations

c. Communication between hosting servers over standard TCP/IP network

5. File and database replication capability:
a. Via Microsoft SQL Server 2005 update Replication Services and Microsoft File Replication Services

b. No requirement for proprietary file replication software.

6. Timestamp all recorded events.

I. System Operators
1. Number of concurrent operators: up to 256
2. Security shall be provided through the assignment of operator user names, passwords, and privilege levels. Passwords assigned to system operators shall allow an operator to log onto any Client interface without affecting system control of current operators logged onto other client interfaces
3. Operator rights shall be assignable by
a. Feature

b. Screen or menu

c. Controller

d. Rights shall be assignable to any and all system operators, whether individually or as members of a defined group.

e. It shall be possible to add, remove and edit any operator and operator group rights.

4. The software shall allow access to designated listings of alarms, readers, relays, schedules, and access levels.
5. Authorized operators shall be able to view, edit, add, or delete any or all alarms, readers, relays and/or schedules and access levels as their designated privilege level allows.
6. Operators shall have the capability, within their authorized privilege parameters, to use the same display screen to mask, unmask any alarm point; turn on, turn off, or pulse any relay; or lock, unlock, momentary release or set modes including card only, card or pin, card and pin, or pin only for any card reader.
7. Operator/User Interface - The ACS shall provide an operator configurable and customizable interface.
    a. The operator interface shall provide a hardware configuration tree and filterable display grids to display information to the operator. All live events, trace events, alerts and system status shall be provided in grids that can be sized, floated or relocated by the user.

    b. The Operator shall be able to specify display colors and be able to sort/group information at will.

    c. The Operator Interface shall incorporate a menu bar with drop-down menus and display icons for full system setup and operation. This menu and these icons shall offer to system operators complete access on one screen to all system functions and system setup parameters to which the users have rights.

    d. Screens that are opened by the operator shall remain open and available via tabs just below the main ribbon for easy accessibility until they are closed by the operator.

    e. The background and text colors for all transaction-display screens shall be customizable for each operator, and it shall be possible to apply filters to display only selected transactions on a transaction-display screen, as described in this specification.

    f. The screen layouts shall provide for viewing system cardholder activity; monitoring and acknowledging alarms; and monitoring and controlling input points, relays and door configurations. Capability to include a site tree per connected hardware gateway for displaying system setup and configuring system parameters shall be provided.

    g. It shall be possible to create tabbed windows in the screen layout to conserve desktop space in the viewing area without in any way restricting the availability of information that can be displayed for the operator.

    h. All operator-specified screen configurations shall be stored per operator such that when the operator logs on, the interface opens in the saved configuration. a) The stored operator interface shall include the following:

        1) docking positions and state of all dockable controls

2) group sort categories

3) direction of all status views

4) displayed/hidden columns in all status views

J. The software shall provide for the following capabilities and functions, as a minimum:
1. "First Person In" - auto-unlock schedules are not activated until a valid credential has been presented and a door is opened with an access granted transaction.
2. Roll call - indicates in/out status of cardholders
3. Mustering - an advanced roll call function that provides for personnel mustering at designated "safe zone" readers in case of emergency evacuation.
4. Photo recall - recall a stored photo based on a cardholder's credential presentation at any specified reader or readers to allow a positive visual match to be made by a guard or operator monitoring the system.
5. Supervisor cards - Allow for the creation of supervisor cards such that supervisor cardholders can be configured with the ability to:
   a. change reader modes at certain access points

   b. globally unlock or lockdown any or all doors on the system

   c. grant anti-passback free passes to all cardholders

   d. mask or unmask inputs such as door contacts

6. “Two person rule" - require two different valid cards to be presented in succession before access is granted.
7. Credential data formats - allow for multiple data formats and include a format builder to allow operators to create custom formats as required.
8. History and trace functions - allow operators to quickly review past activity and to follow an object's or person's activity going forward, for objects such as users, readers, inputs, and outputs.
9. Customizable Situation Manager - allows instant change of operating parameters of the system to predefined settings in order to respond to changing security threats by clicking a button on the menu ribbon. The Situation Manager shall be able to instantly trigger a linkage macro that is designed to respond to immediate or perceived threats.
10. Scheduling - The software shall include:
    a. a host scheduler that can be used for some global linkage functions.

    b. an available advanced system calendar to perform various functions including the ability to:

       1) automatically create a full system backup

       2) schedule a full download to the controller network

       3) run and distribute system reports

       4) automatically synchronize server and controller times

       5) schedule execution of any global macro

6) automatically schedule hardware commands

K. Door and I/O Configuration

1. The software shall support configuration and support for all industry standard reader types and peripheral hardware.
2. Reader types - The ACS software shall allow for selection of reader type, including
   a. Wiegand/Proximity (1 wire LED)
   b. Wiegand/ Proximity 1 wire LED / 4 bit keypad
   c. Wiegand/ Proximity (2 wire LED) / 4 bit keypad
   d. Wiegand/ Proximity (1 wire LED) / 8 bit keypad
   e. Wiegand/ Proximity (2 wire LED) / 8 bit
   f. Biometric
3. Door Configuration - Through the door configuration interface of the ACS software, the user shall be able to configure, monitor and control the hardware components in the software for any door or access control point in the system, including the following: a. door position switches.
   a. Request to exit (REX) devices and all associated door hardware
   b. Door strike times
   c. Individually assign input points and relays through the software to readers to permit door monitoring and door-lock control
   d. Reassignment of door function inputs and relays to general purpose inputs and outputs, and auxiliary general purpose I/O to door I/O
   e. Held open times and ADA timing - allow the operator to type in the exact time in hours, minutes and seconds
      1) It shall not be acceptable to use drop down values or inputs in seconds only.
      2) Maximum duration: 36 hours, 24 minutes, 30 seconds with a 2 second resolution
   f. Manual opening, closing, or masking of a door or group of doors
   g. Viewing doors that have been configured
   h. Editing existing door configurations
   i. Deleting door configurations from the system
   j. Global lock, unlock, lock out and lock down

1) specifiable global lock and unlock lockout and lockdown, permitting users to rapidly lock all doors, selected doors or a single door to prevent entry and/or egress.

2) Systems unable to affect a rapid, comprehensive lock out and lock down of any or all doors shall be unacceptable.

3) configure the lockout parameters such that designated cardholders may override the lockout/lockdown command(s) and retain entry access at the locked-out doors

4) Systems that are not capable of easily conferring cardholder-by-cardholder permissions to override lockout or that confer such permissions only on a cardholder group basis shall be unacceptable

5) lock, lockout, or lockdown via a panic button, keypad, card reader, or other external device tied to the system

6) enablement of administrators or authorized users to lock out doors without allowing any cardholder(s) to exercise override privileges

7) Systems incapable of establishing lockout without override at any single door, combination of doors or all doors shall be unacceptable

8) software-selectable autolock on a per door basis

k. Man-traps and Sally ports - when two doors so configured, only one of those shall be permitted to be open at any one time, and access shall be denied through the other.

4. Linkage Macros - The software shall provide a linkage macro tool that allows a user to define input/output linkages which link any system transaction or event (trigger) such as schedule change, input state change, door or user group action, alarm acknowledgement or user command to a user defined series of actions (procedures) including initiation of other user defined action lists, relay control, door mode control, alarm generation, schedule enable/disable and ASCII-text out to a 3rd party system or device.
   a. The linkage macros shall have the ability to be created both to function within a controller and its connected hardware without requiring PC intervention (input/output linkages), as well as system events that are software and PC-generated. The response time when linking inputs and outputs within any specific controller shall not exceed 1 second.

   b. The software shall provide an easy-to-use tool for configuring these linkage macros that allows operators to create them "on the fly to meet current or future function requirements.

c. Each controller shall support at least 1000 user defined linkage macros with 100 instructions per macro, with a greater number possible via controller memory allocation.

L. Listings and Groups
1. The ACS software shall allow access to listings of all or selected individual or groups of inputs via operator permission, alarms, readers, relays, schedules and access levels.
2. Administrators and authorized operators shall be able to view, edit, add, or delete any or all alarms, readers, relays and/or schedules and access levels, which shall have the capability of being grouped for display, configuration, automation, and control.
3. Administrators and authorized operators shall have the capability to use the same display screen to mask, unmask any alarm point; turn on, turn off, or pulse any relay; or lock, unlock, momentary release or set modes including card only, card or pin, card and pin, or pin only for any card reader. a. This ability shall be available for groups of inputs, outputs, and readers.
4. Manual control for these functions shall be available via right-click menus.
5. Cardholders shall be assignable to user groups.

M. Monitoring and Message Filters
1. Screens - The ACS software shall provide screens for operators to view system activity in real time.
2. The ACS software shall support the use of multiple display monitors.
3. Customization
a. Events of different types shall be customizable via application of text and background colors for easier identification in the monitoring screen.

b. The operator shall have the ability to define custom Filters for filtering information displayed on a transaction screen and a separate filter for filtering the display of cardholder images in the Roll Call window.

1) The Filters option shall be applicable per device and per user and capable of displaying available event messages

2) Filters can be capable of being defined and saved for defined functions.

3) The system shall maintain the capability of recording into the historical file all transactions into history in the presence of filters for real time monitoring.

N. Alarm Management - The ACS system shall allow for the following alarm management capabilities:
1. Set up any system transaction or event to display as an alarm and to require alarm confirmation and acknowledgement, or not as needed
2. Operator ability to set alarm priorities from over a range of 255 values, with the highest priority alarms displaying at the top of the monitoring screen
3. Alarm-handling capabilities that include interfaces to create predefined customizable or operator annotated alarm acknowledgement messages
4. Custom color coding assignable for displaying different alarm events for easy operator recognition and handling
5. Alerts - event or alarm configuration to trigger an email or SMS alert

6. Linking of audio WAV files to the generation of defined alarms with immediate audible alerts upon alarm, customizable on an event by event basis

O. Elevator Control - Elevator control shall be user configurable using an available elevator control software module to provide the following functions:
   1. Provide the authorized operator with the ability to enable floor call buttons based on card access by certain user groups
   2. Enable the floor buttons assigned to the user group to which the card holder is assigned when that cardholder uses the elevator reader
   3. Enable designated relays on the controller and/or output boards that are in series with the elevator cab floor buttons to allow floor access

P. Cardholders/Credentials
   1. The ACS software user interface shall provide the ability to add, edit, activate, deactivate and/or delete individual card or cardholder records.
   2. Enrollment and configuration functions:
      a. ability to block enroll credentials for large populations

      b. individual credential enrollment, with the capability of presenting credentials to an enrollment reader

      c. assignment of up to 30 card numbered credentials to a single card holder record

      d. configure credentials to automatically activate and/or expire based on

         1) a future date and time, or

         2) a designated number of uses

      e. capture a photo using a digital camera or retrieve a stored photo file for inclusion in individual new or existing card or cardholder records, such photos to be displayable in the cardholder record, printable on a photo ID badge, and made part of the card and cardholder record

      f. via a cardholder entry screen shall provide tabbed pages to allow a system user to:

         1) digitally store the photo in over 39 different formats including BMP, GIF, JPG, and TIF and export the selected image to any of the 39 formats

         2) configure and assign virtually unlimited access groups, which consist of a time schedule or time schedules and a reader group or groups

         3) provide separate drop-down calendar controls for use in assigning future card-activation and card-expiration dates (temporary credentials)

         4) enter cardholder names, user group membership, access level information, a personal identification number (PIN), company information and user defined custom data fields

         5) enable anti-passback override

         6) set cardholder ADA/DDA information

7) set VIP status

8) view data concerning the recent transaction for the cardholder in the system

9) enable PIN exempt override

g. display of cardholder information in both individual record form and in filterable spreadsheet or "grid" format that allows for mass viewing, searching, sorting, and editing

h. configuration of user requirements, as follows:

1) use of more than one credential (dual verification), such as the use of a card plus a PIN or card plus biometric verifications

2) select individual users or user groups to be PIN-exempt

3) set a card + PIN rule to apply only during predefined days and hours during the week

3. Badging

a. the ACS shall allow creation and saving of an unlimited number of photo/graphic badge templates

b. the ACS shall allow any or all of the following elements to be employed together in card design that can be used to create individual, cardholder-specific cards or identification badges:

1) captured or retrieved cardholders' photos that are part of the cardholder database

2) graphics, logos or other images

3) static data that is duplicated on each card printed

4) variable data from the cardholder database that is specific to each card printed

5) bar codes

c. it shall be possible for customers to create card designs that employ:

1) choice of vertical orientation or horizontal orientation with optional card rotation

2) dual-sided printing

3) predefined or custom dimensions

4) cardholder photos, with optional borders, with ability to rotate the image, select border color and width and adjust the image brightness

5) bitmaps or JPEGs of logos, designs, pictures and other graphics, including a card background color or graphic, all with definable dimensions

6) text using the design font selections available in Windows with ability to vary text formatting

7) slots for insertion of clips, lanyards, or similar

8) bar codes associated with database fields that are to be selected from a drop-down list that includes database fields and a constant or separator The user shall have the capability to select the field length, use of padding, padding characters, position, rotation, ratio, height, size and readability of text appearing with the bar code.

d. the ACS software shall be capable of allowing unlimited individual badge designs to be designed, created and previewed before saving.

e. the ACS software shall allow for on-screen printer selection from a drop-down list that displays all installed print drivers within Windows.

f. the customer shall be able to define logical arguments based on selected database information that may vary from card record to card record. It shall be possible to define different bitmap images to appear on the printed card as a result of the application logic, which uses the specific data from the database as the criterion for displaying or not displaying the image

4. Cardholder Database functions:
   a. provide pages in the cardholder database module to allow custom fields to be saved to the cardholder database

   b. display custom fields on a custom tabbed page

   c. allow users to:

      1) rename each field and its accompanying label

      2) enter and save existing data into the custom field, or delete the data from the field

   d. provide a page in the cardholder database module to permit template definitions that can be easily assigned to new card holders in order to reduce data entry time

   e. have the ability to display cardholders in a sortable and filterable grid

Q. Anti-Passback - The ACS shall support the following modes of anti-passback:
   1. Soft Anti-Passback

2. Hard Anti-Passback
3. Timed Anti-Passback
    a. the following modes of timed anti-passback shall be supported:

        1) Last Valid User

        2) Per User

        3) Timed Hard Anti-Passback, Soft Anti-Passback

    b. the ACS software shall allow the operator to type in the exact time in hours, minutes and seconds

        1) It shall not be acceptable to use drop down values or inputs in seconds only.

        2) Maximum value: 18 hours, 12 minutes, 16 seconds

        3) Resolution: 1 second

R. Graphics Mapping Client - The following functions shall be supported:
    1. Vector based mapping - bitmap images shall not be used.
    2. Retention of aspect ratios upon map re-sizing
    3. Display floor view, unit view and sensor view on a single screen, without requiring the operator to switch to alternate views
S. Video Management and Recording
    1. The ACS shall provide an available video-only client for monitoring of surveillance cameras, with the ability to pause live video, rewind and fast forward recorded video.
    2. The ACS shall provide an available event video recording (EVR) solution for video management with the following characteristics:
        a. seamless integration with ACS

        b. built on a Microsoft.NET framework

        c. user friendly with the complexity and sophistication hidden from the user to provide a uniform, simple look and feel

        d. available video analytics that can detect and prevent threatening events in real-time to include loitering, package left behind and people counting

        e. storage of video based on user defined events

        f. maintenance of forensic integrity without a requirement for accurate time synchronization between the video server, access control server, and field hardware a) video clips shall include a unique system generated identifier

        g. ONVIF compliant

        h. support for MJPEG and H.264 video streams

T. Third Party System Integration - The ACS software shall provide the ability to transmit ASCII codes from the primary field panel to 3rd party systems.
   1. The ACS shall provide a linkage editor that allows the authorized user or system administrator to define the ASCII strings that will be sent to 3rd party equipment such as CCTV systems, DVRs and other security equipment based on user commands or system initiated events that have been defined by the user.
   2. The ACS shall provide integration with the EasyLobby visitor management system.

U. Reports - The ACS shall include a built-in report function that allows the configuration of reports based on selected system parameters.
   1. The ACS shall provide the ability to produce instant history reports for all devices and card holders.
   2. A history report option shall be available as part of the configuration editor for all card holders and devices without leaving the edit function.
   3. The report function shall use simple selection criteria utilizing check boxes and drop down menus.
   4. Reports shall be obtained by any of the following methods, some by using the optional Report Client:
      a. view on the screen support a search function for user entered text
      b. print
      c. export to a file the following formats:
         1) RTF
         2) PDF, with the following options:
            a) Assignment of the Owner Password
            b) Assignment of the User Password
            c) 40-bit,128-bit or no Encryption
            d) Allow/disallow printing
            e) Allow/disallow modify contents
            f) Allow/disallow copy
            g) Allow/disallow modify annotation
         3) HTML
         4) Microsoft Excel Worksheet (XLS)
         5) TIFF
         6) Text delimited file
   5. Reports shall be generated on demand or on a schedule with capability for automatic or manual email to a distribution list when the System Calendar is in use.

6. Advanced report design function - The ACS software shall include an option for more advanced report design functionality, to include the capability to design all system reports with the capability to:
   a. define report type
   b. add selected fields
   c. define report headers and footers
   d. add logos and images
   e. include pre-defined reports for cardholder listings, system messages, and history and alarm messages
7. Audit - The ACS shall include a complete audit trail that tracks all configuration changes for operators, card holders and controllers.
8. old value, new value and operator making the change shall be logged.

2.2 SERVER

A. Software Server (PC)
   1. CPU: Quad Core Intel Xeon processor, 2.5 GHz or higher
   2. Operating system: Windows 7 - 32 and 64 bit, Windows 8 and Windows 8 Server 2003/2008/2012
   3. RAM: 4 GB minimum
   4. On-board storage: 500 GB minimum
   5. CD or DVD ROM 8x minimum
   6. Ethernet Port: 10/100/1000 Base-T (RJ-45)
   7. Serial Port: RS-232 or USB, but not required if using TCP/IP
   8. Database: Microsoft SQL Server 2005/2008/2008R2 or 2012 or the equivalent SQL Express versions
   9. Net Framework: Microsoft.Net Framework 3.5

B. Client PC's
   1. The ACS shall have the ability to support up to 256 Client work stations on a LAN/WAN/Internet connection.
   2. CPU: Quad Core Intel Xeon processor, 2.0 GHz or higher
      a. Operating system (one of the following):
         1) Windows 7 Professional or Ultimate - 32 and 64 bit
         2) Windows 8 Professional
         3) Microsoft Server 2003 or 2008
   3. RAM: 2 GB minimum
   4. On-board storage: 160 GB minimum available 5. Ethernet Port: 10/100/1000 Base-T (RJ-45)
   5. Video Card:
      a. Resolution: 1280 x 1024 minimum supported
      b. RAM: 64 MB minimum

C. Gateway Computers - The ACS shall support configuration of Gateway computers for connection to field controllers to meet IT infrastructure requirements.

D. The ACS shall support the capability to configure the Gateway, Database Server, Application Server and Client GUI on a single PC, or distributed in a network environment.

2.3 DOOR CONTROLERS

A. Manufacturers:
   1. Kerri NXT platform.
   2. KeyScan
   3. Substitutions: According to requirements of Division 01 and Section 26 0000.

B. Controllers shall make access control decisions at doors, exits, and entrances etc., and communicate to PCs for programming instructions, event monitoring and record keeping.
   1. The controllers shall receive data input from other peripheral hardware components of the system, such as readers, input devices and relays.
   2. All system controllers shall be connected to the system server(s) where event history, cardholder data and system programming data shall reside.
   3. The controllers shall receive data input from, and provide system data to, the controlling system server(s) as part of the system polling process.

C. The controllers shall be designed specifically for access control system applications.

D. Controllers shall be intelligent and fully stand alone processor capable.

E. Controllers shall be available in two door and four door versions.
   1. Controllers shall allow access and egress readers to occupy the same reader port, effectively doubling the controller capacity when both access and egress are required.

F. Controllers shall make all local access control and alarm decisions without host server dependency.

G. All panels shall support flash memory to facilitate firmware updates.

H. Encryption - The controller shall provide the capability for FIPS 197 AES 128 Bit encryption.

I. Site codes - The ACS software shall support up to 8 site codes or formats per controller.
   1. Each site code shall be configured independently with a value range from 0 to 999,999,999,999.

J. Card numbers - The system shall support card numbers with a value range from 1 to 999,999,999,999,999.

K. PIN digits
   1. The ACS shall support the use of PIN digits in a PIN only mode, Card or PIN mode, or Card and PIN mode at selected readers.
   2. The PIN digit assigned to a cardholder shall be capable of different lengths for each cardholder with a range of 0 to 15 digits.
   3. Leading zero PIN digits shall be supported.

L. Reader interfaces
   1. The ACS shall support controller types that have the ability to connect up to 1, 2, 4 or 8 readers, depending upon configuration, firmware and reader type.
   2. The controller-reader communication shall be via a high security 64 bit encrypted format that also provides for reader supervision via an RS-485 connection.
   3. The controller will support interfaces to the following types of readers:
      a. Up to 64 bit Wiegand

      b. Bar Code with Wiegand output

c. Keypad with Wiegand output

d. Biometric with Wiegand output

e. Electronic Discharge or Touch Memory Devices with Wiegand output

f. Keri Systems MS Series Proximity Reader

g. The controller shall provide reader status supervision.

M. Cardholders
1. Each controller shall store no less than 48,000 and up to 100K cardholders/users and 10,000 events, with memory configurable to increase or decrease these capacities.
2. The controller shall be configurable such that only events designated by a system administrator or operator are stored.
3. Should the event buffer become full, each controller shall delete events only as needed on a first in, first out basis.

N. 1. Each Controller's memory shall operate independently of all other Controllers. Memory shall be configurable for the number of cardholders, the size of each cardholder record related to cardholder options, and the number of offline transaction storage.

O. Linkage macros
1. Each controller shall support at least 1000 user defined linkage macros with 100 instructions per macro, with a greater number possible via controller memory allocation.
a. The total number of macros shall be configurable based on available memory at the controller.

P. Inputs (other than Readers)
1. All inputs shall be protected against power surges by diodes.
2. Supervision of system input points shall be provided by the control panel.
3. User definable EOL resistance values shall be configurable for every input in the system including reader door contacts and request to exit inputs.
a. The EOL shall include a minimum and maximum resistance value for both the active and inactive states of the input.

4. In addition to the normal status changes between the inactive and active states, the system shall report the following conditions:
a. open circuit

b. shorted circuit

c. grounded circuit

d. EOL tolerance - In the event the circuit resistance cannot be classified due to rapid changes in the circuit resistance, a non-settling error shall be reported.

5. Each controller shall have a dedicated tamper input.

Q. Outputs
1. Level: 10 amp @ 125 VAC maximum
2. Type: dry circuit, single pole, double throw relay
3. Functions:

a. application of power to an electric locking device, automatic gate, door operator, or annunciator

b. shunting an alarm

c. other general purpose function triggered by an input or software event

4. All outputs shall be protected against power surges by MOVs and resistor snubber circuits.

R. Memory
1. The controller's memory shall be non-volatile (supported by a lithium battery) with an expected life of 5 years.
2. The controller shall send a notification to the Server Software when the lithium battery power approaches a state where it can no longer back up the memory.

S. Controllers shall be protected by a self-resetting, thermal fuse as well as diode protection.

T. Failures - Failure or fault of power supply to panels(s) or data connections between the panel(s) and server(s) shall be indicated on the system display of an operator's screen.

U. Indicator LED's:
1. RS-485 network activity
2. TCP/IP network
3. Activity
4. Speed
5. Power fault for over voltage and reverse voltage
6. Reset indication for Controller memory
7. Relay energized

V. Environmental
1. Operating temperature: 32º F to 150º F (0º C to 65º C)
2. Relative Humidity: 0 - 90%.

W. Input / Output Expansion Modules
1. Inputs shall be configurable as standard door I/O (REX and door contact) or used as general purpose inputs.
2. Input type: Dry Contact
3. Outputs shall be configurable for monitoring, alarm management, I/O linking and other functions.
4. Output type: Form C Relay rated at 10A @ 125 VAC
5. Modules shall be available as in the following configurations:
a. 4 input/4 output

b. Expansion motherboard capable of accepting up to 8 modules, each with either 8 inputs or 8 outputs per module

2.4 PROXIMITY READERS

A. The interface to the Controller will be on the supervised, encrypted, 9 bit RS-485 bus and shall require only a 4 conductor cable for all Reader functionality including dual color LED control and beeper control.
1. The Reader shall be supervised by the Controller with a regular "heartbeat" capable of responding within 1 second if the Reader goes offline.

B. The Readers shall read encrypted Proximity Cards.

C. When connected to the Controller, presentation of a card or tag shall produce an audible beep from the Reader and will change the color of the Reader LED, as follows:
   1. Amber: power is on and the Reader is in its ready state.
   2. Green: access is granted.
   3. Red: access is denied.

D. Accidental or intentional transmission of radio frequency signals into the Reader shall not compromise the security of the access control system

E. All proximity readers shall be of a weatherproof, potted, rugged design.

F. Operating temperature: at least -40ºF to 150ºF (-40ºC to 65ºC)

G. Power options
   1. Directly from the controller, with current not to exceed 120 mA
   2. Independently from the controller

H. The following reader styles shall be available:
   1. Mullion - for mounting directly on a standard metal mullion doorframe
      a. Dimensions: 3.75” h by 1.60” w by 0.625” d (9.5 cm h x 4.1 cm w x 1.6 cm d)

      b. Read range with standard Proximity Card: up to 4” (10 cm)

   2. Wall switch - a single gang mount, wall switch reader for mounting onto a metal or plastic electrical junction box or on a non-metallic flat surface.
      a. Dimensions: 4.18” h by 2.95” w by 0.625” d (10.6 cm h x 7.5 cm w x 1.6 cm

      b. Read range with standard proximity card: up to 6” (15 cm)

   3. Other - As needed, the software shall have the capability of accepting inputs from Readers with Wiegand outputs such as Biometric Readers, Vehicle Readers, other proximity devices, swipe, optical or contact readers.

2.5 POWER SUPPLIES

A. All systems shall be Power over Ethernet. Refer to plans for additional information.

2.6 ACCESS CREDENTIALS

A. The system shall accept user credentials of various types, including proximity and swipe cards, PINs, and biometrics.

B. Proximity cards and tags shall be uniquely encoded and not sensitive to facility code matching or other limiting factors.

C. The following types of proximity credentials shall be available:
   1. Clamshell Card
      a. Color: white with imprinted encoded number and date code

      b. Dimensions (l x w x d): 3.38” x 2.13” x 0.065” (8.6 cm x 5.4 cm x 178 mm) 3) The card shall have a slot punch for attachment to a badge clip.

   2. ISO Card
      a. Color: white with imprinted encoded number and date code

      b. Dimensions (l x w x d): 3.38” x 2.13” x 0.031” (86 mm x 54 mm x 0.08mm)

c. The card shall be capable of accepting a direct print of photo and other graphics from a dye-sublimation printer.

d. The card shall be optionally available with a standard high coercivity three track magnetic stripe.

e. The card shall have an available area for a slot punch for attachment to a badge clip. c. Key Ring Tag

f. Color: light gray with imprinted encoded number and date code

g. Dimensions (l x w x d): 1.57” x .98” x 0.157” (40 mm x 25 mm x 4 mm)

h. Shape: teardrop, with a riveted eyelet, allowing the tag to be attached to a key ring.

3. Adhesive Patch - An adhesive tag or "patch" that adheres to a wallet, cell phone, photo badge, or another access credential

2.7 COMMUNICATIONS

A. IP Network - IP network communication shall be used for communication between servers and controllers.
   1. The IP network shall support 10/100/1000 Base-T Ethernet communication and auto MDI/MDIX.
   2. The access control system shall support the following network protocols:
      a. TCP

      b. UDP

      c. NTP

   3. Connectors: RJ-45 and terminal block
B. RS-485 - communication between Controllers, their Expansion Modules, and the high security Proximity Readers shall be via a supervised, encrypted, 9 bit RS-485 bus.
   1. Supported distance: 500 feet

2.8 DOOR POSITION INDICATOR SWITCH

A. Recessed mounted.
B. Form A relays typically.
C. Form C where doors requiring monitoring by two different systems.

2.9 ELECTRIC DOOR HARDWARE

A. By Division 08 Contractor, see Division 08 specification and door schedule on Drawings.
B. Request to Exit Switches: Request to exit (RX) switches should be mechanically hardware based devices. Passive infrared (PIR) or sonic detectors should only be used when no mechanical method is available.

2.10 ENCLOSURES

A. Provide lockable metal enclosures to house all door controllers.

2.11 SYSTEM CABLE

A. All required cable is to be provided by Contractor as suggested by the Manufacturer.
B. Description: Plenum rated, suitable for installation in conduit and cable tray.
C. Data cabling shall comply with specification 27 1000 and shall have a yellow jacket.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

A. Access control systems shall be designed and installed to not interfere with egress requirements for life safety nor interfere with intrusion or fire alarm systems.
B. All access controlled handicap entrances shall be fully integrated into the building access control system ensuring that while providing access to the disabled, that proper access control is maintained in both the unsecured and secured modes. Access control systems shall be installed to comply with Americans with Disabilities Act.
C. All access control installations shall using housings and mountings which maintain or minimize disruption to architectural sensibilities or themes of the building.
D. All access control installations shall using housings and mounting designed to provide sufficient protection against tampering and vandalism. Torx center pin security fasteners shall be used on all devices installed in public areas.
E. Install all components in accordance with Manufacturer's written requirements.
F. Configure all components to fail secure with mechanical manual egress from secured side of door in the event of power loss or other failure.
G. All access control equipped doors shall be equipped with door position monitors and request to exit devices to allow for configuration of door condition alarms.
H. All exterior doors are to monitored for position and an alarm shall be generated when doors are propped open during business hours or when opened during secured hours. Time schedules and alarm notification procedures shall be coordinated with the Owner and may include phone dialing, text message, or email.
I. All access control equipment shall be located in secured rooms. Do not mount door controllers outside of telecommunication rooms.
J. Power supplies for the access control equipment shall be located inin secured rooms. Do not mount power supplies for door access control equipment outside of telecommunication rooms.

3.2 PREPARATION

A. Obtain and review Shop Drawings and Manufacturer's Product Data for materials furnished by other Divisions (i.e. Division 08). Prior to installing conductors. Such items to be reviewed include:
    1. Electric latches.
    2. Electric locks.
    3. Electric power hinges.
    4. Electric strikes.
    5. Electric locksets.
    6. Electric push bars.
    7. Power supplies.
    8. Door position indicator switches.
    9. Other electric door hardware.

B. Coordination:
   1. Contractor shall become familiar with all details of the work, verify all dimensions in the field, and shall advise the Architect of any discrepancy before performing the work.
   2. Coordinate installation of 120-volt power connection locations and requirements.
   3. Coordinate with Owner's IT personnel for network addressing, host server installation, set-up and programming.
   4. Coordinate routing of cabling through Communications Cabling Pathway ensure adequate capacity exists.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Set, wire, and connect door hardware power supply devices furnished and installed under Division 08. Wire and connect electric door hardware furnished and set by Division 08.

C. Provide conduit Identification in accordance with Section - Identification for Electrical Systems.

D. Provide cable markers at each cable end, at junction points, and boxes.

E. Wiring Connection Requirements: All low voltage control, monitor, power, and other cables shall be connected using sealed crimp type lugs, no wire nuts will be allowed.

F. Provide labels with device identification matching that shown on approved Shop Drawings.
   1. All devices, cables, termination hardware, patching and cross-connection facilities, conduits, other cable pathways, components and telecommunications closets shall be identified using a documented and consistent alpha numeric labeling scheme.
   2. Labeling scheme shall be approved by the Engineer.

3.4 FIELD QUALITY CONTROL

A. Manufacturer shall provide the services of technical representatives who are familiar with all components and installation procedures of the installed Access Control System for the following:
   1. Supervise installation
   2. System Start up.
   3. Provide system adjustments.
   4. Final connections.
   5. System testing.
   6. Owner personnel training.

B. Acceptance Testing - 3rd party testing not required. Schedule testing such that Owner, Architect and Engineer can be present to witness testing Performance Verification Testing:
   1. The Security Access System shall be completely tested for opens and shorts.
   2. Test each reader for proper operation.
   3. Test each door to ensure proper control functions are provided.
   4. Test each door to ensure position monitoring is functioning.
   5. Test each door to ensure proper inter-operation with door opener.
   6. Verify time schedule operation is functioning.

3.5 SYSTEM START UP

A. At completion of installation and prior to final acceptance, turn on the equipment; ensure that all equipment is operating properly.

B. System start up shall be performed by Manufacturer trained personnel.

C. Provide system adjustments to ensure proper operation.

D. Provide initial system set-up according to the requirements of the Owner's Program of Requirements document. Include creating initial databases, set-up of up to 25 initial schedules, software installation, create up to 25 cardholders.

3.6 OWNER INSTRUCTION AND DEMONSTRATION

A. Demonstrate normal and abnormal modes of operation, and required response to each.

B. Provide training in the operation and maintenance of the system for personnel designated by the Owner. Record owner training sessions on DVD or other agreed upon media, and make training videos available to the owner at no charge. The training shall be organized as follows:

1. Three (4) two-hour training classes for system technical operation and maintenance. This class shall cover the following topics:
   a. Review of signal flow diagrams.
   b. Review of all equipment functions, relevant to the function in this system.
   c. Review of initial equipment settings.
   d. Demonstration of all functional connections from a user perspective.
   e. Review & demonstration of control system software replacement/upgrade procedures.
   f. Review of manufacturers' recommended routine maintenance procedures.
2. Each training session may take place at any time (chosen by the Owner) after the systems are operational, up to a year following system acceptance.
3. Close out submittals shall be provided prior to any training classes.
4. Coordinate detailed specifics of the training session(s) time, date & location with the Owner

3.7 DOCUMENTATION

A. Provide written certificate(s) and include a copy with the O&M manuals, indicating that the inspections and tests specified herein have been performed, that Owner Training and Demonstration, and that the installation is in accordance with these specifications. Certificate shall be signed and dated by Contractor.

END OF SECTION

This page intentionally left blank

LIST OF ABBREVIATIONS

(E) - EXISTING
(V) - VERIFY
A/E - ARCHITECT/ENGINEER
AC - ALTERNATING CURRENT
ACI - AMERICAN CONCRETE INSTITUTE
ACM - ASBESTOS CONTAINING MATERIAL
ACP - ACOUSTICAL CEILING PANEL
ACS - ADULT CHANGING STATION
ACT - ACOUSTICAL CEILING TILE
ADA - AMERICANS W/DISABILITIES ACT
AFF - ABOVE FINISH FLOOR
AHU - AIR HANDLING UNIT
AISC - AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT - ALTERNATE
ALUM - ALUMINUM
ANSI - AMERICAN NATIONAL STANDARDS INSTITUTE
ARCH - ARCHITECT
ASHRAE - AMERICAN SOCIETY OF HEATING REF. AND AIR CONDITIONING ENGINEERS
ASI - ARCHITECTURAL SUPPLEMENTAL INSTRUCTION
AWI - AMERICAN WOODWORKING INSTITUTE
AWP - ACOUSTICAL WALL PANEL
BD - BOARD
BLDG - BUILDING
BM - BEAM
BOT - BOTTOM
BRG - BEARING
BRK - BRICK
BRK - CARPET - ANTI-STATIC
BTU - BRITISH THERMAL UNITS
BUR - BUILT UP ROOFING
CAB - CABINET
CB - CATCH BASIN
CBB - CEMENT BACKER BOARD
CG - CORNER GUARD
CI - CAST IRON
CIP - CAST IN PLACE
CJ - CONTROL JOINT
CLG - CEILING
CLR - CLEAR
CMU - CONCRETE MASONRY UNIT
CMU-B - CONCRETE MASONRY UNIT (BURNISHED)
CMU-G - CONCRETE MASONRY UNIT (GLAZED)
CMU-S - CONCRETE MASONRY UNIT (SCORED)
CO - CLEAN OUT
CONC - CONCRETE
CONC-P - POLISHED CONCRETE
CONC-S - SEALED CONCRETE
CONC-ST - STAINED CONCRETE
CP - CABINET PULL
CPT - CARPET
CPT-AS - CARPET - ANTI-STATIC
CPT-ESD - CARPET - ELECTROSTATIC DISCHARGE
CS - CAST STONE
CSMT - CASEMENT
CSWK - CASEWORK
CT - CHANGING TABLE
CTR - COUNTER
CUH - CABINET UNIT HEATER
DEMO - DEMOLITION
DEPT - DEPARTMENT
DF - DRINKING FOUNTAIN
DIA - DIAMETER
DIAG - DIAGONAL
DIM - DIMENSION
DIST - DISTANCE
DOC - DOCUMENT
DR - DOOR
DTL - DETAIL
DW - DISHWASHER
DWG - DRAWING
EA - EACH
EB - EDGEBANDING
EHD - ELECTRIC HAND DRYER
EIFS - EXTERIOR INSULATION FINISH SYSTEM
EJ - EXPANSION JOINT
ELEC - ELECTRIC
ELEV - ELEVATOR/ELEVATION
EQ - EQUAL
EQUP - EQUIPMENT
EWC - ELECTRIC WATER COOLER
EXIST - EXISTING
EXP - EXPOSED
FAF - FLUID APPLIED FLOORING
FD - FLOOR DRAIN
FEC - FIRE EXTINGUISHER CABINET
FF - FINISH FLOOR
FFE - FURNITURE, FIXTURE, AND EQUIPMENT
FHC - FIRE HOSE CABINET
FIN - FINISH
FLR - FLOOR
FND - FOUNDATION
FRP - FIBERGLASS REINFORCED PANEL
FRT - FRY REGLET REVEAL TRIM
FTG - FOOTING
FWC - FABRIC WALL COVERING
G - GROUT
GALV - GALVANIZED
GB - GRAB BAR
GC - GENERAL CONTRACTOR
GEN - GENERAL
GL - GLASS/ GLAZING
GWB - GYPSUM WALL BOARD
HB - HOSE BIB
HCP - HANDICAP
HDW - HARDWARE
HDWD - HARDWOOD
HM - HOLLOW METAL
HORZ - HORIZONTAL
HSD - HAND SANITIZER DISPENSER
HT - HEIGHT

LIST OF ABBREVIATIONS

IBC - INTERNATIONAL BUILDING CODE
INSUL - INSULATION
INTB - INTEGRAL BASE
JAN - JANITOR
LAM - LAMINATE
LAV - LAVATORY
LGMF - LIGHT GAUGE METAL FRAMING
LOCK - LOCKER
LVR - LOUVER
LVT - LUXURY VINYL TILE
MAS - MASONRY
MB - MARKER BOARD
MBH - MOP/ BROOM HOLDER
MDF - MEDIUM DENSITY FIBERBOARD
MECH - MECHANICAL
MH - MANHOLE
MIR - MIRROR
ML - MATCHLINE
MPTLP-SN - METAL PROFILE STAIR NOSING
MTL - METAL
MTL STD - METAL STUD
MTLP - METAL PROFILE TRIM
MW - MICROWAVE
N - NONE
NC - NON COMBUSTIBLE
NIC - NOT IN CONTRACT
NOM - NOMINAL
NTS - NOT TO SCALE
OC - ON CENTER
OFCI - OWNER FURNISHED CONTRACTOR INSTALLED
OFOI - OWNER FURNISHED OWNER INSTALLED
OH - OVERHEAD
OSB - ORIENTED STRAND BOARD
OTS - OPEN TO STRUCTURE
OWP - OPERABLE WALL PANEL
PB - PARTICLE BOARD
PC - PRECAST
PLAM - PLASTIC LAMINATE
PLAST - PLASTER
PLYWD - PLYWOOD
PREV - PREVIOUS
PRF - PREFINISHED
PT - PAINT
PT-E - PAINT- EPOXY
PTD - PAPER TOWEL DISPENSER
PWP - PREFINISHED WALL PANEL
QT - QUARRY TILE
QTB - QUARRY TILE BASE
RAD - RADIUS
RAF - RESILIENT ATHLETIC FLOORING
RB - RESILIENT BASE
REINF - REINFORCEMENT
REQ'D - REQUIRED
REV - REVERSE
RH - ROBE HOOK
RM - ROOM
RN - RESILIENT NOSING
RO - ROUGH OPENING
RR - RESILIENT REDUCER
RSF - RESILIENT SHEET FLOORING
RSTR - RESILIENT STAIR TREADS
RSTR - RESILIENT STAIR TREADS-RISERS
RT - RUBBER TILE
RTU - ROOF TOP UNIT
RWS - ROLLER WINDOW SHADES
SC - SPECIAL COATING
SCD - SEAT COVER DISPENSER
SD - SOAP DISPENSER
SDT - STATIC DISSIPATIVE TILE
SECT - SECTION
SHT - SHEET
SIM - SIMILAR
SLT - SLATE
SLT-T - SLATE TILE
SMK - SMOKE
SND - SANITARY NAPKIN DISPOSAL
SNV - SANITARY NAPKIN VENDING MACHINE
SPC - SPECIALTY COUNTERTOP
SPEC - SPECIFICATIONS
SQ - SQUARE
SS - STAINLESS STEEL
SSF - SOLID SURFACE
ST - STONE
STN - STAIN
SUSP - SUSPEND
SV - SHEET VINYL
T - TILE
TAC - TACKABLE WALL COVERING
TB - TACK BOARD
TBWP - TRAFFIC BEARING WATER PROOFING
TC - THIN COAT
TEMP - TEMPORARY/TEMPERATURE
TO - TOP OF
TP - TOILET PARTITION
TPD - TOILET PAPER DISPENSER
TRTD - TREATED
TS - TRANSITION STRIP
TYP - TYPICAL
UL - UNDERWRITERS LABORATORIES
UNF - UNFINISHED
UNO - UNLESS NOTED OTHERWISE
VCT - VINYL COMPOSITION TILE
VWC - VINYL WALL COVERING
W/ - WITH
WD - WOOD
WDT - WOOD TRIM
WDW - WINDOW
WOM - WALK-OFF MAT
WR - WASTE RECEPTACLE
WT - WINDOW TREATMENT
WWC - WOOD WALL COVERING

Notice: ICON Architectural Group, along with its consultant[illegible]ve made its best efforts to compile addenda and cos[illegible] items into a compiled construction set fo[illegible] trades on site. However, ICON [illegible]r guarantee that all ite[illegible] location o[illegible] all interested pa[illegible] management items. It is th[illegible]y and rely on the information iss[illegible]nda and cost management reduction pa[illegible] full scope of such items. Use of these documents by t[illegible] Contractor, the Contractor expressly agrees to hold ICON and its consultants harmless for any inconsistencies.

AFTER BIDDING COMPILED CONSTRUCTION SET NOTE

GENERAL NOTES

1. NOTIFY ARCHITECT PROMPTLY IF ANY CONDITIONS CONFLICT WITH THE CONSTRUCTION DOCUMENTS
2. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION/CONSTRUCTION.
3. CONTRACTORS TO VERIFY ALL EXISTING CONDITIONS, VISIT SITE AND FAMILIARIZE THEMSELVES WITH ALL EXISTING CONDITIONS.
4. DIMENSIONS AND ELEVATIONS AS SHOWN ON THE DRAWINGS MUST BE FIELD VERIFIED AND COORDINATED
5. COORDINATE ALL PENETRATIONS THRU FOUNDATION W/APPROPRIATE TRADES.
6. PROVIDE A SAFE MEANS OF EGRESS THROUGH AND/OR AROUND THE BUILDING AND SITE AT ALL TIMES DURING THE CONSTRUCTION PHASE. SIDEWALKS FRONTING THE BLDG SHALL REMAIN USABLE AND CLEARED OF MUD OR OTHER DEBRIS. CONTRACTOR WILL MAINTAIN A CLEAR AND REASONABLE WORK AREA TO BE COORDINATED WITH BUILDING MANAGER/OWNERS REPRESENTATIVE.
7. CONTRACTOR SHALL VERIFY AND PROVIDE ANY ROUGH-IN CONSTRUCTION REQUIRED FOR OWNER-INSTALLED EQUIPMENT CALLED OUT IN DRAWINGS OR SPECIFICATIONS UNLESS OTHERWISE NOTED
8. MINIMUM SLIP RESISTANCE OF FLOOR SURFACES.-WALKING SURFACES (GENERAL): O.5 STATIC COEFFICIENT OF FRICTION-ACCESSIBLE ROUTES: 0.6 STATIC COEFFICIENT OF FRICTION -RAMPS: 0.8 STATIC COEFFICIENT OF FRICTION
9. ALL DIRECTIONAL REFERENCES IN DRAWINGS SHALL REFER TO PLAN NORTH.
10. ALL JOINTS & PENETRATIONS SHALL BE FIRE SAFED & FIRE SEALED AS REQUIRED TO COMPLY WITH APPLICABLE BUILDING CODES.
11. KEYNOTES ARE USED TO ASSIST IN NOTING AND INDICATE REPETITIVE INSTANCES.
12. SUSPENDED CEILING HEIGHTS ARE DIMENSIONED FROM FINISHED FLOOR.
13. COORDINATE EXACT LOCATIONS OF LIGHT FIXTURES, ACCESS PANELS, SPRINKLER HEADS, HVAC DUCTS, CEILING DIFFUSERS/GRILLES AND ANY ADDITIONAL CEILING ITEMS WITH MECHANICAL AND ELECTRICAL CONTRACTORS AND ARCHITECT. ALL SPRINKLER HEADS SHALL BE PLACED IN THE CENTER OF CEILING TILES. NOTIFY ARCHITECT PROMPTLY IF ANY LOCATIONS CONFLICT.

ARCH. MASTER LIST - KEYNOTES

⬡#

Exterior Elevation
1 BUILDING SIGNAGE. PROVIDE WALL BACKING AS REQUIRED. SEE SHEET A611 FOR DETAILS
2 METAL ROOF COPING. COLOR TO BE CLEAR ANODIZED EXCEPT FOR MP-2 AND MP-3 ASSEMBLIES: MATCH PANEL COLOR
3 BUILDING MOUNTED LIGHTING. SEE ELECTRICAL.
4 RAIN LEADER DISCHARGE PIPING FOR SECONDARY OVERFLOW DRAINS, 16" ABOVE GRADE. COORDINATE WITH MECHANICAL.
5 CARD READER. SEE PLANS AND COORDINATE WITH ELEC
6 ADA DOOR PUSH BUTTON. SEE PLANS AND COORDINATE WITH ELEC
7 LOUVER, SEE MECHANICAL
8 CONCRETE SPLASH BLOCK. SEE DETAIL 9/A508
9 CONNECTION FOR CAMERA. SEE ELEC
10 DOWNSPOUT. COLOR TO MATCH MP-1

Finish Floor
1 MTLP-3 AT FLOOR TILE TO RESILIENT FLOOR TRANSITION
2 MTLP-5 AT FLOOR TILE TO CONC. TRANSITION
3 MTLP-6 AT FLOOR TILE TO CPT TRANSITION
4 RR-3 AT RESILIENT FLOOR TO RESILIENT FLOOR TRANSITION
5 RR-1 AT CPT TO CONC. TRANSITION
6 RR-3 AT CPT TO RESILIENT FLOOR TRANSITION
7 RR-2 AT RESILIENT FLOOR TO CONC. TRANSITION
8 PROVIDE 4'-0"H FRP ON WALLS ADJACENT TO MOP SINK WITH MFR STANDARD TRIM PIECES, SEE ELEVS.
9 PROVIDE FULL HEIGHT WALL TILE; SEE INTERIOR ELEVATIONS FOR TYPES AND INSTALLATION PATTERNS
10 FLOOR PATTERN IS 90% LVT-1 AND 10% LVT-2, PLACED RANDOMLY AT A 1/3RD OFFSET.
11 RWS-1 (MANUAL) W/ SSF-1 SILL AS OCCURS.
12 RWS-2 (MOTORIZED) W/ SSF-1 SILL
13 6'-8" HIGH WALL PADDING AT 0'-4" AFF, ENTIRE ROOM. BLOCKING TO BE PROVIDED PRIOR TO INSTALLATION.
14 STOP FRP AND/OR BASE HERE W/ TRIM PIECES AS REQUIRED.
15 NOTE NOT USED.
16 STAIRS TO RECEIVE RSTR-1 W/ RT-1 AT LANDINGS; ALL HANDRAILS, STRINGERS AND EXPOSED STAIR PARTS TO BE PAINTED PT-6
17 RWS-3 (MANUAL) BLACKOUT - W/ SSF-1 SILL
18 PAINT STRUCTURAL COLUMN PT-6
19 FINISH WALL W/ LEVEL 5 FINISH FOR VINYL WALL GRAPHIC INSTALLATION AS OCCURS OR FUTURE. PRECAST LOCATIONS TO HAVE SEAMS FILLED AND PREPPED FOR FLAT, SMOOTH WALL.
20 4'-0" HIGH BAND OF ACOUSTIC PANELS AT 3'-0" AFF, SEE ELEVS.
22 RR-4 AT RAF TO CONC. TRANSITION
23 KEYWAY TRANSITION FROM EPOXY FLOORING TO POLISHED CONCRETE
24 DIVIDER STRIP TRANSITION FROM EPOXY FLOORING TO URETHANE FLOORING BY FOOD SERVICE.
25 STAINLESS STEEL COVER BASE, BY FOODSERVICE.
26 METAL THRESHOLD AT WOOD FLOOR TO CONC. TRANSITION, SEE DETAIL 9/A424
27 TRANSITION FROM CARPET TO EXISTING FLOORING, VERIFY IN FIELD.
28 EXISTING MATERIAL WILL BE USED TO PATH AREA AS NEEDED, CONFIRM WITH CONTRACTOR
29 ELEVATOR CAB TO RECEIVE LVT-1
30 STAINLESS STEEL WALL PANELS BY FOODSERVICE
31 STAIRS TO RECEIVE WD-2 TREADS AND PT-6 RISERS; ALL HANDRAILS, STRINGERS, AND EXPOSED STAIR PARTS TO BE PT-6

Floorplan
1 CARD READER, SEE ELEC
2 HANDICAP DOOR ACTUATOR PUSH BUTTON. COORDINATE WITH ELECTRICAL AND HARDWARE SPECIFICATIONS.
3 CABINET UNIT HEATER. COORDINATE WITH MECHANICAL AND ELECTRICAL.
4 FUTURE TECHNOLOGY LOCATION, NIC. COORDINATE POWER ROUGH-IN REQUIREMENTS WITH ELEC. PROVIDE PLYWOOD BLOCKING IN WALL (2'-0" X 2'-0") AND ROUGH-INS FOR A/V MOUNT. COORDINATE FINAL SIZE AND LOCATION WITH OWNER.
5 EQUIPMENT, OFCI
6 OWNER PROVIDED WASHER/DRYER. SEE MECHANICAL.
7 DRINKING FOUNTAIN. SEE MECHANICAL.
8 PATCH AND REPAIR EXISTING WALL AT NEW WALL TIE-IN OR AT REMOVED WALL.
9 FIRE EXTINGUISHER CABINET - SEMI-RECESSED AT GYP.
10 FIRE EXTINGUISHER CABINET - WALL MOUNTED AT CMU/PRECAST.
11 -
12 BOLLARD. SEE CIVIL
13 EXISTING KILN TO BE RELOCATED AND SET UP. 3'-0" DIAMETER, OFCI
14 MOP SINK, SEE MECHANICAL AND FINISH PLANS. PROVIDE CUSTODIAL MOP/BROOM HOLDER ADJACENT TO MOP SINK. MOUNT AT 48" AFF. COORDINATE WITH OWNER PRIOR TO INSTALL, SEE ELEVATIONS.
15 EMERGENCY SHOWER EYE WASH STATION. SEE MECH.
17 MIRROR, 48"W X 84"H, MOUNT 20" A.F.F.
18 EQUIPMENT BY OWNER
19 FUTURE TECHNOLOGY LOCATION, NIC. COORDINATE POWER ROUGH-IN REQUIREMENTS WITH ELEC AT 66" AFF. PROVIDE PLYWOOD BLOCKING IN WALL (2'-0" X 2'-0") AND ROUGH-INS FOR FUTURE A/V MOUNT. COORDINATE FINAL SIZE AND LOCATION WITH OWNER.
20 BOTTLE FILLER, SEE MECH.
21 EMERGENCY KEY BOX, INSTALL AT 40" AFF
22 FLOOR DRAIN. SLOPE MINIMUM 1/4"/12" COORDINATE WITH MECHANICAL OR FOODSERVICE.
23 SPLASHBLOCK - SEE DETAIL 8/A508
24 SHELVING, OFOI
25 ELECTRICAL PANEL, SEE ELEC.
26 FIN TUBE RADIATOR. COORDINATE WITH MECHANICAL AND ELECTRICAL.
27 RECESSED DISPLAY CASE. SEE INTERIOR ELEVATIONS AND DETAIL 9/A421
28 GAS SHUT OFF IN RECESSED 12" X 12" X 6" DEEP LOCKABLE BOX. MOUNT AT 40" TO TOP A.F.F. SEE MECH
29 FLOOR TROUGHS - SEE FOODSERVICE AND MECH.
30 COILING SECURITY DOOR OPERATORS, SEE ELEC.
31 ROOF LADDER - SEE DETAIL 13/A505
32 INFILL NEW CONCRETE SLAB ON GRADE W/ VAPOR BARRIER. INFILL IN ENTIRE SPACE INDICATED OR TO EXTENTS SHOWN. COORDINATE EXTENTS WITH DEMO PLANS, MECH & ELEC.
33 FLOOR CLEANOUT, SEE MECH

Interior Elevation
1 MTLP-1 AT TOP OF WALL TILE AND OUTSIDE CORNERS. SEE TRANSITION DETAILS ON A610.
2 MTLP-2 AT BASE OF WALL TILE, COVE TRANSITION TO FLOOR TILE. SEE TRANSITION DETAILS ON A610.
3 MTLP-7 AT BASE OF WALL TILE, COVE TRANSITION TO CONC. FLOOR. SEE TRANSITION DETAILS ON A610.
4 LOCKABLE CABINET DOORS AND/OR DRAWERS
5 DOUBLE PULL OUT TRASH/RECYCLING
6 SSF-2 COUNTER W/ 5" H APRON; INSTALL CONCEALED WALL BRACKETS AS REQUIRED
7 INSTALL SURFACE MOUNTED WALL BRACKETS AS REQUIRED
8 STANDARD FRP TRIM BASE OF FRP AND MTLP-1 AT TOP OF WALL TILE BASE. SEE TRANSITION DETAILS ON A610.
9 SSF-2 COUNTER W/ 5" H APRON; INSTALL SURFACE MOUNTED WALL BRACKETS AS REQUIRED
10 FLOOR DRAIN, COORDINATE WITH MECHANICAL
11 PROVIDE METAL FILLER PANELS AT EXPOSED ENDS OF LOCKERS
12 DIMENSIONAL SIGNAGE, SEE SHEET A611 FOR DETAILS & A800 SHEETS FOR LOCATIONS.
13 BUILT-IN BENCH, SEE SPEC

Precast
1 STRUCTURAL CONNECTION ON BACK SIDE OF PRECAST, SEE STRUCTURAL FOR LOCATIONS AND DETAILS
2 STRUCTURAL CONNECTION ON FRONT SIDE OF PRECAST, SEE STRUCTURAL FOR LOCATIONS AND DETAILS
3 OPENING FOR DUCT. COORDINATE WITH MECH

SYMBOLS LEGEND

MATERIAL LEGEND

ARCH. MASTER LIST - KEYNOTES

⬡#

4 FIELD CORED HOLES FOR MECH. COORDINATE RE-ENFORCEMENT FROM PRECAST SUPPLIER. MECHANICAL CONTRACTOR TO PROTECT FINISHED WALL AND CLEAN OFF CORE SLURRY FROM WALL IMMEDIATELY

RCP
1 ROOF HATCH OPENING
2 PAINT UNDERSIDE OF STAIRS, PT-6.

Roof Plan
1 NOT USED
2 CRICKET. SLOPED INSULATION TO PROVIDE 1/4" / 1'-0" MINIMUM PITCH AROUND OBSTRUCTION. TYPICAL AT ALL BUILDING JOGS, EQUIPMENT CURBS, AND WHERE REQUIRED TO PROVIDE POSITIVE SLOPE TOWARD ROOF DRAINS.
3 ROOF DRAINS. (PAIRED PRIMARY AND SECONDARY DRAIN BASIN. CONNECT PRIMARY DRAIN TO STORM SEWER. SECONDARY DRAIN TO DISCHARGE ABOVE GRADE. SEE ELEVATIONS. COORDINATE WITH MECHANICAL)
4 TAPERED INSULATION ABOVE LEVEL DECK. 1/4" / 1' - 0" MINIMUM SLOPE. (3" MINIMUM INSULATION DEPTH AROUND DRAIN).
5 OVERFLOW SCUPPER (BASE OF OPENING TO BE LOCATED 2" ABOVE PRIMARY DRAIN. COORDINATE WITH ELEVATIONS.
6 ROOF WALKWAY PADS (TYPICAL AROUND MECHANICAL EQUIPMENT)
7 ROOF TOP EQUIPMENT. SEE DETAIL AND MECHANICAL.
8 ROOF HATCH - SEE DETAIL
10 ROOF LADDER - SEE DETAIL
11 CONDUCTOR HEAD & DOWNSPOUT, EXTEND TO 16" ABOVE GRADE. SEE DETAIL -
12 PLUMBING VENT OR PIPE PENETRATION THROUGH ROOF. PROVIDE BOOT FLASHING. SEE DETAIL AND SEE MECHANICAL.
13 EXHAUST FAN PENETRATION THROUGH ROOF. SEE DETAIL AND SEE MECHANICAL
14 PIPING WEATHER HOOD. SEE MECH
15 ROOF HYDRANT - SEE MECH

ARCH. MASTER LIST - DEMOLITION KEYNOTES

⬠#

1 REMOVE WINDOW LOCATED IN WOOD STUD / EIFS WALL. PREP FOR NEW WORK.
2 REMOVE EXTERIOR WALL UP TO LAMINATED WOOD BEAM. COORDINATE EXTENT OF DEMO WITH FLOOR PLANS AND STRUCTURAL DRAWINGS. WORK TO BE SEQUENCED TO PROVIDE STRUCTURAL SUPPORT PRIOR TO REMOVAL.
3 REMOVE MARKERBOARD OR TACKBOARD AND ALL ASSOCIATED FASTENERS. SALVAGE AND TURN OVER TO OWNER. PATCH AND PREP WALL FOR NEW FINISH AS REQ. SEE FLOOR PLANS.
4 REMOVE INTERIOR STOREFRONT OR WINDOW AND ALL ASSOCIATED FRAMES, ETC.
5 REMOVE HM OR WOOD DOOR, HARDWARE, FRAME, AND SIDELIGHTS AS OCCURS. PREP AREA FOR NEW WORK. COORDINATE WITH FLOOR PLANS.
6 REMOVE MOUNTED CLOCKS, SPEAKERS, FIRE EXTINGUISHERS,PTD, SOAP, ETC. AS REQUIRED FOR NEW WORK. SALVAGE AND TURN OVER TO OWNER. COORDINATE WITH CM AND OWNER.
7 REMOVE SURFACE MOUNTED CONDUIT AS REQUIRED FOR NEW WORK. COORDINATE WITH CM AND ELEC FOR LOCATIONS AND SHUT OFFS. PROTECT EXISTING WALLS AND PREP FOR NEW WORK.
8 REMOVE PLASTIC LAMINATE CABINETS, COUNTERTOPS, OR SHELVING AS OCCURS AND ALL ASSOCIATED FASTENERS, BASE, BLOCKING, ETC. PREP FLOOR / WALL TO RECEIVE NEW FINISH AS REQUIRED.
9 REMOVE CARPET AND ASSOCIATED BASE AS REQUIRED. GRIND OFF ADHESIVE AS REQUIRED FOR NEW FLOORING IN ENTIRE ROOM OR TO EXTENTS SHOWN ON PLAN. PROTECT WALLS. ANY DAMAGE TO WALLS FROM BASE REMOVAL TO BE PATCHED AT CONTRACTOR'S EXPENSE. PREP AREA FOR NEW FLOOR FINISH. COORDINATE WITH FLOOR AND FINISH PLANS.
10 REMOVE VINYL FLOOR TILE AND ASSOCIATED BASE AS REQUIRED. GRIND OFF ADHESIVE AS REQUIRED FOR NEW FLOORING IN ENTIRE ROOM OR TO EXTENTS SHOWN ON PLAN. PROTECT EXISTING WALLS AND BASE. ANY DAMAGE TO WALLS FROM BASE REMOVAL TO BE PATCHED AT CONTRACTOR'S EXPENSE. PREP AREA FOR NEW FLOOR FINISH.
11 REMOVE GYP BD STUD WALL TO EXTENTS SHOWN OR AS REQUIRED FOR NEW OPENING. COORDINATE WITH FLOOR PLANS. PATCH AND PREP WALLS FOR NEW FINISH.
12 REMOVE LOCKERS AS REQUIRED FOR NEW WORK. SALVAGE AND TURN OVER TO OWNER. COORDINATE WITH PLANS & ELEVATIONS.
13 REMOVE AND SALVAGE FOR REINSTALLATION ACT CEILING TILE AND CEILING MOUNTED MECH AND ELEC FIXTURES, ACCESSORIES, ETC. AS REQUIRED FOR NEW WORK. PREP FOR NEW WORK. SEE MECH AND ELEC.
14 REMOVE TECHNOLOGY & TURN OVER TO OWNER. PATCH WALL AND PREP AREA FOR NEW WALL FINISH AS REQUIRED.
15 REMOVE PLUMBING FIXTURE AS OCCURS. COORDINATE WITH MECH. PATCH & PREP WALLS AND FLOOR AS REQUIRED FOR NEW WORK.
16 REMOVE PLAM SHELVING AND BRACKETS. PATCH AND PREP WALLS FOR NEW FINISH.
17 REMOVE LIGHT FIXTURES AS REQUIRED FOR NEW WORK. COORDINATE WITH ELECTRICAL AND RCPS.
18 SAWCUT AND REMOVE EXISTING CONCRETE FLOOR SLAB OF AREA INDICATED BY HATCH, TO EXTENTS SHOWN OR AS REQUIRED FOR MECHANICAL DEMOLITION, OR NEW STRUCTURE, MECH/ELEC PIPING, NEW CONDUIT, ETC. COORDINATE EXTENTS AND LOCATIONS WITH FLOOR PLANS, STRUCTURAL, MECH, AND ELEC.
19 REMOVE CORNER GUARD
20 REMOVE AND SALVAGE WALL MOUNTED SHELVING AND BRACKETS, AND COAT RACKS. TURN OVER TO OWNER.

DRAWING INDEX

Revision 5 | Date #,####	Addm. 3 | March 30,2026	Addm. 2 | March 24,2026	Addm. 1 | March 17,2026	Construction Documents | March 10,2026	SHEET #	SHEET NAME
GENERAL						
		•			G001	General Notes / Drawing Index
					G002	Code Study
					G003	Code Study
					G004	ANSI 117.1 - 2017 Standards
					G005	3D
CIVIL						
					C100	Cover Sheet
	•		•		C200	General Notes & Legend
			•		C300	Survey Overlay & Demolition Plan - School
			•		C301	Survey Overlay & Demolition Plan - Field
	•		•		C400	Overall Site Plan - School
			•		C401	Overall Site Plan - Field
			•		C500	Utility Plan - School
			•		C501	Utility Plan - Field
	•		•		C600	Grading Plan - School
		•	•		C601	Grading Plan - Field
	•		•		C700	Erosion & Sediment Control Plan
			•		C701	SWPPP Narrative & Notes
					C702	SWPPP Details
			•		C800	Landscaping Plan
					C900	Details
					C901	Details
					C902	Turf Details
STRUCTURAL						
					S001	Structural Notes
	•				S002	Schedule Sheet
					S003	Special Inspections & Testing
					S100	Overall Foundation Plan - Drain Tile
					S101	Foundation Plan - Overall
		•			S101b	Foundation Plan - Area B
		•			S101c	Foundation Plan - Area C
		•			S101d	Foundation Plan - Area D
					S102	Framing Plan - Overall - Level 01
	•	•	•		S102a	Foundation Plan - Area A
	•		•		S102b	Framing Plan - Level 01 - Area B
	•	•			S102c	Framing Plan - Level 01 - Area C
	•	•			S102d	Roof Framing Plan - Low Roof - Area D
					S103	Roof Framing Plan - Low Roof - Overall
	•	•			S103a	Framing Plan - Level 02 - Area A
	•	•			S103b	Roof Framing Plan - Low Roof - Area B
		•			S103c	Roof Framing Plan - High Roof - Area C
					S104	Roof Framing Plan - High Roof- Overall
	•	•			S104a	Roof Framing Plan - High Roof - Area A
	•				S104b	Roof Framing Plan - High Roof - Area B
	•				S104d	Roof Framing Plan - High Roof - Area D
					S105	Structural Plans - Area C - Alt #12
		•			S106	Structural Plans - Area D - Alt #13
	•	•			S111	Snow Drift Loading Plan
					S211	Joist Diagrams
					S301	Foundation Details
					S302	Foundation Details
	•		•		S303	Foundation Details
	•				S304	Foundation Details - Full Height
	•				S305	Foundation Details - Full Height
	•	•			S501	Framing Details
	•				S502	Floor Framing Details
					S503	Floor Framing Details
	•	•			S504	Roof Framing Details
	•	•			S505	Roof Framing Details
	•				S506	Roof Framing Details
	•				S507	Cold-Formed Framing Standards
ARCHITECTURAL DEMOLITION						
					AD101E	Demo Main Level 01 - Area E
					AD101F	Demo Main Level 01 - Area F
ARCHITECTURAL						
		•	•		A001	Architectural Site Plan
		•			A002	Site Plan - Football Turf
					A091	Wall Assemblies
					A092	Horizontal Assemblies
					A100	Lower Level 00 - Overall Plan
					A100A	Lower Level 00 - Area A
					A100B	Lower Level 00 - Area B
					A100C	Lower Level 00 - Area C
		•			A100D	Lower Level 00 - Area D
					A101	Main Level 01 - Overall Plan
					A101A	Main Level 01 - Area A
		•			A101B	Main Level 01 - Area B
					A101C	Main Level 01 - Area C
					A101D	Main Level 01 - Area D
					A101E	Main Level 01 - Area E
					A101F	Main Level 01 - Area F
					A102	Upper Level 02 - Overall Plan
		•			A102AB	Upper Level 02 - Area A & Area B
					A103	Alt. #2 - Main Level 01 - Area E
		•			A104	Alt. #12 + 13 - Area C Reduction / Weight Room
		•	•		A105	Roof Plan
					A110A	Lower Level 00 Reflected Ceiling Plan - Area A
					A110B	Lower Level 00 Reflected Ceiling Plan - Area B
			•		A110C	Lower Level 00 Reflected Ceiling Plan - Area C
					A110D	Lower Level 00 Reflected Ceiling Plan - Area D
			•		A111A	Main Level 01 Reflected Ceiling Plan - Area A
			•		A111B	Main Level 01 Reflected Ceiling Plan - Area B
			•		A111C	Main Level 01 Reflected Ceiling Plan - Area C
			•		A111E	Main Level 01 Reflected Ceiling Plan - Area E
					A111F	Main Level 01 Reflected Ceiling Plan - Area F
					A112A	Upper Level 02 Reflected Ceiling Plan - Area A
					A200	Exterior Axons
					A201	Overall Exterior Elevations
		•			A202	Exterior Elevations
		•			A203	Exterior Elevations
		•			A204	Exterior Elevations
			•		A211	Overall Precast Plans
					A212	Precast Elevations - Area A
					A213	Precast Elevations - Area B
					A214	Precast Elevations - Area C
					A215	Precast Elevations - Area D
					A301	Building Sections
					A302	Building Sections
					A303	Building Sections
					A311	Wall Sections
					A312	Wall Sections
					A313	Wall Sections - Commons
					A314	Wall Sections - Area D
					A315	Wall Sections
			•		A316	Wall Sections
		•			A317	Wall Sections
					A321	Circulation Sections & Enlarged Plans
					A322	Circulation Sections & Enlarged Plans
					A323	Circulation Sections & Enlarged Plans
			•		A324	Circulation Sections & Enlarged Plans
					A325	Details - Vertical Circulation
					A326	Details - Vertical Circulation
					A401	Enlarged Plans & Elevations - Area B Restroom
					A402	Enlarged Plans & Elevations - Restrooms & Mudrooms
					A403	Enlarged Plans & Elevations - Restrooms
		•			A404	Enlarged Plans & Elevations - Media Center & Locker Rooms
					A405	Enlarged Plans & Elevations - Reception
					A406	Enlarged Plans & Elevations - Alternates
					A410	Interior Elevations - Area A
					A411	Interior Elevations - Lower Level
					A412	Interior Elevations - Commons
		•			A413	Interior Elevations - Commons & Lower Level
					A414	Interior Elevations - Gymnasium
					A415	Interior Elevations - Gymnasium & Area D
		•			A416	Interior Elevations - Area D
					A417	Interior Elevations - Area C Corridors
					A418	Interior Elevations - Main Level
					A419	Interior Elevations - Science
		•			A420	Details - Casework Sections
		•			A421	Details - Locker & Custom Casework Sections
					A422	Details - Interior Ceiling
			•		A423	Details - Interior Openings
					A424	Details - Interior Plan Details
					A425	Details - Interior Plan Details
					A431	Enlarged Gym Striping Plan
					A432	Enlarged Gym Bleachers Plan
					A433	Enlarged Commons Floor Pattern Plan
					A501	Details - Enlarged Plan Details
			•		A502	Details - Exterior Wall
					A503	Details - Exterior Precast
			•		A504	Details - Exterior Openings
		•			A505	Details - Wall & Roof Details
		•	•		A506	Details - Roof Details
			•		A507	Details - Roof Details
		•	•		A508	Details - Site
		•	•		A601	Door Schedule
					A603	Exterior Storefront and Curtainwall Elevations
					A604	Interior Storefront Elevations
		•			A610	Finish Schedule
					A611	Interior & Exterior Signage
					A612	Finish Details
					A700A	Lower Level 00 Finish Plan - Area A
					A700B	Lower Level 00 Finish Plan - Area B
					A700C	Lower Level 00 Finish Plan - Area C
		•			A700D	Lower Level 00 Finish Plan - Area D
					A701A	Main Level 01 Finish Plan - Area A
					A701B	Main Level 01 Finish Plan - Area B
					A701C	Main Level 01 Finish Plan - Area C
			•		A701E	Main Level 01 Finish Plan - Area E
					A701F	Main Level 01 Finish Plan - Area F
					A702A	Upper Level 02 Finish Plan - Area A
					A800A	Lower Level 00 Signage Plan - Area A
					A800B	Lower Level 00 Signage Plan - Area B
					A800C	Lower Level 00 Signage Plan - Area C
					A800D	Lower Level 00 Signage Plan - Area D
					A801A	Main Level 01 Signage Plan - Area A
					A801B	Main Level 01 Signage Plan - Area B
					A801C	Main Level 01 Signage Plan - Area C
					A801E	Main Level 01 Signage Plan - Area E
					A801F	Main Level 01 Signage Plan - Area F
					A802A	Upper Level 02 Signage Plan - Area A
MECHANICAL						
					M000	Mechanical Title Sheet
					M100	Jefferson Mechanical
					M101	Jefferson Mechanical Alternate 1
					M102	Jefferson Mechanical Alternate 2
					F200	Lower Level Overall Plan - Fire Protection
					F200A	Lower Level Segment A - Fire Protection
					F200B	Lower Level Segment B - Fire Protection
					F200C	Lower Level Segment C - Fire Protection
					F200D	Lower Level Segment D - Fire Protection
					F201	Main Level Overall Plan - Fire Protection
					F201A	Main Level Segment A - Fire Protection
					F201B	Main Level Segment B - Fire Protection
					F201C	Main Level Segment C - Fire Protection
					F201D	Main Level Segment D - Fire Protection
					F202	Upper Level Overall Plan - Fire Protection
					F202A	Upper Level Segment A - Fire Protection
					P20F	Foundation - Plumbing
					P20FA	Foundation Segment A - Plumbing
		•			P20FB	Foundation Segment B - Plumbing
					P20FC	Foundation Segment C - Plumbing
			•		P20FD	Foundation Segment D - Plumbing
					P200	Lower Level Overall Plan - Plumbing
					P200A	Lower Level Segment A - Plumbing
					P200B	Lower Level Segment B - Plumbing
					P200C	Lower Level Segment C - Plumbing
			•		P200D	Lower Level Segment D - Plumbing
					P201	Main Level Overall Plan - Plumbing
					P201A	Main Level Segment A - Plumbing
					P201B	Main Level Segment B - Plumbing
	•				P201C	Main Level Segment C - Plumbing
					P201D	Main Level Segment D - Plumbing
					P202	Upper Level Overall Plan - Plumbing
					P202A	Upper Level Segment A - Plumbing
		•			P203	Plumbing Schematics
					P204	Plumbing Schedules
					P205	Plumbing Riser Diagrams
					P206	Plumbing Riser Schematics & Schedules
					M200	Lower Level Overall Plan - Mechanical Piping
					M200A	Lower Level Segment A - Mechanical Piping
	•				M200B	Lower Level Segment B - Mechanical Piping
			•		M200C	Lower Level Segment C - Mechanical Piping
					M200D	Lower Level Segment D - Mechanical Piping
					M201	Main Level Overall Plan - Mechanical Piping
					M201A	Main Level Segment A - Mechanical Piping
					M201B	Main Level Segment B - Mechanical Piping
					M201C	Main Level Segment C - Mechanical Piping
					M201D	Main Level Segment D - Mechanical Piping
					M202	Upper Level Overall Plan - Mechanical Piping
					M202A	Upper Level Segment A - Mechanical Piping
					M203	Mechanical Schematics
					M300	Lower Level Overall Plan - Hvac
					M300A	Lower Level Segment A - Hvac
	•				M300B	Lower Level Segment B - Hvac
			•		M300C	Lower Level Segment C - Hvac
		•			M300D	Lower Level Segment D - Hvac
					M301	Main Level Overall Plan - Hvac
					M301A	Main Level Segment A - Hvac
		•			M301B	Main Level Segment B - Hvac
		•			M301C	Main Level Segment C - Hvac
	•				M301D	Main Level Segment D - Hvac
					M302	Upper Level Overall Plan - Hvac
		•			M302A	Upper Level Segment A - Hvac
					M400	Roof Brg - Mechanical
					M400A	Roof Brg Segment A - Mechanical
					M400B	Roof Brg Segment B - Mechanical
					M400C	Roof Brg Segment C - Mechanical
					M400D	Roof Brg Segment D - Mechanical
					M500	Mechanical Controls
					M501	Mechanical Controls
					M502	Mechanical Controls
					M503	Mechanical Controls
					M600	Mechanical Details
					M601	Mechanical Details
	•		•		M700	Mechanical Schedules
			•		M701	Mechanical Schedules
ELECTRICAL						
					E000	Electrical Title Sheet
			•		E001	Site Plan - Electrical Demolition
		•	•		E002	Site Plan - Electrical
		•	•		E101E	Main Level Segment E - Electrical Demolition
					E101F	Main Level Segment F - Electrical Demolition
					E200	Lower Level Overall Plan - Lighting
					E200A	Lower Level Segment A - Lighting
		•			E200B	Lower Level Segment B - Lighting
		•			E200C	Lower Level Segment C - Lighting
		•			E200D	Lower Level Segment D - Lighting
		•			E201	Main Level Overall Plan - Lighting
		•			E201A	Main Level Segment A - Lighting
		•			E201B	Main Level Segment B - Lighting
		•			E201C	Main Level Segment C - Lighting
			•		E201E	Main Level Segment E - Lighting
					E201F	Main Level Segment F - Lighting
		•			E202	Upper Level Overall Plan - Lighting
		•			E202A	Upper Level Segment A - Lighting
					E203	Large Scale Kitchen Plan - Lighting
					E300	Lower Level Overall Plan - Power
					E300A	Lower Level Segment A - Power
			•		E300B	Lower Level Segment B - Power
		•			E300C	Lower Level Segment C - Power
					E300D	Lower Level Segment D - Power
					E301	Main Level Overall Plan - Power
		•			E301A	Main Level Segment A - Power
					E301B	Main Level Segment B - Power
					E301C	Main Level Segment C - Power
			•		E301E	Main Level Segment E - Power
					E301F	Main Level Segment F - Power
					E302	Upper Level Overall Plan - Power
					E302A	Upper Level Segment A - Power
					E303	Roof Brg - Power
		•			E304	Large Scale Kitchen Plan - Power
					E400	Lower Level Overall Plan - Telecommunications
					E400A	Lower Level Segment A - Telecommunications
					E400B	Lower Level Segment B - Telecommunications
					E400C	Lower Level Segment C - Telecommunications
					E400D	Lower Level Segment D - Telecommunications
					E401	Main Level Overall Plan - Telecommunications
					E401A	Main Level Segment A - Telecommunications
					E401B	Main Level Segment B - Telecommunications
					E401C	Main Level Segment C - Telecommunications
			•		E401E	Main Level Segment E - Telecom
					E401F	Main Level Segment F - Telecom
					E402	Upper Level Overall Plan - Telecommunications
					E402A	Upper Level Segment A - Telecommunications
		•			E403	Large Scale Kitchen Plan - Telecommunications
					E500	Lower Level Overall Plan - Electronic Safety & Security
		•			E500A	Lower Level Segment A - Electronic Safety & Security
					E500B	Lower Level Segment B - Electronic Safety & Security
					E500C	Lower Level Segment C - Electronic Safety & Security
					E500D	Lower Level Segment D - Electronic Safety & Security
					E501	Main Level Overall Plan - Electronic Safety & Security
		•			E501A	Main Level Segment A - Electronic Safety & Security
					E501B	Main Level Segment B - Electronic Safety & Security
					E501C	Main Level Segment C - Electronic Safety & Security
		•	•		E501E	Main Level Segment E - Electronic Safety & Security
		•			E501F	Main Level Segment F - Electronic Safety & Security
					E502	Upper Level Overall Plan - Electronic Safety & Security
		•	•		E502A	Upper Level Segment A - Electronic Safety & Security
			•		E503	Large Scale Kitchen Plan - Electronic Safety & Security
					E720	Lighting Details
		•	•		E730	Power Details
		•	•		E731	Power Details
					E740	Systems Details
					E741	Systems Details
		•			E820	Lighting Schedules
		•	•		E830	Power Schedules
		•	•		E831	Power Schedules
					E832	Power Schedules
					E900	Alternate 2 - Electrical
FOOD SERVICE						
		•	•		QF101	Foodservice Equipment Plan
		•	•		QF201	Foodservice Equipment Elevations
		•			QF202	Foodservice Equipment Elevations
		•			QF203	Foodservice Equipment Elevations
		•			QF204	Foodservice Equipment Elevations
		•	•		QF301	Foodservice Plumbing Rough-In Plan
			•		QF401	Foodservice Electrical Rough-In Plan
			•		QF501	Foodservice Special Conditions Plan
					QF502	Foodservice Special Conditions - Omit Ceiling Plan
		•			QF601	Foodservice Equipment Details
		•			QF602	Foodservice Equipment Details
		•	•		QF701	Foodservice Equipment Item Details
		•			QF801	Foodservice Walk-In Details
					QF802	Foodservice Walk-In Details

PROJECT ALTERNATE LEGEND

ALTERNATE #1 - JEFFERSON ADMIN OFFICE + RESTROOM
- BASE BID: NO WORK
- ALT SCOPE: JEFFERSON ADMIN. RENO OF CLASSROOMS - AREA F
ADA RESTROOM RENO OF STORAGE - AREA E

ALTERNATE #2 - STEAM CLASSROOM
- BASE BID: NO WORK
- ALT SCOPE: RENO, REMOVE WALL, ADD CASEWORK

ALTERNATE #3 - PARKING LOT.
- BASE BID: ASPHALT
- ALT SCOPE: CONCRETE

ALTERNATE #4 - WENGER CABINETS
- BASE BID: CASEWORK AS INDICATED IN PLANS
- ALT SCOPE: PROVIDE WENGER FURNITURE IN LIEU OF PLAM CASEWORK

ALTERNATE #5 - ACOUSTIC CEILING PANELS
- BASE BID: NO WORK
- ALT SCOPE: PROVIDE SCU-1 AS INDICATED ON REFLECTED CEILING PLANS

ALTERNATE #6 - CONCRETE PATIO SOUTH OF THE COMMONS
- BASE BID: NO PATIO
- ALT 6A: PATIO
- ALT 6B: EXTENDED PATIO

ALTERNATE #7 - EXTERIOR ROPE LIGHTING
- BASE BID: NO WORK
- ALT SCOPE: PROVIDE LIGHTS AS INDICATED ON ROOF PLAN AND ELECTRICAL DRAWINGS

ALTERNATE #8 - MONUMENT ON SOUTH SIDE
- BASE BID: NO WORK
- ALT SCOPE: VC MONUMENT - SEE ARCHITECTURAL SITE PLAN AND ELECTRICAL DRAWINGS

△1 ALTERNATE #9 - FOOD SERVICE EQUIPMENT
- BASE BID: NO WORK
- ALT 9A: A LA CARTE EQUIPMENT AS NOTED ON EQUIPMENT SCHEDULE
- ALT 9B: A LA CARTE COUNTERS AS NOTED ON EQUIPMENT SCHEDULE

ALTERNATE #10 - GYM WRESTLING MAT LIFTS
-BASE BID: NO WORK
-ALT SCOPE: WRESTLING MAT LIFTS

ALTERNATE #11 - EXTERIOR PRECAST WALL FINISH
-BASE BID: ACID ETCH FINISH
-ALT SCOPE: POLISHED CONCRETE FINISH

ALTERNATE #12 - AREA C CLASSROOMS
-BASE BID: INCLUDE CLASSROOMS AS SHOWN
-ALT SCOPE: REMOVE 4 CLASSROOMS

ALTERNATE #13 - WEIGHT ROOM
-BASE BID: INCLUDE WEIGHT ROOM AS SHOWN
-ALT SCOPE: REMOVE WEIGHT ROOM

ALTERNATE #14 - VC EXTERIOR SIGNAGE BY MUSIC
-BASE BID: NO WORK
-ALT SCOPE: ALUMACORR SIGNAGE

△3 ALTERNATE #15 - TEMPERATURE CONTROLS
-BASE BID: INCLUDE AS INDICATED
-ALT SCOPE: PROVIDE PRICE FOR AN ALTERNATIVE AUTOMATIC TEMPERATURE CONTROLS CONTRACTOR

ICON
ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School
210 12th Street NE
Valley City, ND 58072

STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

Date 03/10/26

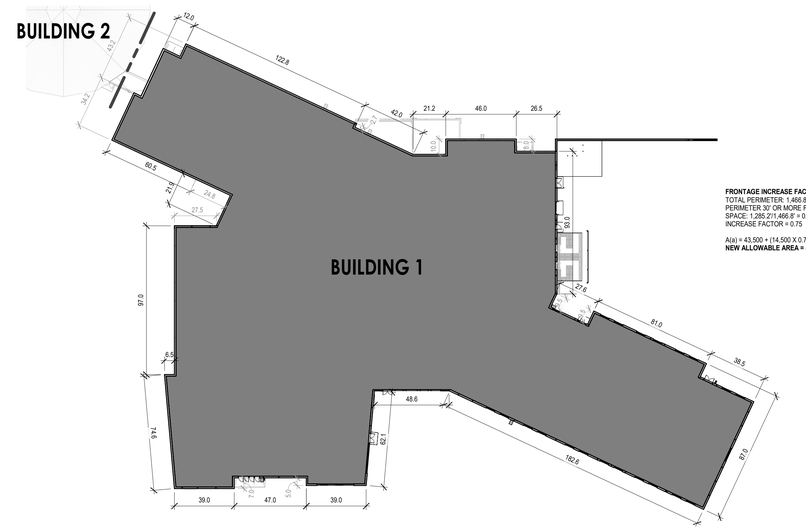
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
1	Addendum #1	03/17/26
2	Addendum #2	03/24/26
3	Addendum #3	03/30/26

DRAWN BY: AS/HO/JT
JN: 24-028

General Notes / Drawing Index

SHEET
G001



FRONTAGE INCREASE FACTOR
TOTAL PERIMETER: 1,466.8'
PERIMETER 30' OR MORE FROM OPEN SPACE: 1,285.2/1,466.8' = 0.876 OR 88%
INCREASE FACTOR = 0.75

A(a) = 43,500 × (14,500 X 0.75) = 54,375 SF
NEW ALLOWABLE AREA = 54,375 SF

1 G002 Code Diagram - Frontage Calcs

1" = 40'-0"

CODE STUDY -
2021 INTERNATIONAL BUILDING CODE
VALLEY CITY PUBLIC SCHOOL
VALLEY CITY, ND

EXIT LEGEND

2 HR FIRE BARRIER
1 HR FIRE BARRIER
SMOKE PARTITION
EXIT PATH 100' DISTANCE TO EXIT TRAVELED — TOTAL NUMBER OF OCCUPANTS EXITING 99

- B — TOTAL NUMBER OF OCCUPANTS EXITING THROUGH FROM UPPER FLOOR
- A — TOTAL NUMBER OF OCCUPANTS EXITING THROUGH FROM LOWER FLOOR
- 1 — TOTAL NUMBER OF OCCUPANTS EXITING DURING EVENING OCCUPANCY

PLUMBING FIXTURE COUNT - DAYTIME "E" OCCUPANCY - BUILDING 1

OCCUPANCY: ASSEMBLY - E			OCCUPANTS: 2,275			(1,137 MALE / 1,138 FEMALE)	
EDUCATIONAL FACILITIES	WATER CLOSET		LAVATORIES		BATHTUBS OR SHOWERS	DRINKING FOUNTAINS 1 PER 100	OTHER
	MALE 1 PER 50	FEMALE 1 PER 50	MALE 1 PER 50	FEMALE 1 PER 50			
REQUIRED	**23**	**23**	**23**	**23**	-	**23**	**1 SERVICE SINK**
PROVIDED	27	27	34	35	-	16	6

PLUMBING FIXTURE COUNT - EVENING "A" OCCUPANCY - BUILDING 1 - GYMNASIUM W/ BLEACHERS; REMAINING SCHOOL UNOCCUPIED

OCCUPANCY: ASSEMBLY - A-4			OCCUPANTS: 1,446			(723 MALE / 723 FEMALE)	
EDUCATIONAL FACILITIES	WATER CLOSET		LAVATORIES		BATHTUBS OR SHOWERS	DRINKING FOUNTAINS 1 PER 1,000	OTHER
	MALE 1 PER 75	FEMALE 1 PER 40	MALE 1 PER 200	FEMALE 1 PER 150			
REQUIRED	**10**	**19**	**4**	**5**	-	**2**	**1 SERVICE SINK**
PROVIDED	17	20	11	11	-	10	2

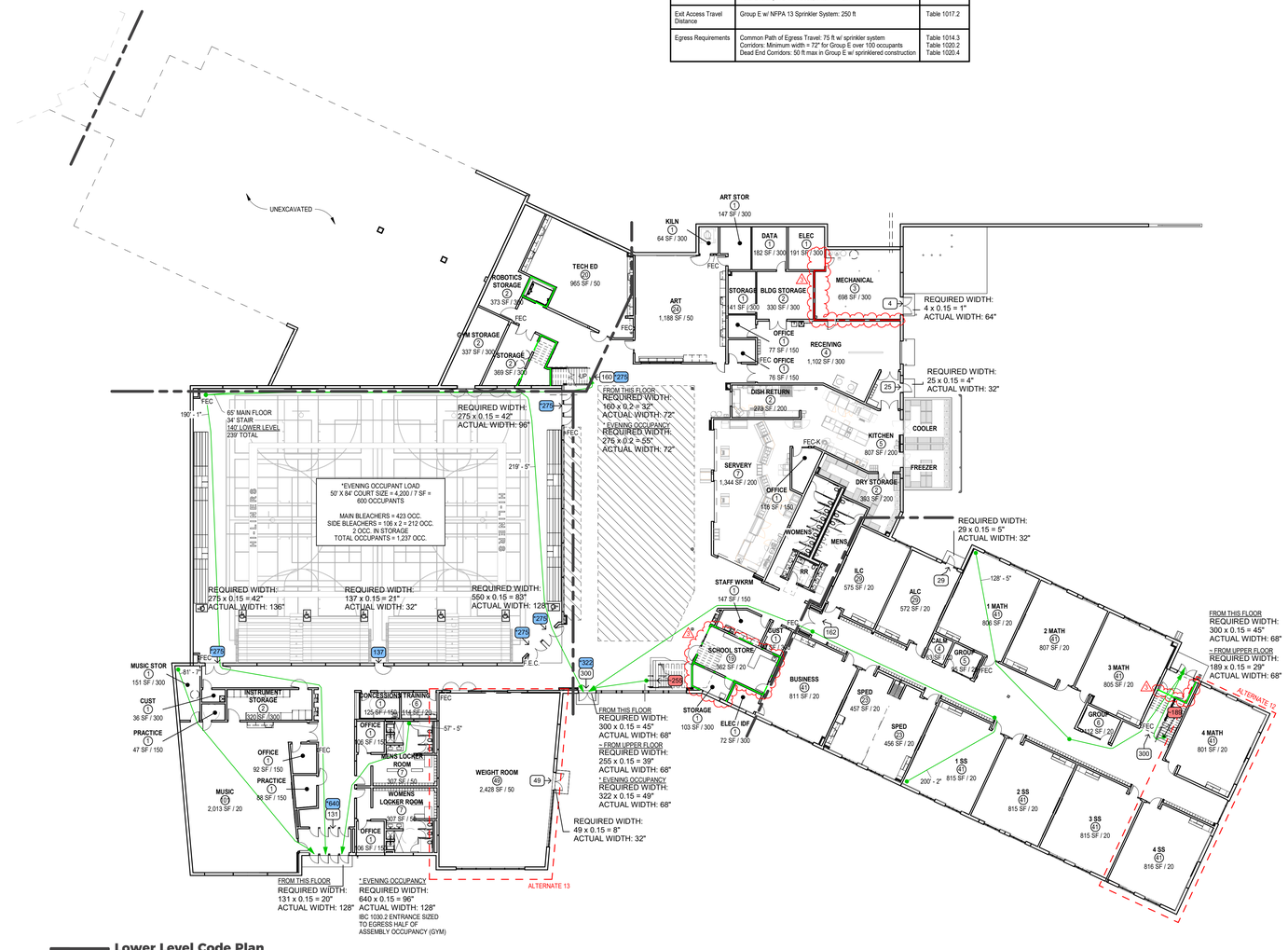
See alternative code compliance letter from Valley City Public Schools dated 03/06/2026 regarding school capacity.

CODE STUDY - BUILDING 1
Fully Sprinkled

Item	Description	Code Section
Occupancy	A-2 Assembly - Cafeteria/Commons A-4 Assembly - Gymnasiums w/ bleachers E Education	Chapter 3
Gross Square Footage	Gross Building Area Lower Level = 54,343 SF Main Level = 38,652 SF Upper Level = 12,168 SF Total = 105,163 SF	See Plan
Construction Type / Fire Resistance	Type II-B Primary Structural Framing 0 Hr Exterior & Interior Bearing Walls 0 Hr Floor & Roof Construction 0 Hr Fire resistance for exterior wall based on fire separation distance, Group E Occupancy is 0 hour when greater than 30' - 0"	Table 601 / 602
General Building Heights and Areas	Group / Allowable Height w/ Sprinkler / Allowable Area / Most Restrictive Non-separated Occupancy A-2 3 Stories / 75 ft 28,500 sf A-4 3 Stories / 75 ft 28,500 sf E 3 Stories / 75 ft 43,500 sf	Table 504.3 Table 504.4 Table 506.2 Table 508.3.2
Mixed Occupancies & Horizontal Separation	Group E to A 0 Hour - No separation required	Table 508.4
Allowable Area Modifications	Allowable Building Area Factor A(a) = A(1) + [NS x I(f)] A(a) = Allowable area (sf) A(1) = Tabular allowable area factor NS = Tabular allowable area factor for a nonsprinklered building I(f) = Area factor increase due to frontage (%) A(a) = 43,500 + [14,500 x I(f)] Area Increase due to Frontage: I(f) = 0.75 for 75-100% of building perimeter 30' or greater from open space **A(a) = 43,500 + [14,500 x 0.75] = 54,375 SF per story**	Section 506 Table 506.3.3
Fire Walls	Separation Between Building Types = 2 HR Exception 3: Fire walls shall be permitted to terminate at the interior surface of noncombustible exterior sheathing where the building on each side of the fire wall is protected by an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.	Section 706 Section 706.5
Automatic Sprinkler System	Building addition to be sprinklered Required Minumum = NFPA 13, provided throughout	903
Fire Extinguisher Requirements	Portable fire extinguishers to be installed in Group E occupancies Min. rated extinguisher = 2-A Max. Floor Area per Unit = 3,000 sf Max. Floor Area for Extinguisher = 11,250 sf Max. Travel Distance to extinguisher = 75 ft	906
Fire Alarm & Detection Systems Manual Fire Alarm	An approved fire alarm system installed in accordance with the provision of this code and NFPA 72 shall be provided. Group E = manual fire alarm system required Where automatic sprinkler systems are installed, systems/ detectors shall be connected to the building fire alarm system.	907.2.1 907.2
Occupant Loads	See Code Plan for Occupancies and Egress Width of building areas Total Daytime E Occupants: 2,276 Total Evening A-2, A-4 Occupants: 1,237	Table 1004.5
Exit Access Travel Distance	Group E w/ NFPA 13 Sprinkler System: 250 ft	Table 1017.2
Egress Requirements	Common Path of Egress Travel: 75 ft w/ sprinkler system Corridors: Minimum width = 72" for Group E over 100 occupants Dead End Corridors: 50 ft max in Group E w/ sprinklered construction	Table 1014.3 Table 1020.2 Table 1020.4

CODE STUDY - BUILDING 2 - EXISTING JEFFERSON ELEMENTARY
Not Sprinkled

Item	Description	Code Section
Occupancy	A-2 Assembly - Cafeteria/Commons E Education	Chapter 3
Gross Square Footage	Building 2: Existing Building = 44,284 SF New Connection Addition = 303 SF Total = 44,587 SF	See Plan
Construction Type / Fire Resistance	Type II-B Existing Primary Structural Framing 0 Hr Existing Exterior & Interior Bearing Walls 0 Hr Existing Floor & Roof Construction 0 Hr Fire resistance for exterior wall based on fire separation distance, Group E Occupancy is 0 hour when greater than 30' - 0"	Table 601 / 602
General Building Heights and Areas	N/A	
Mixed Occupancies & Horizontal Separation	N/A	
Allowable Area Modifications	N/A	
Fire Walls	Separation Between Building Types = 2 HR	Section 706
Automatic Sprinkler System	Not Provided	903
Fire Extinguisher Requirements	Portable fire extinguishers to be installed in Group E occupancies Min. rated extinguisher = 2-A Max. Floor Area per Unit = 3,000 sf Max. Floor Area for Extinguisher = 11,250 sf Max. Travel Distance to extinguisher = 75 ft	906
Fire Alarm & Detection Systems Manual Fire Alarm	Existing horn and speaker system Existing	907.2.1 907.2
Occupant Loads	See Code Plan for Occupancies and Egress Width of building areas Total Occupants: 1,446	Table 1004.5
Exit Access Travel Distance	Group E without 13 Sprinkler System: 200 ft	Table 1017.2
Egress Requirements	Common Path of Egress Travel: 75 ft without sprinkler system Corridors: Minimum width = 72" for Group E over 100 occupants Dead End Corridors: 20 ft max in Group E	Table 1014.3 Table 1020.2 Table 1020.4



2 G002 Lower Level Code Plan

1" = 20'-0"

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School

210 12th Street NE
Valley City, ND 58072

STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

LICENSED ARCHITECT — HEIDI BRENNAN — 6859 — STATE OF NORTH DAKOTA
Date 03/10/26

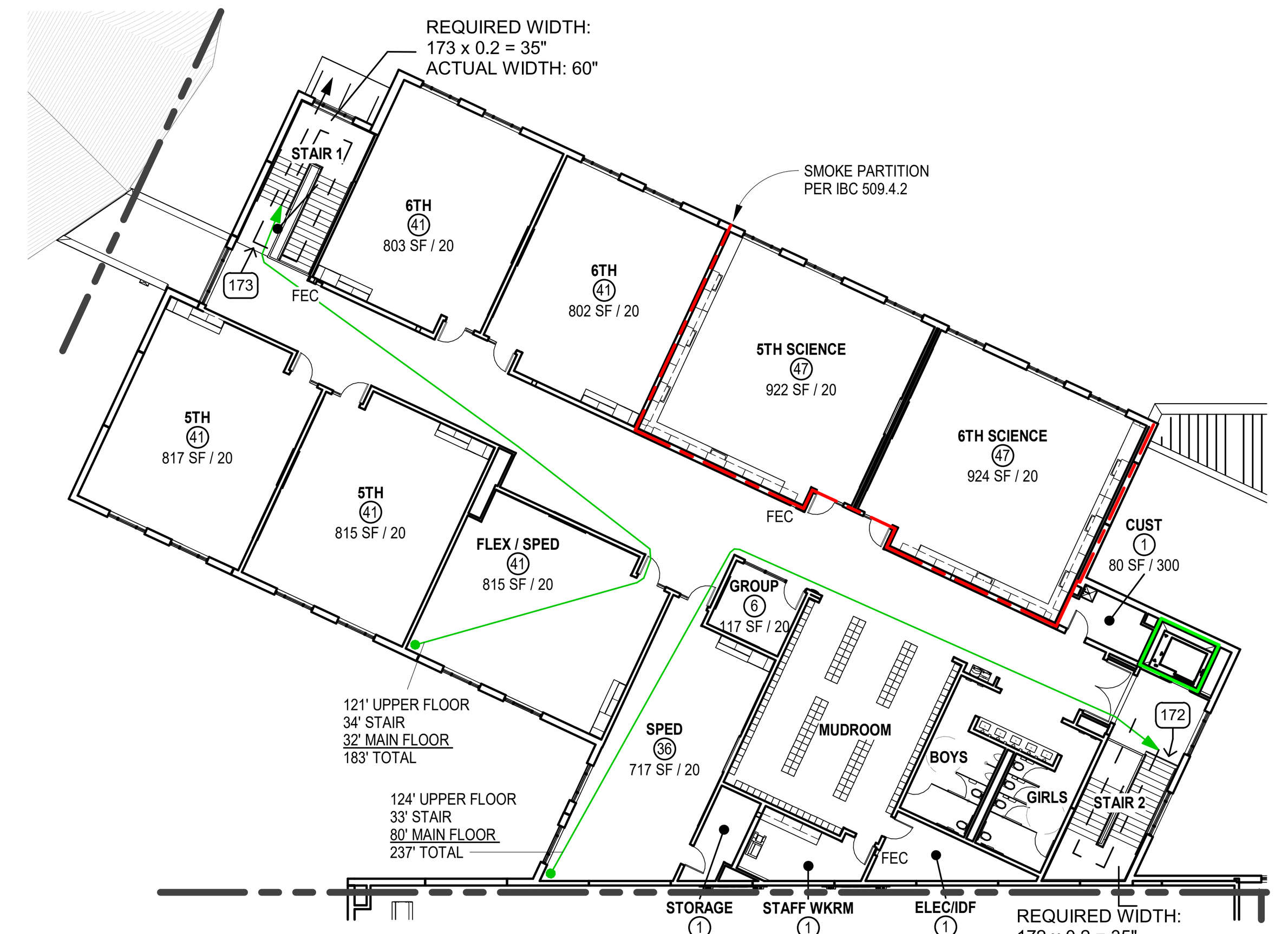
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
3	Addendum #3	03/30/26

DRAWN BY: AS/HO/DT JN: 24-028

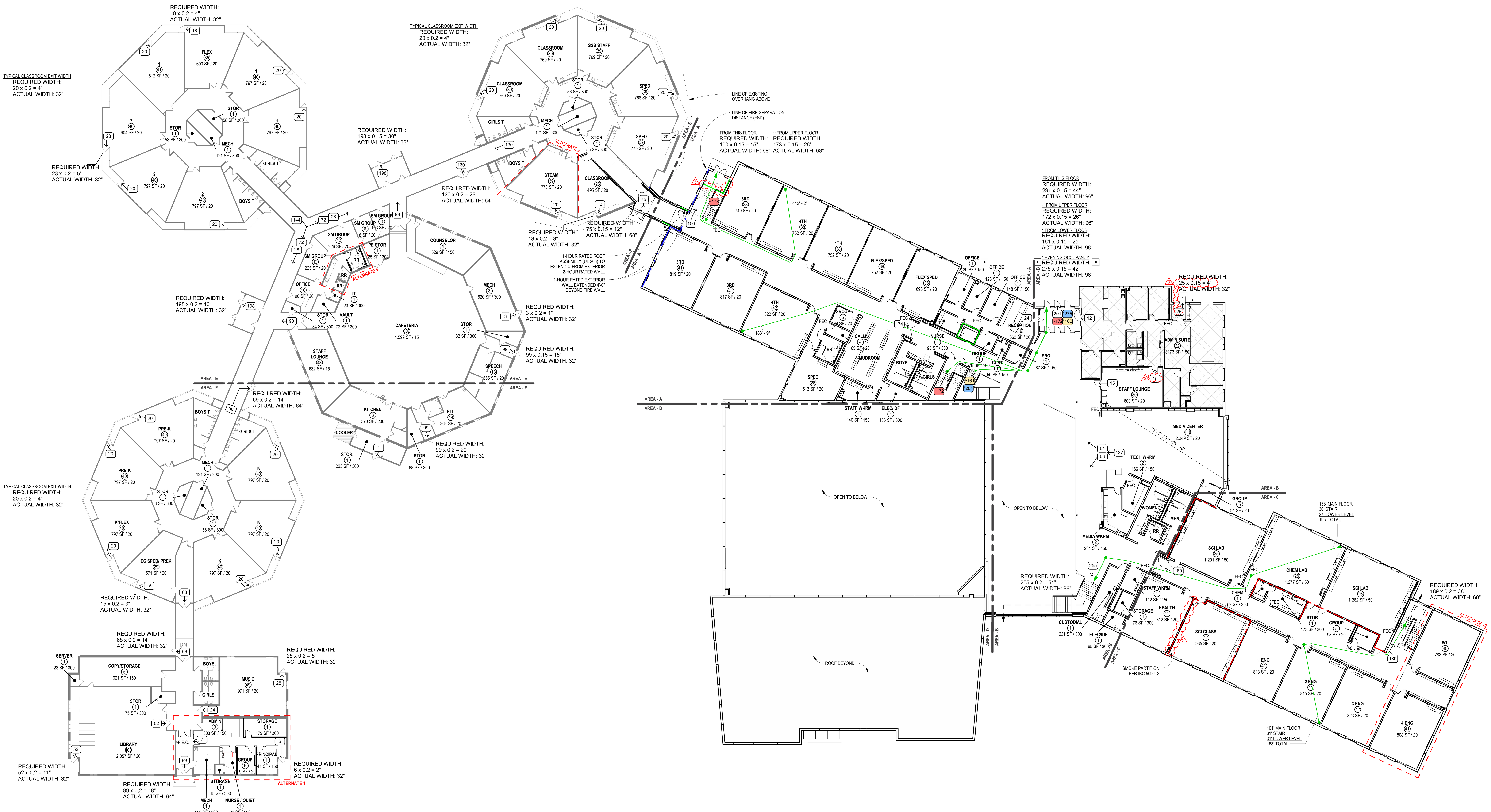
Code Study

SHEET
G002



1 G003 **Upper Level Code Plan**

1" = 20'-0"



2 G003 **Main Level Code Plan**

1" = 20'-0"

EXIT LEGEND

2 HR FIRE BARRIER

1 HR FIRE BARRIER

SMOKE PARTITION

EXIT PATH 100' — DISTANCE TO EXIT TRAVELED — 99 TOTAL NUMBER OF OCCUPANTS EXITING

~ TOTAL NUMBER OF OCCUPANTS EXITING THROUGH FROM UPPER FLOOR

^ TOTAL NUMBER OF OCCUPANTS EXITING THROUGH FROM LOWER FLOOR

* TOTAL NUMBER OF OCCUPANTS EXITING DURING EVENING OCCUPANCY

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School

210 12th Street NE
Valley City, ND 58072

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

LICENSED ARCHITECT HEIDI BRENNA (1859) Date 03/10/26 STATE OF NORTH DAKOTA

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
3	Addendum #3	03/30/26

DRAWN BY: AS/HO/JT JN: 24-028

Code Study

SHEET

G003

GENERAL NOTES:

1. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES ON THE DRAWINGS, OR IN THE FIELD PRIOR TO BEGINNING WORK OR DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER & ENGINEER.
2. A COMPLETE SET OF APPROVED DRAWINGS MUST BE MAINTAINED ON SITE AT ALL TIMES BY THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS.
3. CHANGES TO APPROVED PLANS SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE OWNER AND ENGINEER.
4. CHANGES TO APPROVED PLANS ON PUBLIC PROPERTY SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL FROM THE RESPECTIVE PUBLIC ENTITY.
5. ALL SITE AND RIGHT-OF-WAY CONSTRUCTION SHALL MEET CITY OF FARGO STANDARD SPECIFICATIONS LATEST REVISION. IN THE CASE OF A DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS, THE PLANS SHALL GOVERN.
6. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING & VERIFYING ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION & IS RESPONSIBLE FOR ANY DAMAGE TO THEM DURING CONSTRUCTION. CONTRACTOR SHALL CONTACT THE LOCAL ONE-CALL SYSTEM AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION.
7. ANY WORK ON EXISTING CITY OWNED UTILITIES SHALL REQUIRE NOTIFICATION TO THE CITY BY THE CONTRACTOR 24 HOURS PRIOR TO COMMENCING WORK.
8. THE CONTRACTOR SHALL COMPLY WITH ALL RULES & REGULATIONS OF FEDERAL, STATE, COUNTY, & LOCAL AUTHORITIES.
9. THE CONTRACTOR IS REQUIRED TO MEET ALL APPLICABLE FEDERAL, OSHA, STATE, AND LOCAL REGULATIONS CONCERNING PROJECT SAFETY AND ASSUMES FULL RESPONSIBILITY FOR SAFETY ON THE PROJECT.
10. CONTRACTOR SHALL VERIFY THAT ALL NECESSARY PERMITS FOR CONSTRUCTION HAVE BEEN OBTAINED, ALL BONDS ARE POSTED, ALL FEES ARE PAID AND PROOF OF INSURANCE IS PROVIDED PRIOR TO THE START OF THE PROJECT.
11. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL HORIZONTAL AND VERTICAL CONTROLS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SURVEY AND RELATED COSTS.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR HIS/HER OWN MEASUREMENTS AND QUANTITIES. ENGINEER QUANTITIES ARE ESTIMATES ONLY.
13. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF UNDERGROUND UTILITIES BY THE APPROPRIATE UTILITY ENTITY. PROPER COORDINATION WITH THE RESPECTIVE UTILITY ENTITIES SHALL BE PERFORMED BY THE CONTRACTOR TO INSURE THAT ALL UTILITY ENTITY STANDARDS FOR MATERIAL AND METHODS ARE MET. THE GENERAL CONTRACTOR SHALL OVERSEE INSTALLATION OF UTILITIES AND COORDINATE WITH ALL SUBCONTRACTORS TO AVOID CONFLICTS.
14. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES) TO THE OWNER FOLLOWING COMPLETION OF CONSTRUCTION ACTIVITIES.
15. THE CONTRACTOR SHALL PROVIDE TESTING, INSPECTIONS, AS-BUILT DRAWINGS, CERTIFICATIONS AND ANY OTHER PROCEDURES OR DOCUMENTATION REQUIRED BY THE GOVERNING AGENCIES TO CLOSE OUT THE PROJECT.
16. THE CONTRACTOR SHALL RESTORE ANY STRUCTURES, PIPE, UTILITY, PAVEMENT, CURBS SIDEWALKS, LANDSCAPED ARES, ETC. WITHIN THE SITE OR ADJOINING PROPERTIES DISTURBED DURING DEMOLITION OR CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AND TO THE SATISFACTION OF THE OWNER/JURISDICTIONAL AUTHORITY.
17. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL STRIPPING, RUBBISH, TRASH, DEBRIS, ORGANIC, AND EXCESS EXCAVATED MATERIAL IN A LAWFUL MANNER.
18. CONTRACTOR SHALL REFERENCE THE PROJECT GEOTECHNICAL REPORT AVAILABLE IN THE PROJECT MANUAL AND COMPLY WITH ALL REPORT REQUIREMENTS. IF A CONFLICT ARISES BETWEEN THE GEOTECHNICAL REPORT AND CIVIL DOCUMENTS, THE GEOTECHNICAL REPORT SHALL GOVERN.
19. FOR THE PURPOSES OF CONSTRUCTION SURVEY, ALL BUILDING DIMENSIONS SHALL BE VERIFIED WITH STRUCTURAL AND ARCHITECTURAL PLANS.
20. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING SHOP DRAWINGS TO THE ENGINEER FOR REVIEW OF ALL APPLICABLE PRODUCTS AND MATERIALS BEING USED FOR CONSTRUCTION.
21. ALL UNDERGROUND WORK SHALL BE COMPLETED PRIOR TO COMPLETION OF SUBGRADE PREPARATION AND START OF ROADWAY WORK INCLUDING BUT NOT LIMITED TO INSTALLATION OF FABRIC, GRAVEL, PAVING, ETC.
22. CONTRACTOR IS RESPONSIBLE FOR SECURING HAUL ROAD AGREEMENTS, IF NECESSARY. CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE TO HAUL ROADS AS WELL AS RESOLVING ANY CLAIMS OF DAMAGE.
23. ELECTRONIC FILES ARE AVAILABLE FROM ENGINEER UPON REQUEST AND COMPLETION OF WAIVER FORM. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH PREPARING DATA FOR EQUIPMENT USE ABOVE AND BEYOND SUBMITTAL OF FINISHED GROUND SURFACE. THIS DATA IS CONSIDERED SUPPLEMENTAL AND IS NOT CONSIDERED PART OF THE CONTRACT DOCUMENTS.

GRADING NOTES:

1. LOCATION AND TOP ELEVATIONS OF INLETS AND STRUCTURES MAY NEED TO BE ADJUSTED IN THE FIELD BY THE CONTRACTOR WHERE NECESSARY AND SHALL BE APPROVED BY THE ENGINEER. CONTRACTOR SHALL NOTE ANY CHANGES IN AS-BUILT DRAWINGS.
2. IF UNSUITABLE SUBGRADE MATERIALS ARE ENCOUNTERED, THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT (FROM OFF-SITE BORROW MATERIAL) OF ALL UNSUITABLE MATERIAL TO CLASSIFIED AS MH, CH, OH, OL AND PEAT IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM, UNLESS APPROVED IN WRITING BY THE PROJECT GEOTECHNICAL ENGINEER. THE SITE ENGINEER AND GEOTECHNICAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY UPON ENCOUNTERING UNSUITABLE SUBGRADE MATERIAL.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL EXCAVATIONS AND GRADING INCLUDING FURNISHING OFF-SITE BORROW AND DISPOSING OF EXCESS MATERIAL AS REQUIRED TO MEET PLAN GRADES. OFF SITE BORROW SHALL MEET ALL REQUIREMENTS OF THE PROJECT GEOTECHNICAL REPORT (IF AVAILABLE) OR PER NDDOT STANDARD SPECIFICATIONS.
4. ANY FARMING / SPREADING / MANIPULATING / ADDING OF WATER / ETC. OF EXCAVATED MATERIAL TO BRING MOISTURE CONTENT TO WITHIN SPECIFICATIONS OR TO A POINT WHERE SPECIFIED DENSITY CAN BE MAINTAINED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
5. COMPACTION LIFTS AND TESTING SHALL BE PER NDDOT REQUIREMENTS IN TRENCHING, SUB-BASE, BASE, AND PAVING MATERIALS. SUB-BASE LIFTS SHALL NOT EXCEED 12". BASE LIFTS SHALL NOT EXCEED 6".
6. CONTRACTOR SHALL UNIFORMLY GRADE BEHIND CURBS TO MATCH EXISTING GRADES AT PROPERTY LINES.
7. GRADE TO ENSURE POSITIVE DRAINAGE. ALL FINISHED SURFACES SHALL BE FREE FROM SURFACE IRREGULARITIES.
8. ALL LANDSCAPE ISLANDS SHALL BE GRADED TO DRAIN OVER CURBS. UNLESS NOTED OTHERWISE.
9. EXCAVATION CONTRACTOR SHALL TAKE INTO ACCOUNT THAT ADDITIONAL CLAY WILL BE GENERATED DUE TO THE INSTALLATION OF THE PIPES AND BEDDING MATERIAL THAT WAS NOT ACCOUNTED FOR IN THE ESTIMATED QUANTITIES. THIS MAY IMPACT IMPORT/EXPORT QUANTITIES. CONTRACTOR SHALL BID / CONSTRUCT ACCORDINGLY.
10. CONTRACTOR SHALL PERFORM PROOF ROLL ON SUBGRADE PRIOR TO PLACING AGGREGATE BASE, AND ON AGGREGATE BASE MATERIAL PRIOR TO PAVING.

PAVING NOTES:

1. ALL PAVEMENT SECTION MATERIALS AND INSTALLATION SHALL MEET THE REQUIREMENTS OF NDDOT.
2. AGGREGATE BASE COURSE SHALL MEET THE REQUIREMENTS OF NDDOT.
3. CONCRETE FOR FLAT WORK SHALL BE A BATCH PLANT MIX MEETING THE REQUIREMENTS OF THE NDDOT STANDARD SPECIFICATIONS. (MINIMUM 4,000 PSI)
4. HOT BITUMINOUS PAVEMENT SHALL BE A PLANT MIX MEETING THE REQUIREMENTS OF THE NDDOT STANDARD SPECIFICATIONS (LATEST EDITION).
5. PAINTED PARKING STRIPING SHALL BE WATER BASED 4" IN WIDTH YELLOW STRIPES AND BE LOCATED AS SHOWN ON THE PLANS. ACCESSIBLE PARKING STRIPING SHALL BE BLUE AND PER ADA REQUIREMENTS. GORE AREA LINES SHALL BE PAINTED AT 45 DEGREES AND SHALL HAVE A SPACING OF 3'. CURE COMPOUND SHALL BE REMOVED BY SANDBLASTING, GRINDING, OR OTHER APPROVED METHOD BEFORE INSTALLATION OF PAVEMENT MARKINGS ON CONCRETE TO ENSURE PROPER ADHESION OF THE PAINT. ALL WORK SHALL BE IN ACCORDANCE WITH THE NDDOT REQUIREMENTS.
6. THE CONTRACTOR SHALL SUBMIT A JOINTING PLAN FOR CONCRETE PAVEMENT TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. IF NO JOINTING PLAN IS SUBMITTED, THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR JOINTING LAYOUT.
7. CONTRACTOR SHALL ALLOW NEW BITUMINOUS PAVEMENT TO COOL TO A TEMPERATURE BELOW 125°F AND CURE FOR A PERIOD OF 72 HOURS BEFORE APPLYING PERMANENT PAVEMENT MARKINGS. APPLY WATER BASED PAINT WHEN THE AIR AND PAVEMENT SURFACE TEMPERATURES ARE 45°F OR WARMER.
8. WHEN PAVING ADJACENT TO EXISTING ASPHALT PAVEMENT, CONTRACTOR SHALL SAW CUT EXISTING PAVEMENT AND APPLY TACK COAT FOR CLEAN EDGE TO PAVE AGAINST.
9. ALL ADA DOME PANELS SHALL BE CAST IRON.

STORM SEWER & DRAINAGE NOTES:

1. CMP PIPE SHALL BE SPIRAL RIB 16 GA POLYMERIC COATED OR 12 GA ALUMINIZED.
2. HDPE STORM SEWER SHALL BE ADS N12 OR PRINSCO GOLDFLO OR APPROVED EQUAL.
3. REINFORCED CONCRETE PIPE SHALL MEET NDDOT REQUIREMENTS.
4. POLYPROPYLENE (PPL) STORM SEWER SHALL BE ADS HP STORM "GRAY PIPE" OR PRINSCO GOLDPRO OR APPROVED EQUAL.
5. INVERTS SHOWN ON PLAN DRAWINGS ARE PIPE INVERTS UNLESS NOTED OTHERWISE.
6. ANY SUBSTITUTION FOR MATERIALS OR PROCEDURES MUST HAVE PRIOR WRITTEN APPROVAL OF THE CITY AND THE PROJECT ENGINEER.
7. STORM SEWER NOT BURIED AT LEAST 6' BELOW FINISH GRADE IS SUBJECT TO FREEZING. HEAT TAPE MAY BE INSTALLED TO MITIGATE FUTURE MAINTENANCE.
8. ANNOTATED LENGTH OF CULVERT INCLUDES LENGTH OF FLARED END SECTION. FOR CLARIFICATION: ANNOTATED LENGTH = PIPE LENGTH + FES LENGTH.

SANITARY SEWER NOTES:

1. LOCATIONS AND TOP ELEVATIONS OF STRUCTURES MAY NEED TO BE ADJUSTED IN THE FIELD BY THE CONTRACTOR WHERE NECESSARY AND SHALL BE APPROVED BY THE ENGINEER. CONTRACTOR SHALL NOTE ALL CHANGES ON AS-BUILT DRAWINGS.
2. CONSTRUCTION OF THE SANITARY SEWER SYSTEM AND CONNECTION TO THE EXISTING SEWER SYSTEM SHALL MEET THE REQUIREMENTS OF AND SHALL BE INSTALLED UNDER THE DIRECTION OF THE CITY.
3. PVC SCHEDULE 40 SANITARY SEWER SHALL MEET ASTM D1785, D2665, F891, F1488, OR F1760 WITH APPROVED FITTINGS. SOLVENT WELDED JOINTS MUST USE ASTM F656 PURPLE PRIMER AND ASTM D2564 CEMENT.
4. PVC SDR-35 AND SDR-26 SANITARY SEWER SHALL MEET ASTM D3034.
5. CONTRACTOR SHALL CONFIRM LOCATION AND INVERT ELEVATION OF SEWER TIE-IN POINT PRIOR TO ANY SITE OR BUILDING CONSTRUCTION.
6. ROOF DRAINS, FOUNDATION DRAINS OR OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.
7. DEFLECTION TESTS SHALL BE PERFORMED ON ALL SANITARY SEWER MAINS. TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5%. IF A PIPE EXCEEDS THE MAXIMUM DEFLECTION, IT SHALL BE REMOVED AND CORRECTED. THE RIGID BALL OR MANDREL USED SHALL HAVE A DIAMETER OF NOT LESS THAN 95% OF THE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER (WHATEVER IS SPECIFIED IN THE ASTM SPECIFICATION). THE TEST SHALL BE PERFORMED WITHOUT THE USE OF MECHANICAL PULLING DEVICES.
8. PUBLIC SANITARY SEWER MAINS SHALL BE PRESSURE TESTED PER ASTM F-1417 (OR APPROVED EQUAL) IN THE PRESENCE OF THE ENGINEER.

WATER NOTES:

1. CONSTRUCTION OF THE WATER SYSTEM AND CONNECTION TO THE EXISTING WATER SYSTEM SHALL MEET THE REQUIREMENTS OF AND SHALL BE INSTALLED UNDER THE DIRECTION OF THE CITY.
2. INSTALLATION OF THE PRIVATE FIRE SERVICE MAINS AND APPURTENANCES SHALL BE IN ACCORDANCE WITH NFPA 24 AND THE REQUIREMENTS OF THE CITY.
3. COPPER WATER PIPE AND FITTINGS SHALL BE TYPE "K" COPPER.
4. DUCTILE IRON WATER PIPE AND FITTINGS SHALL BE CLASS 350, AS SPECIFIED BY AWWA C150 FOR LAYING CONDITION TYPE 2. PIPE JOINTS AND FITTINGS SHALL BE RESTRAINED.
5. PVC WATER PIPE AND FITTINGS 4" AND LARGER SHALL MEET AWWA C-900.
6. ALL DUCTILE IRON FITTINGS, GATE VALVES, AND BURIED PORTIONS OF GATE VALVE BOXES, CURB STOPS AND BOXES, AND HYDRANTS SHALL BE WRAPPED IN AN 8 MIL POLYETHYLENE PLASTIC AND TAPED WITH A POLYETHYLENE (NOT DUCT TAPE) TAPE.
7. ALL WATER LINES SHALL BE BELOW THE FROST LINE 7.5' FROM FINISH GRADE TO TOP OF PIPE.
8. WATER METERS, BOXES, VAULTS AND BFP'S SHALL MEET ALL REQUIREMENTS OF THE UTILITY COMPANY. CONTRACTOR SHALL CONFIRM ALL ITEMS AGAINST CURRENT LIST OF APPROVED DEVICES PRIOR TO ORDERING.
9. WATER LINE CROSSING ANY AND ALL SEWERS SHALL HAVE A MINIMUM VERTICAL SEPARATION OF 18" BETWEEN THE OUTSIDE OF THE WATER MAIN PIPE AND THE SEWER PIPE. ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING SUCH THAT BOTH JOINTS WILL BE EQUAL DISTANCE AND AS FAR FROM THE SEWER AS POSSIBLE, IF WATER CROSSES BELOW SANITARY SEWERS, THE SEWER MUST BE WATER MAIN MATERIAL FOR THE SPAN.
10. SITE CONTRACTOR IS RESPONSIBLE FOR MAKING TIE-IN TO WATER AND SANITARY SEWER CONNECTIONS AT BUILDING. SEE ARCHITECTURAL AND MECHANICAL PLANS FOR EXACT LOCATIONS FOR BUILDING STUB OUTS AND FLOOR DRAINS.
11. CONTRACTOR SHALL TEST THE WATER MAIN IN THE PRESENCE OF THE ENGINEER USING AWWA C605 CRITERIA. PIPE SHALL BE BE PRESSURIZED TO 150 PSI FOR TWO HOURS WITH 0 PSI ALLOWABLE PRESSURE LOSS. ALL WATER SERVICE CURB STOPS ALONG THE MAIN BEING TESTED SHALL BE OPEN DURING THE TEST. CONTRACTOR IS RESPONSIBLE FOR CAPPING THE END OF WATER SERVICES WITH A SUITABLE PRESSURE RATED PLUG.
12. ALL WATER MAINS, FITTINGS, AND APPURTENANCES SHALL BE CHLORINATED AND TESTED IN ACCORDANCE WITH AWWA C651, AWWA 652, AND AS SET FORTH BY THE LATEST REVISION OF THE CITY OF FARGO SPECIFICATIONS. CHLORINATED WATER SHALL REMAIN IN THE PIPE LINE FOR AT LEAST 24 HOURS AND SHALL HAVE A RESIDUAL CHLORINE CONTENT OF AT LEAST 25 PARTS PER MILLION AT THAT TIME. A WATER SAMPLE WILL BE TAKEN AFTER THE MAIN IS FLUSHED AND SHALL SHOW THE ABSENCE OF BACTERIA BEFORE CONNECTIONS ARE ALLOWED TO THE WATERMAIN. CHLORINE DISINFECTION SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE PIPE.
13. ALL PRODUCTS (TREATMENT CHEMICALS AND MATERIALS) THAT MAY COME INTO CONTACT WITH WATER INTENDED FOR USE IN A PUBLIC WATER SYSTEM SHALL MEET ANSI/NSF INTERNATIONAL STANDARDS 60 & 61, AS APPROPRIATE.
14. FOR BACTERIOLOGICAL TEST, TWO (2) SETS OF SAMPLES SHALL BE COLLECTED AT LEAST 16 HOURS APART, OR TWO (2) SETS SHALL BE COLLECTED 15 MINUTES APART AFTER AT LEAST A 16-HOUR REST SETS SHALL BE COLLECTED EVERY 1,200 FT. OF NEW MAIN, PLUS ONE SET FROM THE END OF THE WATER MAIN AND AT LEAST ONE FROM EACH BRANCH GREATER THAN ONE (1) PIPE LENGTH. BACTERIOLOGICAL TEST MUST BE ANALYZED BY A NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY CERTIFIED LAB.

DEMOLITION NOTES

1. CONCRETE CURB AND GUTTER TO BE REMOVED SHALL BE SAW CUT IN FULL SECTIONS.
2. CONTRACTOR SHALL SAW CUT EXISTING PAVEMENT FOR REMOVAL. PAVEMENT SHALL BE REMOVED IN FULL SECTIONS.
3. LIMITS OF STREET PATCHING AND PATCHING REQUIREMENTS SHALL BE VERIFIED WITH THE CITY.

TEMPORARY TRAFFIC CONTROL NOTES:

1. EXCAVATION OR OTHER WORK IN THE RIGHT-OF-WAY SHALL REQUIRE A TRAFFIC CONTROL PLAN THAT MEETS ALL MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) REQUIREMENTS. CONTRACTOR SHALL COORDINATE WITH THE CITY FOR ANY NECESSARY ROAD CLOSURES.
2. UNLESS NOTED OTHERWISE, THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AN ATSSA CERTIFIED TRAFFIC CONTROL SUPERVISOR (TCS) AND ANY NECESSARY TEMPORARY TRAFFIC CONTROL DEVICES ON AND OFF-SITE INCLUDING OBTAINING ANY APPLICABLE PERMITS. THE CONTRACTOR SHALL IDENTIFY THE TCS AND PROVIDE PROOF OF CERTIFICATION AT A PRECONSTRUCTION MEETING.
3. UNLESS A TEMPORARY TRAFFIC CONTROL PLAN IS INCLUDED WITH THE DESIGN DOCUMENTS, CONTRACTOR SHALL SUBMIT A COPY OF THE APPROVED TRAFFIC CONTROL PLAN TO THE ENGINEER FOR REVIEW.
4. CONTRACTOR IS RESPONSIBLE TO INSTALL, INSPECT, MAINTAIN, AND REMOVE TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE LATEST STANDARDS AND REQUIREMENTS OF THE MUTCD, STANDARD HIGHWAY SIGNS AND MARKINGS BOOK PUBLISHED BY THE FHWA, AND LOCAL REGULATIONS.
5. CHANGES TO THE TEMPORARY TRAFFIC CONTROL PLAN SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE OWNER, ENGINEER, AND PERMITTING AUTHORITY IF APPLICABLE.

LEGEND

ABBREVIATIONS

ADJ	ADJACENT
ALT	ALTERNATE
ARCH	ARCHITECT
ACP	ASBESTOS CEMENT PIPE
BIT	BITUMINOUS
BLDG	BUILDING
BM	BENCHMARK
B.O.	BY OWNER/BY OTHERS
B.O.P.	BEGINNING OF PROJECT
BV	BUTTERFLY VALVE
BVCE	BEGINNING VERTICAL CURVE ELEVATION
BVCS	BEGINNING VERTICAL CURVE STATION
C	CIVIL
B.P.	CAST IRON
CIP	CAST IRON PIPE
CU	COPPER
CMP	CORRUGATED METAL PIPE
CJ	CONTROL JOINT
CONC	CONCRETE
CF	CUBIC FEET
CS	CURB STOP
C.O.	CLEAN OUT
CNTR	CENTER
CONST	CONSTRUCTION
CONTR	CONTRACTOR
CY	CUBIC YARD
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DEMO	DEMOLITION
DTL	DETAIL
DIM	DIMENSION
DOM	DOMESTIC
D.S.	DOWN SPOUT
DWG	DRAWING
DWL	DOWEL
EA	EACH
ELEC	ELECTRIC
ELEV	ELEVATION
ENCL	ENCLOSURE
E.O.P.	END OF PROJECT
E.J.	EXPANSION JOINT
EX.	EXISTING
EX.A.	EACH WAY
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
FD	FIRE DEPARTMENT
FFE	FIRST FLOOR ELEVATION
FO	FIBER OPTICS
FTG	FOOTING
G.C.	GENERAL CONTRACTOR
GALV	GALVANIZED
GAL	GALLON
GRAN	GRANULAR
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE
HORZ	HORIZONTAL
HB	HOSE BIB
HDCP	HANDICAPPED
HYD	HYDRANT
I	INLET
K	CURVATURE VALUE
M	MECHANICAL
MH	MANHOLE
MAX	MAXIMUM
MIN	MINIMUM
M.J.	MECHANICAL JOINT
MISC.	MISCELLANEOUS
NC	NON-CORROSIVE
NOM	NOMINAL
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OD	OUTSIDE DIMENSION
OCEW	ON CENTER EACH WAY
OC	ON CENTER
OHE	OVERHEAD ELECTRIC
P.C.	PRECAST CONCRETE
PVIE	POINT OF VERTICAL INTERSECTION ELEVATION
PVIS	POINT OF VERTICAL INTERSECTION STATION
PREFAB	PREFABRICATED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE PIPE
PP	POWER POLE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REQ'D	REQUIRED
RIM	RIM OF INLET OR CASTING
ROW	RIGHT OF WAY
SAN	SANITARY
SS	SANITARY SEWER
ST	STORM
STD	STANDARD
SB	SOIL BORING
STRUCT	STRUCTURAL
SF	SQUARE FEET
SCH	SCHEDULE
SW	SIDEWALK
T	TELEPHONE
TYP	TYPICAL
UNEX	UN-EXCAVATED
UE	UTILITY EASEMENT
UGE	UNDERGROUND ELECTRIC
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
V	VERIFY
VCL	VERTICAL CURVE LENGTH
VOL	VOLUME
VCP	VITRIFIED CLAY PIPE
W/	WITH
W/O	WITH OUT
WTH	WIDTH
W	WATER

ESTIMATED DEMOLITION QUANTITIES

ITEM	QUANTITY	UNIT
REMOVE EX. CURB & GUTTER	164	LF
REMOVE EX. SIDEWALK	75	SY
REMOVE EX. ASPHALT	3,014	SY
REMOVE EX. CONCRETE	64	SY
REMOVE EX. GRAVEL	1,811	SY
REMOVE EX. FENCE	1,125	LF
REMOVE & REPLACE EX. FENCE	20	LF
REMOVE EX. TREES	10	EA
REMOVE EX. STORM INLET	1	EA
ABANDON EX. STORM PIPE	1	LS
REMOVE EX. LANDSCAPING	458	SF
REMOVE & RELOCATE EX. PLAYGROUND BORDER & MULCH	1	LS
REMOVE EX. GOAL POST	2	EA
REMOVE/ABANDON EX. UGE	1	LS
REMOVE/ABANDON EX. FO	1	LS

ESTIMATED SITE QUANTITIES

ITEM	QUANTITY	UNIT
CURB & GUTTER - HIGHBACK △1	2,012	LF
CURB & GUTTER - DROP	60	LF
CONCRETE PAVEMENT - 6"	228	SY
ASPHALT PAVEMENT - 5" △1	8,167	SY
CONCRETE SIDEWALK - 4"	1,172	SY
CONCRETE SIDEWALK - 4" - ALT 6A △1	151	SY
CONCRETE SIDEWALK - 4" - ALT 6B	132	SY
THICKENED EDGE CONCRETE SIDEWALK	291	LF
PAVEMENT MARKING - PAINT	4,812	LF
PAVEMENT MARKING - ADA SYMBOL	8	EA
ADA PARKING SIGN	4	EA
ADA PARKING SIGN - VAN ACCESSIBLE	4	EA
△1 "DO NOT ENTER" SIGN	1	EA
SEGMENTAL BLOCK RETAINING WALL	101	LF
BOLLARD	6	EA
REMOVABLE BOLLARD	2	EA
HIGHWAY GUARDRAIL	1	LS
TRANSFORMER PAD	1	EA
FLAG POLE	3	EA
GOAL POST	2	EA
NAILER BOARD	1,471	LF
TRACK PROTECTION BRIDGE	1	LS
△3 LANDSCAPE CURB	239	LF

ESTIMATED SANITARY QUANTITIES

ITEM	QUANTITY	UNIT
SDR-35 PIPE - 6" - OPEN CUT	420	LF
DR-17 PIPE - 6" - BORE	394	EA
MANHOLE	3	EA
CONNECT TO EX. MAIN	1	EA

ESTIMATED WATER QUANTITIES

ITEM	QUANTITY	UNIT
C-900 PIPE - 4"	10	LF
C-900 PIPE - 6"	853	LF
GATE VALVE - 4"	1	EA
GATE VALVE - 6"	4	EA
HYDRANT	2	EA
LIVE TAP EX. MAIN	1	EA

ESTIMATED STORM QUANTITIES

ITEM	QUANTITY	UNIT
FLAT DRAIN TILE	4,806	LF
HDPE PIPE - 12"	699	LF
ALTERNATE 13 - HDPE PIPE - 12"	61	LF
PERFORATED HDPE PIPE W/ GEOSOCK - 12"	553	LF
HDPE PIPE - 15"	211	LF
HDPE PIPE - 18"	26	LF
HDPE PIPE - 24"	339	LF
SCHD 40 PIPE - 16'	92	LF
PERFORATED HDPE PIPE W/ GEOSOCK - 36"	387	LF
RCP PIPE - 36" - JACK & BORE	79	LF
12" NYLO INLET	2	EA
SINGLE BOX INLET	3	EA
INLET - 27"	3	EA
ALTERNATE 13 - INLET 27"	1	EA
MANHOLE/INLET - 48"	3	EA
MANHOLE/INLET - 60"	2	EA
INLET - 72"	1	EA
MANHOLE W/ WEIR PLATE - 84"	1	EA
OUTLET STRUCTURE - 60"	1	EA
HYDRODYNAMIC SEPARATOR	1	EA
INLINE CLEANOUT - 6"	2	EA
RAISE EX. CASTING	2	EA
CONNECT TO EX. STRUCTURE	2	EA

ESTIMATED GRADING QUANTITIES

ITEM	QUANTITY	UNIT
TOPSOIL STRIPPING - 6" △1	5,239	CY
TOPSOIL SPREADING - 6" △3	1,222	CY
COMMON EXCAVATION	13,946	CY
EXPORT	1,201	CY
SUBGRADE PREPARATION	20,043	SY
GEOTEXTILE FABRIC	9,052	SY
AGGREGATE BASE	1,792	CY
FINISHING STONE	611	CY
BASE STONE	8,548	CY

△1 ADDENDUM 1
- REVISED QUANTITIES

△3 ADDENDUM 3
- REVISED QUANTITIES

ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School

210 12th Street NE
Valley City, ND 58072

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

TYLER
TRENDA
PE-41570
DATE: 3/30/26

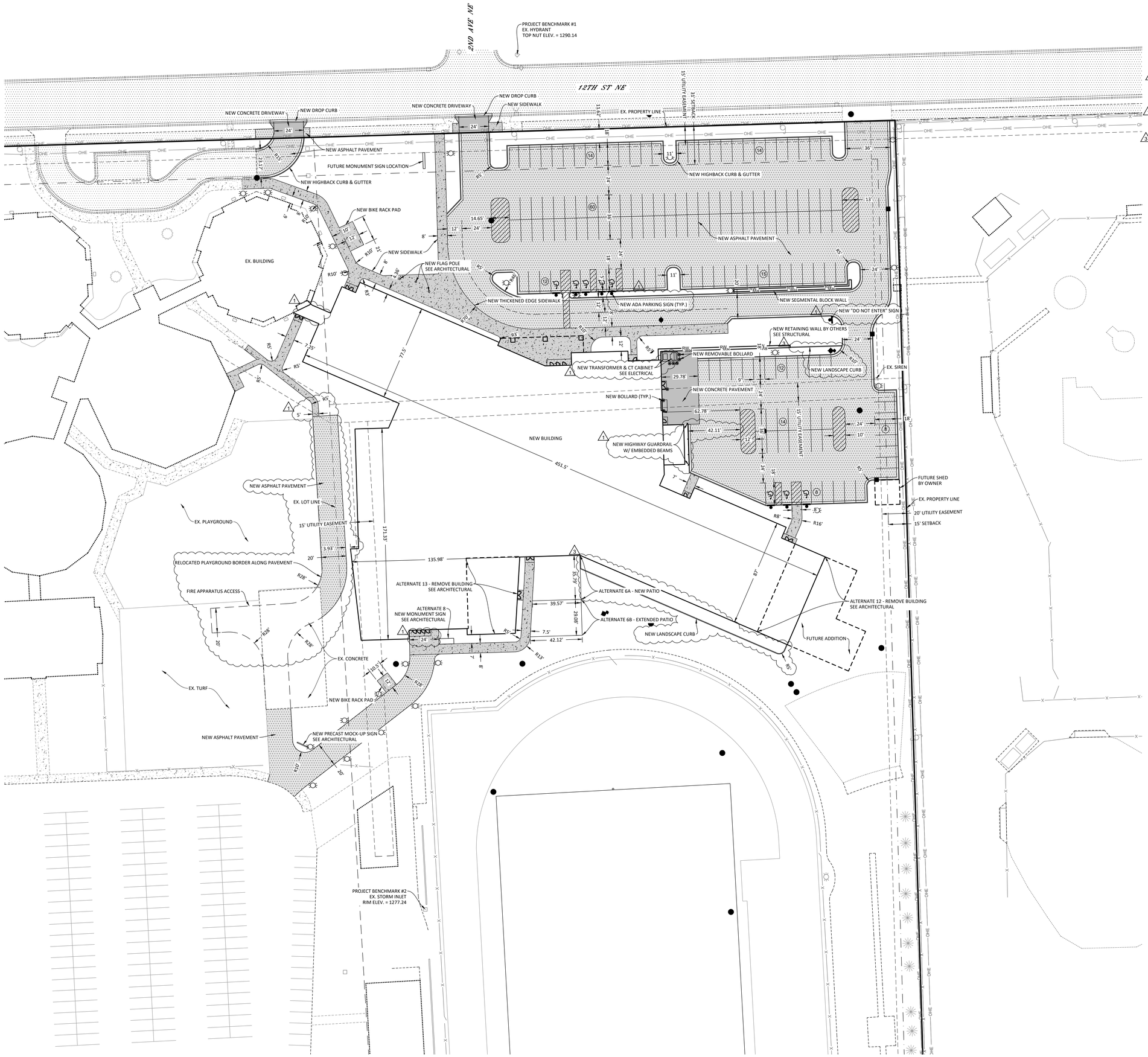
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
1	ADDENDUM 1	03/17/2026
2	ADDENDUM 2	03/24/2026
3	ADDENDUM 3	03/30/2026

DRAWN BY: TWT
JN: 25007.1

GENERAL NOTES & LEGEND

SHEET
C200



NOTES:

1. SEE ARCHITECTURAL FOR TRASH ENCLOSURE, BIKE RACK, HANDRAIL, SEGMENTAL BLOCK WALL AND BENCH DETAILS.
2. SEE ELECTRICAL FOR SITE LIGHTING. APPROXIMATE LOCATIONS SHOWN FOR REFERENCE ONLY. LIGHT POLES SHALL NOT BE PLACED IN UTILITY EASEMENTS.
3. TRANSFORMER PAD CONCRETE SHALL BE PER ELECTRICAL AND POWER COMPANY SPECIFICATIONS/DETAILS.
4. ALTERNATE #3 - PARKING LOT. BASE BID: ASPHALT. ALTERNATE SCOPE: CONCRETE PAVEMENT.
5. SITE IS CURRENTLY BEING REPLATTED INTO ONE LOT.
6. NEW SIDEWALK IN CITY ROW SHALL BE INSTALLED PER CITY STANDARDS.
7. CONTRACTOR SHALL COORDINATE WITH CITY PRIOR TO POURING CONCRETE.

3 8. NEW HIGHWAY GUARDRAIL WITH EMBEDDED BEAMS SHALL BE 3' TALL WITH 6" X 9" FLANGE BEAMS. BEAMS SHALL BE BURIED MINIMUM 3' FROM FINISH GROUND. BEAMS SHALL BE SPACED A MAXIMUM 6'-3" CENTER TO CENTER. GUARDRAIL SHALL BE STANDARD W-BEAM RAIL WITH ROUNDED ENDS.

1 9. NEW SEGMENTAL BLOCK WALL SHALL BE KEYSTONE STANDARD, ALLAN BLOCK CLASSIC, VERSA-LOK STANDARD OR APPROVED EQUAL AND INSTALLED PER MANUFACTURES SPECIFICATIONS. COORDINATE COLOR SELECTION WITH ARCHITECT.

3 10. LANDSCAPE CURB SHALL BE 6" WIDE CAST-IN-PLACE WITH SLANTED PROFILE.

1 ADDENDUM 1
- REVISED ASPHALT FIRE LANE
- REVISED BUILDING FOOTPRINT
- REVISED SOUTH DOOR SIDEWALK WIDTH
- REVISED PATIO ALTERNATE DIMENSIONS
- REVISED HIGHWAY GUARDRAIL LOCATION
- ADDED LIGHT POLE LOCATIONS
- ADDED TRANSFORMER AND CT CABINET LOCATIONS
- ADDED NOTE
- ADDED "DO NOT ENTER" SIGN
- ADDED ADA PARKING SIGN CALLOUT

3 ADDENDUM 3
- ADDED LANDSCAPE CURB
- REVISED/ADDED NOTES

0 30 60

CALL BEFORE YOU DIG
NORTH DAKOTA
UTILITIES UNDERGROUND LOCATION SERVICE
1-800-795-0555

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School

210 12th Street NE
Valley City, ND 58072

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

REGISTERED PROFESSIONAL ENGINEER
TYLER TRENDA
PE-41570
DATE: 3/30/26
NORTH DAKOTA

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
1	ADDENDUM 1	03/17/2026
2	ADDENDUM 2	03/24/2026
3	ADDENDUM 3	03/30/2026

DRAWN BY: TWT JN: 25007.1

OVERALL SITE PLAN - SCHOOL

SHEET
C400

NOTES:

1. ELEVATIONS ARE FLOWLINE ELEVATIONS UNLESS OTHERWISE NOTED.
2. 6" OF TOPSOIL STRIPPING WAS ASSUMED TO ALLOW FOR CLEARING OF ALL VEGETATION FROM THE SITE.
3. CONTRACTOR SHALL OVER-EXCAVATE IN GRASS AREAS ON THE SITE TO GENERATE SUITABLE FILL. CONTRACTOR SHALL BACKFILL OVER-EXCAVATED AREAS WITH MATERIAL GENERATED FROM FOOTBALL FIELD EXCAVATION. MATERIAL GENERATED FROM FOOTBALL FIELD EXCAVATION SHALL NOT BE USED UNDER BUILDING OR PAVEMENT AREAS.
4. QUANTITIES ASSUME FILL TO 1' BELOW FFE. SEE STRUCTURAL FOR FILL REQUIREMENTS.
5. EXCESS TOPSOIL/CLAY SHALL BECOME PROPERTY OF THE CONTRACTOR AND HAULED OFFSITE PRIOR TO CLOSE OUT OF THE PROJECT.
6. FILL QUANTITY ASSUMES A FILL FACTOR OF 1.3.
7. AGGREGATE BASE SHALL BE NDDOT CLASS 5.
8. QUANTITY FOR AGGREGATE BASE IS ASSUMED TO BE IN PLACE AND COMPACTED. CONTRACTOR SHALL MAKE ADJUSTMENTS FOR LOOSE VOLUME IF NECESSARY.
9. AGGREGATE BASE AND GEOTEXTILE FABRIC QUANTITIES ASSUME THEY EXTEND 1' BEYOND EDGE OF PAVEMENT.
10. GEOTEXTILE FABRIC PANELS SHALL BE A MINIMUM OF 12' WIDE AND INSTALLED WITH A MINIMUM OVERLAP OF 18" WITH JOINTS ORIENTATED TO FOLLOW TRAFFIC MOVEMENT.
11. GEOTEXTILE FABRIC QUANTITY DOES NOT INCLUDE REQUIRED OVERLAP.
12. GEOTEXTILE FABRIC SHALL BE NDDOT TYPE R1.
13. WHERE RUNOFF DRAINS AWAY FROM CURBING, GUTTER SHALL BE INSTALLED AS OUTFLOW. WHERE CURBING RECEIVES WATER, GUTTER SHALL BE INSTALLED AS INFLOW.
14. IF ANY FOOTPRINT CHANGING ALTERNATES GET SELECTED, CONTRACTOR SHALL CONTACT ENGINEER FOR ALTERNATE GRADING PLAN.

FG	FINISH GROUND
FL	FLOWLINE
HP	HIGH POINT
INV	STRUCTURE INVERT ELEVATION
LP	LOW POINT
MC	MIDPOINT OF CURVE
ME	MATCH EXISTING GROUND
PC	POINT OF CURVATURE
RIM	STRUCTURE RIM ELEVATION
TC	TOP OF CURB/THICKENED EDGE
TOC	TOP OF CONCRETE
TW	TOP OF WALK
TOW	TOP OF WALL
BOW	BOTTOM OF WALL

GRADE BREAK/FLOWLINE

1 ADDENDUM 1
- REVISED GRADING AT FIRE LANE, CONNECTION TO EX. BUILDING AND SOUTH PARKING LOT

3 ADDENDUM 3
- ADDED ALTERNATE PATIO GRADING

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School

210 12th Street NE
Valley City, ND 58072

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

TYLER TRENDA PE-41570 DATE: 3/30/26 REGISTERED PROFESSIONAL ENGINEER NORTH DAKOTA

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/30/2026
1	ADDENDUM 1	03/17/2026
2	ADDENDUM 2	03/24/2026
3	ADDENDUM 3	03/30/2026

DRAWN BY: TWT JN: 25007.1

0 30 60

CALL BEFORE YOU DIG NORTH DAKOTA
UTILITIES UNDERGROUND LOCATION SERVICE
1-800-795-0555

GRADING PLAN - SCHOOL

SHEET
C600

EROSION CONTROL LEGEND

SF	SILT FENCE	782	LF
	FIBER ROLL PROTECTION (STRAW WATTLE)	15	LF
	SEEDING & HYDROMULCH (3 / 1)	6,446	SY
	SEEDING WITH EROSION CONTROL BLANKET	917	SY
	STANDARD INLET PROTECTION	13	EA
	VEHICLE TRACKING PAD	1	EA
3	6" LANDSCAPE MULCH	626	SY

NOTES:
1. CONTRACTOR SHALL FOLLOW NDDEQ STORMWATER POLLUTION PREVENTION STANDARDS FOR ALL EROSION CONTROL DURING CONSTRUCTION.
2. A FODS TRACKOUT CONTROL MAT MAY BE USED AS AN APPROVED EQUAL TO THE VEHICLE TRACKING PAD. CONTRACTOR SHALL SUBMIT PROPOSED MAT LAYOUT TO ENGINEER FOR REVIEW PRIOR TO INSTALLING.
3. CONTRACTOR SHALL INSTALL PERIMETER EROSION AND SEDIMENT CONTROLS PRIOR TO ANY LAND DISTURBING ACTIVITY.
4. IF CONCRETE WASHOUT OCCURS ONSITE, CONTRACTOR SHALL COORDINATE LOCATION WITH OWNER.
5. INLET PROTECTION SHALL BE BY DANDY PRODUCTS, ERTEC, FLEXSTORM, OR APPROVED EQUAL AND INSTALLED PER MANUFACTURES RECOMMENDATION.
6. CONTRACTOR SHALL LEAVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES IN PLACE UNTIL ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED.
7. CONTRACTOR IS RESPONSIBLE FOR ALL INSTALLATION, MAINTENANCE, REPLACEMENT IF NECESSARY, REMOVAL, ETC OF ANY AND ALL PROTECTION MEASURES NEEDED FROM THE START OF CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED.
8. SILT FENCE SHALL BE INSTALLED ON PROPERTY LINE/EDGE OF PAVEMENT. OFFSET ON PLANS FOR CLARITY.

1 ADDENDUM 1
- REVISED SEEDING AREA
- REVISED QUANTITIES

1 ADDENDUM 1
- REVISED SEEDING AREA
- REVISED QUANTITIES
- ADDED LANDSCAPE MULCH

0 30 60

CALL BEFORE YOU DIG
NORTH DAKOTA
UTILITIES UNDERGROUND LOCATION SERVICE
1-800-795-0555

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School

210 12th Street NE
Valley City, ND 58072

STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

REGISTERED PROFESSIONAL ENGINEER
TYLER TRENDA
PE-41570
DATE: 3/30/26
NORTH DAKOTA

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
1	ADDENDUM 1	03/17/2026
2	ADDENDUM 2	03/24/2026
3	ADDENDUM 3	03/30/2026

DRAWN BY: TWT
JN: 25007.1

EROSION & SEDIMENT CONTROL PLAN

SHEET
C700

FOUNDATION KEYNOTE MASTER LIST

1. FLOOR DRAIN - VERIFY NUMBER, LOCATION(S), SIZE, SLOPE & ELEVATION WITH ARCHITECTURAL / MECHANICAL PLANS. PROVIDE ADDITIONAL REINFORCEMENT AROUND OPENING PER DETAIL9 /S301
2. HOUSEKEEPING PADS BY GC - VERIFY NUMBER, LOCATION(S) & SIZE WITH ARCHITECTURAL, MECHANICAL & ELECTRICAL PLANS. PADS TO BE 4" THICK CONCRETE, REINFORCED W/ #4 REBAR @ 1' - 0" O.C., EACH WAY
3. BLOCK OUT FOUNDATION WALL / FOOTING AS REQUIRED FOR INSTALLATION OF MECHANICAL PIPING - VERIFY W/ MECHANICAL
4. SUMP PIT - VERIFY NUMBER, LOCATION(S) & SIZE WITH ARCHITECTURAL & MECHANICAL PLANS.
5. CONTINUOUS GALVANIZED STEEL ANGLE FOR STOOP SLAB SUPPORT - SEE DETAIL 21 /S301
6. DRILL & EPOXY SET NEW FOUNDATION WALL AND FOOTING REINFORCING BARS INTO EXISTING FOUNDATION, 8" MINIMUM - SEE DETAIL20 /S301
7. INSULATED FREEZER / COOLER SLAB - VERIFY CONSTRUCTION WITH FS EQUIPMENT SUPPLIER. PROVIDE 5'-0" MINIMUM OF NON-FROST-SUSCEPTIBLE FILL BELOW SLAB - SEE GEOTECHNICAL REPORT FOR FILL REQUIREMENTS.
8. RAMP - COORDINATE WITH ARCH. SEE DETAILS17 /S301 &18 /S301 FOR RAMP TOP & BOTTOM.
9. THICKENED SLAB FOR VOLLEYBALL SLEEVE INSERTS. COORDINATE NUMBER & LOCATIONS WITH ARCH. SEE DETAIL 23 /S301

FRAMING KEYNOTE MASTER LIST

1. MECHANICAL OPENING THRU FLOOR - VERIFY SIZE, QUANTITY AND LOCATIONS WITH ARCHITECTURAL & MECHANICAL PLANS. FOR REINFORCEMENT/FRAMING AROUND DECK OPENING SEE DETAIL17 /S501
2. MECHANICAL OPENING THRU ROOF - VERIFY SIZE, QUANTITY AND LOCATIONS WITH ARCHITECTURAL & MECHANICAL PLANS. FOR REINFORCEMENT/FRAMING AROUND DECK OPENING SEE DETAIL 15/S501
3. HORIZONTAL/CROSS BRIDGING - QUANTITY, SIZES & ANCHORAGE AS REQUIRED BY THE STEEL JOIST SUPPLIER PER SJI STANDARDS. SEE DETAIL 13/S501 13 /S501
4. MECHANICAL UNIT ATOP ROOF - VERIFY SIZE, QUANTITY AND LOCATION WITH ARCHITECTURAL & MECHANICAL PLANS. WEIGHT NOT TO EXCEED THAT SHOWN - IF WEIGHT NOT SHOWN, ASSUME MAX UNIT WEIGHT OF 200 LBS. JOIST SUPPLIER TO DESIGN JOISTS FOR ADDTIONAL WEIGHT AS REQUIRED. FOR SUPPORT OF MECH UNIT ON ROOF SEE DETAIL14 /S501
5. OPENING THROUGH ROOF DECK FOR ACCESS HATCH - VERIFY SIZE & LOCATION WITH ARCH. FOR REINFORCEMENT/FRAMING AROUND DECK OPENING SEE DETAIL 15 /S501
6. W8X18 HOIST / LIFELINE BEAM - B.O. STEEL 126' - 4" (VERIFY LOCATIONS / ELEVATIONS WITH ELEVATOR SUPPLIER)
7. BASKETBALL BACKSTOP ASSEMBLY - JOIST SUPPLIER TO DESIGN JOIST FOR ADDITIONAL LOADS AS REQUIRED. VERIFY LENGTH & WEIGHT WITH ARCHITECTURAL PLANS & BACKSTOP SUPPLIER.
8. GYM DIVIDER CURTAIN - JOIST SUPPLIER TO DESIGN JOIST BOTTOM CHORD FOR ADDITIONAL 100 PLF FOR CURTAIN SUSPENSION. VERIFY LENGTH & WEIGHT WITH ARCHITECTURAL PLANS & CURTAIN SUPPLIER.
9. WRESTLING MAT LIFT - JOIST SUPPLIER TO DESIGN JOIST FOR ADDITIONAL LOADS AS REQUIRED. VERIFY SIZE & WEIGHT WITH LIFT SUPPLIER.
10. PROVIDE HORIZONTAL BRIDGING IN LIEU OF X-BRIDGING IN BAYS WITH DUCT WORK
11. PREFABRICATED METAL CANOPY - BY CANOPY SUPPLIER. SEE ARCH.
12. 6" GALVANIZED STEEL Z-SHAPE SUNSHADE PURLINS AT 1' - 4"o.c. - BY COLD-FORMED STEEL DESIGNER / SUPPLIER
13. 8" DEEP CFS JOISTS AT 1'-4"o.c. MAX - BY CFS SUPPLIER / DESIGNER. PROVIDE BRIDGING AT 2'-0"o.c. PER DETAIL 12/S507

MASTER FLOOR DECKING SCHEDULE

MARK	DECK SPECIFICATIONS
FD1	2 1/2" CONC SLAB OVER 1 1/2" X 19 GA (50ksi) COMPOSITE STEEL FLOOR DECK (4" TOTAL SLAB THICKNESS) REINF. W/ #3 EA WAY @ 1'-0"o.c. SEE DETAIL 12/S501
FD2	2" CONC SLAB OVER 3" X 20 GA COMPOSITE STEEL FLOOR DECK (5" TOTAL SLAB THICKNESS) REINF. W/ #3 EA WAY @ 1'-0"O.C. SEE DETAIL 12/S501

MASTER ROOF DECKING SCHEDULE

MARK	DECK SPECIFICATIONS
RD1	<varies>
RD2	2" TYPE "DA" (DOVETAIL ACOUSTICAL) 22 GA. STEEL ROOF DECK (3-SPAN MINIMUM) - FASTEN W/ 3/4" Ø PUDDLE WELDS IN A 24/3 PATTERN & (5) - HILTI S-SLC 01 M HWH SIDELAP CONNECTORS PER SPAN - SEE DETAIL 11/S501
RD3	3 1/2" TYPE "DA" (DOVETAIL ACOUSTICAL) 19 GA. STEEL ROOF DECK (3-SPAN MINIMUM) - FASTEN W/ 3/4" Ø PUDDLE WELDS IN A 24/3 PATTERN & (5) #12 TEK SCREWS SIDELAP FASTENERS PER SPAN - SEE DETAIL 11/S501

COLUMN SCHEDULE

MARK	COLUMN SIZE	BASE PLATE		ANCHOR BOLTS	DETAIL
		THICKNESS	DETAIL		
C1	HSS6X6X3/16	1 1/4"	10/S301	(4) 3/4" Ø	11/S301
C2	<varies>	<varies>	10/S301	<varies>	11/S301
C3	HSS8X8X5/16	1 1/4"	10/S301	(4) 3/4" Ø	11/S301
C4	HSS8X8X1/2	1 1/4"	10/S301	(4) 3/4" Ø	11/S301

COLUMN / PAD FOOTING SCHEDULE

MARK	SIZE	DEPTH	BOT REINFORCING		TOP REINFORCING		REMARKS
			TRANS	LONG	TRANS	LONG	
F4	4' - 0" SQ	1' - 0"	(4) #5	(4) #5	-	-	
F5	5' - 0" SQ	1' - 0"	(5) #5	(5) #5	-	-	
F6	6' - 0" SQ	1' - 2"	(6) #5	(6) #5	-	-	
F6-6	6' - 6" SQ	1' - 3"	(6) #5	(6) #5	-	-	
F7	7' - 0" SQ	1' - 4"	(7) #5	(7) #5	-	-	
F7-6	7' - 6" SQ	1' - 5"	(8) #5	(8) #5	-	-	
F8	8' - 0" SQ	1' - 6"	(9) #5	(9) #5	-	-	
F8-6	8' - 6" SQ	1' - 7"	(7) #6	(7) #6	-	-	
F9	9' - 0" SQ	1' - 8"	(8) #6	(8) #6	-	-	
F9-6	9' - 6" SQ	1' - 9"	(9) #6	(9) #6	-	-	
F10	10' - 0" SQ	1' - 10"	(10) #6	(10) #6	-	-	
F10-6	10' - 6" SQ	1' - 11"	(8) #7	(8) #7	-	-	
F13	13' - 0" SQ	2' - 4"	(9) #7	(9) #7	-	-	

3

WALL / STRIP FOOTING SCHEDULE

MARK	SIZE	DEPTH	BOT REINFORCING		TOP REINFORCING		REMARKS
			TRANS	LONG	TRANS	LONG	
CF1-8	1' - 8"	1' - 0"	-	(2) #5	-	-	@ STOOPS
CF2	2' - 0"	1' - 0"	#4 @ 6' - 0"	(2) #5	-	-	
CF2-6	2' - 6"	1' - 0"	#4 @ 6' - 0"	(3) #5	-	-	
CF2A	2' - 0" THK'D	1' - 0"	#4 @ 6' - 0"	(2) #5			
CF3	3' - 0"	1' - 0"	#4 @ 4' - 0"	(3) #5	-	-	
CF3-6	3' - 6"	1' - 0"	#5 @ 1' - 6"	(4) #5	-	-	
CF4	4' - 0"	1' - 0"	#5 @ 1' - 6"	(4) #5	-	-	
CF4-6	4' - 6"	1' - 0"	#5 @ 1' - 6"	(5) #5	-	-	
CF5	5' - 0"	1' - 2"	#5 @ 1' - 6"	(5) #5	-	-	
CF5-6	5' - 6"	1' - 2"	#5 @ 1' - 6"	(6) #5	-	-	
CF6	6' - 0"	1' - 2"	#5 @ 1' - 6"	(6) #5	-	-	
CF10	10' - 0"	1' - 6"	#8 @ 1' - 4"	(11) #6	#5 @ 1' - 4"	(6) #6	

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School - STRUCTURAL

210 12th Street NE
Valley City, ND 58072

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. JOCHIM
PE-9135
DATE 03-10-2026
NORTH DAKOTA

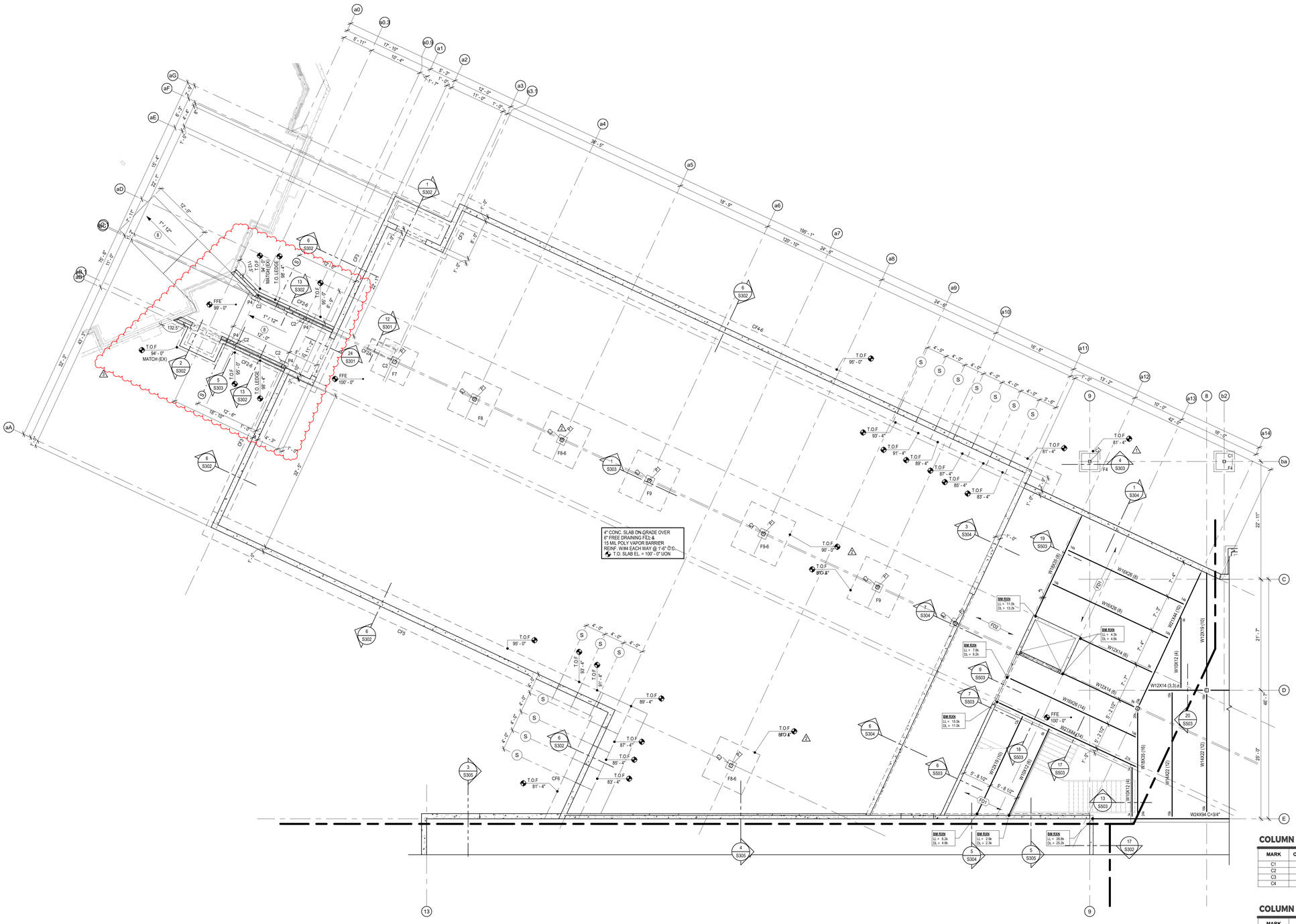
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
3	ADDENDUM #3	03/30/26

DRAWN BY: MFJ, CMM JN: 24-028

Schedule Sheet

SHEET
S002



2 S102A Foundation Plan - Area A

1/8" = 1'-0"

T.O. FOOTING EL = 95' - 0" UON

FOUNDATION PLAN NOTES

1. ALL WALL FOOTINGS ARE TO BE CENTERED ON WALLS, UON. WALL FOOTINGS ARE TO BE 12" THICK REINFORCED W/ (2) #5 CONT LONGITUDINAL BARS AND PROJECT 6" BEYOND EACH FACE OF FOUNDATION WALL THEY SUPPORT, UON. ALL PAD FOOTINGS ARE TO BE CENTERED ON COLUMNS / PIERS, UON.
2. CONTRACTOR TO VERIFY ALL DIMENSIONS & NOTIFY ARCHITECT / ENGINEER IF DISCREPANCIES EXIST.
3. SEE SHEET S001 FOR GENERAL CONCRETE & FOUNDATION NOTES.
4. SEE ARCH FOR DIMENSIONING OF FOUNDATION WALL HOLDOUTS, LOCATION OF STOOPS, SLAB RECESSES & SLOPED SLAB AREAS.
5. SEE DETAIL 6 /S301 FOR SLAB CONSTRUCTION JOINTS (CCJ). SEE DETAIL 7 /S301 FOR SLAB CONTROL JOINTS (CJ). CONTRACTOR SHALL SUBMIT A PROPOSED JOINT LAYOUT TO ARCH/ENG. FOR APPROVAL PRIOR TO SLAB PLACEMENT.

   CONTROL JOINTS SHALL BE ON COLUMN LINES AND AT RE-ENTRANT CORNERS TO THE GREATEST EXTENT POSSIBLE W/ SPACING LESS THAN 12'-0" O.C. BETWEEN.

   CONSTRUCTION JOINTS SHALL BE LOCATED SO AS NOT TO ALLOW A SINGLE SLAB POUR TO EXCEED 4000sf UNLESS ALTERNATIVE MEASURES ARE TAKEN TO CONTROL SLAB CURLING & SHRINKAGE.

   PROVIDE CJ OR CCJ JOINTS SO AS NOT TO EXCEED A SLAB UNIT ASPECT RATIO OF 1.5:1.
6. ADD (2) #5 x 3'-0" REBAR @ 3" O.C. FOR CRACK CONTROL AT RE-ENTRANT CORNERS - SEE DETAIL 9 /S301
7. (S)— - INDICATES STEPPED WALL FOOTING LOCATION - SEE DETAIL 1 /S301
8. "C#" - INDICATES A STEEL COLUMN - SEE SCHEDULE ON THIS SHEET
9. "P#" - INDICATES A CONCRETE PIER - SEE PIER DETAILS ON S302
10. "F# / CF#" - INDICATES COLUMN PAD / WALL STRIP FOOTINGS - SEE SCHEDULES ON THIS SHEET
11. REINFORCE 8" CMU WALLS W/ (1) #5 VERTICAL @ 4'-0" O.C., UON. ALL MASONRY BELOW GRADE SHALL BE FULLY GROUTED.
12. SEE DETAIL 12 /S301 FOR THICKENED SLAB BELOW STAIR STRINGERS. VERIFY LOCATION WITH ARCH.
13. SEE DETAIL 16 /S301 FOR THICKENED SLABS BELOW NON-BEARING CMU WALLS. VERIFY LOCATIONS OF ALL CMU WALLS WITH ARCH.
14. ▨ - INDICATES STEP IN FLOOR SLAB ELEVATION - SEE DETAIL 14 /S301

KEYNOTES

#	
8	RAMP - COORDINATE WITH ARCH. SEE DETAILS 17/S301 & 18/S301 FOR RAMP TOP & BOTTOM.

COLUMN SCHEDULE

MARK	COLUMN SIZE	BASE PLATE THICKNESS	BASE PLATE DETAIL	ANCHOR BOLTS	DETAIL
C1	HSS6X6X3/16	1 1/4"	10/S301	(4) 3/4" Ø	11/S301
C2	<varies>	<varies>	10/S301	<varies>	11/S301
C3	HSS8X8X5/16	1 1/4"	10/S301	(4) 3/4" Ø	11/S301
C4	HSS8X8X1/2	1 1/4"	10/S301	(4) 3/4" Ø	11/S301

COLUMN / PAD FOOTING SCHEDULE

MARK	SIZE	DEPTH	BOT REINFORCING TRANS	BOT REINFORCING LONG	TOP REINFORCING TRANS	TOP REINFORCING LONG	REMARKS
F4	4' - 0" SQ	1' - 0"	(4) #5	(4) #5	-	-	
F5	5' - 0" SQ	1' - 0"	(5) #5	(5) #5	-	-	
F6	6' - 0" SQ	1' - 2"	(6) #5	(6) #5	-	-	
F6-6	6' - 6" SQ	1' - 3"	(6) #5	(6) #5	-	-	
F7	7' - 0" SQ	1' - 4"	(7) #5	(7) #5	-	-	
F7-6	7' - 6" SQ	1' - 5"	(8) #5	(8) #5	-	-	
F8	8' - 0" SQ	1' - 6"	(9) #5	(9) #5	-	-	
F8-6	8' - 6" SQ	1' - 7"	(7) #6	(7) #6	-	-	
F9	9' - 0" SQ	1' - 8"	(8) #6	(8) #6	-	-	
F9-6	9' - 6" SQ	1' - 9"	(9) #6	(9) #6	-	-	
F10	10' - 0" SQ	1' - 10"	(10) #6	(10) #6	-	-	
F10-6	10' - 6" SQ	1' - 11"	(8) #7	(8) #7	-	-	
F13	13' - 0" SQ	2' - 4"	(9) #7	(9) #7	-	-	

3

WALL / STRIP FOOTING SCHEDULE

MARK	SIZE	DEPTH	BOT REINFORCING TRANS	BOT REINFORCING LONG	TOP REINFORCING TRANS	TOP REINFORCING LONG	REMARKS
CF1-8	1' - 8"	1' - 0"	-	(2) #5	-	-	@ STOOPS
CF2	2' - 0"	1' - 0"	#4 @ 6' - 0"	(2) #5	-	-	
CF2-6	2' - 6"	1' - 0"	#4 @ 6' - 0"	(3) #5	-	-	
CF2A	2' - 0" THK'D	1' - 0"	#4 @ 6' - 0"	(2) #5			
CF3	3' - 0"	1' - 0"	#4 @ 4' - 0"	(3) #5	-	-	
CF3-6	3' - 6"	1' - 0"	#5 @ 1' - 6"	(4) #5	-	-	
CF4	4' - 0"	1' - 0"	#5 @ 1' - 6"	(4) #5	-	-	
CF4-6	4' - 6"	1' - 0"	#5 @ 1' - 6"	(5) #5	-	-	
CF5	5' - 0"	1' - 2"	#5 @ 1' - 6"	(5) #5	-	-	
CF5-6	5' - 6"	1' - 2"	#5 @ 1' - 6"	(6) #5	-	-	
CF6	6' - 0"	1' - 2"	#5 @ 1' - 6"	(6) #5	-	-	
CF10	10' - 0"	1' - 6"	#8 @ 1' - 4"	(11) #6	#5 @ 1' - 4"	(6) #6	

2

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School - STRUCTURAL

210 12th Street NE
Valley City, ND 58072

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

MICHAEL F. JOCHIM
PE-9135
DATE 03-10-2026

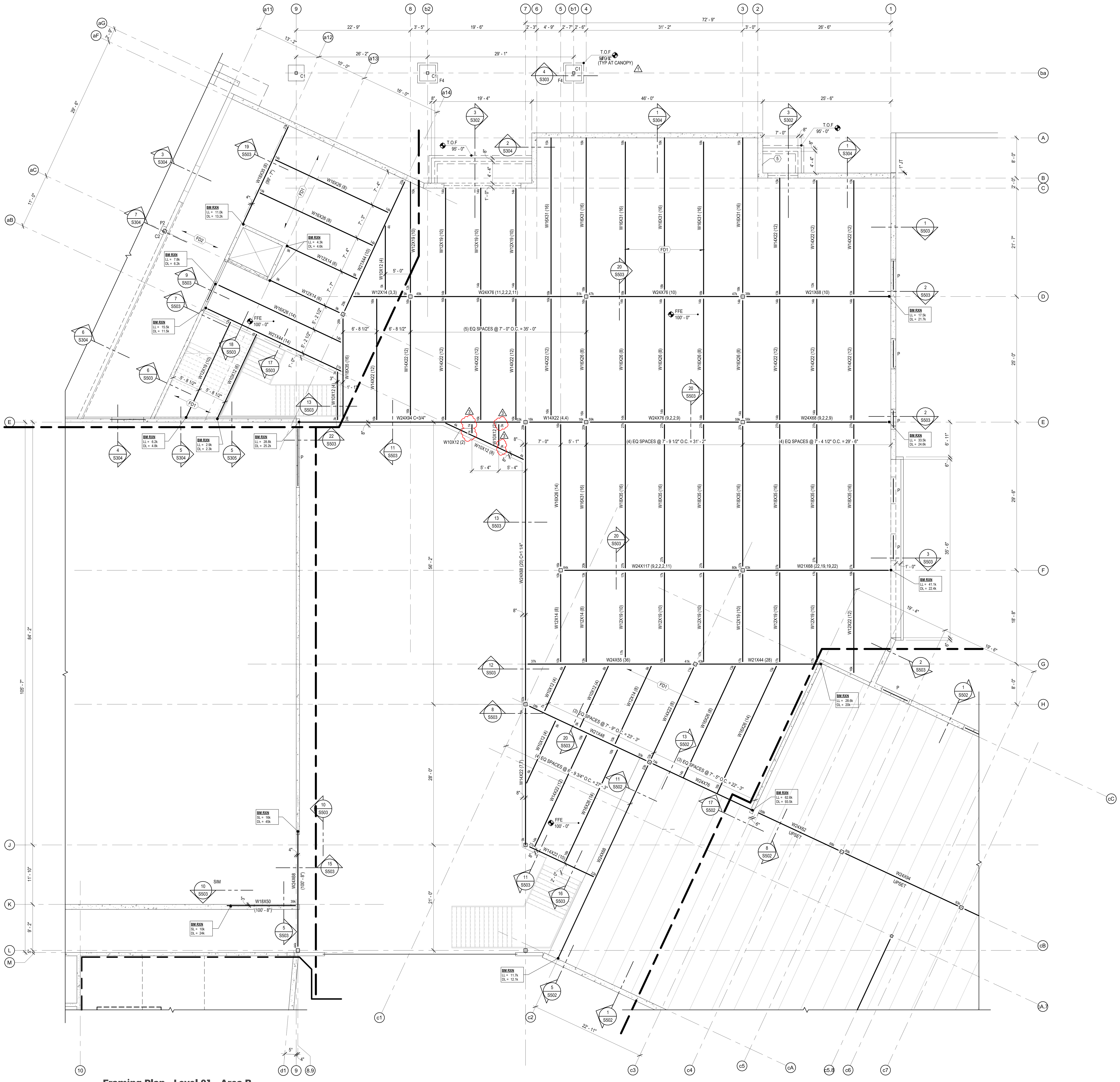
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
1	ADDENDUM #1	03/17/26
2	ADDENDUM #2	03/24/26
3	ADDENDUM #3	03/30/26

DRAWN BY: MFJ, CMM
JN: 24-028

Foundation Plan - Area A

SHEET
S102A



1 S102B **Framing Plan - Level 01 - Area B**
1/8" = 1'-0"

FRAMING PLAN SHEET NOTES

1. NUMBER IN PARENTHESES WITH "+ /-" ADJACENT TO STEEL BEAM SIZE INDICATES ELEVATION OF TOP OF STEEL BEAM IN INCHES FROM REFERENCE ELEVATION EQUAL TO STEEL DECK BEARING ELEVATION (DBE) - NO NUMBER ADJACENT TO BEAM SIZE INDICATES TOP OF BEAM @ DBE.
2. CONTRACTOR TO VERIFY ALL DIMENSIONS & NOTIFY ARCHITECT / ENGINEER IF DISCREPANCIES EXIST.
3. SEE SHEET S001 FOR GENERAL FRAMING / LIGHT GAUGE NOTES AND MINIMUM LIGHT GAUGE DESIGN VALUES.
4. SEE DETAIL 18 /S501 FOR SUPPORT OF NON-BEARING CMU WALLS @ THE UNDERSIDE OF ROOF DECK.
5. VERIFY SIZE, QUANTITY & LOCATIONS FOR ALL ROOF PENETRATIONS W/ ARCHITECTURAL & MECHANICAL DRAWINGS. SEE DETAIL15 /S501 FOR FRAMING @ ALL ROOF PENETRATIONS.
6. FD# / RD# - DENOTES METAL DECK - SEE SCHEDULE ON THIS SHEET
7. - DENOTES STEEL BEAM TO STEEL COLUMN MOMENT CONNECTION. SEE DETAIL 9 /S501
8. - DENOTES STEEL BEAM CANTILEVERED OVER STEEL COLUMN CONNECTION. SEE DETAIL 7 /S501
9. - INDICATES A STEP IN ROOF DECK BEARING ELEVATION. SEE PLAN FOR ACTUAL DBE.
10. - INDICATES A SNOW DRIFT LOAD PER IBC. SNOW DRIFTS ARE TAPERED LOADS WITH MAGNITUDES AS INDICATED ON THE PLANS. DRIFT LOADS ARE TO BE APPLIED IN ADDITION TO UNIFORM ROOF LOADS AS INDICATED IN THE GENERAL STRUCTURAL NOTES
11. SEE ROOF LOADING PLAN ON SHEET S111 FOR ADDITIONAL LOADS IMPOSED ON ROOF FRAMING AND STRUCTURAL NOTES ON SHEET S001 FOR ADDITIONAL REQUIREMENTS.
12. ###k - INDICATES A STRENGTH LEVEL WIND LOAD PER IBC. PRECAST CONCRETE SUPPLIER TO DESIGN PANELS & CONNECTIONS FOR LOAD INDICATED ON PLAN. LOAD SHOWN IS TO BE DISTRIBUTED UNIFORMLY THROUGH PANELS & CONNECTIONS TO THE FOUNDATION.
13. 'P' - DENOTES PRECAST OPENING. VERIFY SIZE & LOCATIONS WITH ARCHITECTURAL AND PRECAST SUPPLIER.
14. 'HSS' - DENOTES AN HSS5x2 1/2x1/4" (SSV) FRAMING MEMBER
15. 'H' - DENOTES LIGHT GAUGE HEADER ASSEMBLY. SIZE & GAUGE OF HEADER, SILL & JAMB TO BE DETERMINED BY LIGHT GAUGE ENGINEER / SUPPLIER. SEE DETAILS ON SHEET S507.

KEYNOTES

#	
5	CONTINUOUS GALVANIZED STEEL ANGLE FOR STOOP SLAB SUPPORT - SEE DETAIL 21/S301

FLOOR DECKING SCHEDULE

MARK	DECK SPECIFICATIONS
FD1	2 1/2" CONC SLAB OVER 1 1/2" X 19 GA (50ksi) COMPOSITE STEEL FLOOR DECK (4" TOTAL SLAB THICKNESS) REINF. W/ #3 EA WAY @ 1'-0"o.c. SEE DETAIL 12/S501
FD2	2" CONC SLAB OVER 3" X 20 GA COMPOSITE STEEL FLOOR DECK (5" TOTAL SLAB THICKNESS) REINF. W/ #3 EA WAY @ 1'-0"O.C. SEE DETAIL 12/S501

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School - STRUCTURAL

210 12th Street NE
Valley City, ND 58072

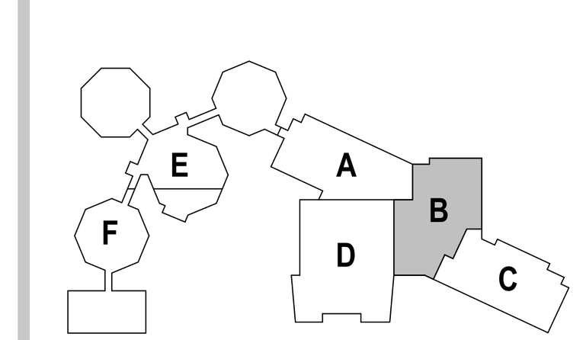
STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. JOCHIM
PE-9135
DATE 03-10-2026
NORTH DAKOTA

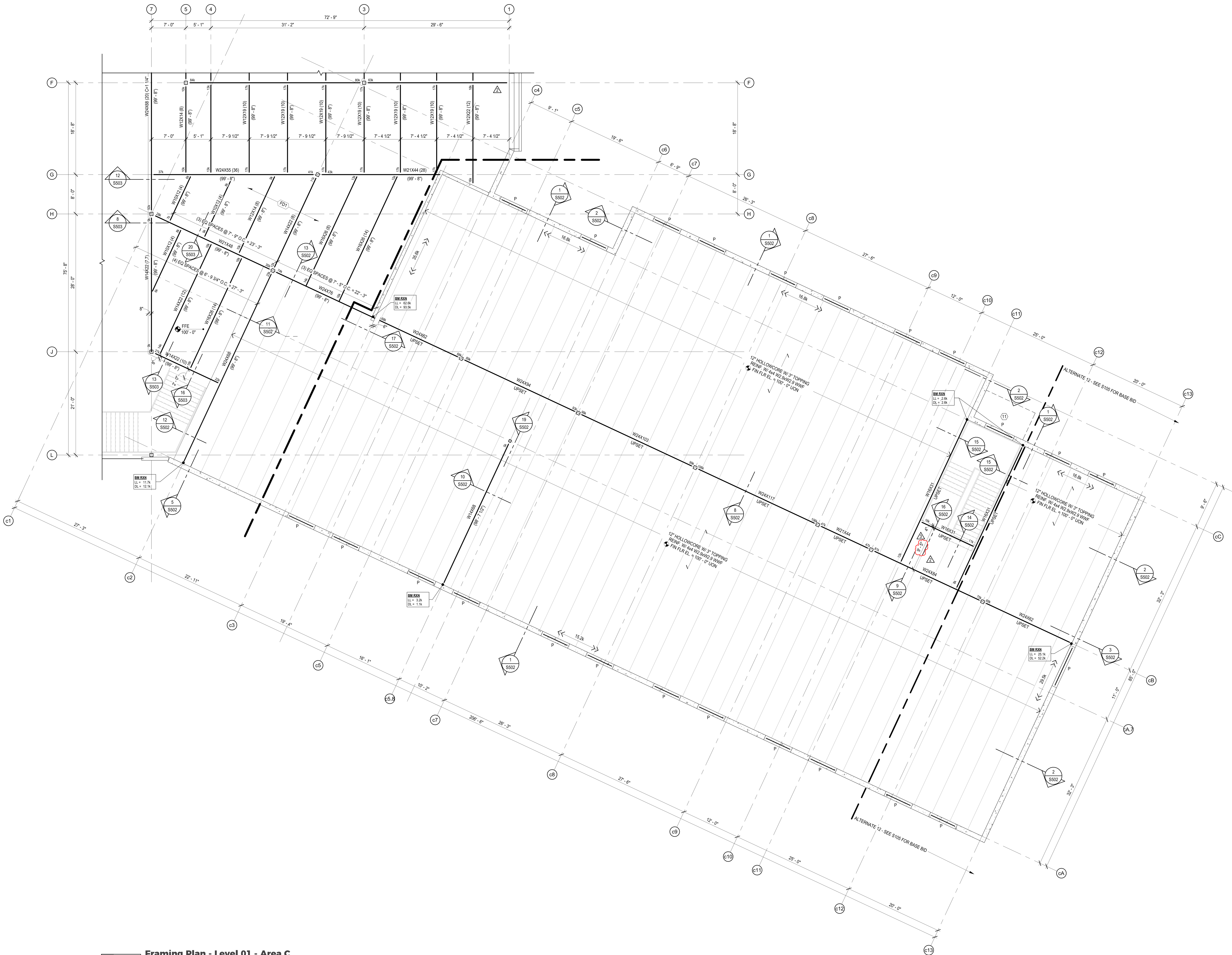
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
1	ADDENDUM #1	03/17/26
3	ADDENDUM #3	03/30/26

DRAWN BY: MFJ, CMM JN: 24-028

Framing Plan - Level 01 - Area B

SHEET
S102B



1 S102C **Framing Plan - Level 01 - Area C**

1/8" = 1'-0"

TOP OF STEEL (T.O.S.) = 99' - 10 1/2" U.O.N.

FRAMING PLAN SHEET NOTES

1. NUMBER IN PARENTHESES WITH "+ /-" ADJACENT TO STEEL BEAM SIZE INDICATES ELEVATION OF TOP OF STEEL BEAM IN INCHES FROM REFERENCE ELEVATION EQUAL TO STEEL DECK BEARING ELEVATION (DBE) - NO NUMBER ADJACENT TO BEAM SIZE INDICATES TOP OF BEAM @ DBE.
2. CONTRACTOR TO VERIFY ALL DIMENSIONS & NOTIFY ARCHITECT / ENGINEER IF DISCREPANCIES EXIST.
3. SEE SHEET S001 FOR GENERAL FRAMING / LIGHT GAUGE NOTES AND MINIMUM LIGHT GAUGE DESIGN VALUES.
4. SEE DETAIL 18 /S501 FOR SUPPORT OF NON-BEARING CMU WALLS @ THE UNDERSIDE OF ROOF DECK.
5. VERIFY SIZE, QUANTITY & LOCATIONS FOR ALL ROOF PENETRATIONS W/ ARCHITECTURAL & MECHANICAL DRAWINGS. SEE DETAIL15 /S501 FOR FRAMING @ ALL ROOF PENETRATIONS.
6. FD# / RD# - DENOTES METAL DECK - SEE SCHEDULE ON THIS SHEET
7. - DENOTES STEEL BEAM TO STEEL COLUMN MOMENT CONNECTION. SEE DETAIL 9 /S501
8. - DENOTES STEEL BEAM CANTILEVERED OVER STEEL COLUMN CONNECTION. SEE DETAIL 7 /S501
9. - INDICATES A STEP IN ROOF DECK BEARING ELEVATION. SEE PLAN FOR ACTUAL DBE.
10. - INDICATES A SNOW DRIFT LOAD PER IBC. SNOW DRIFTS ARE TAPERED LOADS WITH MAGNITUDES AS INDICATED ON THE PLANS. DRIFT LOADS ARE TO BE APPLIED IN ADDITION TO UNIFORM ROOF LOADS AS INDICATED IN THE GENERAL STRUCTURAL NOTES
11. SEE ROOF LOADING PLAN ON SHEET S111 FOR ADDITIONAL LOADS IMPOSED ON ROOF FRAMING AND STRUCTURAL NOTES ON SHEET S001 FOR ADDITIONAL REQUIREMENTS.
12. ###k - INDICATES A STRENGTH LEVEL WIND LOAD PER IBC. PRECAST CONCRETE SUPPLIER TO DESIGN PANELS & CONNECTIONS FOR LOAD INDICATED ON PLAN. LOAD SHOWN IS TO BE DISTRIBUTED UNIFORMLY THROUGH PANELS & CONNECTIONS TO THE FOUNDATION.
13. 'P' - DENOTES PRECAST OPENING. VERIFY SIZE & LOCATIONS WITH ARCHITECTURAL AND PRECAST SUPPLIER.
14. 'HSS' - DENOTES AN HSS5x2 1/2x1/4" (SSV) FRAMING MEMBER
15. 'H' - DENOTES LIGHT GAUGE HEADER ASSEMBLY. SIZE & GAUGE OF HEADER, SILL & JAMB TO BE DETERMINED BY LIGHT GAUGE ENGINEER / SUPPLIER. SEE DETAILS ON SHEET S507.

KEYNOTES

#	
11	PREFABRICATED METAL CANOPY - BY CANOPY SUPPLIER. SEE ARCH.

FLOOR DECKING SCHEDULE

MARK	DECK SPECIFICATIONS
FD1	2 1/2" CONC SLAB OVER 1 1/2" X 19 GA (50ksi) COMPOSITE STEEL FLOOR DECK (4" TOTAL SLAB THICKNESS) REINF. W/ #3 EA WAY @ 1'-0"o.c. SEE DETAIL 12/S501

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School - STRUCTURAL

210 12th Street NE
Valley City, ND 58072

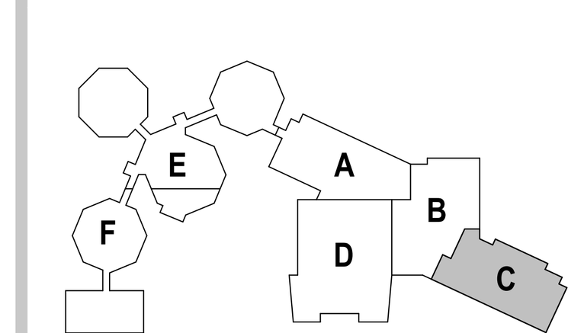
STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



DRAWING HISTORY

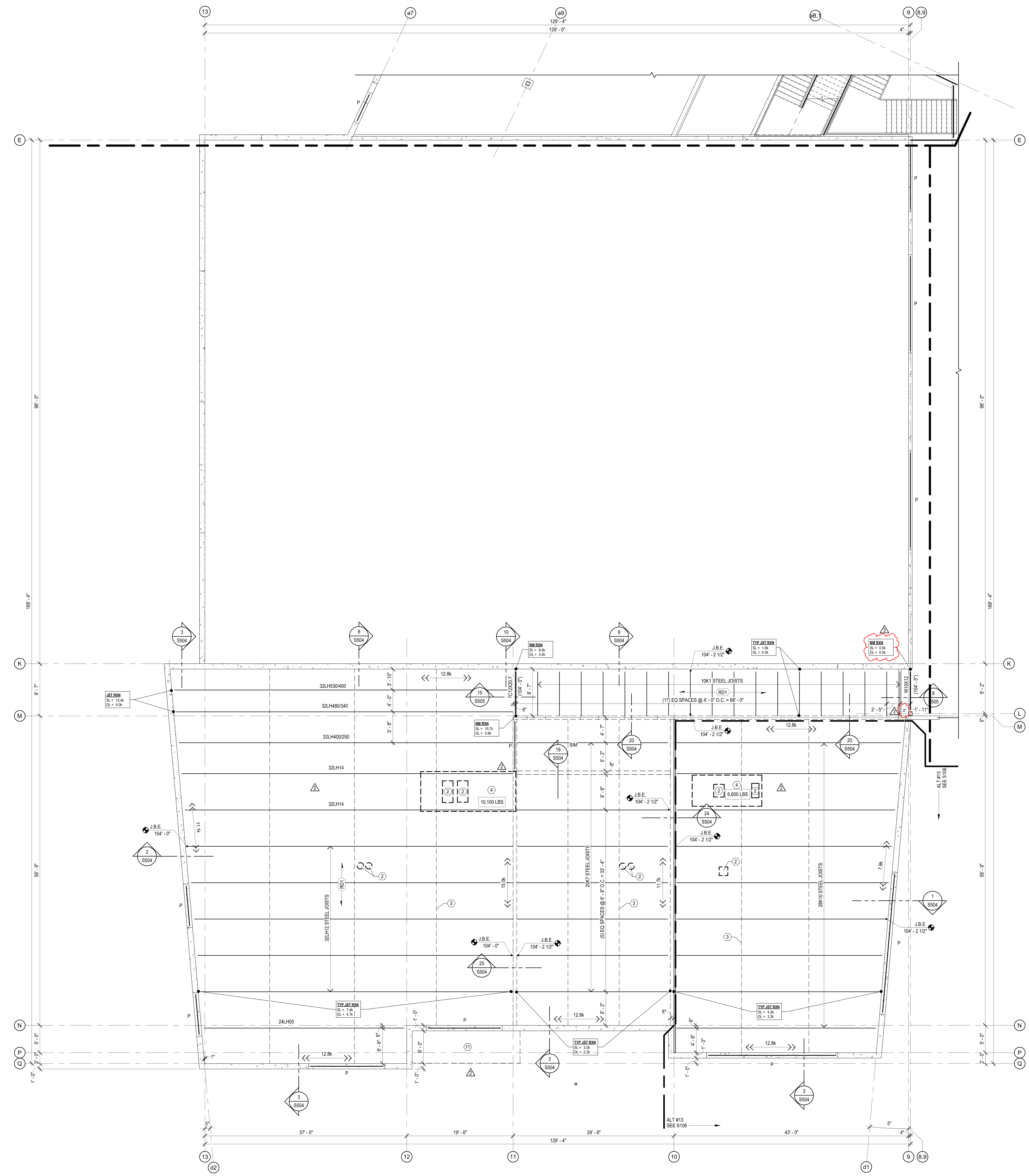
NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
2	ADDENDUM #2	03/24/26
3	ADDENDUM #3	03/30/26

DRAWN BY: MFJ, CMM JN: 24-028

Framing Plan - Level 01 - Area C

SHEET

S102C



2 S102D Roof Framing Plan - Low Roof - Area D

1/8" = 1'-0"

JOIST BEARING ELEVATION (J.B.E.) = 104' - 0" U.O.N.

FRAMING PLAN SHEET NOTES

1. NUMBER IN PARENTHESES WITH "+ /-" ADJACENT TO STEEL BEAM SIZE INDICATES ELEVATION OF TOP OF STEEL BEAM IN INCHES FROM REFERENCE ELEVATION EQUAL TO STEEL DECK BEARING ELEVATION (DBE) - NO NUMBER ADJACENT TO BEAM SIZE INDICATES TOP OF BEAM @ DBE.
2. CONTRACTOR TO VERIFY ALL DIMENSIONS & NOTIFY ARCHITECT / ENGINEER IF DISCREPANCIES EXIST.
3. SEE SHEET S001 FOR GENERAL FRAMING / LIGHT GAUGE NOTES AND MINIMUM LIGHT GAUGE DESIGN VALUES.
4. SEE DETAIL 18 /S501 FOR SUPPORT OF NON-BEARING CMU WALLS @ THE UNDERSIDE OF ROOF DECK.
5. VERIFY SIZE, QUANTITY & LOCATIONS FOR ALL ROOF PENETRATIONS W/ ARCHITECTURAL & MECHANICAL DRAWINGS. SEE DETAIL15 /S501 FOR FRAMING @ ALL ROOF PENETRATIONS.
6. FD# / RD# - DENOTES METAL DECK - SEE SCHEDULE ON THIS SHEET
7. - DENOTES STEEL BEAM TO STEEL COLUMN MOMENT CONNECTION. SEE DETAIL 9 /S501
8. - DENOTES STEEL BEAM CANTILEVERED OVER STEEL COLUMN CONNECTION. SEE DETAIL 7 /S501
9. - INDICATES A STEP IN ROOF DECK BEARING ELEVATION. SEE PLAN FOR ACTUAL DBE.
10. - INDICATES A SNOW DRIFT LOAD PER IBC. SNOW DRIFTS ARE TAPERED LOADS WITH MAGNITUDES AS INDICATED ON THE PLANS. DRIFT LOADS ARE TO BE APPLIED IN ADDITION TO UNIFORM ROOF LOADS AS INDICATED IN THE GENERAL STRUCTURAL NOTES
11. SEE ROOF LOADING PLAN ON SHEET S111 FOR ADDITIONAL LOADS IMPOSED ON ROOF FRAMING AND STRUCTURAL NOTES ON SHEET S001 FOR ADDITIONAL REQUIREMENTS.
12. ###k - INDICATES A STRENGTH LEVEL WIND LOAD PER IBC. PRECAST CONCRETE SUPPLIER TO DESIGN PANELS & CONNECTIONS FOR LOAD INDICATED ON PLAN. LOAD SHOWN IS TO BE DISTRIBUTED UNIFORMLY THROUGH PANELS & CONNECTIONS TO THE FOUNDATION.
13. 'P' - DENOTES PRECAST OPENING. VERIFY SIZE & LOCATIONS WITH ARCHITECTURAL AND PRECAST SUPPLIER.
14. 'HSS' - DENOTES AN HSS5x2 1/2x1/4" (SSV) FRAMING MEMBER
15. 'H' - DENOTES LIGHT GAUGE HEADER ASSEMBLY. SIZE & GAUGE OF HEADER, SILL & JAMB TO BE DETERMINED BY LIGHT GAUGE ENGINEER / SUPPLIER. SEE DETAILS ON SHEET S507.

KEYNOTES

#	
2	MECHANICAL OPENING THRU ROOF - VERIFY SIZE, QUANTITY AND LOCATIONS WITH ARCHITECTURAL & MECHANICAL PLANS. FOR REINFORCEMENT/FRAMING AROUND DECK OPENING SEE DETAIL 15/S501
3	HORIZONTAL/CROSS BRIDGING - QUANTITY, SIZES & ANCHORAGE AS REQUIRED BY THE STEEL JOIST SUPPLIER PER SJI STANDARDS. SEE DETAIL 13/S501
4	MECHANICAL UNIT ATOP ROOF - VERIFY SIZE, QUANTITY AND LOCATION WITH ARCHITECTURAL & MECHANICAL PLANS. WEIGHT NOT TO EXCEED THAT SHOWN - IF WEIGHT NOT SHOWN, ASSUME MAX UNIT WEIGHT OF 200 LBS. JOIST SUPPLIER TO DESIGN JOISTS FOR ADDTIONAL WEIGHT AS REQUIRED. FOR SUPPORT OF MECH UNIT ON ROOF SEE DETAIL 14/S501
11 (△2)	PREFABRICATED METAL CANOPY - BY CANOPY SUPPLIER. SEE ARCH.

ROOF DECKING SCHEDULE

MARK	DECK SPECIFICATIONS
RD1	1 1/2", TYPE 'B' 20 GA. STEEL ROOF DECK, (3) SPAN MINIMUM. FASTEN W/ 5/8" Ø PUDDLE WELDS IN A 36/4 PATTERN & (1) #10 TEK SCREW SIDELAP FASTENER PER SPAN - SEE DETAIL 10/S501

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School - STRUCTURAL

210 12th Street NE
Valley City, ND 58072

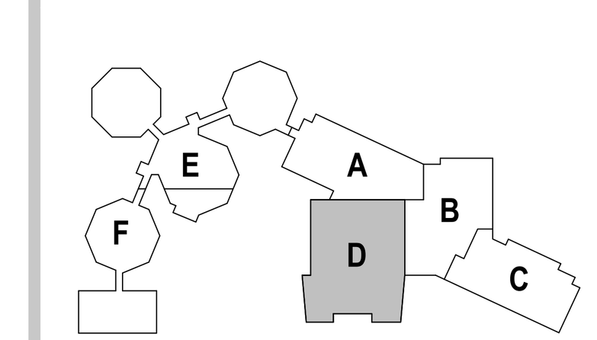
STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. JOCHIM
PE-9135
DATE 03-10-2026
NORTH DAKOTA

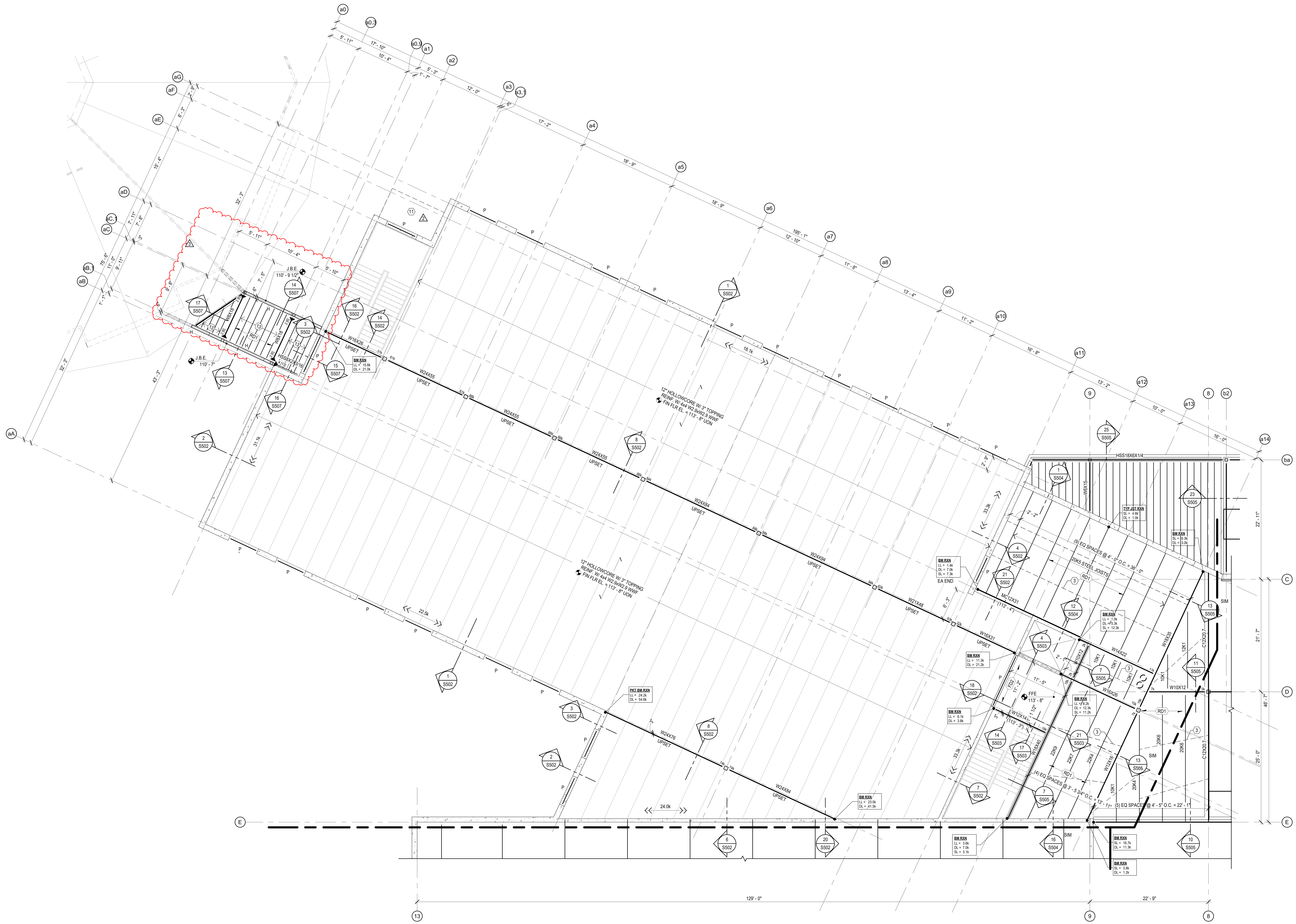
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
2	ADDENDUM #2	03/24/26
3	ADDENDUM #3	03/30/26

DRAWN BY: MFJ, CMM JN: 24-028

Roof Framing Plan - Low Roof - Area D

SHEET
S102D



1 S103A **Level 02 - Framing Plan - Area A**

1/8" = 1'-0"

FRAMING PLAN SHEET NOTES

1. NUMBER IN PARENTHESES WITH "+ /-" ADJACENT TO STEEL BEAM SIZE INDICATES ELEVATION OF TOP OF STEEL BEAM IN INCHES FROM REFERENCE ELEVATION EQUAL TO STEEL DECK BEARING ELEVATION (DBE) - NO NUMBER ADJACENT TO BEAM SIZE INDICATES TOP OF BEAM @ DBE.
2. CONTRACTOR TO VERIFY ALL DIMENSIONS & NOTIFY ARCHITECT / ENGINEER IF DISCREPANCIES EXIST.
3. SEE SHEET S001 FOR GENERAL FRAMING / LIGHT GAUGE NOTES AND MINIMUM LIGHT GAUGE DESIGN VALUES.
4. SEE DETAIL 18 /S501 FOR SUPPORT OF NON-BEARING CMU WALLS @ THE UNDERSIDE OF ROOF DECK.
5. VERIFY SIZE, QUANTITY & LOCATIONS FOR ALL ROOF PENETRATIONS W/ ARCHITECTURAL & MECHANICAL DRAWINGS. SEE DETAIL15 /S501 FOR FRAMING @ ALL ROOF PENETRATIONS.
6. FD# / RD# - DENOTES METAL DECK - SEE SCHEDULE ON THIS SHEET
7. - DENOTES STEEL BEAM TO STEEL COLUMN MOMENT CONNECTION. SEE DETAIL 9 /S501
8. - DENOTES STEEL BEAM CANTILEVERED OVER STEEL COLUMN CONNECTION. SEE DETAIL 7 /S501
9. - INDICATES A STEP IN ROOF DECK BEARING ELEVATION. SEE PLAN FOR ACTUAL DBE.
10. - INDICATES A SNOW DRIFT LOAD PER IBC. SNOW DRIFTS ARE TAPERED LOADS WITH MAGNITUDES AS INDICATED ON THE PLANS. DRIFT LOADS ARE TO BE APPLIED IN ADDITION TO UNIFORM ROOF LOADS AS INDICATED IN THE GENERAL STRUCTURAL NOTES
11. SEE ROOF LOADING PLAN ON SHEET S111 FOR ADDITIONAL LOADS IMPOSED ON ROOF FRAMING AND STRUCTURAL NOTES ON SHEET S001 FOR ADDITIONAL REQUIREMENTS.
12. ###k - INDICATES A STRENGTH LEVEL WIND LOAD PER IBC. PRECAST CONCRETE SUPPLIER TO DESIGN PANELS & CONNECTIONS FOR LOAD INDICATED ON PLAN. LOAD SHOWN IS TO BE DISTRIBUTED UNIFORMLY THROUGH PANELS & CONNECTIONS TO THE FOUNDATION.
13. 'P' - DENOTES PRECAST OPENING. VERIFY SIZE & LOCATIONS WITH ARCHITECTURAL AND PRECAST SUPPLIER.
14. 'HSS' - DENOTES AN HSS5x2 1/2x1/4" (SSV) FRAMING MEMBER
15. 'H' - DENOTES LIGHT GAUGE HEADER ASSEMBLY. SIZE & GAUGE OF HEADER, SILL & JAMB TO BE DETERMINED BY LIGHT GAUGE ENGINEER / SUPPLIER. SEE DETAILS ON SHEET S507.

KEYNOTES

#	
3	HORIZONTAL/CROSS BRIDGING - QUANTITY, SIZES & ANCHORAGE AS REQUIRED BY THE STEEL JOIST SUPPLIER PER SJI STANDARDS. SEE DETAIL 13/S501
11	PREFABRICATED METAL CANOPY - BY CANOPY SUPPLIER. SEE ARCH.
13	8" DEEP CFS JOISTS AT 1'-4"o.c. MAX - BY CFS SUPPLIER / DESIGNER. PROVIDE BRIDGING AT 2'-0"o.c. PER DETAIL 12/S507

FLOOR DECKING SCHEDULE

MARK	DECK SPECIFICATIONS
FD2	2" CONC SLAB OVER 3" X 20 GA COMPOSITE STEEL FLOOR DECK (5" TOTAL SLAB THICKNESS) REINF. W/ #3 EA WAY @ 1'-0"O.C. SEE DETAIL 12/S501

ROOF DECKING SCHEDULE

MARK	DECK SPECIFICATIONS
RD1	<varies>

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School - STRUCTURAL

210 12th Street NE
Valley City, ND 58072

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

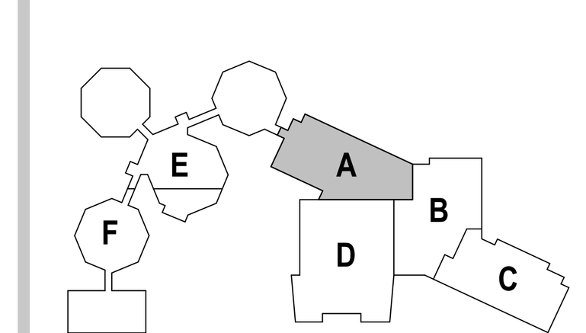
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. JOCHIM
PE-9135
DATE 03-10-2026
NORTH DAKOTA

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
2	ADDENDUM #2	03/24/26
3	ADDENDUM #3	03/30/26

DRAWN BY: MFJ, CMM JN: 24-028

Framing Plan - Level 02 - Area A

SHEET

S103A

3 | S103B **Roof Framing Plan - Low Roof - Area B**

1/8" = 1'-0"

FRAMING PLAN SHEET NOTES

1. NUMBER IN PARENTHESES WITH "+ /-" ADJACENT TO STEEL BEAM SIZE INDICATES ELEVATION OF TOP OF STEEL BEAM IN INCHES FROM REFERENCE ELEVATION EQUAL TO STEEL DECK BEARING ELEVATION (DBE) - NO NUMBER ADJACENT TO BEAM SIZE INDICATES TOP OF BEAM @ DBE.
2. CONTRACTOR TO VERIFY ALL DIMENSIONS & NOTIFY ARCHITECT / ENGINEER IF DISCREPANCIES EXIST.
3. SEE SHEET S001 FOR GENERAL FRAMING / LIGHT GAUGE NOTES AND MINIMUM LIGHT GAUGE DESIGN VALUES.
4. SEE DETAIL 18 /S501 FOR SUPPORT OF NON-BEARING CMU WALLS @ THE UNDERSIDE OF ROOF DECK.
5. VERIFY SIZE, QUANTITY & LOCATIONS FOR ALL ROOF PENETRATIONS W/ ARCHITECTURAL & MECHANICAL DRAWINGS. SEE DETAIL15 /S501 FOR FRAMING @ ALL ROOF PENETRATIONS.
6. FD# / RD# - DENOTES METAL DECK - SEE SCHEDULE ON THIS SHEET
7. - DENOTES STEEL BEAM TO STEEL COLUMN MOMENT CONNECTION. SEE DETAIL 9 /S501
8. - DENOTES STEEL BEAM CANTILEVERED OVER STEEL COLUMN CONNECTION. SEE DETAIL 7 /S501
9. - INDICATES A STEP IN ROOF DECK BEARING ELEVATION. SEE PLAN FOR ACTUAL DBE.
10. - INDICATES A SNOW DRIFT LOAD PER IBC. SNOW DRIFTS ARE TAPERED LOADS WITH MAGNITUDES AS INDICATED ON THE PLANS. DRIFT LOADS ARE TO BE APPLIED IN ADDITION TO UNIFORM ROOF LOADS AS INDICATED IN THE GENERAL STRUCTURAL NOTES
11. SEE ROOF LOADING PLAN ON SHEET S111 FOR ADDITIONAL LOADS IMPOSED ON ROOF FRAMING AND STRUCTURAL NOTES ON SHEET S001 FOR ADDITIONAL REQUIREMENTS.
12. ###k - INDICATES A STRENGTH LEVEL WIND LOAD PER IBC. PRECAST CONCRETE SUPPLIER TO DESIGN PANELS & CONNECTIONS FOR LOAD INDICATED ON PLAN. LOAD SHOWN IS TO BE DISTRIBUTED UNIFORMLY THROUGH PANELS & CONNECTIONS TO THE FOUNDATION.
13. 'P' - DENOTES PRECAST OPENING. VERIFY SIZE & LOCATIONS WITH ARCHITECTURAL AND PRECAST SUPPLIER.
14. 'HSS' - DENOTES AN HSS5x2 1/2x1/4" (SSV) FRAMING MEMBER
15. 'H' - DENOTES LIGHT GAUGE HEADER ASSEMBLY. SIZE & GAUGE OF HEADER, SILL & JAMB TO BE DETERMINED BY LIGHT GAUGE ENGINEER / SUPPLIER. SEE DETAILS ON SHEET S507.

KEYNOTES

#	
2	MECHANICAL OPENING THRU ROOF - VERIFY SIZE, QUANTITY AND LOCATIONS WITH ARCHITECTURAL & MECHANICAL PLANS. FOR REINFORCEMENT/FRAMING AROUND DECK OPENING SEE DETAIL 15/S501
3	HORIZONTAL/CROSS BRIDGING - QUANTITY, SIZES & ANCHORAGE AS REQUIRED BY THE STEEL JOIST SUPPLIER PER SJI STANDARDS. SEE DETAIL 13/S501
4	MECHANICAL UNIT ATOP ROOF - VERIFY SIZE, QUANTITY AND LOCATION WITH ARCHITECTURAL & MECHANICAL PLANS. WEIGHT NOT TO EXCEED THAT SHOWN - IF WEIGHT NOT SHOWN, ASSUME MAX UNIT WEIGHT OF 200 LBS. JOIST SUPPLIER TO DESIGN JOISTS FOR ADDTIONAL WEIGHT AS REQUIRED. FOR SUPPORT OF MECH UNIT ON ROOF SEE DETAIL 14/S501
5	OPENING THROUGH ROOF DECK FOR ACCESS HATCH - VERIFY SIZE & LOCATION WITH ARCH. FOR REINFORCEMENT/FRAMING AROUND DECK OPENING SEE DETAIL 15/S501
11	PREFABRICATED METAL CANOPY - BY CANOPY SUPPLIER. SEE ARCH.
12	6" GALVANIZED STEEL Z-SHAPE SUNSHADE PURLINS AT 1' - 4"o.c. - BY COLD-FORMED STEEL DESIGNER / SUPPLIER

2 3

FLOOR DECKING SCHEDULE

MARK	DECK SPECIFICATIONS
FD2	2" CONC SLAB OVER 3" X 20 GA COMPOSITE STEEL FLOOR DECK (5" TOTAL SLAB THICKNESS) REINF. W/ #3 EA WAY @ 1'-0"O.C. SEE DETAIL 12/S501

ROOF DECKING SCHEDULE

MARK	DECK SPECIFICATIONS
RD1	1 1/2", TYPE 'B' 20 GA. STEEL ROOF DECK, (3) SPAN MINIMUM. FASTEN W/ 5/8" Ø PUDDLE WELDS IN A 36/4 PATTERN & (1) #10 TEK SCREW SIDELAP FASTENER PER SPAN - SEE DETAIL 10/S501

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School - STRUCTURAL

210 12th Street NE
Valley City, ND 58072

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

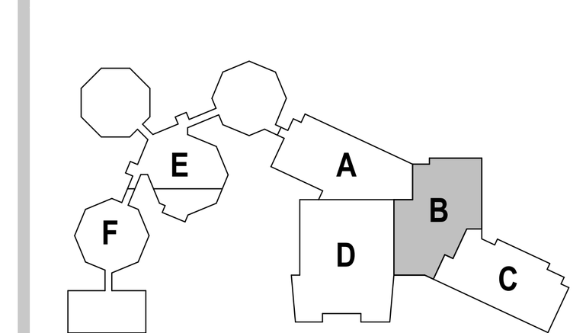
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. JOCHIM
PE-9135
DATE 03-10-2026
NORTH DAKOTA

DRAWING HISTORY

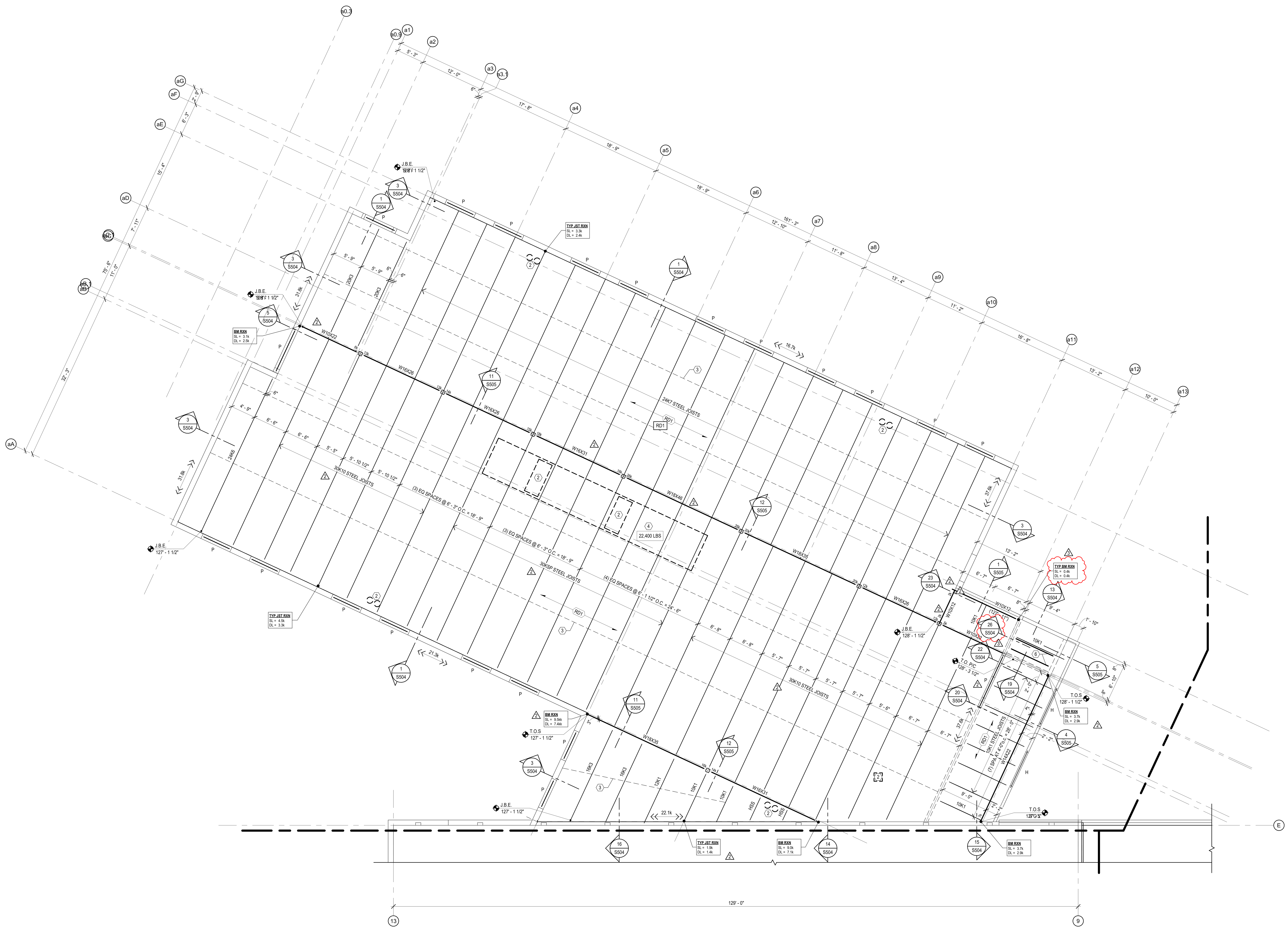
NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
2	ADDENDUM #2	03/24/26
3	ADDENDUM #3	03/30/26

DRAWN BY: MFJ, CMM JN: 24-028

Roof Framing Plan - Low Roof - Area B

SHEET

S103B



1 S104A **Roof Framing Plan - High Roof - Area A**

1/8" = 1'-0"

JOIST BEARING ELEVATION (J.B.E.) = 127' - 1 1/2" U.O.N.

FRAMING PLAN SHEET NOTES

1. NUMBER IN PARENTHESES WITH "+ /-" ADJACENT TO STEEL BEAM SIZE INDICATES ELEVATION OF TOP OF STEEL BEAM IN INCHES FROM REFERENCE ELEVATION EQUAL TO STEEL DECK BEARING ELEVATION (DBE) - NO NUMBER ADJACENT TO BEAM SIZE INDICATES TOP OF BEAM @ DBE.
2. CONTRACTOR TO VERIFY ALL DIMENSIONS & NOTIFY ARCHITECT / ENGINEER IF DISCREPANCIES EXIST.
3. SEE SHEET S001 FOR GENERAL FRAMING / LIGHT GAUGE NOTES AND MINIMUM LIGHT GAUGE DESIGN VALUES.
4. SEE DETAIL 18 /S501 FOR SUPPORT OF NON-BEARING CMU WALLS @ THE UNDERSIDE OF ROOF DECK.
5. VERIFY SIZE, QUANTITY & LOCATIONS FOR ALL ROOF PENETRATIONS W/ ARCHITECTURAL & MECHANICAL DRAWINGS. SEE DETAIL15 /S501 FOR FRAMING @ ALL ROOF PENETRATIONS.
6. FD# / RD# - DENOTES METAL DECK - SEE SCHEDULE ON THIS SHEET
7. - DENOTES STEEL BEAM TO STEEL COLUMN MOMENT CONNECTION. SEE DETAIL 9 /S501
8. - DENOTES STEEL BEAM CANTILEVERED OVER STEEL COLUMN CONNECTION. SEE DETAIL 7 /S501
9. - INDICATES A STEP IN ROOF DECK BEARING ELEVATION. SEE PLAN FOR ACTUAL DBE.
10. - INDICATES A SNOW DRIFT LOAD PER IBC. SNOW DRIFTS ARE TAPERED LOADS WITH MAGNITUDES AS INDICATED ON THE PLANS. DRIFT LOADS ARE TO BE APPLIED IN ADDITION TO UNIFORM ROOF LOADS AS INDICATED IN THE GENERAL STRUCTURAL NOTES
11. SEE ROOF LOADING PLAN ON SHEET S111 FOR ADDITIONAL LOADS IMPOSED ON ROOF FRAMING AND STRUCTURAL NOTES ON SHEET S001 FOR ADDITIONAL REQUIREMENTS.
12. ###k - INDICATES A STRENGTH LEVEL WIND LOAD PER IBC. PRECAST CONCRETE SUPPLIER TO DESIGN PANELS & CONNECTIONS FOR LOAD INDICATED ON PLAN. LOAD SHOWN IS TO BE DISTRIBUTED UNIFORMLY THROUGH PANELS & CONNECTIONS TO THE FOUNDATION.
13. 'P' - DENOTES PRECAST OPENING. VERIFY SIZE & LOCATIONS WITH ARCHITECTURAL AND PRECAST SUPPLIER.
14. 'HSS' - DENOTES AN HSS5x2 1/2x1/4" (SSV) FRAMING MEMBER
15. 'H' - DENOTES LIGHT GAUGE HEADER ASSEMBLY. SIZE & GAUGE OF HEADER, SILL & JAMB TO BE DETERMINED BY LIGHT GAUGE ENGINEER / SUPPLIER. SEE DETAILS ON SHEET S507.

KEYNOTES

#	
2	MECHANICAL OPENING THRU ROOF - VERIFY SIZE, QUANTITY AND LOCATIONS WITH ARCHITECTURAL & MECHANICAL PLANS. FOR REINFORCEMENT/FRAMING AROUND DECK OPENING SEE DETAIL 15/S501
3	HORIZONTAL/CROSS BRIDGING - QUANTITY, SIZES & ANCHORAGE AS REQUIRED BY THE STEEL JOIST SUPPLIER PER SJI STANDARDS. SEE DETAIL 13/S501
4	MECHANICAL UNIT ATOP ROOF - VERIFY SIZE, QUANTITY AND LOCATION WITH ARCHITECTURAL & MECHANICAL PLANS. WEIGHT NOT TO EXCEED THAT SHOWN - IF WEIGHT NOT SHOWN, ASSUME MAX UNIT WEIGHT OF 200 LBS. JOIST SUPPLIER TO DESIGN JOISTS FOR ADDTIONAL WEIGHT AS REQUIRED. FOR SUPPORT OF MECH UNIT ON ROOF SEE DETAIL 14/S501
6	W8X18 HOIST / LIFELINE BEAM - B.O. STEEL 126' - 4" (VERIFY LOCATIONS / ELEVATIONS WITH ELEVATOR SUPPLIER)

ROOF DECKING SCHEDULE

MARK	DECK SPECIFICATIONS
RD1	1 1/2", TYPE 'B' 20 GA. STEEL ROOF DECK, (3) SPAN MINIMUM. FASTEN W/ 5/8" Ø PUDDLE WELDS IN A 36/4 PATTERN & (1) #10 TEK SCREW SIDELAP FASTENER PER SPAN - SEE DETAIL 10/S501

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School - STRUCTURAL

210 12th Street NE
Valley City, ND 58072

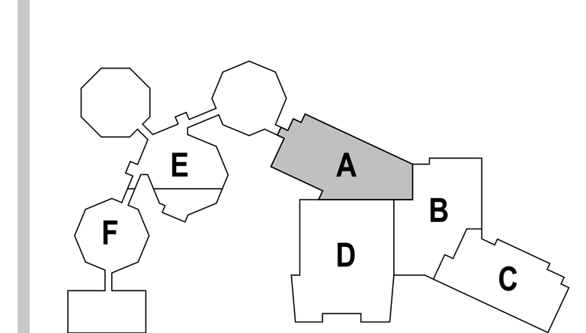
STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. JOCHIM
PE-9135
DATE 03-10-2026
NORTH DAKOTA

DRAWING HISTORY

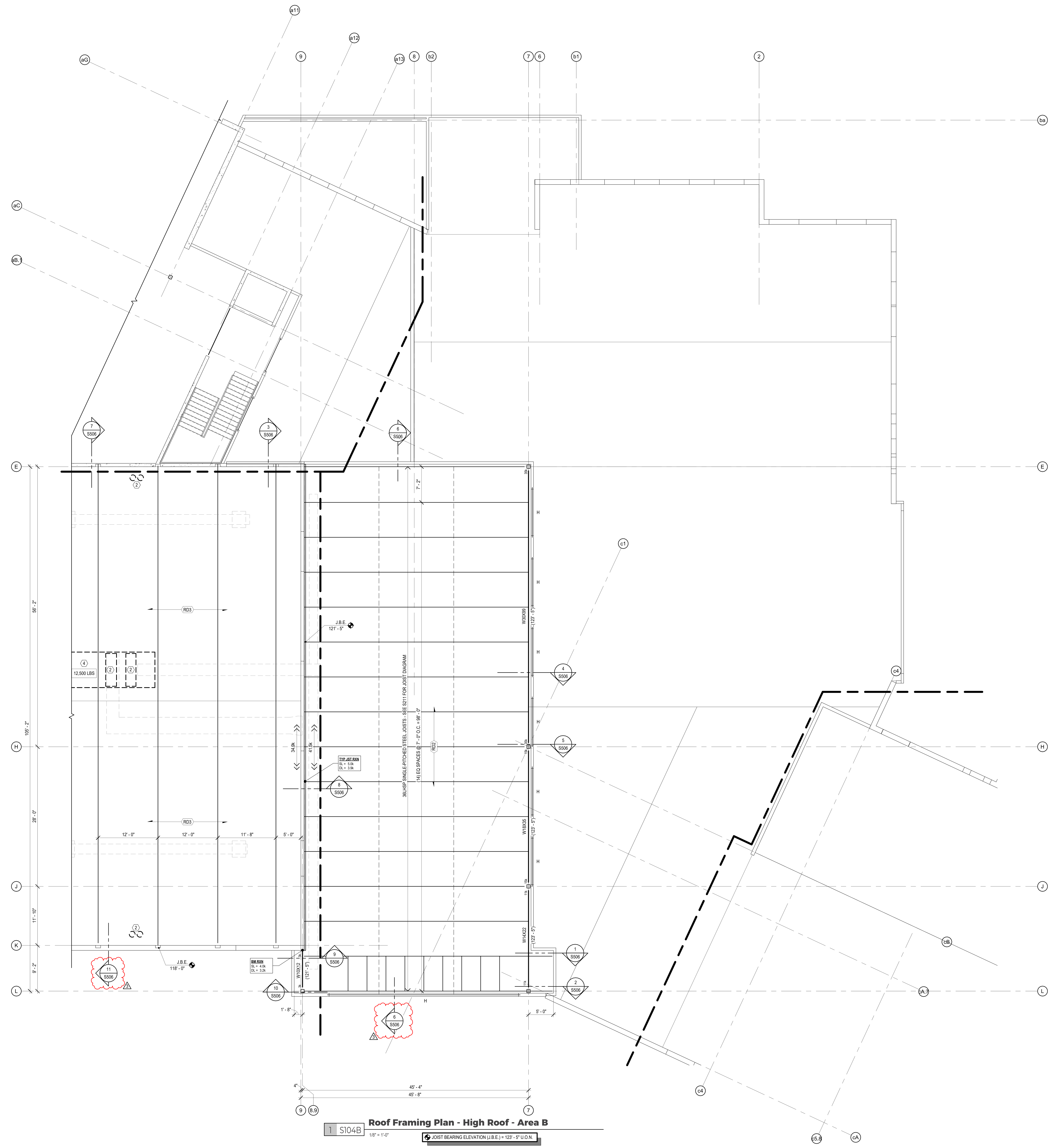
NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
2	ADDENDUM #2	03/24/26
3	ADDENDUM #3	03/30/26

DRAWN BY: MFJ, CMM   JN: 24-028

Roof Framing Plan - High Roof - Area A

SHEET

S104A



1 S104B **Roof Framing Plan - High Roof - Area B**

1/8" = 1'-0"

JOIST BEARING ELEVATION (J.B.E.) = 123' - 5" U.O.N.

FRAMING PLAN SHEET NOTES

1. NUMBER IN PARENTHESES WITH "+ /-" ADJACENT TO STEEL BEAM SIZE INDICATES ELEVATION OF TOP OF STEEL BEAM IN INCHES FROM REFERENCE ELEVATION EQUAL TO STEEL DECK BEARING ELEVATION (DBE) - NO NUMBER ADJACENT TO BEAM SIZE INDICATES TOP OF BEAM @ DBE.
2. CONTRACTOR TO VERIFY ALL DIMENSIONS & NOTIFY ARCHITECT / ENGINEER IF DISCREPANCIES EXIST.
3. SEE SHEET S001 FOR GENERAL FRAMING / LIGHT GAUGE NOTES AND MINIMUM LIGHT GAUGE DESIGN VALUES.
4. SEE DETAIL 18 /S501 FOR SUPPORT OF NON-BEARING CMU WALLS @ THE UNDERSIDE OF ROOF DECK.
5. VERIFY SIZE, QUANTITY & LOCATIONS FOR ALL ROOF PENETRATIONS W/ ARCHITECTURAL & MECHANICAL DRAWINGS. SEE DETAIL15 /S501 FOR FRAMING @ ALL ROOF PENETRATIONS.
6. FD# / RD# - DENOTES METAL DECK - SEE SCHEDULE ON THIS SHEET
7. - DENOTES STEEL BEAM TO STEEL COLUMN MOMENT CONNECTION. SEE DETAIL 9 /S501
8. - DENOTES STEEL BEAM CANTILEVERED OVER STEEL COLUMN CONNECTION. SEE DETAIL 7 /S501
9. - INDICATES A STEP IN ROOF DECK BEARING ELEVATION. SEE PLAN FOR ACTUAL DBE.
10. - INDICATES A SNOW DRIFT LOAD PER IBC. SNOW DRIFTS ARE TAPERED LOADS WITH MAGNITUDES AS INDICATED ON THE PLANS. DRIFT LOADS ARE TO BE APPLIED IN ADDITION TO UNIFORM ROOF LOADS AS INDICATED IN THE GENERAL STRUCTURAL NOTES
11. SEE ROOF LOADING PLAN ON SHEET S111 FOR ADDITIONAL LOADS IMPOSED ON ROOF FRAMING AND STRUCTURAL NOTES ON SHEET S001 FOR ADDITIONAL REQUIREMENTS.
12. ###k - INDICATES A STRENGTH LEVEL WIND LOAD PER IBC. PRECAST CONCRETE SUPPLIER TO DESIGN PANELS & CONNECTIONS FOR LOAD INDICATED ON PLAN. LOAD SHOWN IS TO BE DISTRIBUTED UNIFORMLY THROUGH PANELS & CONNECTIONS TO THE FOUNDATION.
13. 'P' - DENOTES PRECAST OPENING. VERIFY SIZE & LOCATIONS WITH ARCHITECTURAL AND PRECAST SUPPLIER.
14. 'HSS' - DENOTES AN HSS5x2 1/2x1/4" (SSV) FRAMING MEMBER
15. 'H' - DENOTES LIGHT GAUGE HEADER ASSEMBLY. SIZE & GAUGE OF HEADER, SILL & JAMB TO BE DETERMINED BY LIGHT GAUGE ENGINEER / SUPPLIER. SEE DETAILS ON SHEET S507.

KEYNOTES

#	
2	MECHANICAL OPENING THRU ROOF - VERIFY SIZE, QUANTITY AND LOCATIONS WITH ARCHITECTURAL & MECHANICAL PLANS. FOR REINFORCEMENT/FRAMING AROUND DECK OPENING SEE DETAIL 15/S501
4	MECHANICAL UNIT ATOP ROOF - VERIFY SIZE, QUANTITY AND LOCATION WITH ARCHITECTURAL & MECHANICAL PLANS. WEIGHT NOT TO EXCEED THAT SHOWN - IF WEIGHT NOT SHOWN, ASSUME MAX UNIT WEIGHT OF 200 LBS. JOIST SUPPLIER TO DESIGN JOISTS FOR ADDTIONAL WEIGHT AS REQUIRED. FOR SUPPORT OF MECH UNIT ON ROOF SEE DETAIL 14/S501

ROOF DECKING SCHEDULE

MARK	DECK SPECIFICATIONS
RD1	1 1/2", TYPE 'B' 20 GA. STEEL ROOF DECK, (3) SPAN MINIMUM. FASTEN W/ 5/8" Ø PUDDLE WELDS IN A 36/4 PATTERN & (1) #10 TEK SCREW SIDELAP FASTENER PER SPAN - SEE DETAIL 10/S501
RD2	2" TYPE "DA" (DOVETAIL ACOUSTICAL) 22 GA. STEEL ROOF DECK (3-SPAN MINIMUM) - FASTEN W/ 3/4" Ø PUDDLE WELDS IN A 24/3 PATTERN & (5) - HILTI S-SLC 01 M HWH SIDELAP CONNECTORS PER SPAN - SEE DETAIL 11/S501
RD3	3 1/2" TYPE "DA" (DOVETAIL ACOUSTICAL) 19 GA. STEEL ROOF DECK (3-SPAN MINIMUM) - FASTEN W/ 3/4" Ø PUDDLE WELDS IN A 24/3 PATTERN & (5) #12 TEK SCREWS SIDELAP FASTENERS PER SPAN - SEE DETAIL 11/S501

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School - STRUCTURAL

210 12th Street NE
Valley City, ND 58072

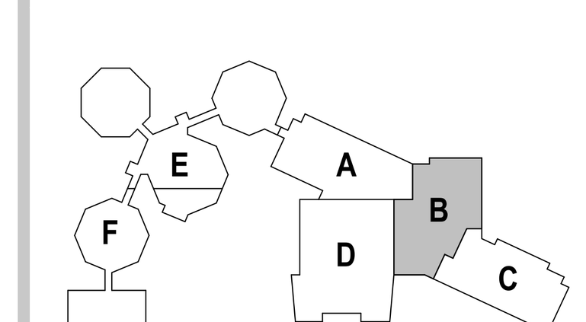
STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. JOCHIM
PE-9135
DATE 03-10-2026
NORTH DAKOTA

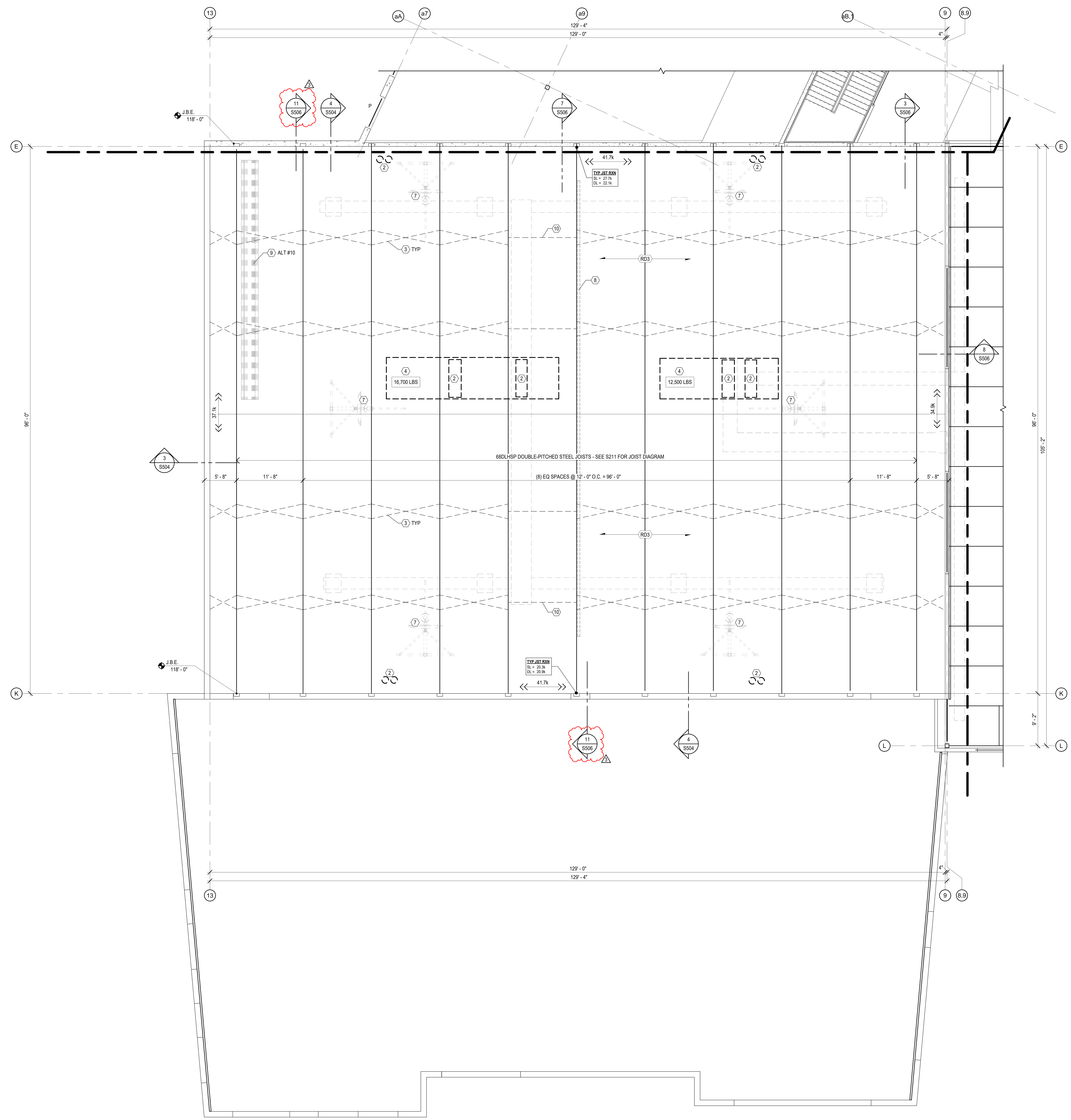
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
3	ADDENDUM #3	03/30/26

DRAWN BY: MFJ, CMM JN: 24-028

Roof Framing Plan - High Roof - Area B

SHEET
S104B



Roof Framing Plan - High Roof - Area D

1 S104D

1/8" = 1'-0"

JOIST BEARING ELEVATION (J.B.E.) = 118' - 0" U.O.N.

FRAMING PLAN SHEET NOTES

1. NUMBER IN PARENTHESES WITH "+ /-" ADJACENT TO STEEL BEAM SIZE INDICATES ELEVATION OF TOP OF STEEL BEAM IN INCHES FROM REFERENCE ELEVATION EQUAL TO STEEL DECK BEARING ELEVATION (DBE) - NO NUMBER ADJACENT TO BEAM SIZE INDICATES TOP OF BEAM @ DBE.
2. CONTRACTOR TO VERIFY ALL DIMENSIONS & NOTIFY ARCHITECT / ENGINEER IF DISCREPANCIES EXIST.
3. SEE SHEET S001 FOR GENERAL FRAMING / LIGHT GAUGE NOTES AND MINIMUM LIGHT GAUGE DESIGN VALUES.
4. SEE DETAIL 18 /S501 FOR SUPPORT OF NON-BEARING CMU WALLS @ THE UNDERSIDE OF ROOF DECK.
5. VERIFY SIZE, QUANTITY & LOCATIONS FOR ALL ROOF PENETRATIONS W/ ARCHITECTURAL & MECHANICAL DRAWINGS. SEE DETAIL15 /S501 FOR FRAMING @ ALL ROOF PENETRATIONS.
6. FD# / RD# - DENOTES METAL DECK - SEE SCHEDULE ON THIS SHEET
7. - DENOTES STEEL BEAM TO STEEL COLUMN MOMENT CONNECTION. SEE DETAIL 9 /S501
8. - DENOTES STEEL BEAM CANTILEVERED OVER STEEL COLUMN CONNECTION. SEE DETAIL 7 /S501
9. - INDICATES A STEP IN ROOF DECK BEARING ELEVATION. SEE PLAN FOR ACTUAL DBE.
10. - INDICATES A SNOW DRIFT LOAD PER IBC. SNOW DRIFTS ARE TAPERED LOADS WITH MAGNITUDES AS INDICATED ON THE PLANS. DRIFT LOADS ARE TO BE APPLIED IN ADDITION TO UNIFORM ROOF LOADS AS INDICATED IN THE GENERAL STRUCTURAL NOTES
11. SEE ROOF LOADING PLAN ON SHEET S111 FOR ADDITIONAL LOADS IMPOSED ON ROOF FRAMING AND STRUCTURAL NOTES ON SHEET S001 FOR ADDITIONAL REQUIREMENTS.
12. ###k - INDICATES A STRENGTH LEVEL WIND LOAD PER IBC. PRECAST CONCRETE SUPPLIER TO DESIGN PANELS & CONNECTIONS FOR LOAD INDICATED ON PLAN. LOAD SHOWN IS TO BE DISTRIBUTED UNIFORMLY THROUGH PANELS & CONNECTIONS TO THE FOUNDATION.
13. 'P' - DENOTES PRECAST OPENING. VERIFY SIZE & LOCATIONS WITH ARCHITECTURAL AND PRECAST SUPPLIER.
14. 'HSS' - DENOTES AN HSS5x2 1/2x1/4" (SSV) FRAMING MEMBER
15. 'H' - DENOTES LIGHT GAUGE HEADER ASSEMBLY. SIZE & GAUGE OF HEADER, SILL & JAMB TO BE DETERMINED BY LIGHT GAUGE ENGINEER / SUPPLIER. SEE DETAILS ON SHEET S507.

KEYNOTES

#	
2	MECHANICAL OPENING THRU ROOF - VERIFY SIZE, QUANTITY AND LOCATIONS WITH ARCHITECTURAL & MECHANICAL PLANS. FOR REINFORCEMENT/FRAMING AROUND DECK OPENING SEE DETAIL 15/S501
3	HORIZONTAL/CROSS BRIDGING - QUANTITY, SIZES & ANCHORAGE AS REQUIRED BY THE STEEL JOIST SUPPLIER PER SJI STANDARDS. SEE DETAIL 13/S501
4	MECHANICAL UNIT ATOP ROOF - VERIFY SIZE, QUANTITY AND LOCATION WITH ARCHITECTURAL & MECHANICAL PLANS. WEIGHT NOT TO EXCEED THAT SHOWN - IF WEIGHT NOT SHOWN, ASSUME MAX UNIT WEIGHT OF 200 LBS. JOIST SUPPLIER TO DESIGN JOISTS FOR ADDTIONAL WEIGHT AS REQUIRED. FOR SUPPORT OF MECH UNIT ON ROOF SEE DETAIL 14/S501
7	BASKETBALL BACKSTOP ASSEMBLY - JOIST SUPPLIER TO DESIGN JOIST FOR ADDITIONAL LOADS AS REQUIRED. VERIFY LENGTH & WEIGHT WITH ARCHITECTURAL PLANS & BACKSTOP SUPPLIER.
8	GYM DIVIDER CURTAIN - JOIST SUPPLIER TO DESIGN JOIST BOTTOM CHORD FOR ADDITIONAL 100 PLF FOR CURTAIN SUSPENSION. VERIFY LENGTH & WEIGHT WITH ARCHITECTURAL PLANS & CURTAIN SUPPLIER.
9	WRESTLING MAT LIFT - JOIST SUPPLIER TO DESIGN JOIST FOR ADDITIONAL LOADS AS REQUIRED. VERIFY SIZE & WEIGHT WITH LIFT SUPPLIER.
10	PROVIDE HORIZONTAL BRIDGING IN LIEU OF X-BRIDGING IN BAYS WITH DUCT WORK

ROOF DECKING SCHEDULE

MARK	DECK SPECIFICATIONS
RD1	1 1/2", TYPE 'B' 20 GA. STEEL ROOF DECK, (3) SPAN MINIMUM. FASTEN W/ 5/8" Ø PUDDLE WELDS IN A 36/4 PATTERN & (1) #10 TEK SCREW SIDELAP FASTENER PER SPAN - SEE DETAIL 10/S501
RD2	2" TYPE "DA" (DOVETAIL ACOUSTICAL) 22 GA. STEEL ROOF DECK (3-SPAN MINIMUM) - FASTEN W/ 3/4" Ø PUDDLE WELDS IN A 24/3 PATTERN & (5) - HILTI S-SLC 01 M HWH SIDELAP CONNECTORS PER SPAN - SEE DETAIL 11/S501
RD3	3 1/2" TYPE "DA" (DOVETAIL ACOUSTICAL) 19 GA. STEEL ROOF DECK (3-SPAN MINIMUM) - FASTEN W/ 3/4" Ø PUDDLE WELDS IN A 24/3 PATTERN & (5) #12 TEK SCREWS SIDELAP FASTENERS PER SPAN - SEE DETAIL 11/S501

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School - STRUCTURAL

210 12th Street NE
Valley City, ND 58072

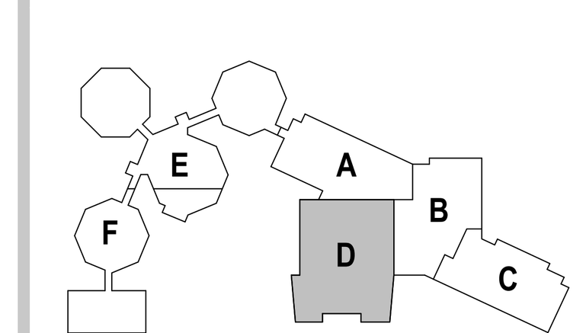
STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. JOCHIM
PE-9135
DATE 03-10-2026
NORTH DAKOTA

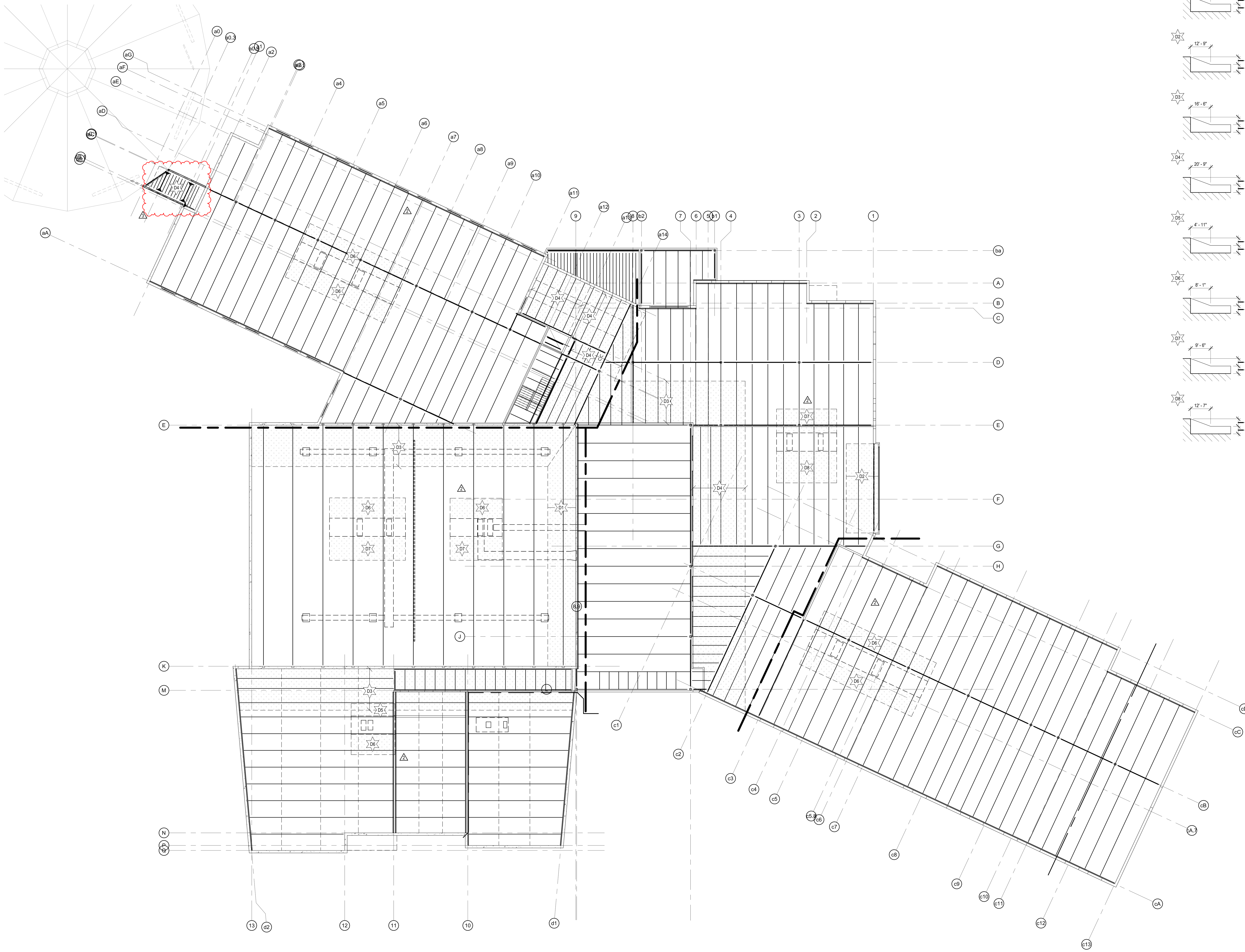
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
3	ADDENDUM #3	03/30/26

DRAWN BY: MFJ, CMM JN: 24-028

Roof Framing Plan - High Roof - Area D

SHEET
S104D



1 S111 — Snow Drift Loading Plan
1/16" = 1'-0"

KEYNOTES - SNOW DRIFT

Keynote	Drift Width	Drift	Base
D1	11'-2"	DRIFT = 27 PSF	BASE = 31 PSF
D2	12'-9"	DRIFT = 42 PSF	BASE = 31 PSF
D3	16'-6"	DRIFT = 80 PSF	BASE = 31 PSF
D4	20'-9"	DRIFT = 100 PSF	BASE = 31 PSF
D5	4'-11"	DRIFT = 24 PSF	BASE = 31 PSF
D6	8'-1"	DRIFT = 39 PSF	BASE = 31 PSF
D7	9'-6"	DRIFT = 46 PSF	BASE = 31 PSF
D8	12'-7"	DRIFT = 61 PSF	BASE = 31 PSF

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School - STRUCTURAL

210 12th Street NE
Valley City, ND 58072

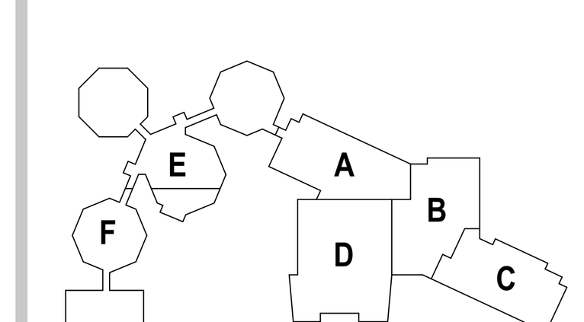
STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. JOCHIM
PE-9135
DATE 03-10-2026
NORTH DAKOTA

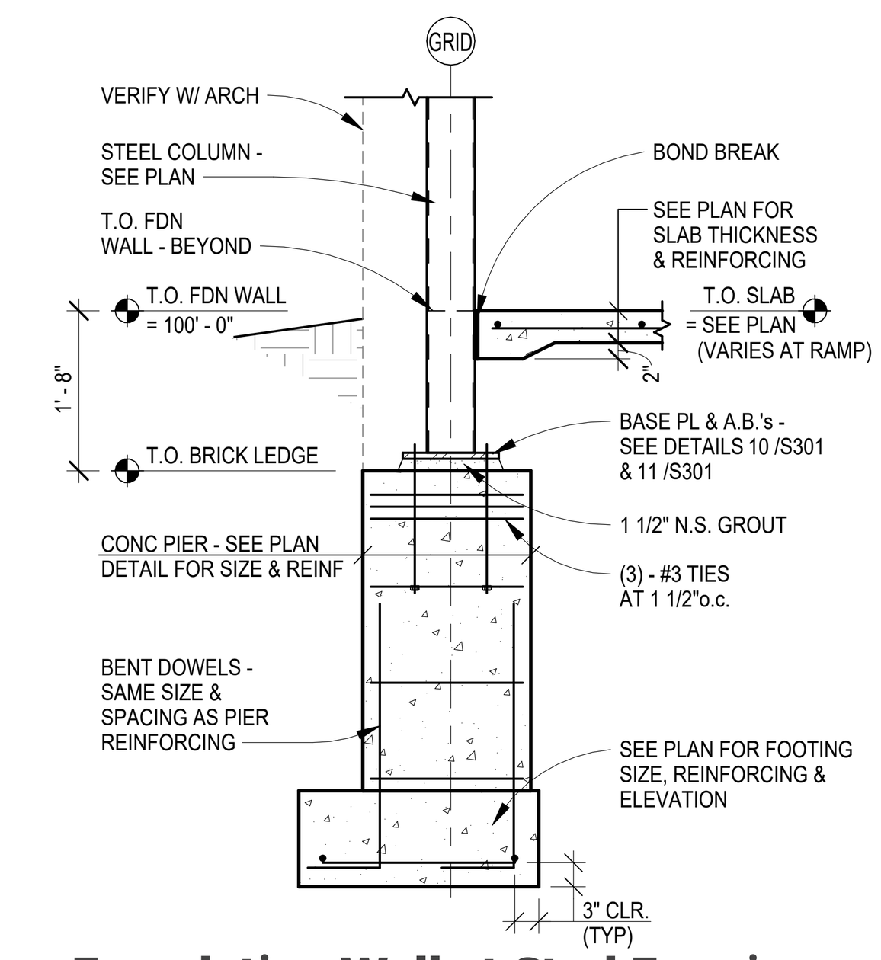
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
2	ADDENDUM #2	03/24/26
3	ADDENDUM #3	03/30/26

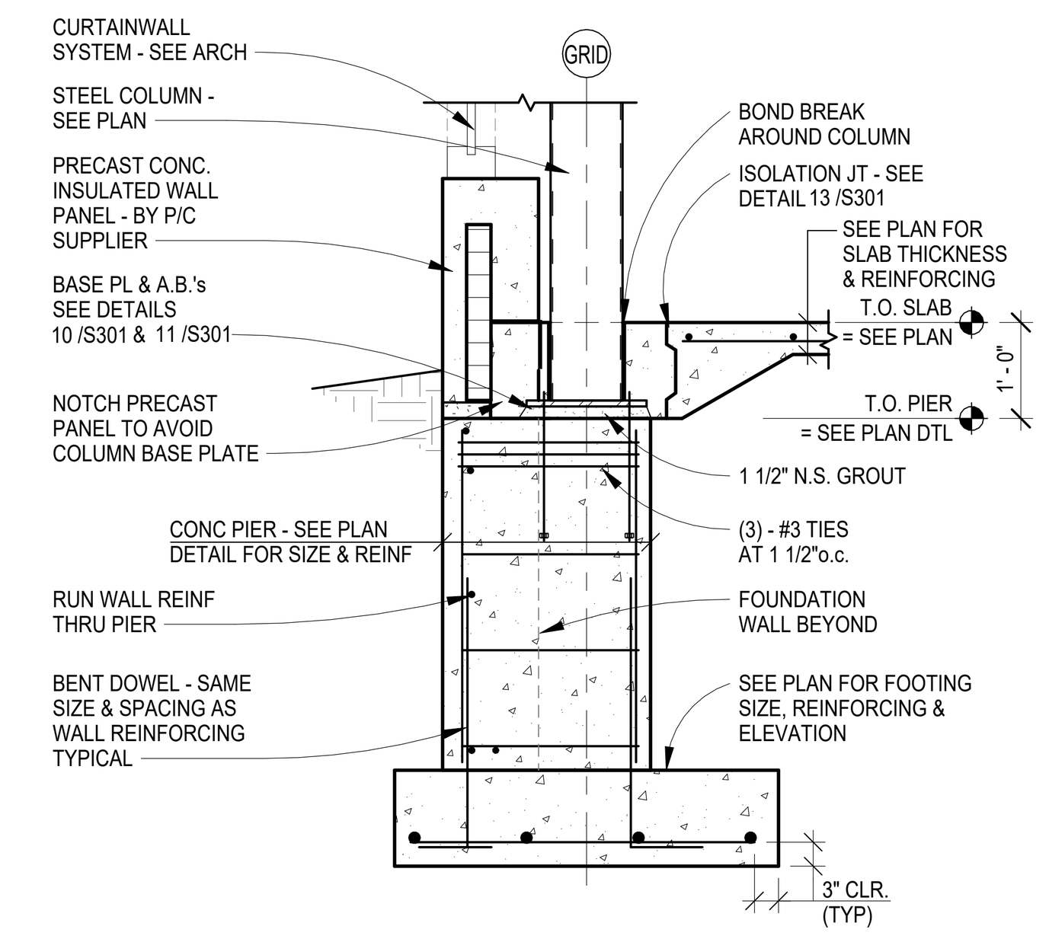
DRAWN BY: MFJ, CMM JN: 24-028

Snow Drift Loading Plan

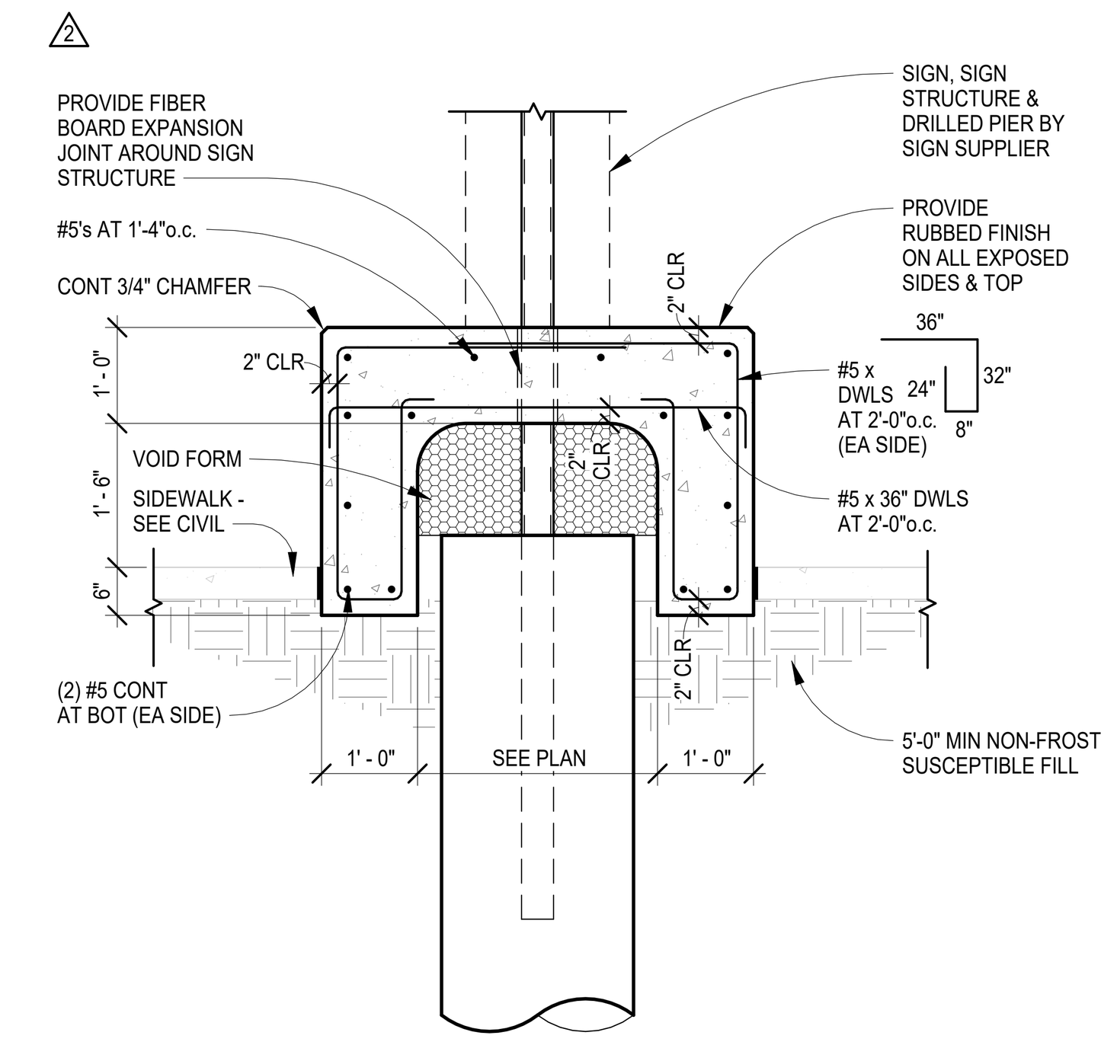
SHEET
S111



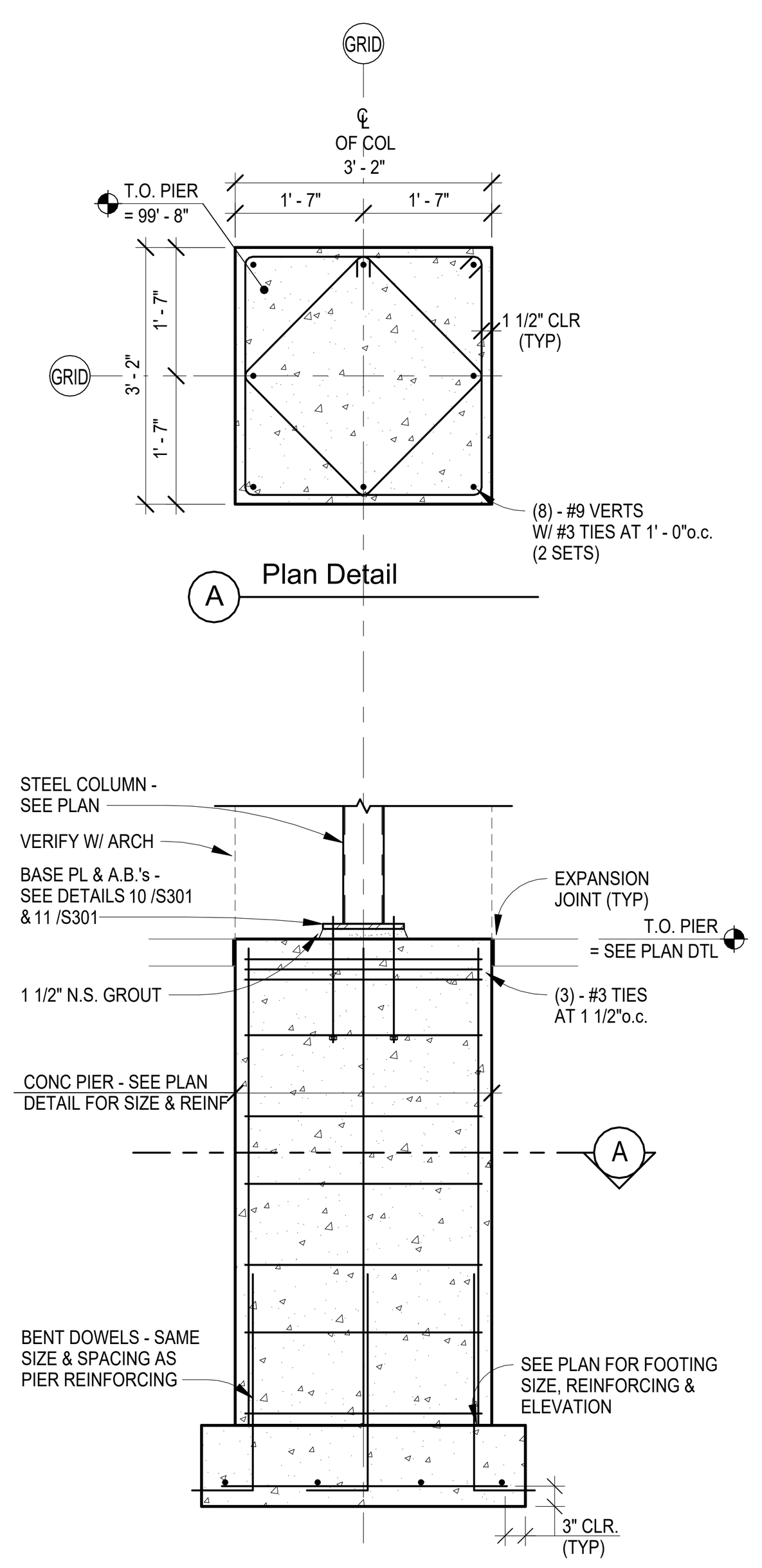
5 | S303 **Foundation Wall at Stud Framing**
1/2" = 1'-0"



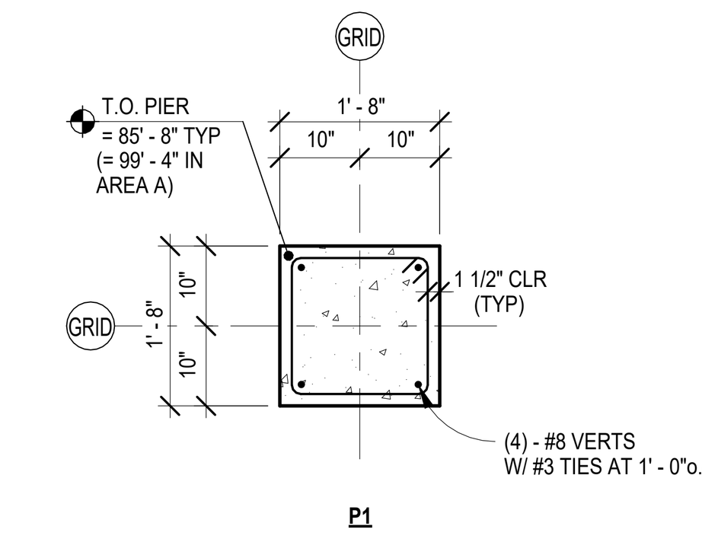
2 | S303 **Pier along Precast**
1/2" = 1'-0"



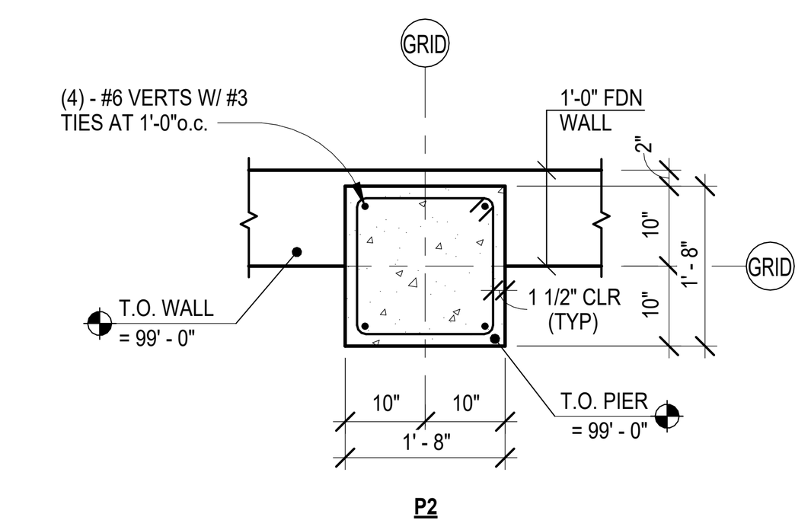
3 | S303 **Monument Foundation**
1/2" = 1'-0"



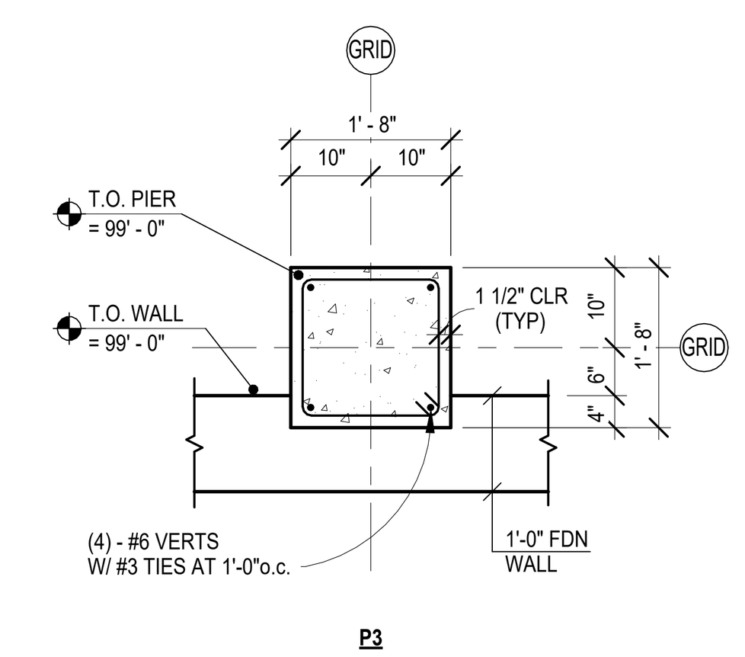
4 | S303 **Canopy Pier**
1/2" = 1'-0"



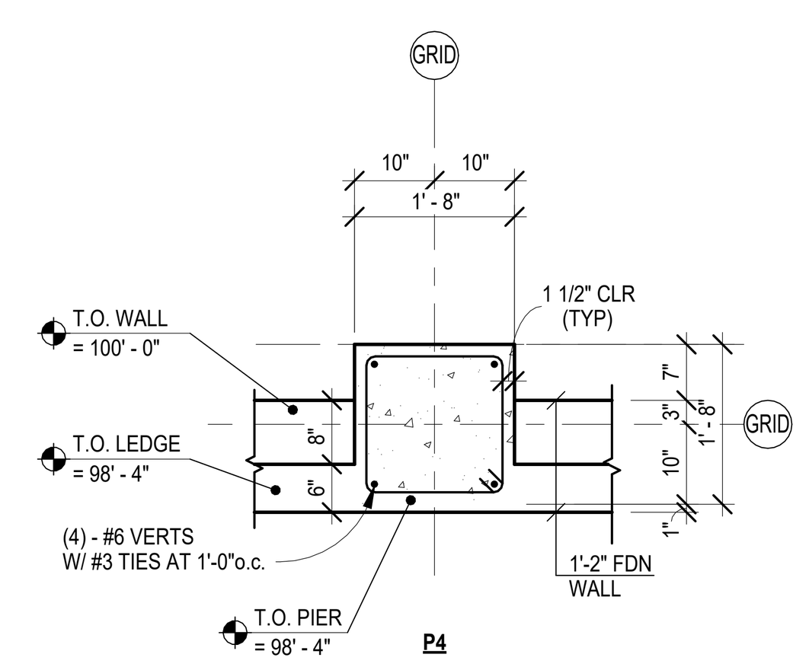
P1 | S303 **Pier**
1/2" = 1'-0"



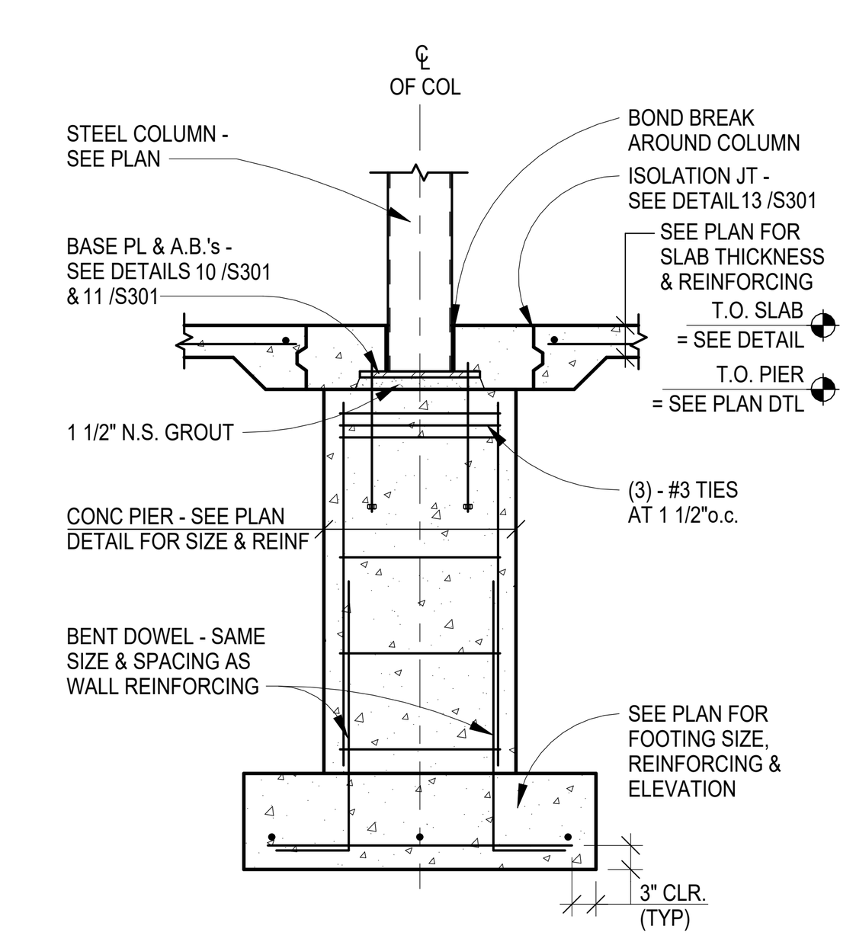
P2 | S303 **Pier**
1/2" = 1'-0"



P3 | S303 **Pier**
1/2" = 1'-0"



P4 | S303 **Pier**
1/2" = 1'-0"



1 | S303 **Pier**
1/2" = 1'-0"

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School - STRUCTURAL

210 12th Street NE
Valley City, ND 58072

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

ELECTRICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. JOCHIM
PE-9135
DATE 03-10-2026
NORTH DAKOTA

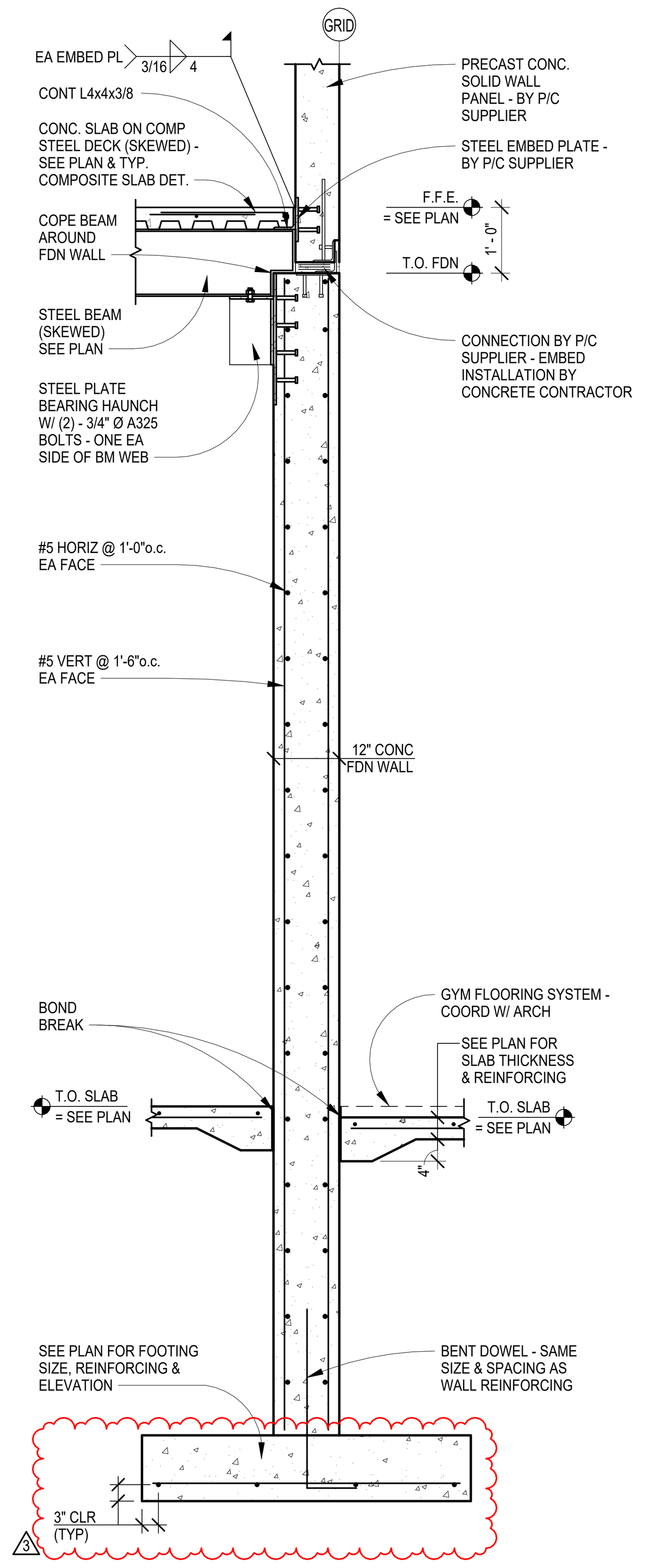
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
1	ADDENDUM #1	03/17/26
2	ADDENDUM #2	03/24/26
3	ADDENDUM #3	03/30/26

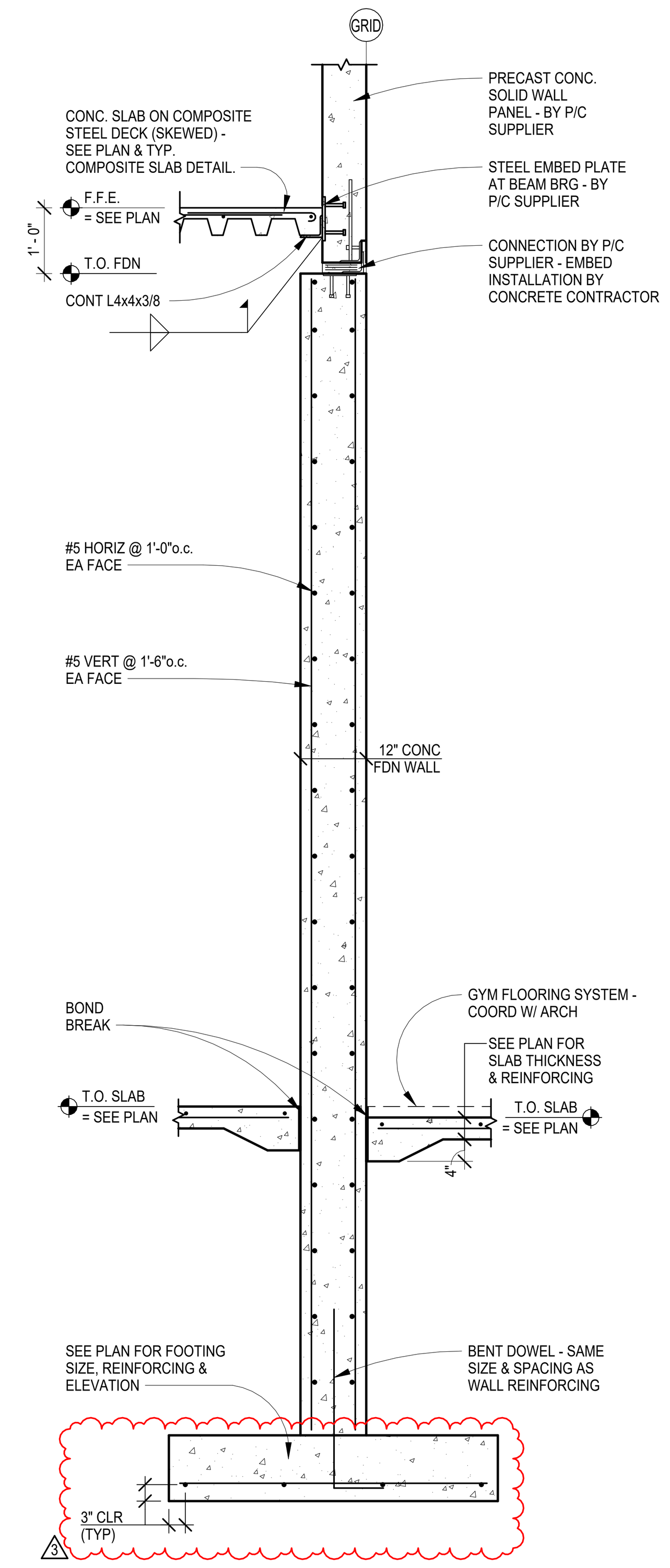
DRAWN BY: MFJ, CMM   JN: 24-028

Foundation Details

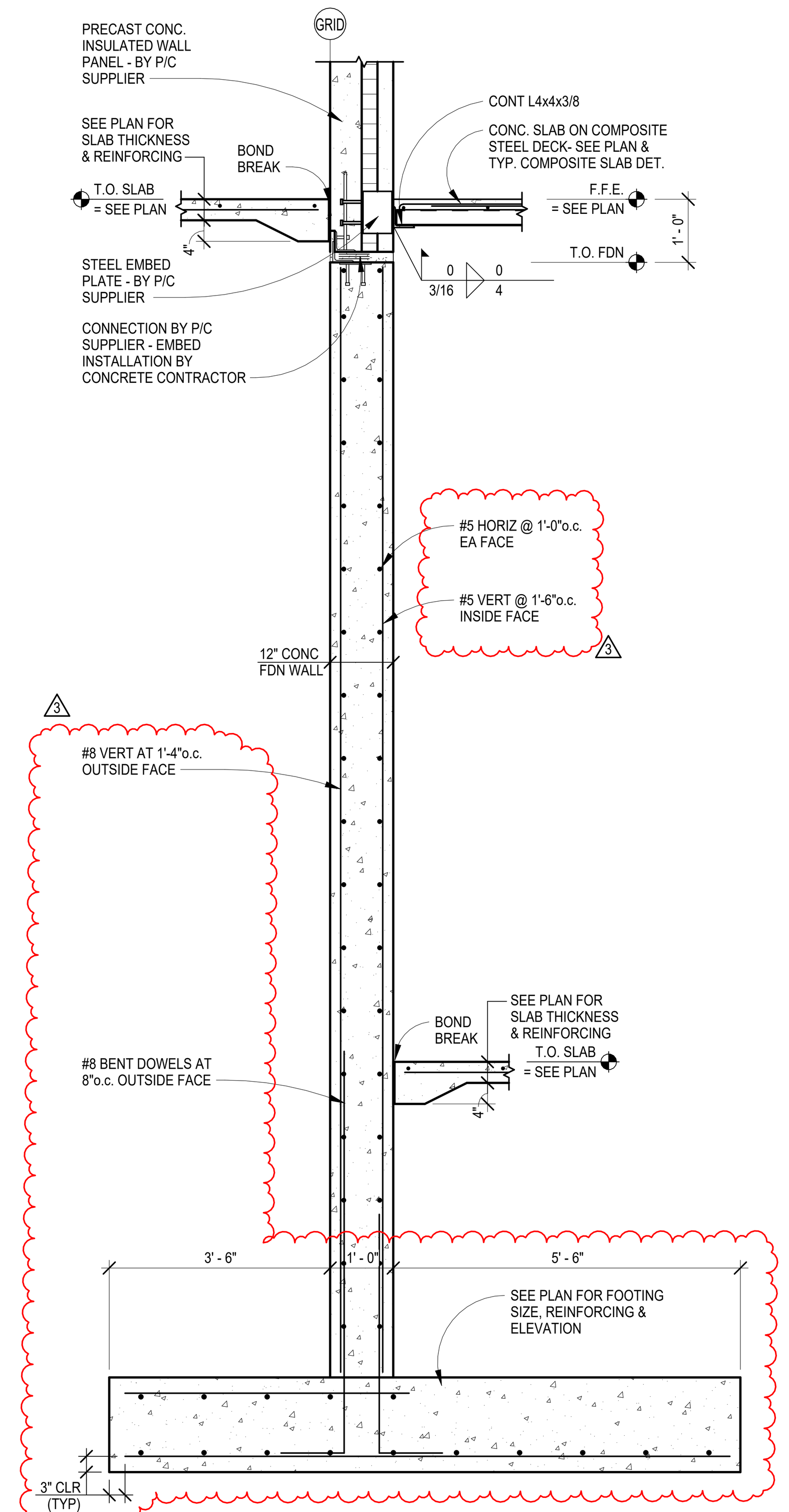
SHEET
S303



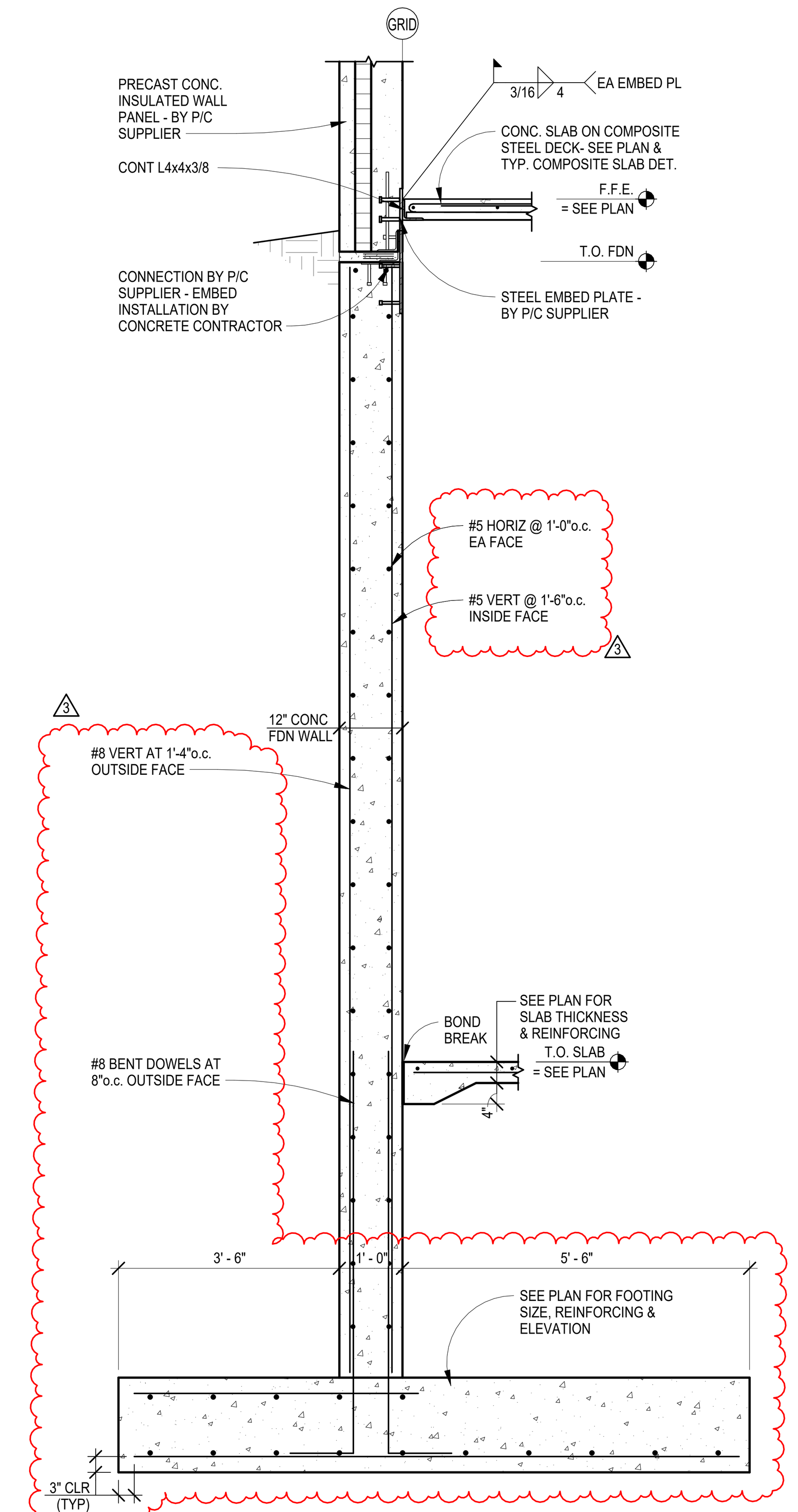
5 S304 **Retaining Wall at Beam Brg at Gym**
1/2" = 1'-0"



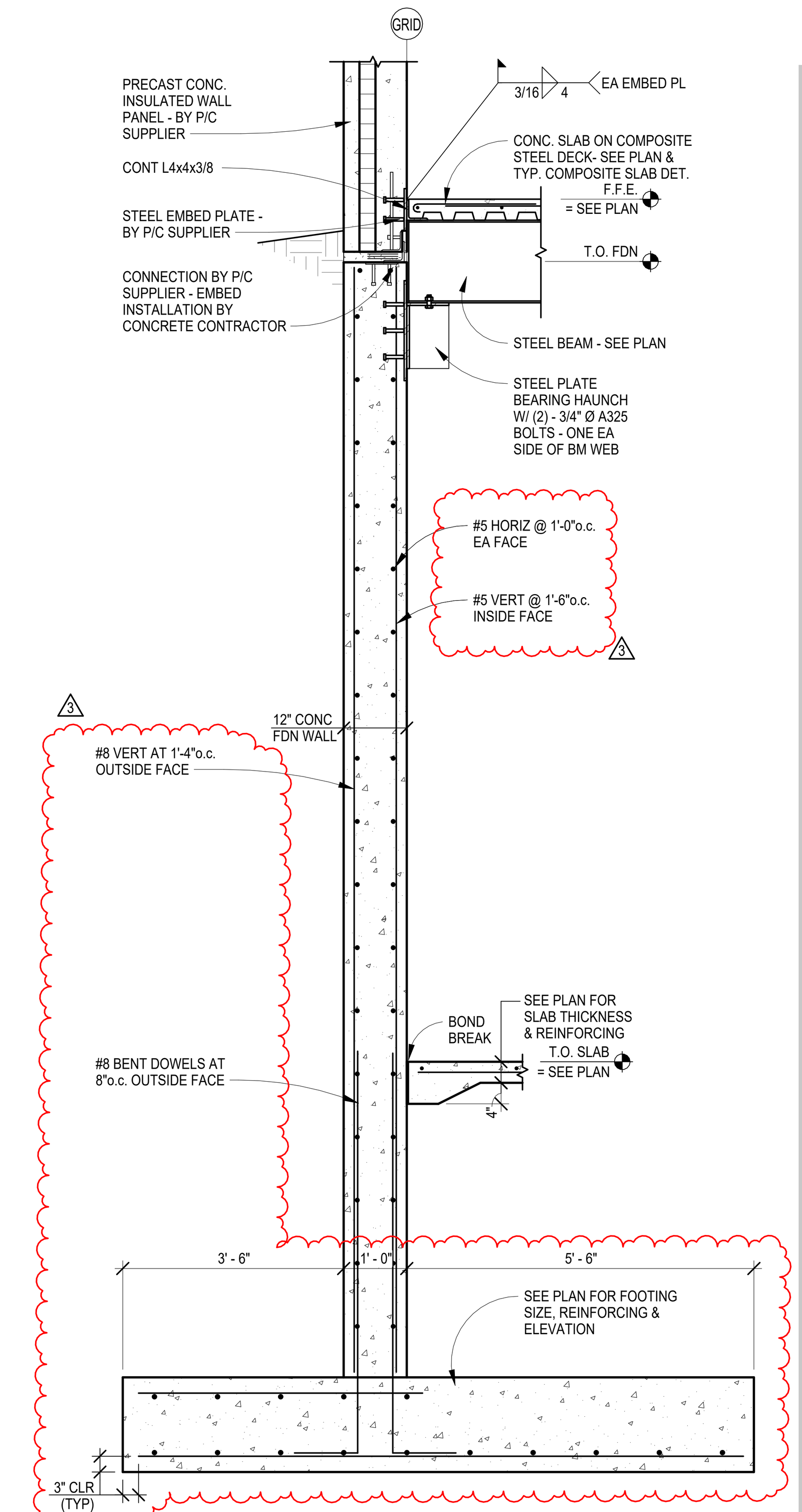
4 S304 **Retaining Wall / Floor Deck Brg at Gym**
1/2" = 1'-0"



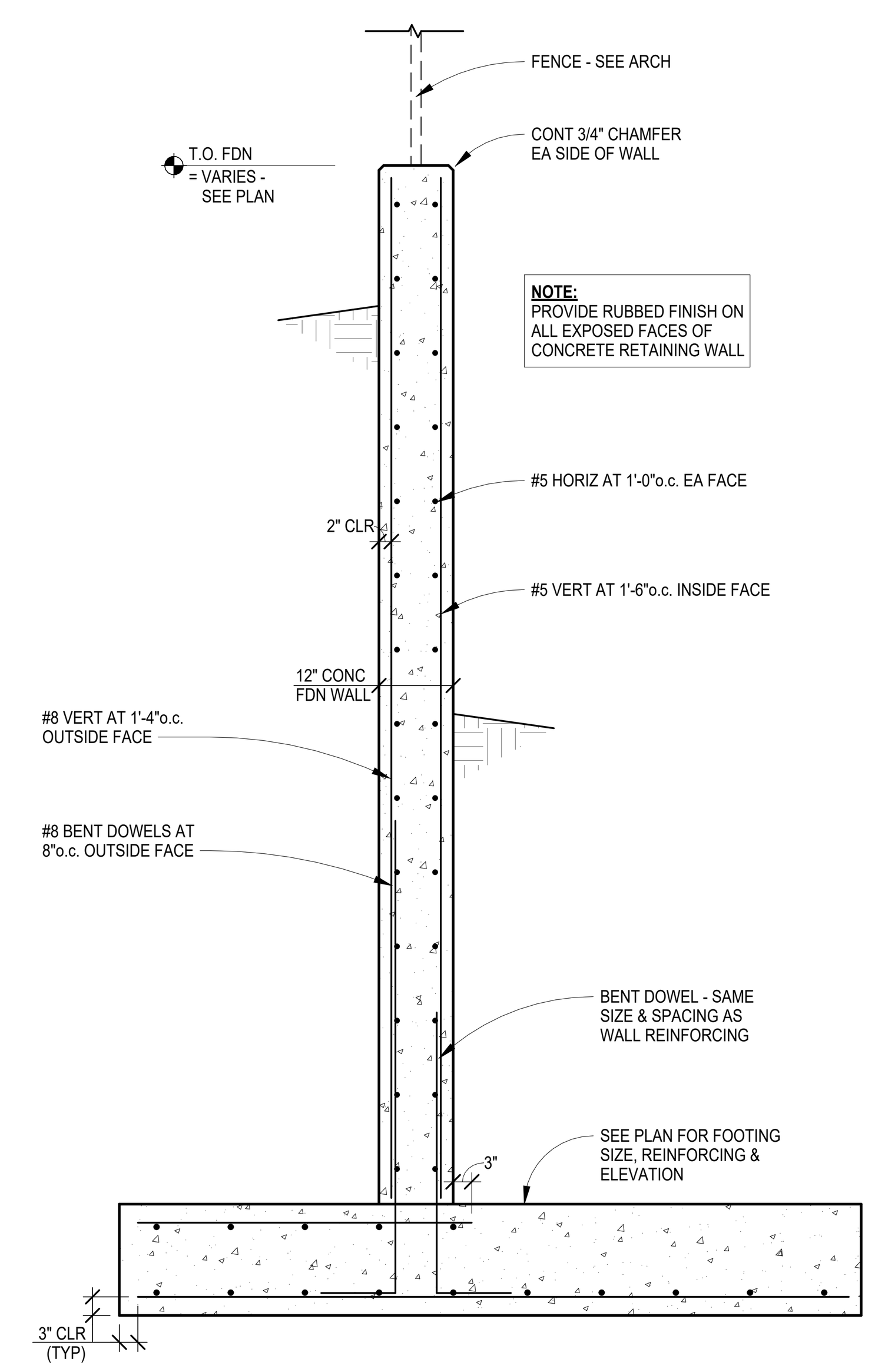
3 S304 **Floor Deck Brg at Retaining FDN Wall**
1/2" = 1'-0"



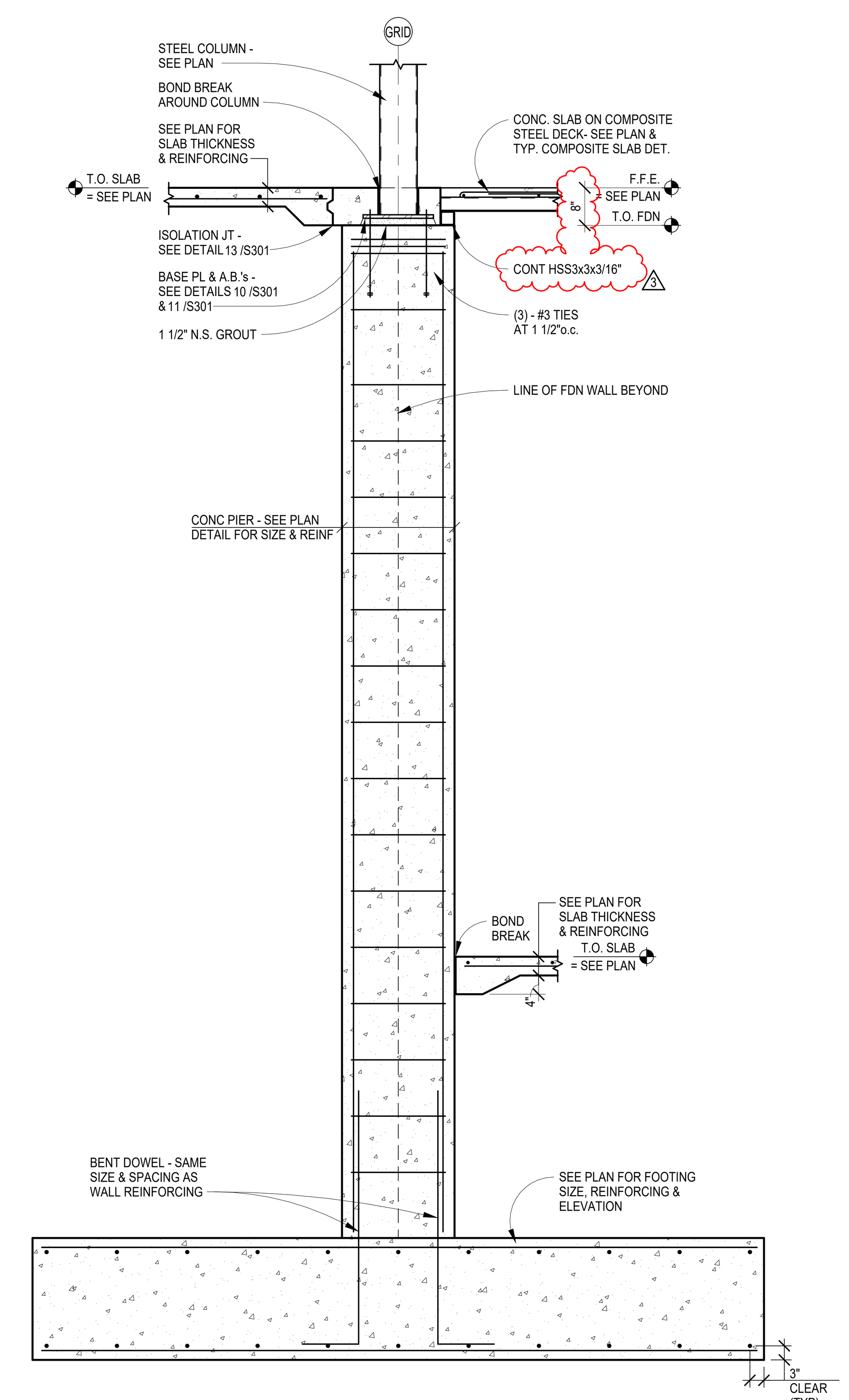
2 S304 **Floor Deck Brg at Retaining FDN Wall**
1/2" = 1'-0"



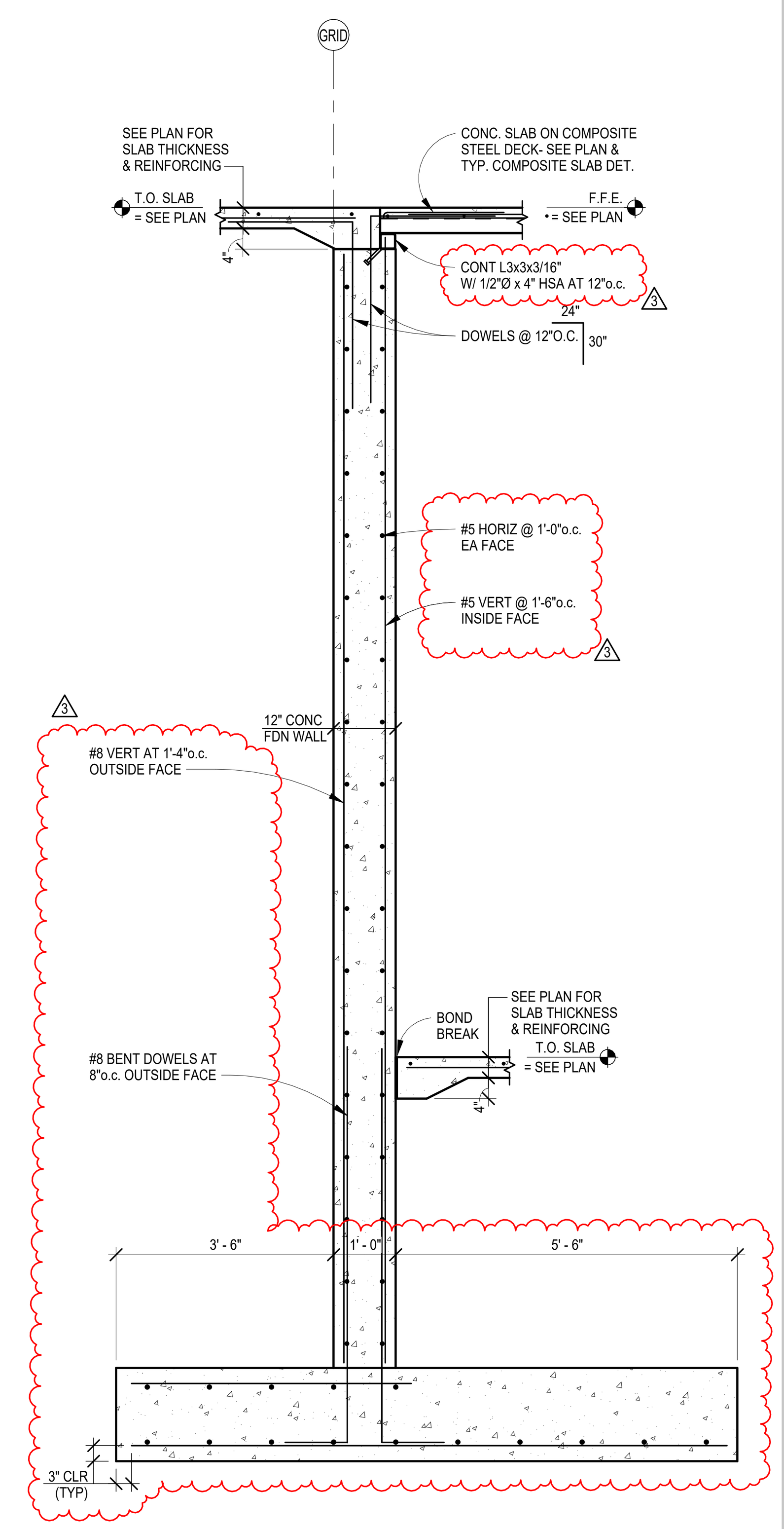
1 S304 **Beam Brg at Retaining FDN Wall**
1/2" = 1'-0"



8 S304 **Exterior Retaining Wall**
1/2" = 1'-0"



7 S304 **Floor Deck Brg / Pier**
1/2" = 1'-0"



6 S304 **Floor Deck Brg at Retaining FDN Wall**
1/2" = 1'-0"

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School - STRUCTURAL

210 12th Street NE
Valley City, ND 58072

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. JOCHIM
PE-9135
DATE 03-10-2026
NORTH DAKOTA

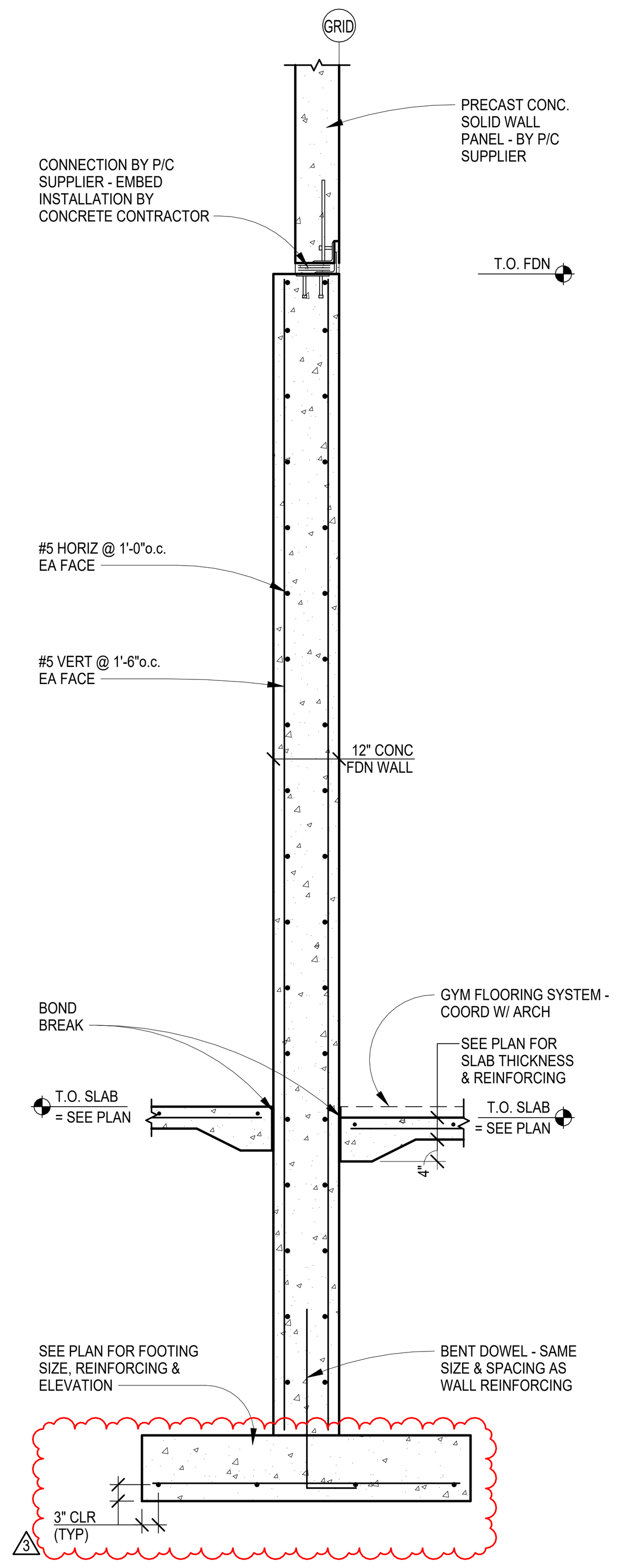
DRAWING HISTORY

NO.	DESCRIPTION	DATE
3	ADDENDUM #3	03/10/26

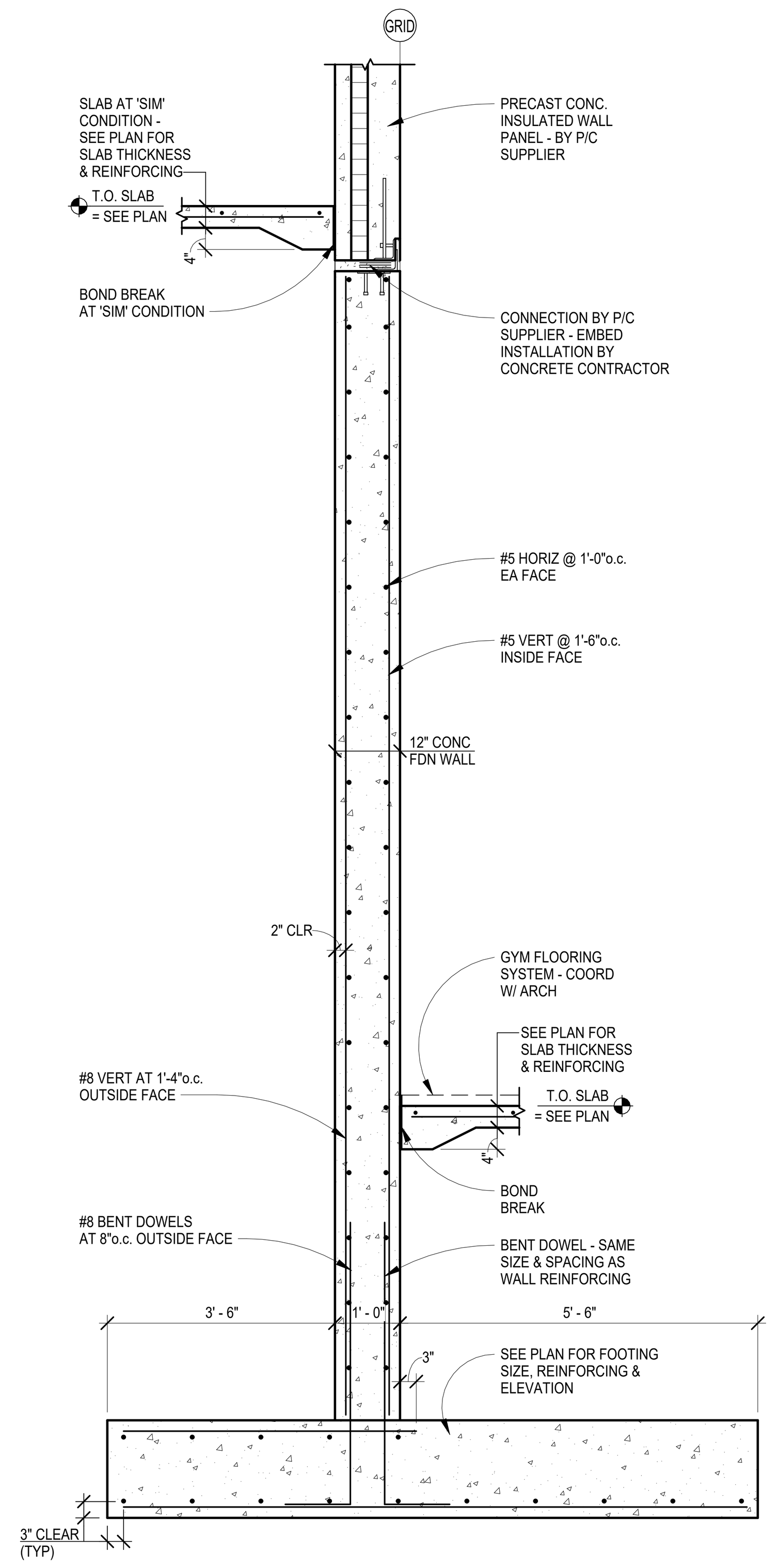
DRAWN BY: MFJ, CMM JN: 24-028

Foundation Details - Full Height

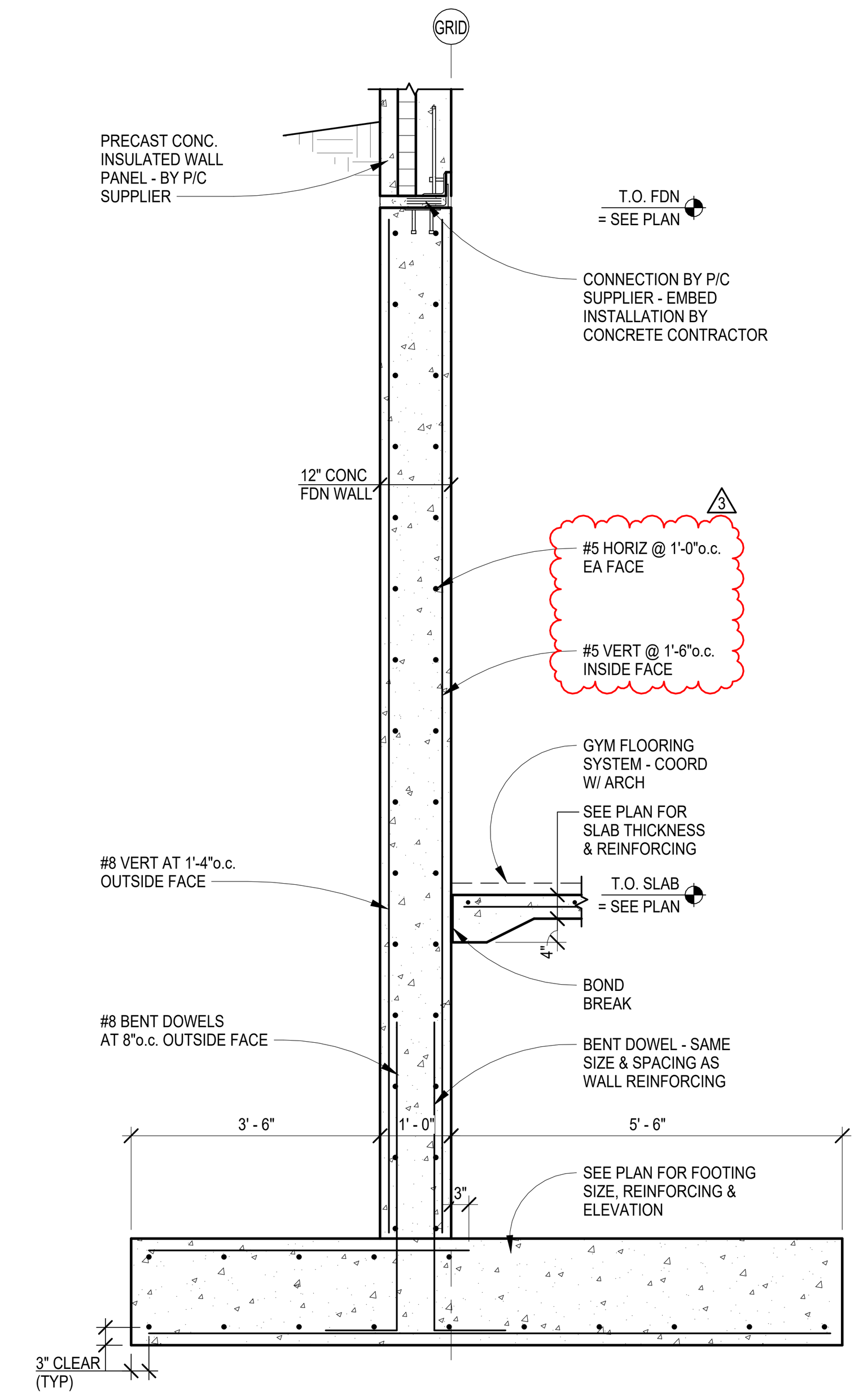
SHEET
S304



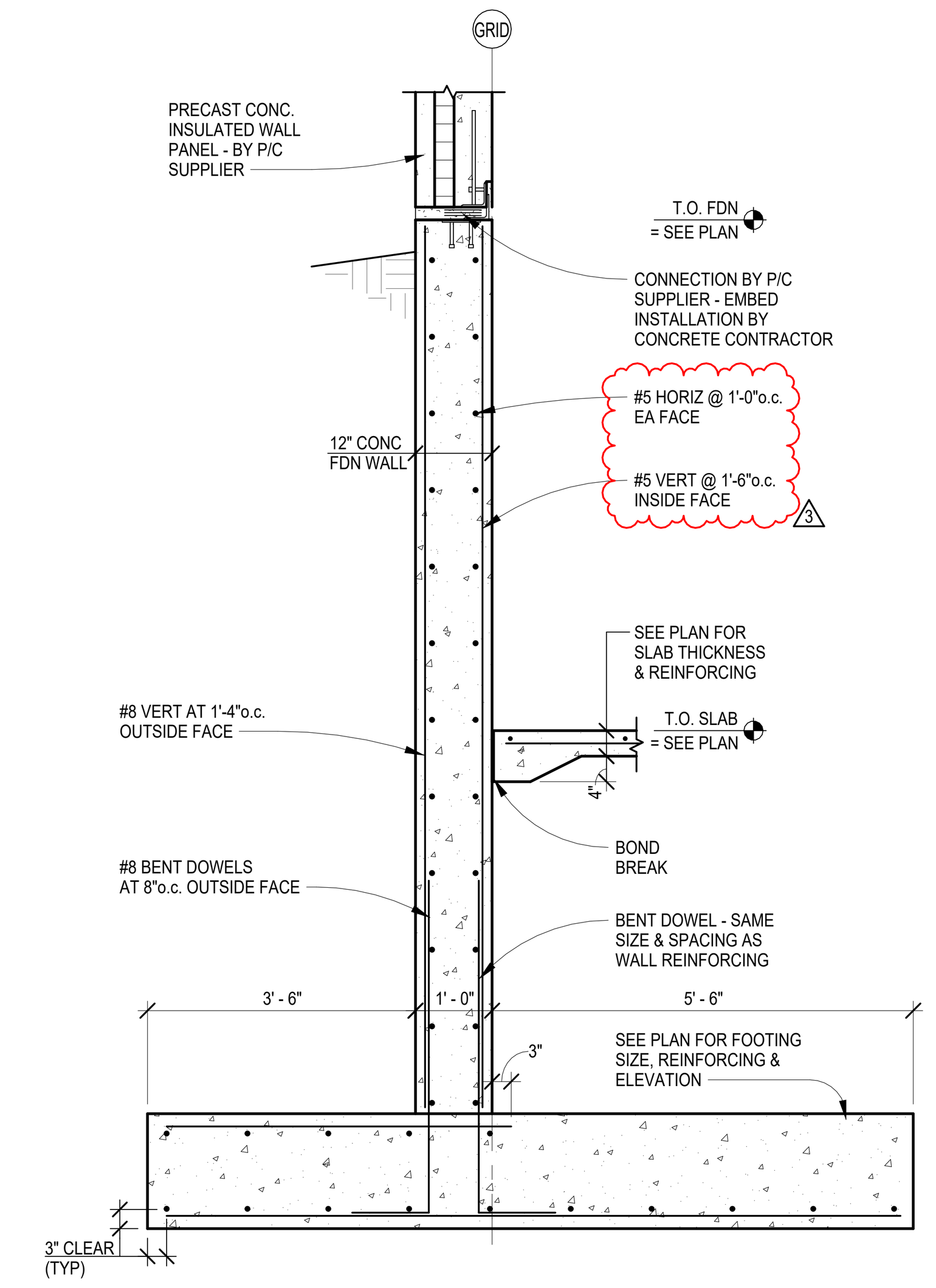
5 S305 **Retaining FDN Wall at Gym**
1/2" = 1'-0"



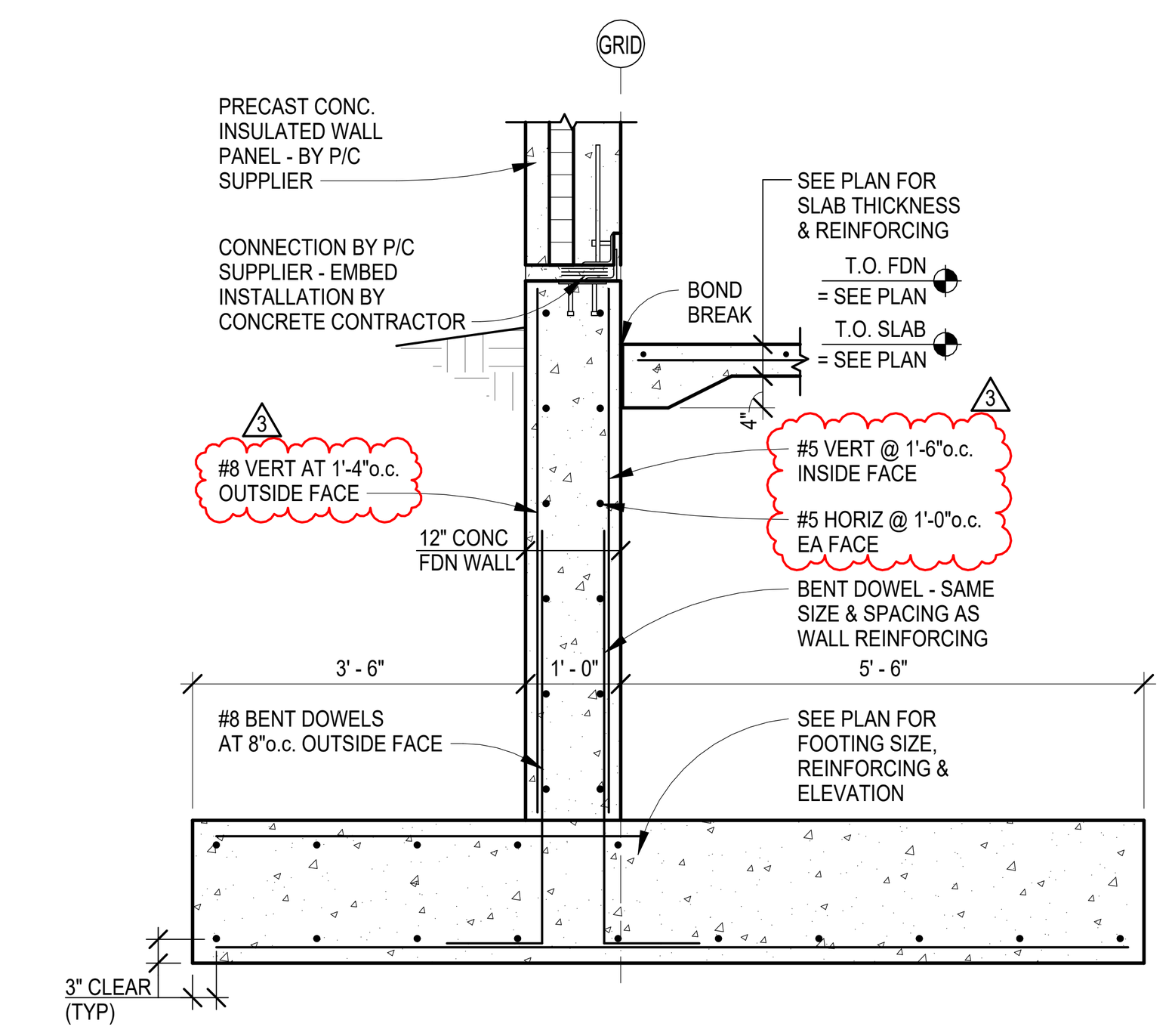
4 S305 **Retaining FDN Wall at Gym**
1/2" = 1'-0"



3 S305 **Retaining FDN Wall at Gym**
1/2" = 1'-0"



2 S305 **Retaining FDN Wall at Music**
1/2" = 1'-0"



1 S305 **Retaining Foundation Wall at Music**
1/2" = 1'-0"

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School - STRUCTURAL
210 12th Street NE
Valley City, ND 58072

STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. JOCHIM
PE-9135
DATE 03-10-2026
NORTH DAKOTA

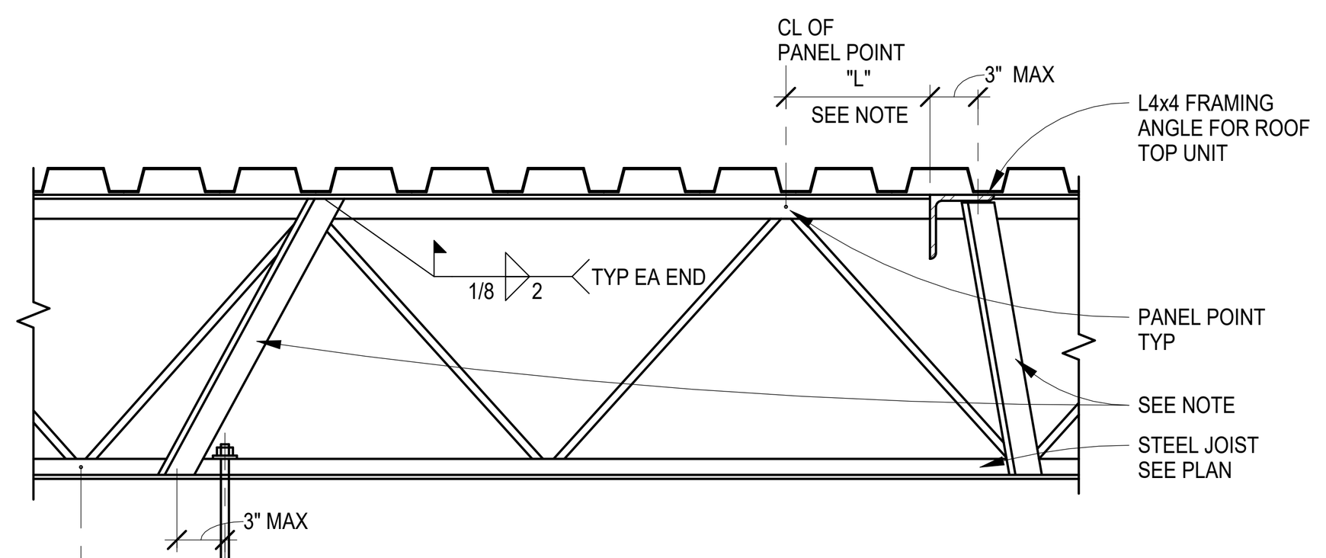
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
3	ADDENDUM #3	03/30/26

DRAWN BY: MFJ, CMM JN: 24-028

Foundation Details - Full Height

SHEET
S305

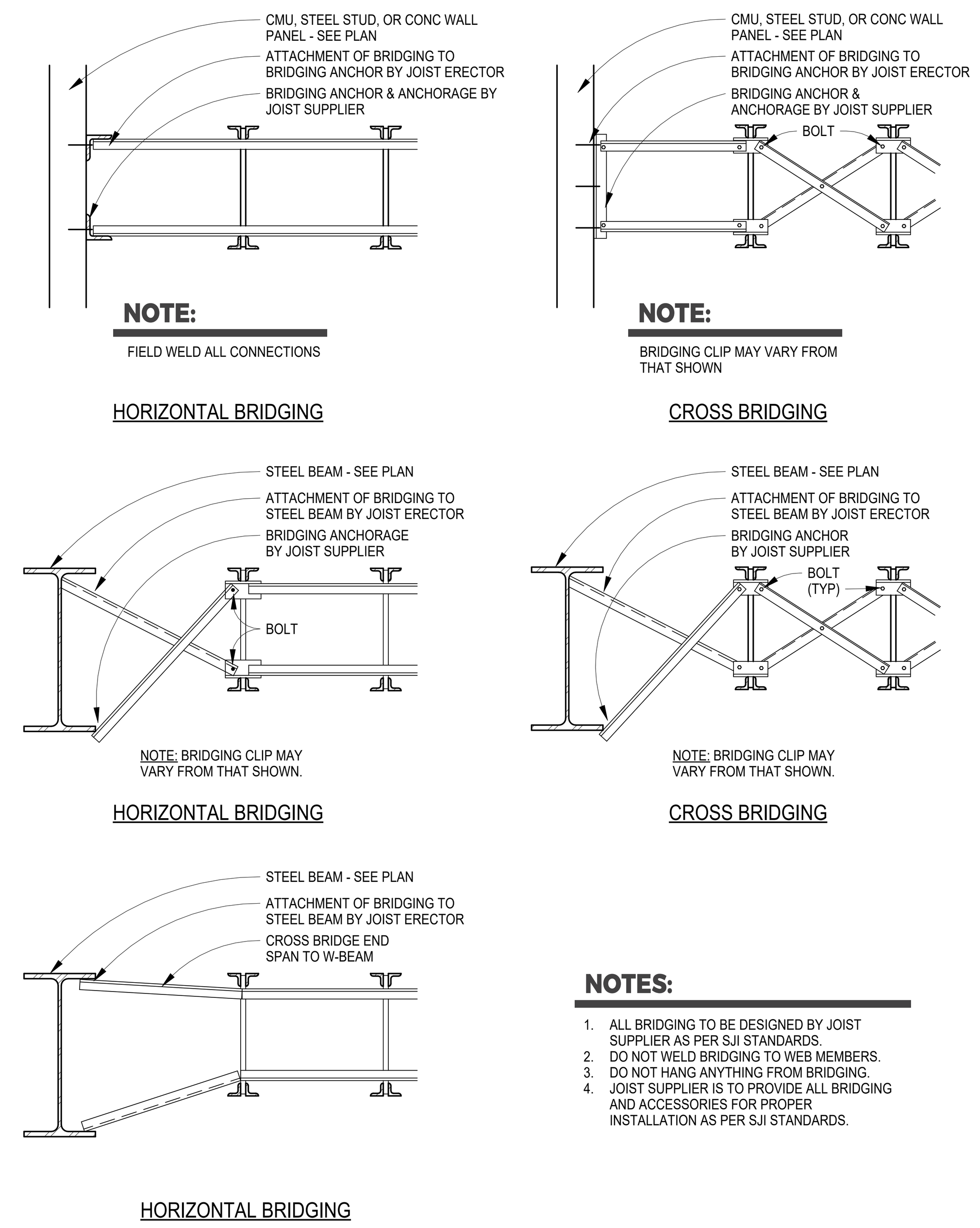


NOTES:

1. PROVIDE L2x2x3/16" CHORD BRACE TO NEXT ADJACENT PANEL POINT WHERE "L" IS GREATER THAN 3".
2. WELDING TO JOIST SHALL BE PERFORMED BY CERTIFIED WELDERS. TAKE CARE TO AVOID DAMAGE OR LOSS OF SECTION OF JOIST COMPONENTS BY OVER-WELDING.

16 S501 Joist Reinforcement

1" = 1'-0"

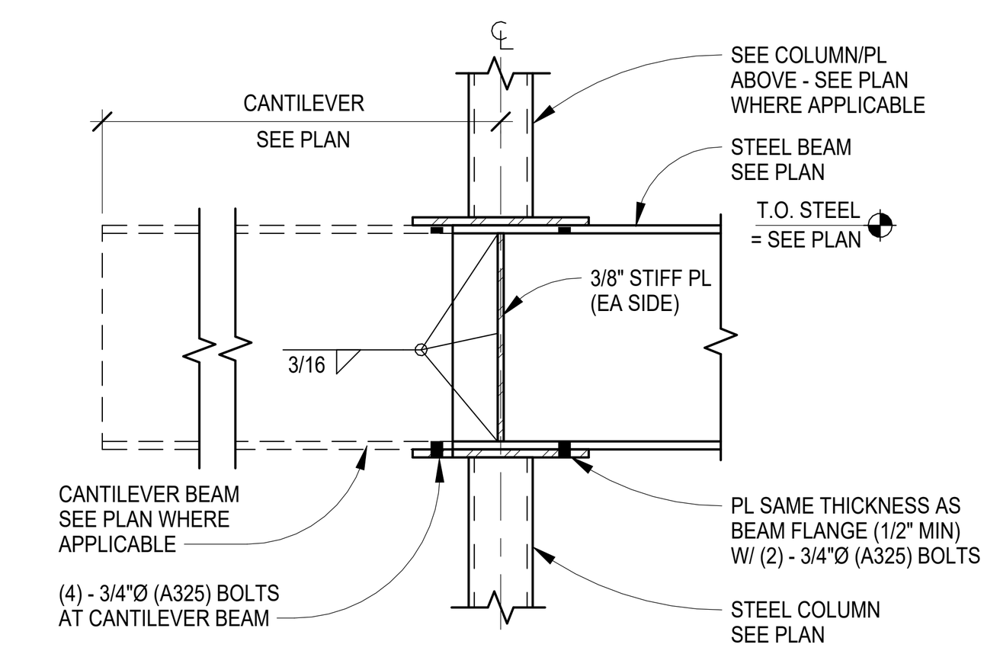


NOTES:

1. ALL BRIDGING TO BE DESIGNED BY JOIST SUPPLIER AS PER SJI STANDARDS.
2. DO NOT WELD BRIDGING TO WEB MEMBERS.
3. DO NOT HANG ANYTHING FROM BRIDGING.
4. JOIST SUPPLIER IS TO PROVIDE ALL BRIDGING AND ACCESSORIES FOR PROPER INSTALLATION AS PER SJI STANDARDS.

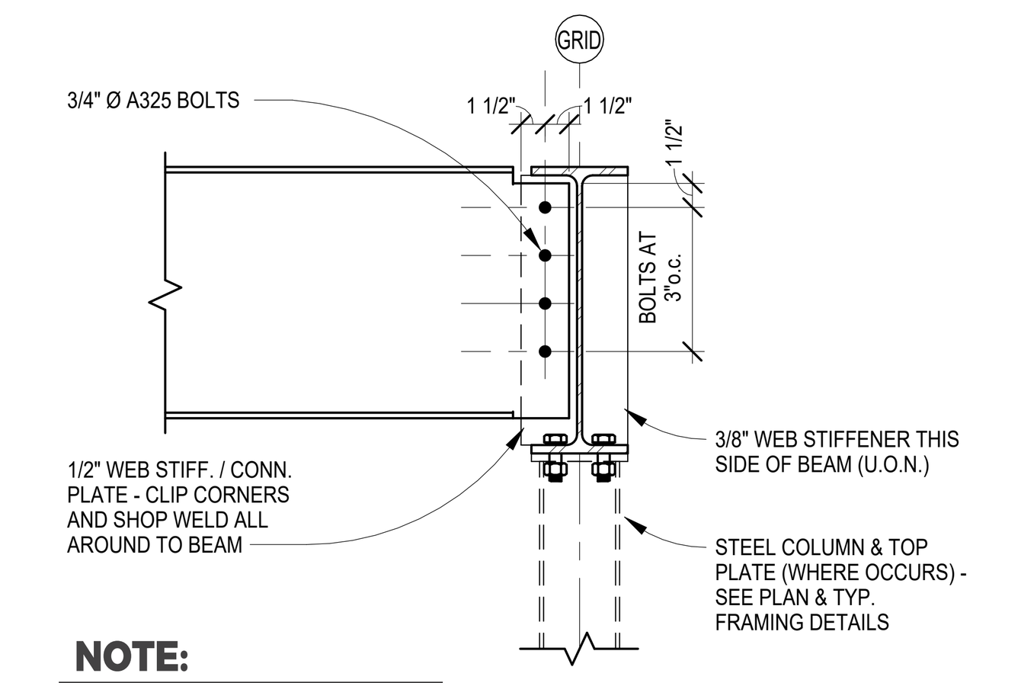
13 S501 Typical Joist Bridging Anchorage

1" = 1'-0"



8 S501 Beam End Connection

1" = 1'-0"



NOTE:

EXTEND STIFF. / CONN. PLATE PAST EXTENT OF BEAM FLANGE AS REQUIRED TO MEET BOLT EDGE DISTANCE REQUIREMENTS.

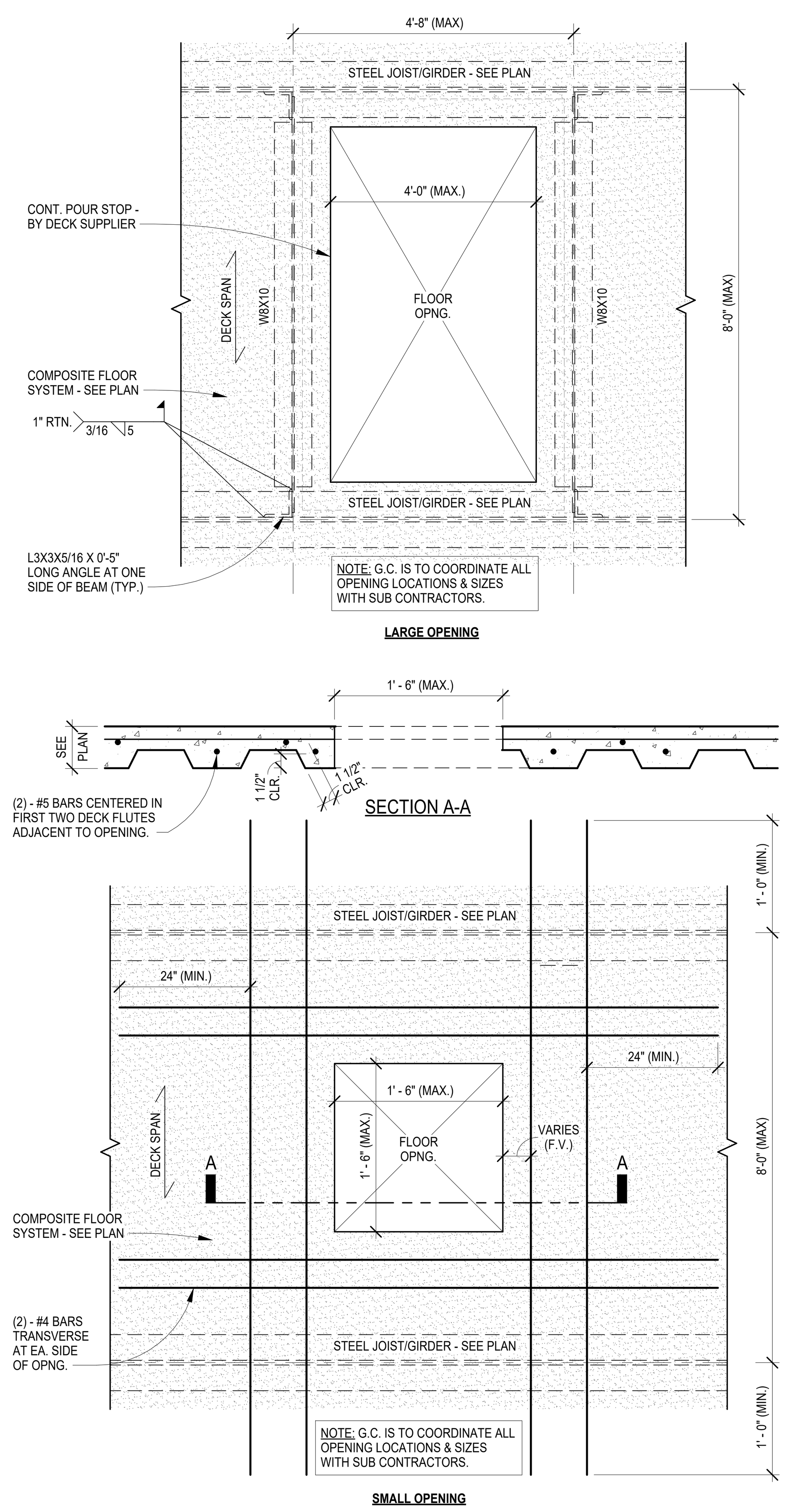
3 S501 Beam Connection At Stiffener Plate

1" = 1'-0"

STEEL CONNECTION NOTES:

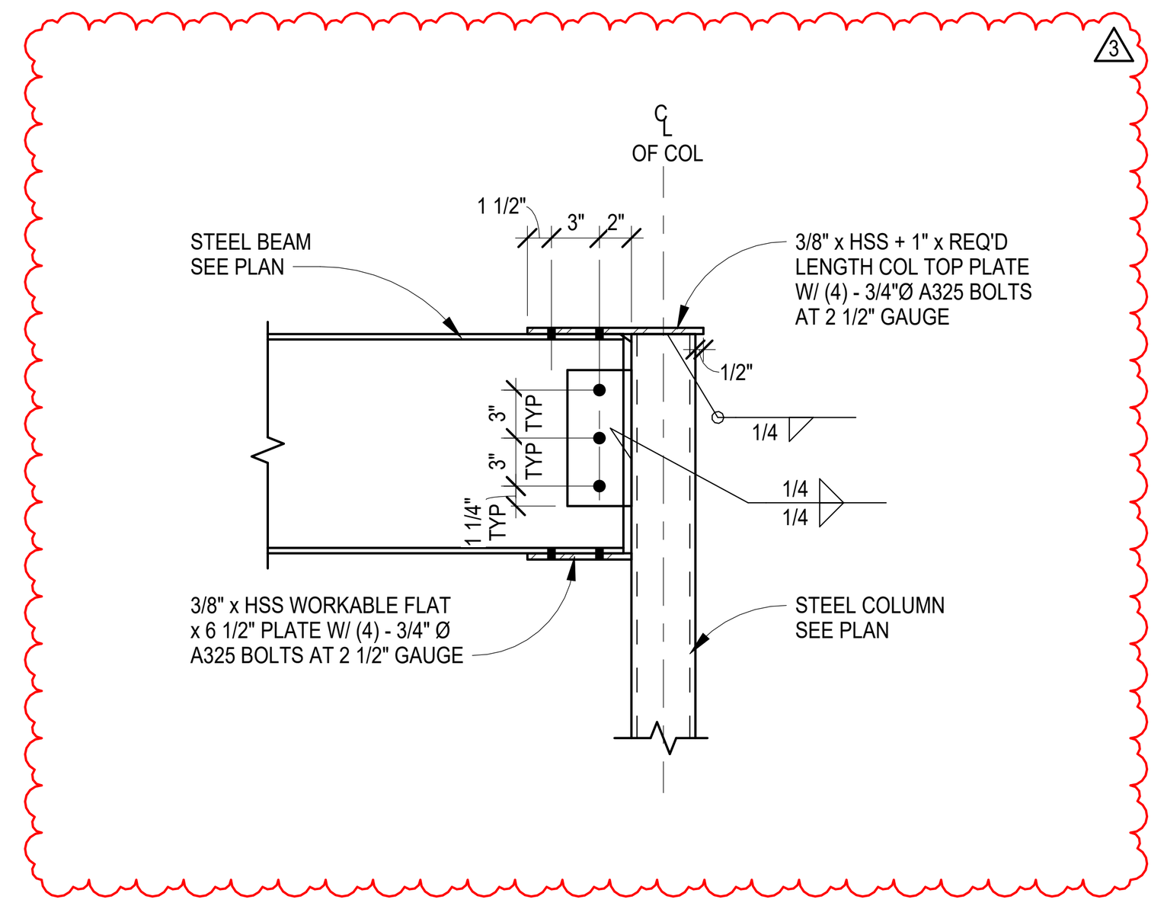
1. NOTES ARE APPLICABLE FOR ALL STEEL BEAM CONNECTIONS INCLUDING BEAM-BEAM, BEAM-COLUMN AND BEAM-EMBED PL FOR ALL SHEAR AND MOMENT CONNECTIONS.
2. USE NUMBER OF ROWS OF BOLTS REQUIRED BASED ON REACTIONS LISTED ON PLANS. USE MINIMUM ROWS AS LISTED.
3. WHERE BEAMS FRAME IN FROM BOTH SIDES OF GIRDER, ADD OSHA ERECTION BOLT TO BOTTOM OF CONN IN ADDITION TO MINS ROWS OF BOLTS.
4. SINGLE ANGLE CONN (W/ REQ'D CAPACITY) SHALL BE USED AT LOCATIONS OF LIMITED 2-SIDE ACCESS.
5. SKEWED BEAMS
   A. IF BEAM IS SKEWED ≤ 45°, USE BENT PL's (3/8" MIN) INSTEAD OF ANGLES. BENT PL's PERPENDICULAR TO GRAIN.
   B. IF BEAM IS SKEWED > 45°, USE SHEAR PL (3/8" MIN) INSTEAD OF ANGLES.

BEAM SIZE	MINIMUM ROWS OF BOLTS
W8, 10	2
W12, 14, 16	3
W18, 21	4
W24, 27	5
W30	6



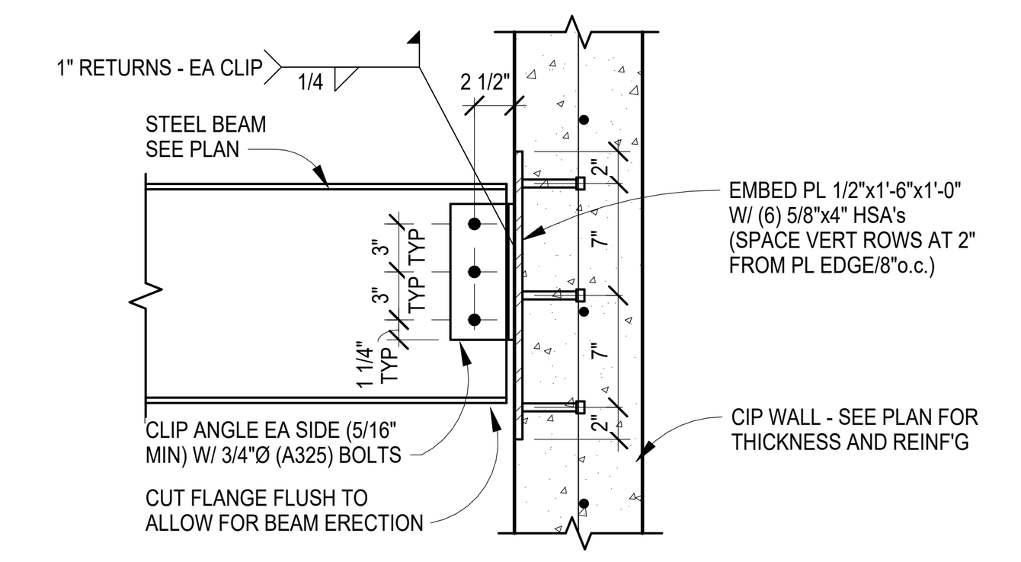
17 S501 Composite Floor Opening

1" = 1'-0"



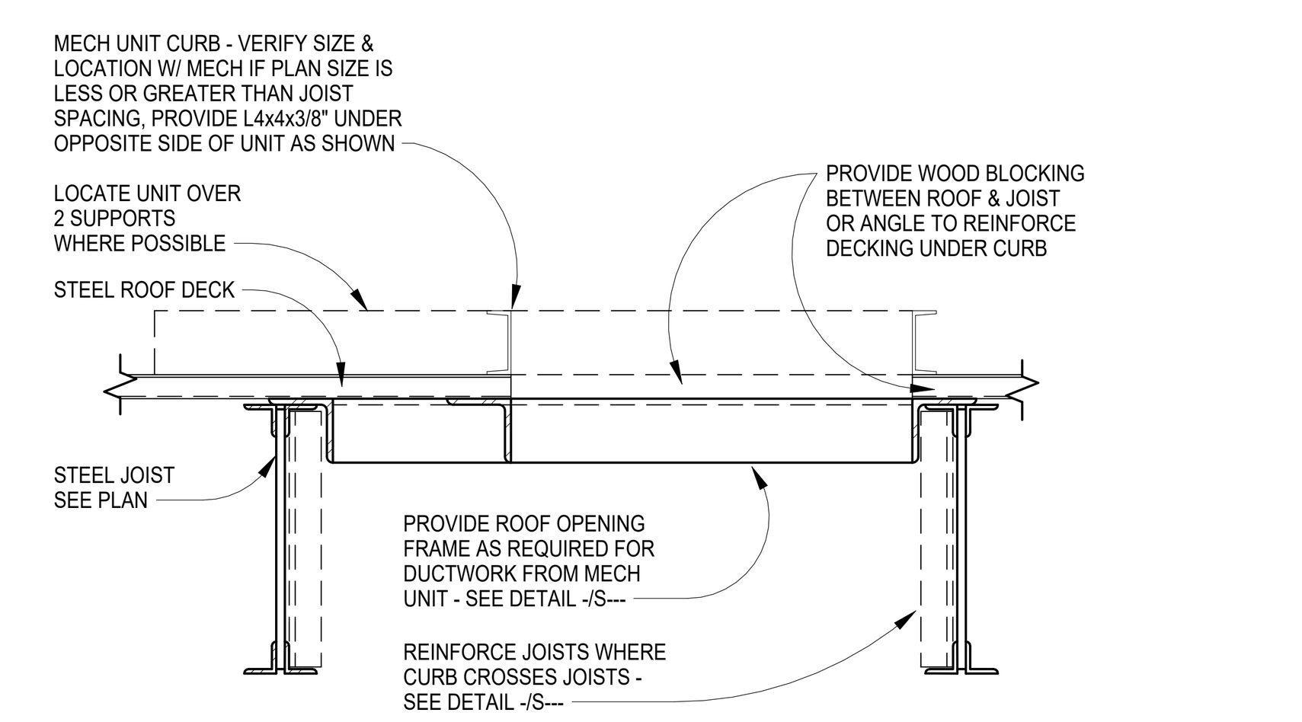
9 S501 Moment Connection

1" = 1'-0"



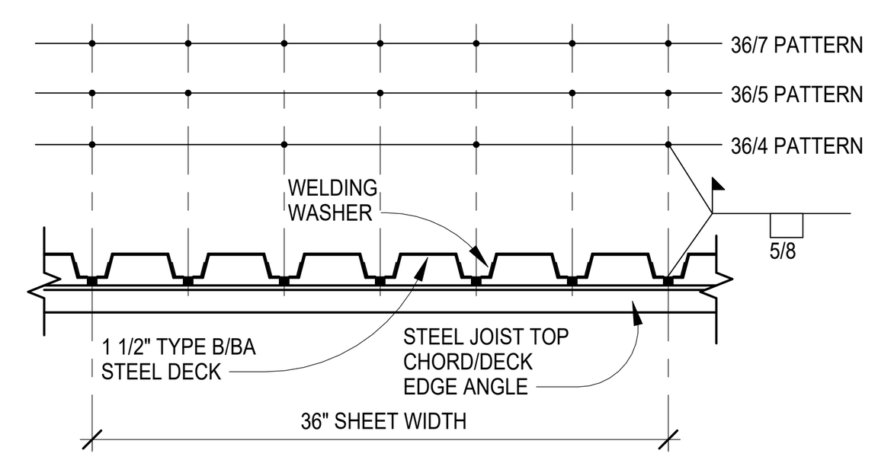
4 S501 Beam/ CIP Wall Connection

1" = 1'-0"



14 S501 Mechanical Support

1" = 1'-0"



NOTES:

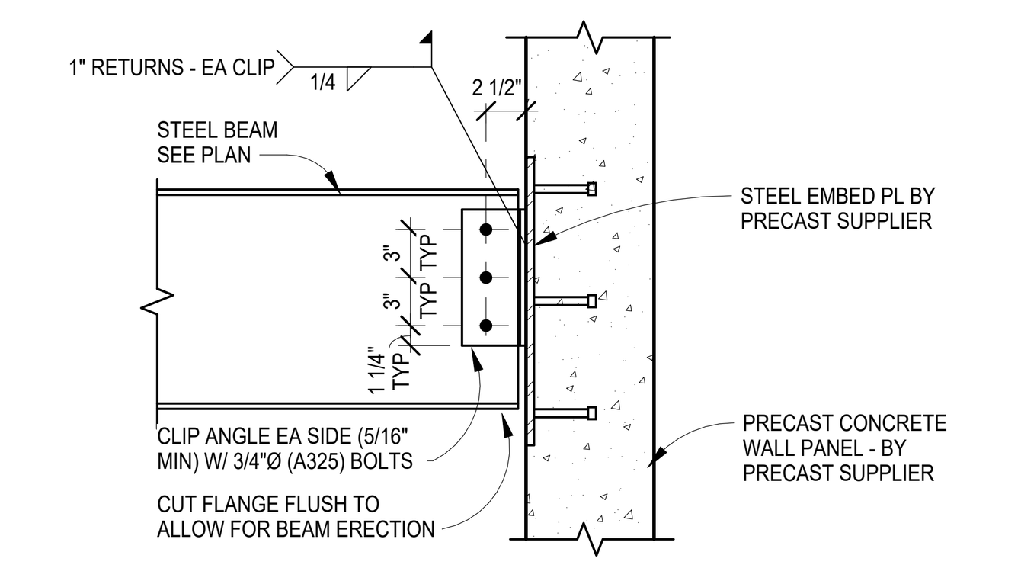
1. WHEN SPAN EXCEEDS 5'-0", SIDES LAPS SHALL BE FASTENED AT MID SPAN OR 3'-0" INTERVALS (WHICHEVER IS SMALLER) W/ #10 TEK SCREWS.
2. LAP DECK ENDS 2" MINIMUM AND WELD TO SUPPORT AT 6"o.c.
3. SEE PLAN FOR DECK FASTENING PATTERN (36/4 MIN).
4. SIDE LAP FASTENERS SHALL BE #10 TEK SCREWS - SEE PLAN FOR REQUIREMENTS.
5. WELDING WASHERS REQUIRED FOR DECK 22 GA & LIGHTER. WASHERS SHALL BE 16 GA W/ NOMINAL 1" HOLE.
6. IN LIEU OF WELDS THE CONTRACTOR MAY USE HILTI STEEL DECK FASTENING SYSTEM W/ THE SAME PATTERN. HILTI FASTENERS ARE AS FOLLOWS: BAR JOIST/STRUC STL tf ≤ 3/8", USE X-HSN 24
   BAR JOIST/STRUC STL tf > 3/8", USE X-ENP-19L15

* WASHERS MAY BE OMITTED AT 22 GA DECKING IF CONTRACTOR CAN DEMONSTRATE CAPACITY TO PROPERLY WELD DECK WITHOUT WASHER.

(TYPE 'B')

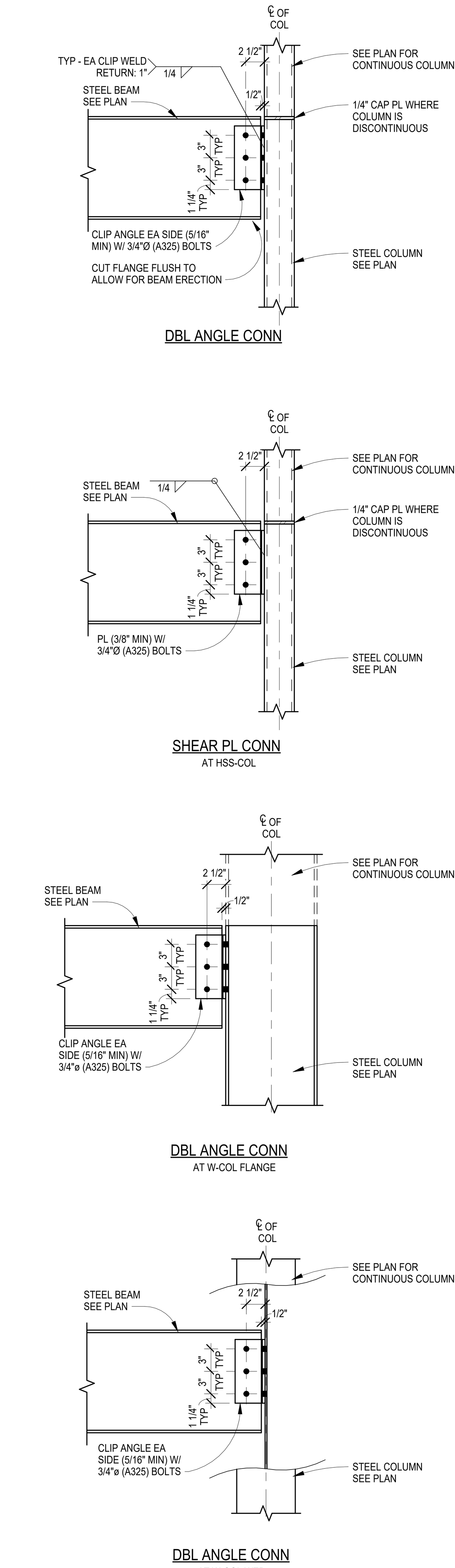
10 S501 Deck Fastening

1" = 1'-0"



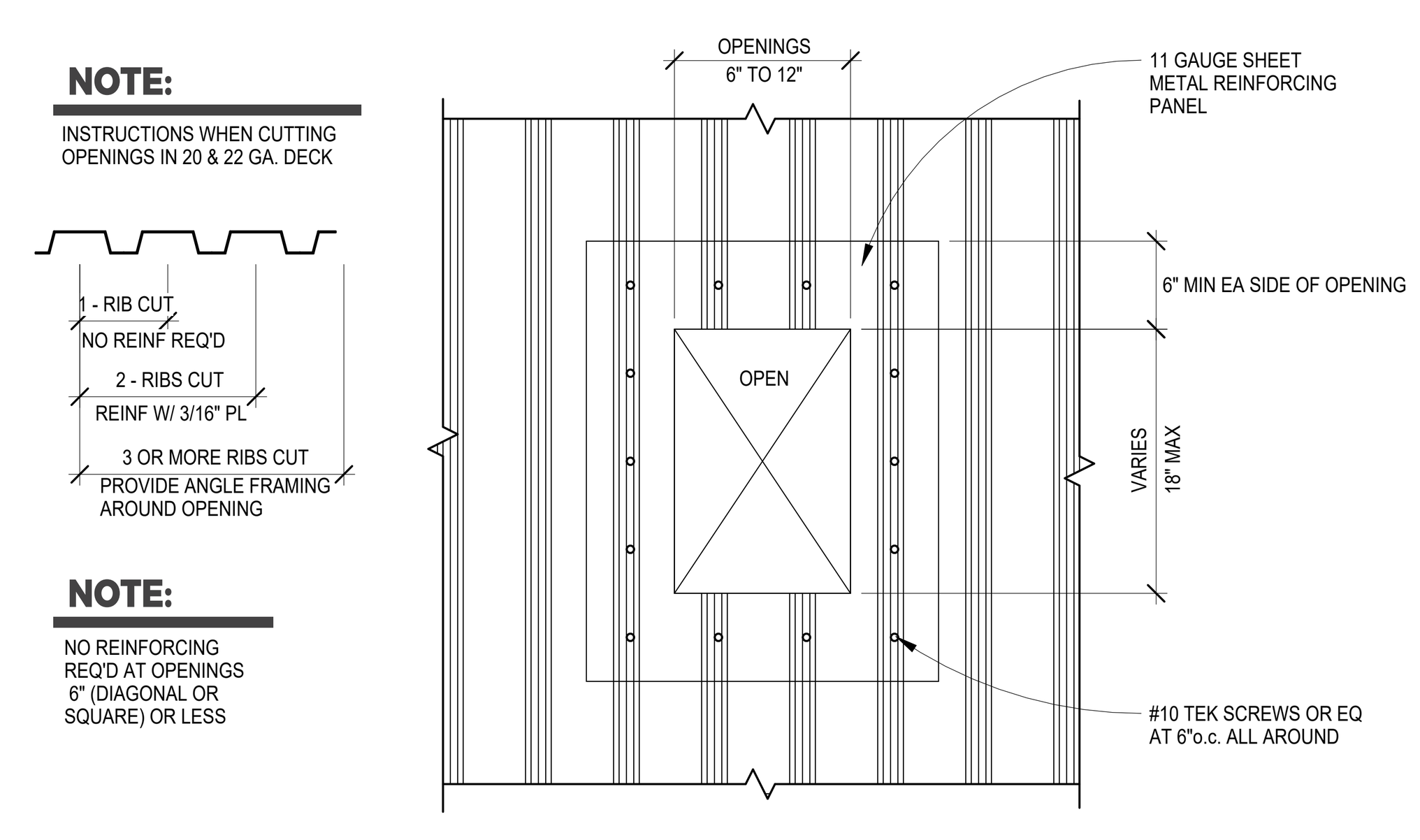
5 S501 Beam/ Precast Wall Connection

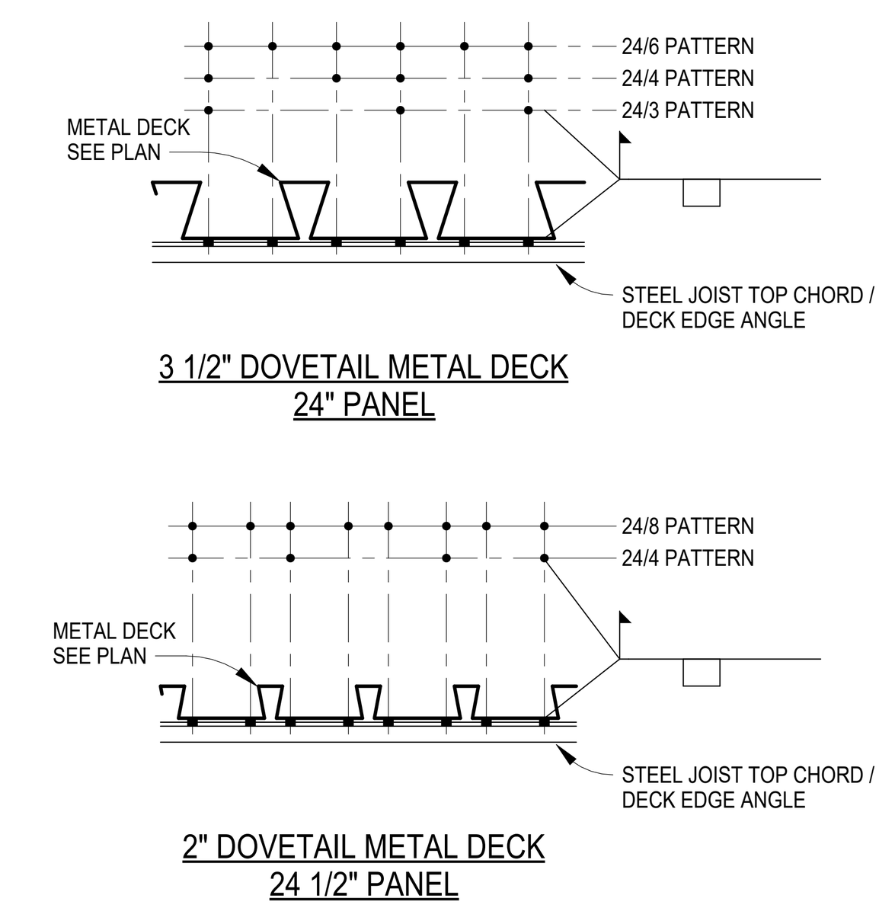
1" = 1'-0"



1 S501 Beam/ Column Connection

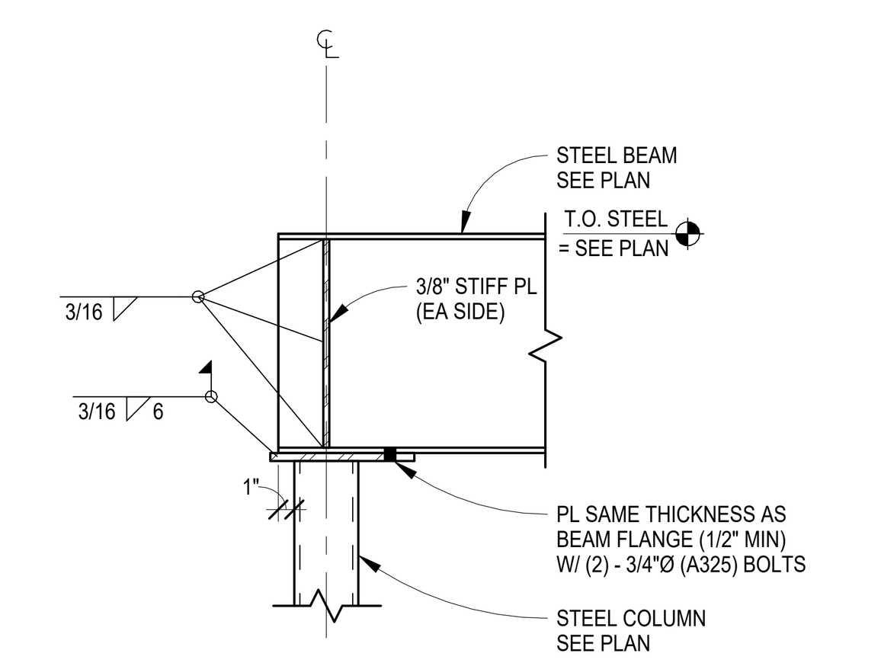
1" = 1'-0"





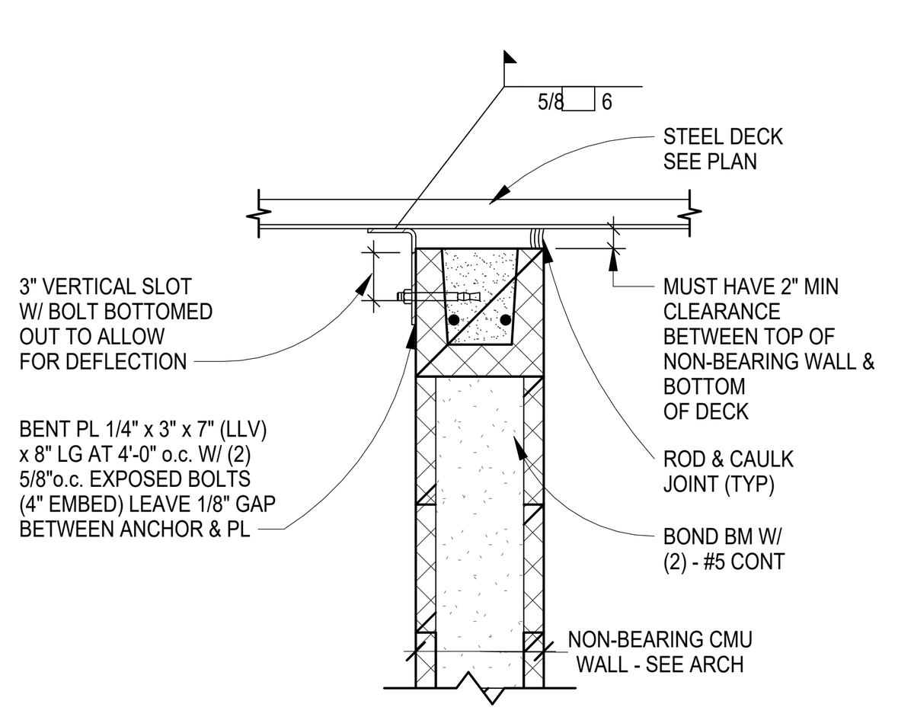
11 S501 Deck Fastening

1" = 1'-0"



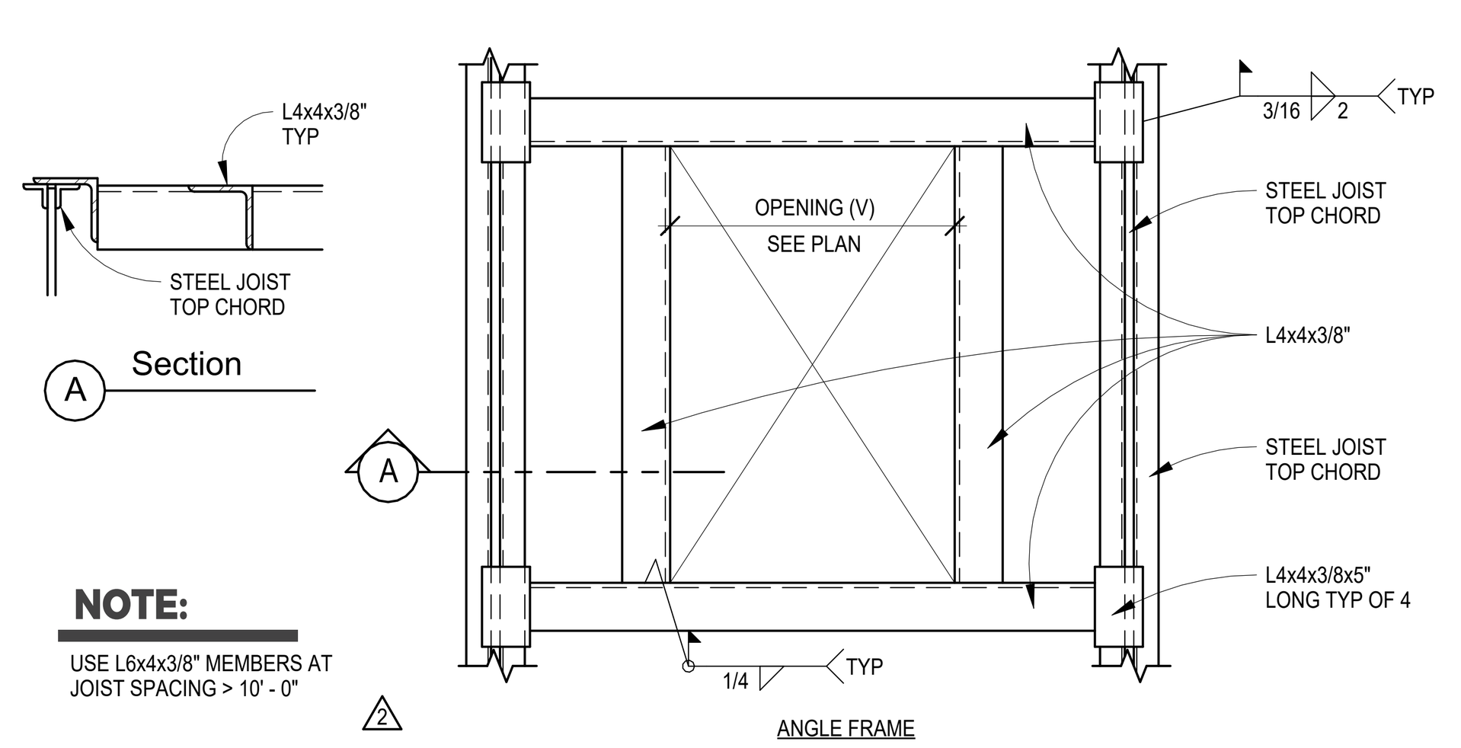
6 S501 Beam End Connection

1" = 1'-0"



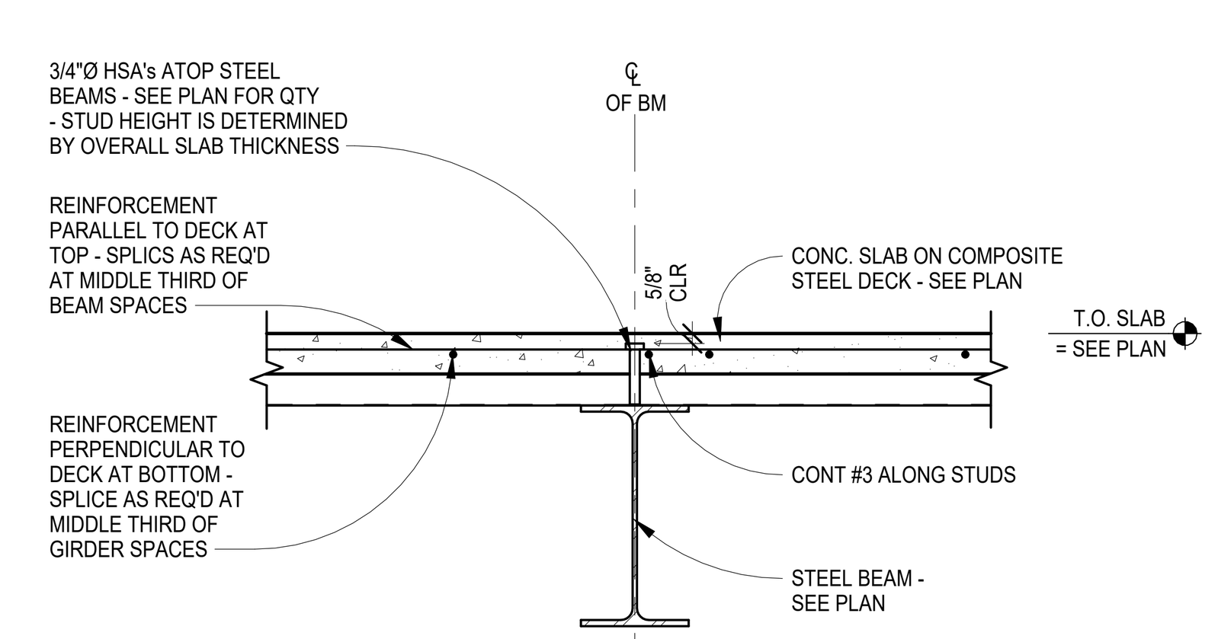
18 S501 Deck at Non Bearing CMU

1" = 1'-0"



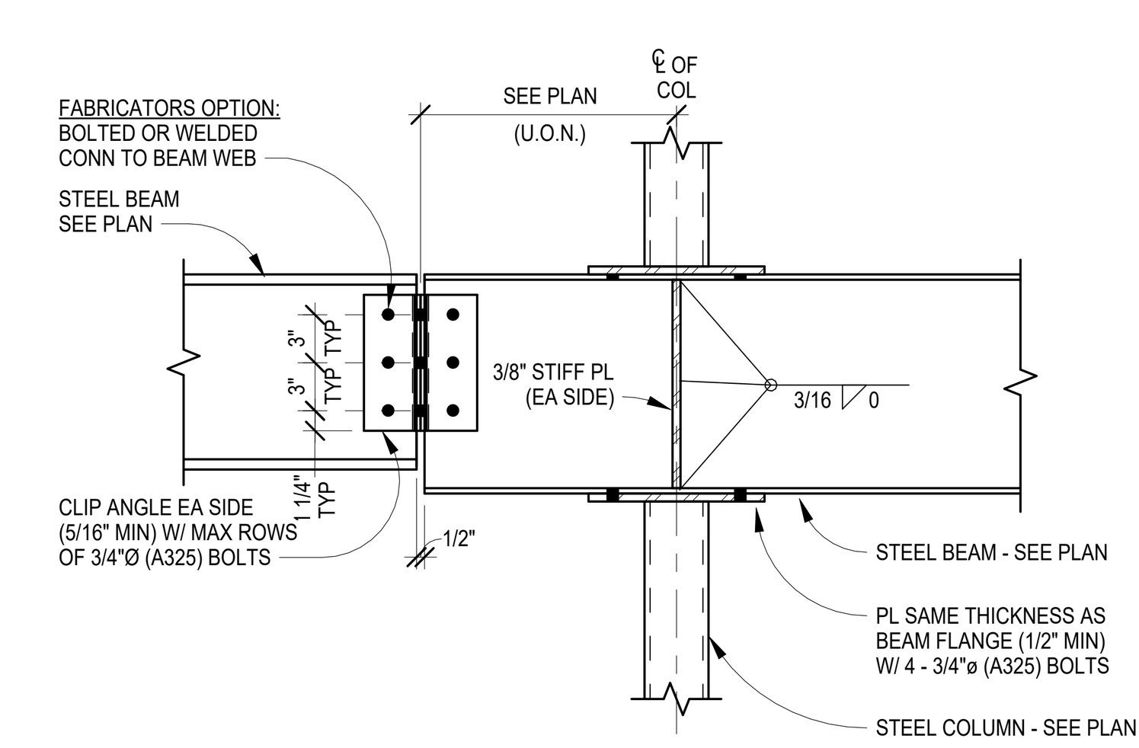
15 S501 Roof Deck Opening

1" = 1'-0"



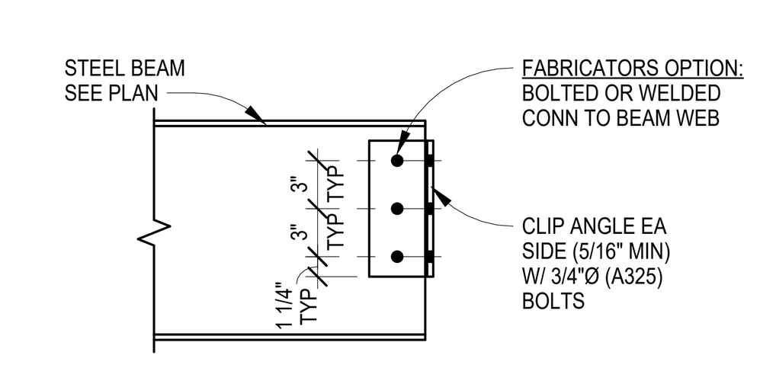
12 S501 Typical Composite Floor Slab

1" = 1'-0"



7 S501 Beam/ Column Connection

1" = 1'-0"



2 S501 Framed Beam Conn

1" = 1'-0"

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School - STRUCTURAL

210 12th Street NE
Valley City, ND 58072

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. JOCHIM
PE-9135
DATE 03-10-2026
NORTH DAKOTA

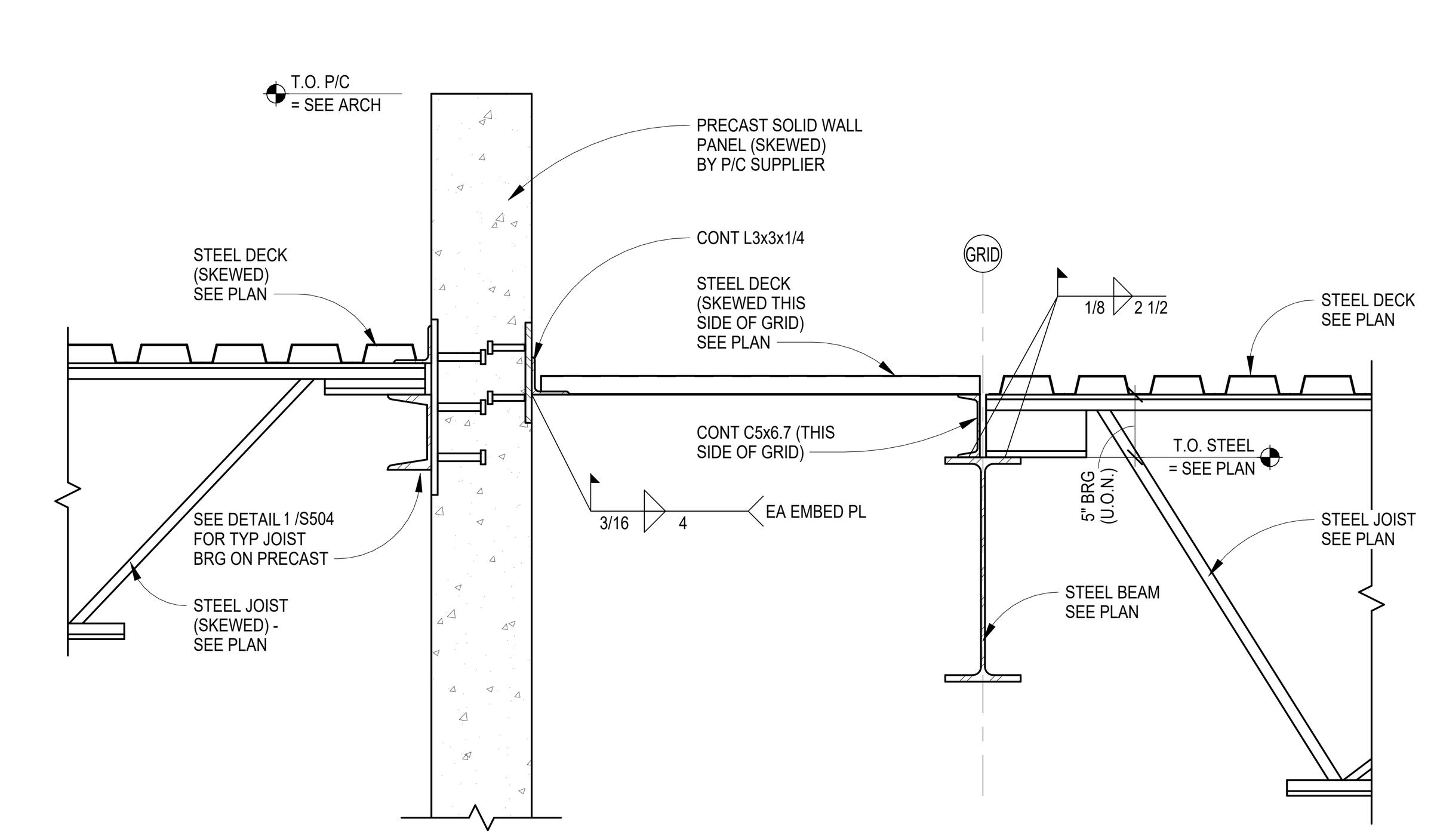
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
2	ADDENDUM #2	03/24/26
3	ADDENDUM #3	03/30/26

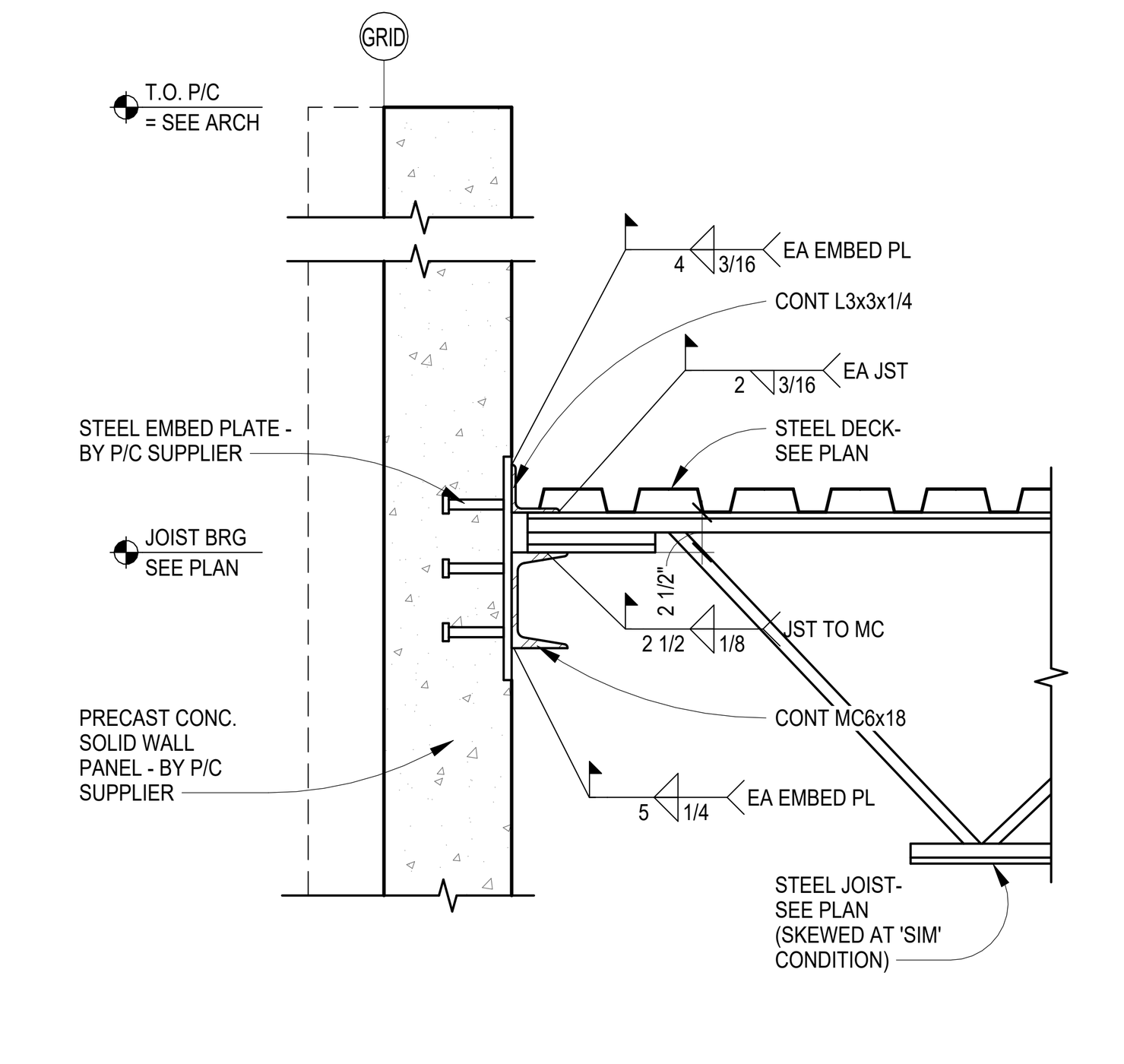
DRAWN BY: MFJ, CMM JN: 24-028

Framing Details

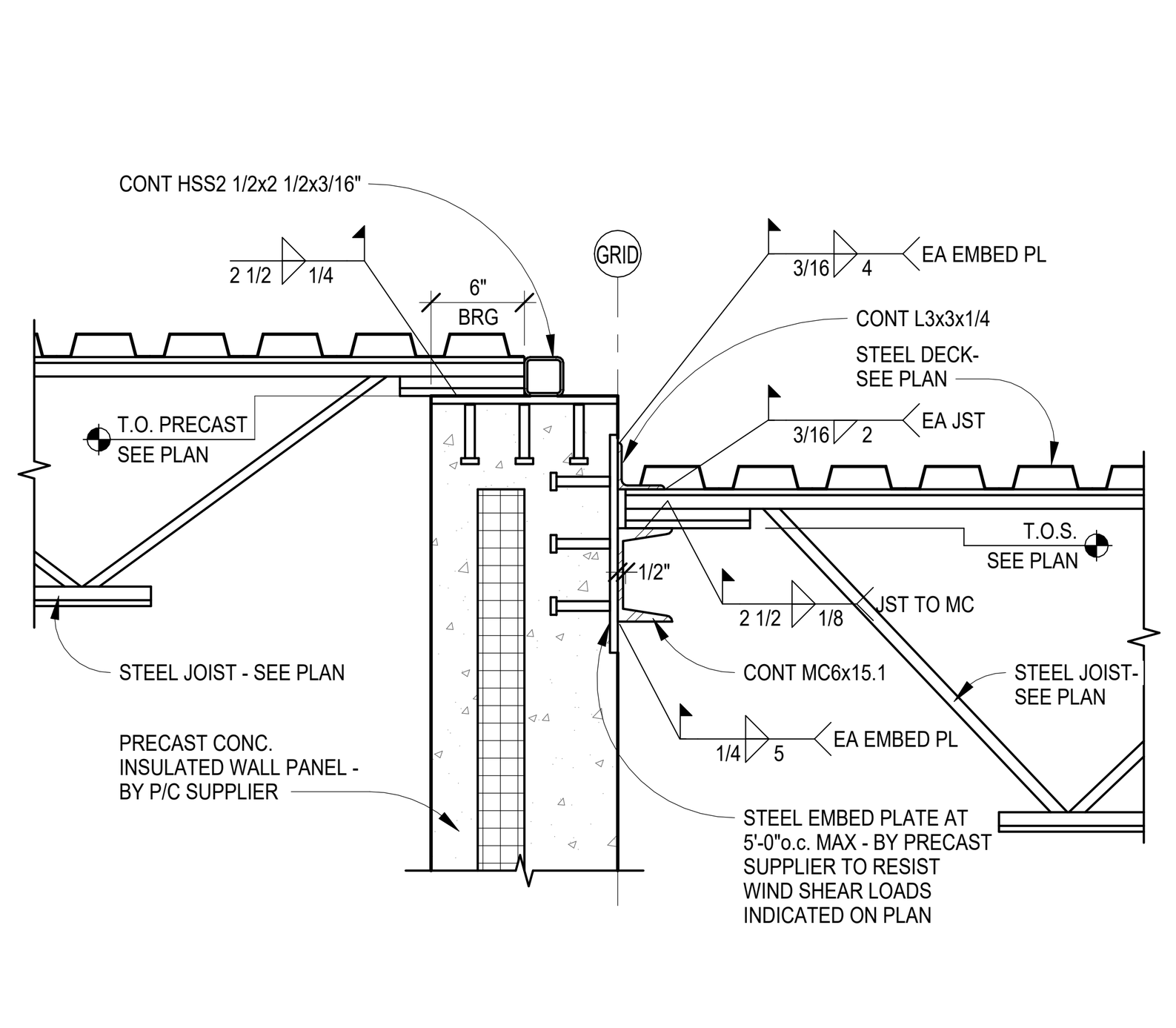
SHEET
S501



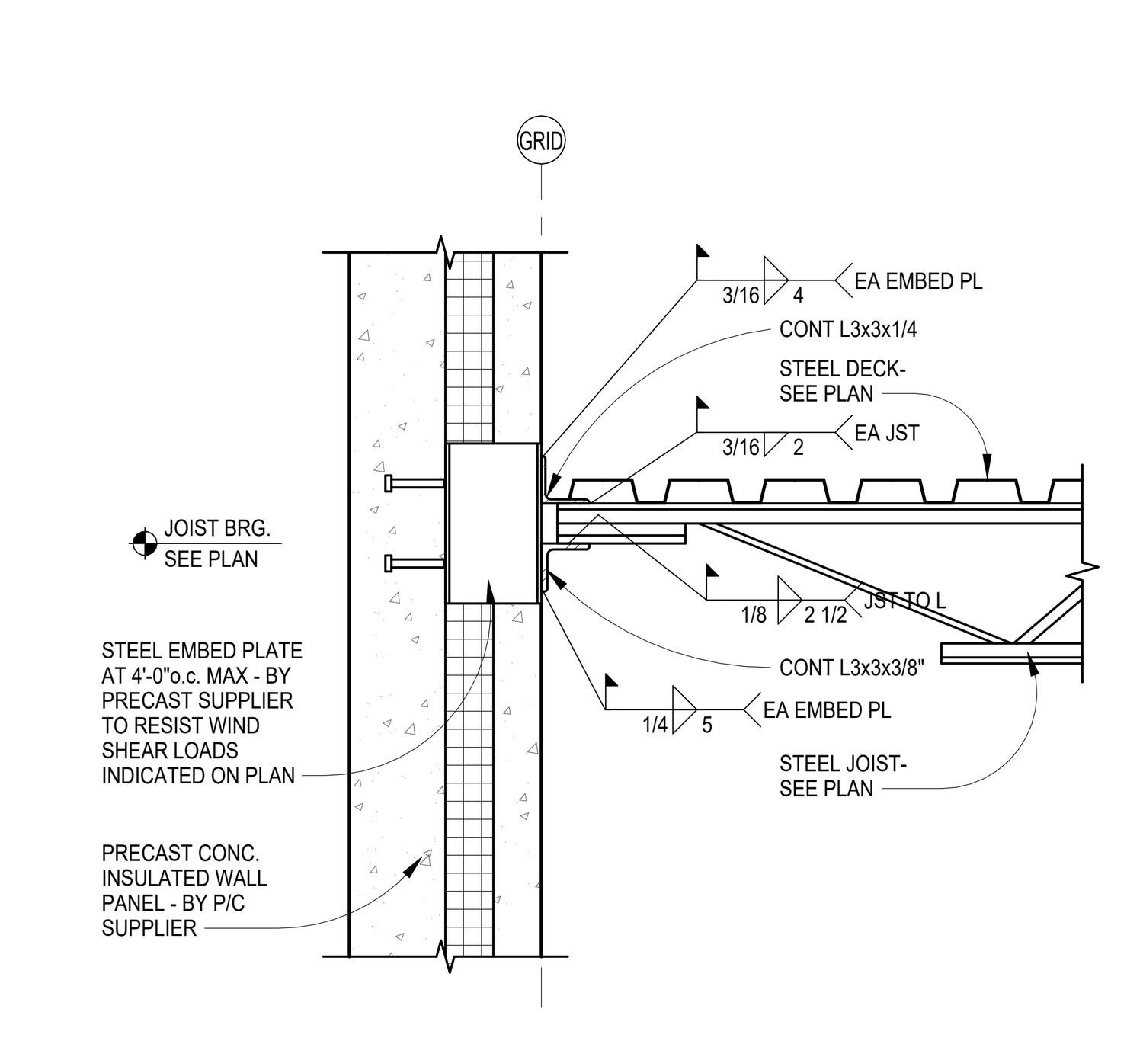
21 S504 **Joist / Deck Brg**
1" = 1'-0"



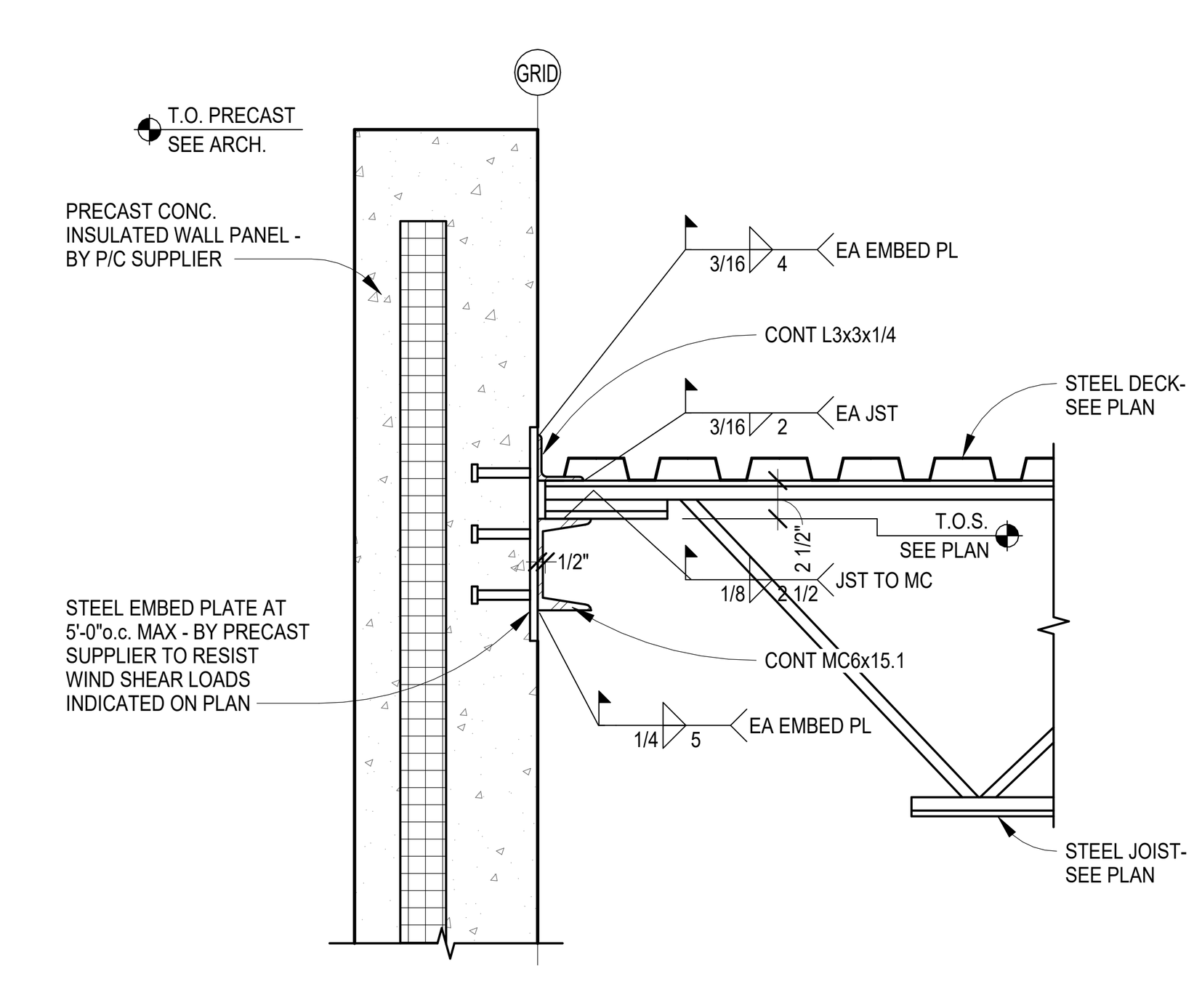
16 S504 **Roof Joist Bearing at Precast**
1" = 1'-0"



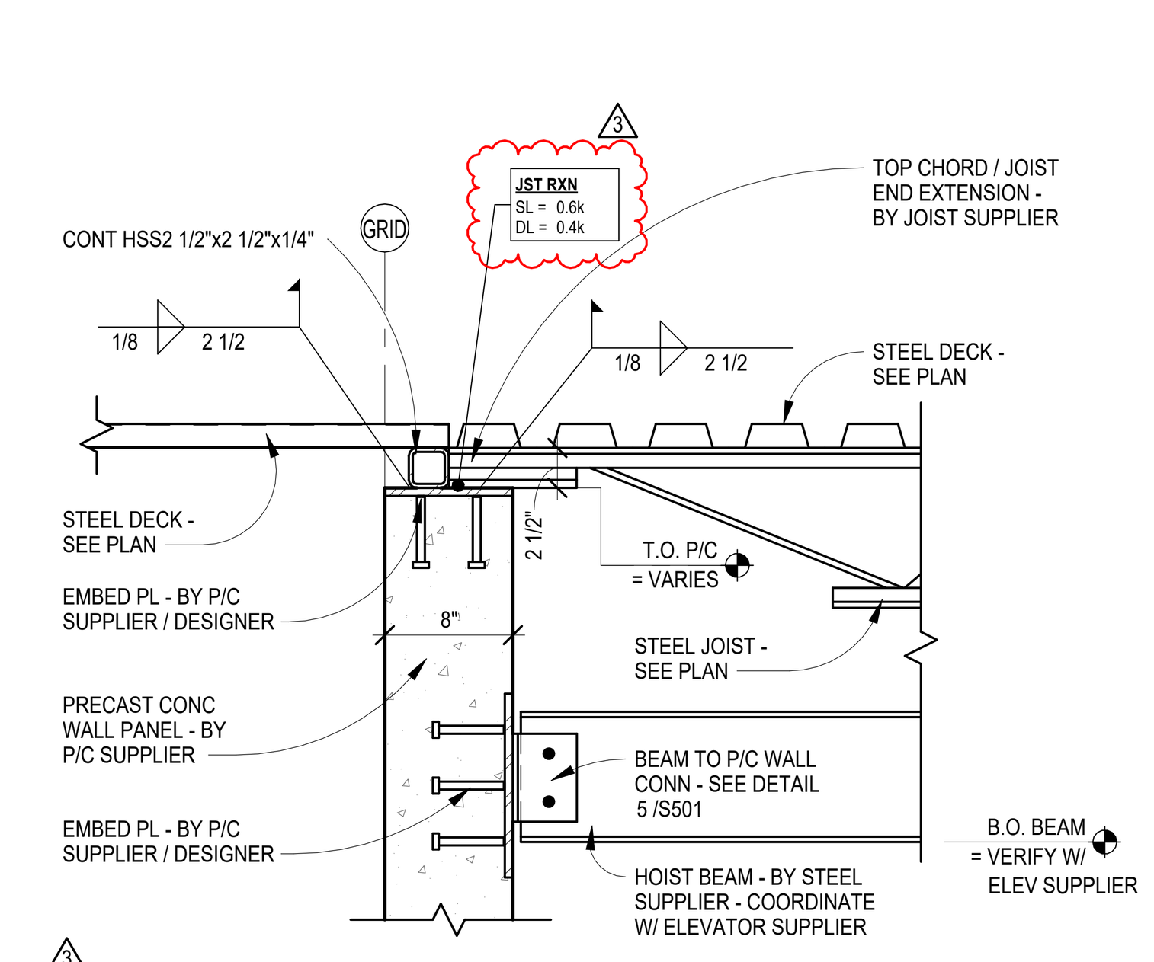
11 S504 **Joist Brg on P/C - Canopy**
1" = 1'-0"



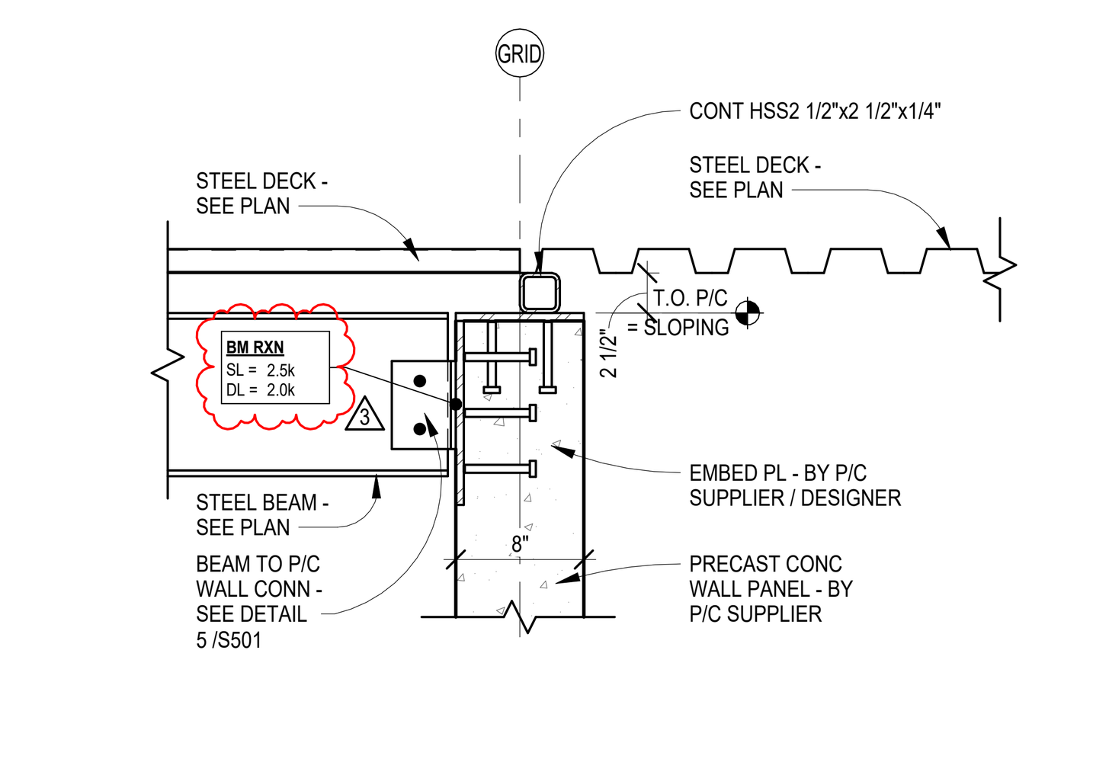
6 S504 **Joist Brg on Exterior of P/C**
1" = 1'-0"



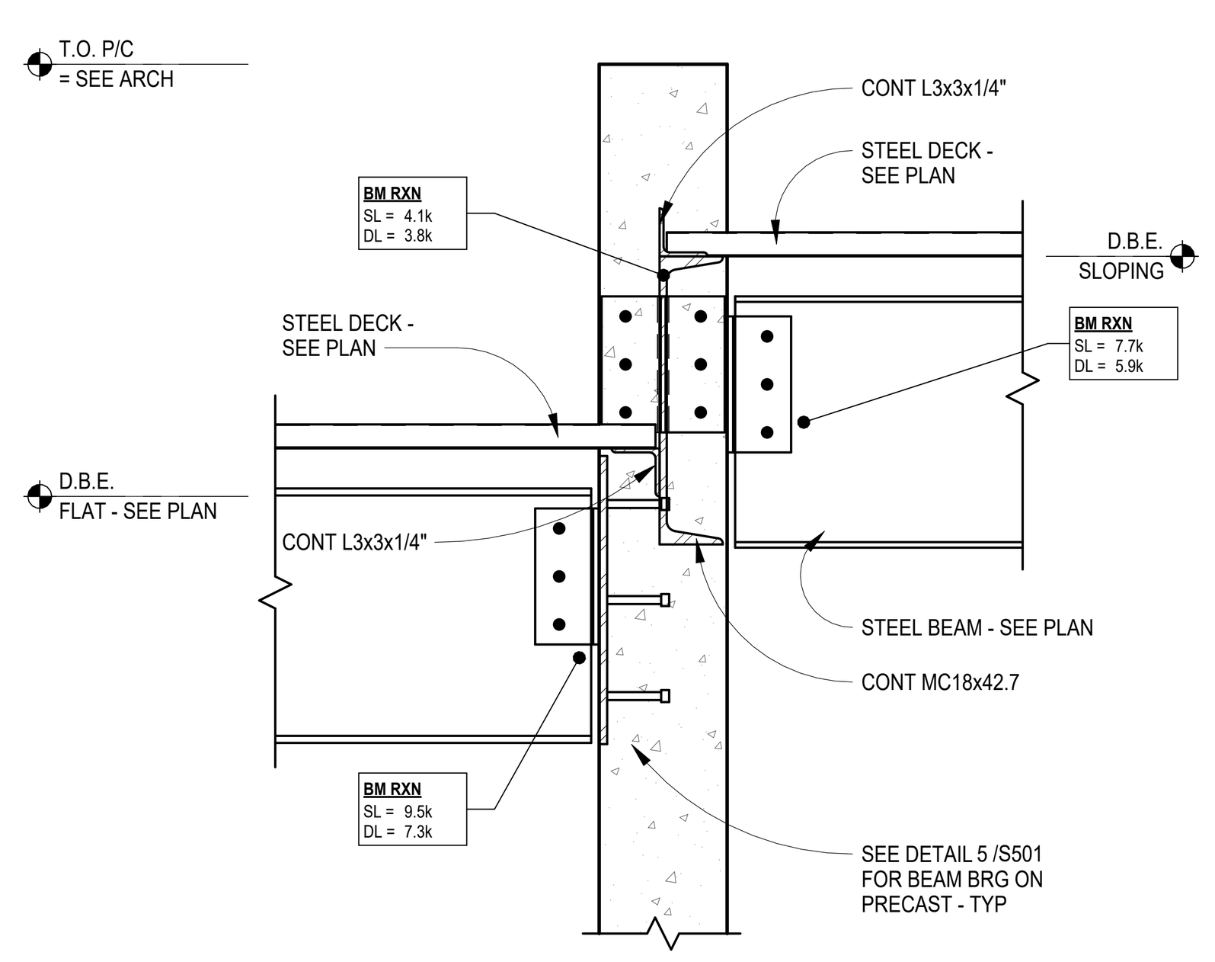
1 S504 **Roof Joist Bearing at Precast**
1" = 1'-0"



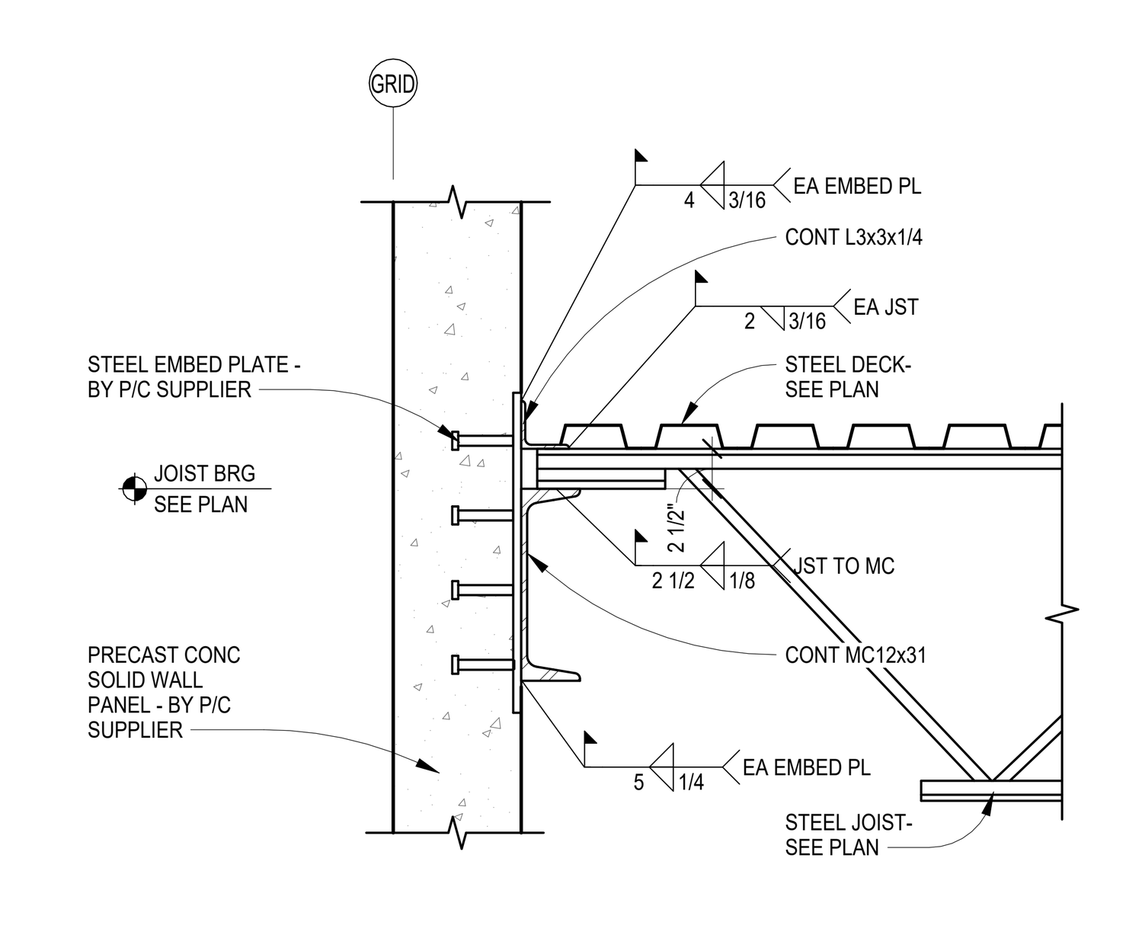
26 S504 **Joist / Hoist Beam Bearing on Precast**
1" = 1'-0"



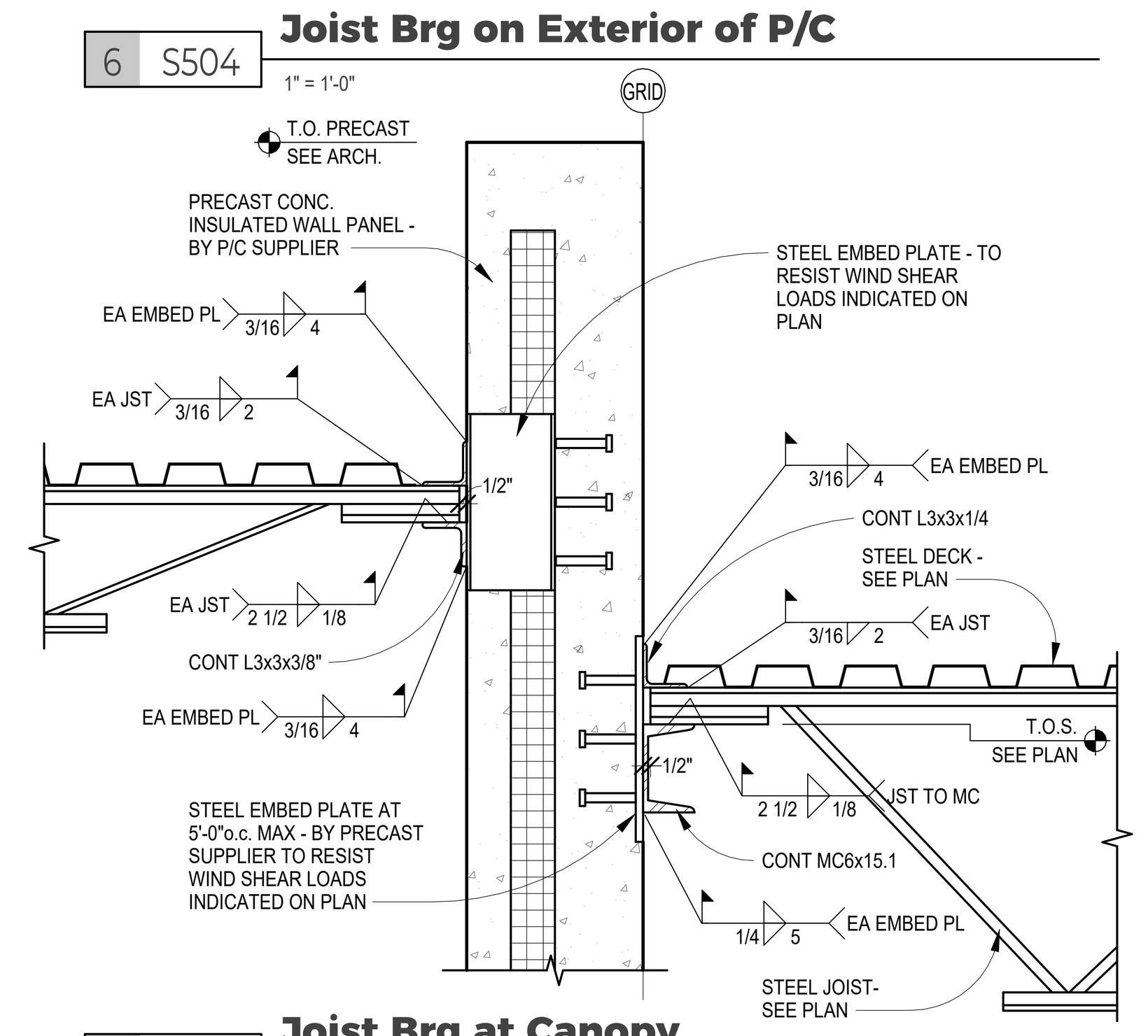
22 S504 **Beam / Deck Brg on Precast**
1" = 1'-0"



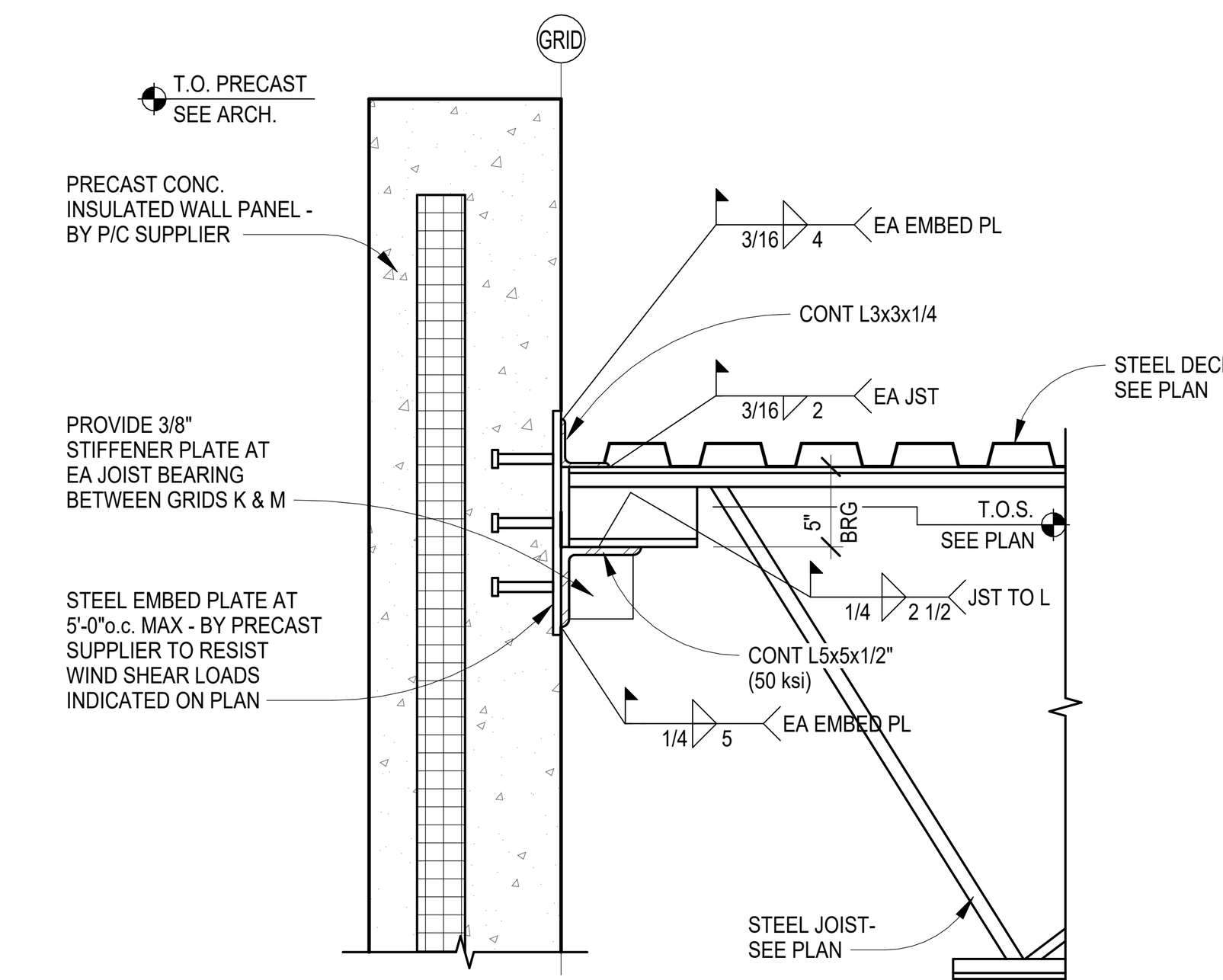
17 S504 **Beam / Deck Brg at Roof Deck Step**
1" = 1'-0"



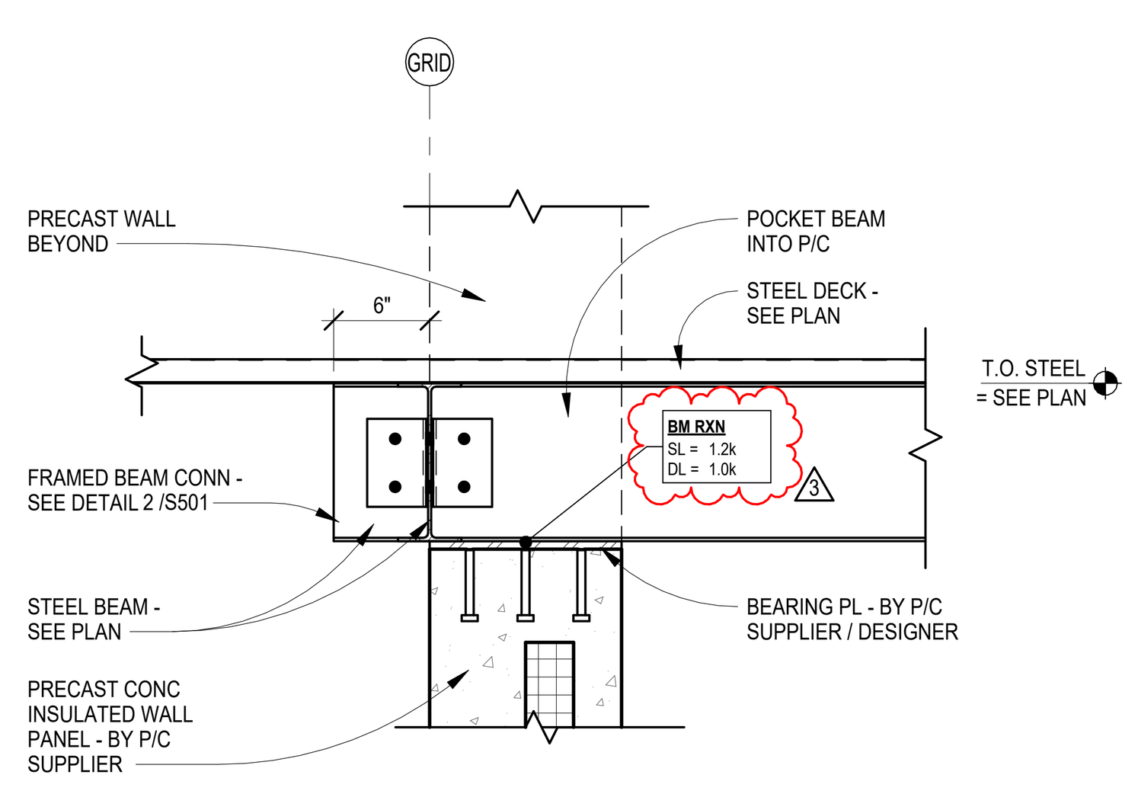
12 S504 **Joist Brg at Elevator P/C**
1" = 1'-0"



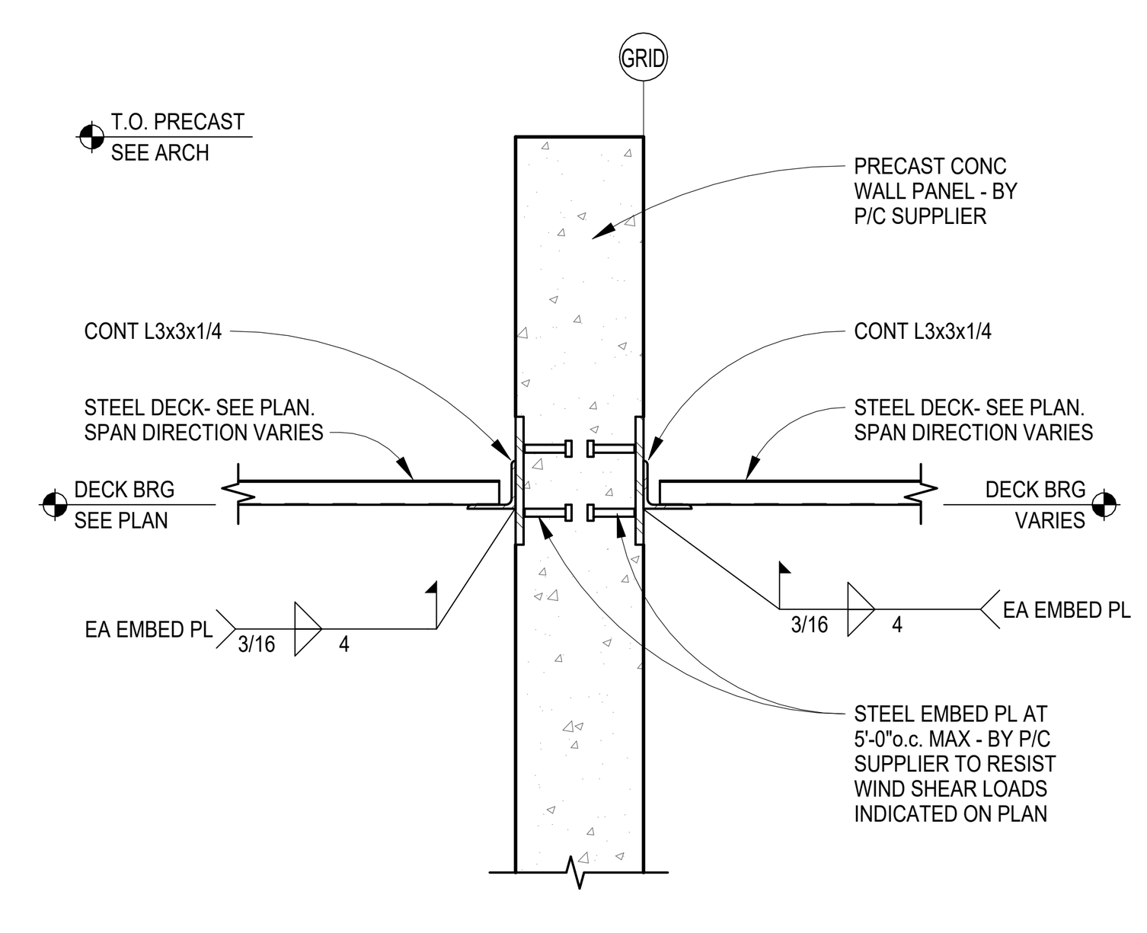
7 S504 **Joist Brg at Canopy**
1" = 1'-0"



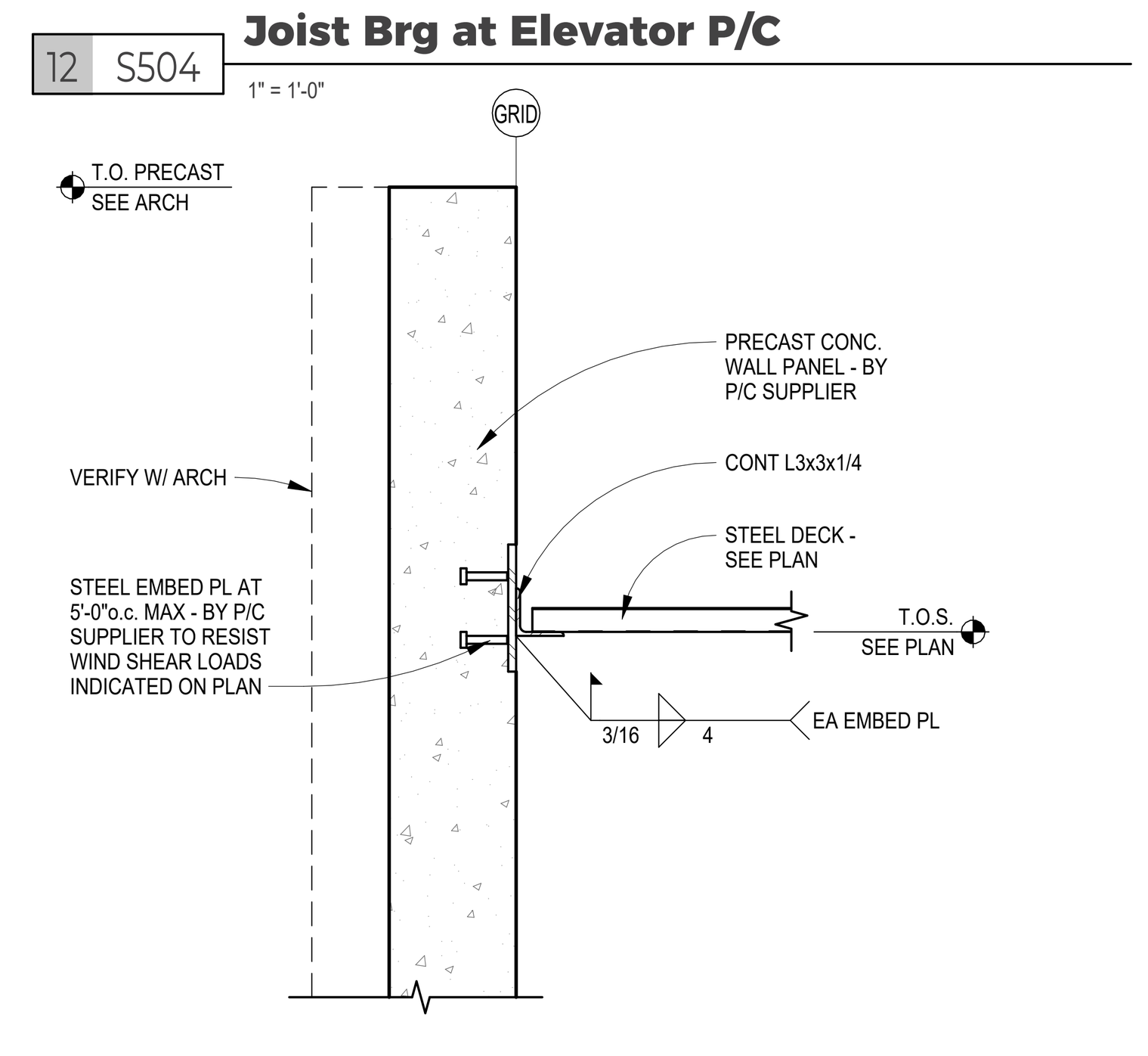
2 S504 **Roof Joist Bearing at Precast**
1" = 1'-0"



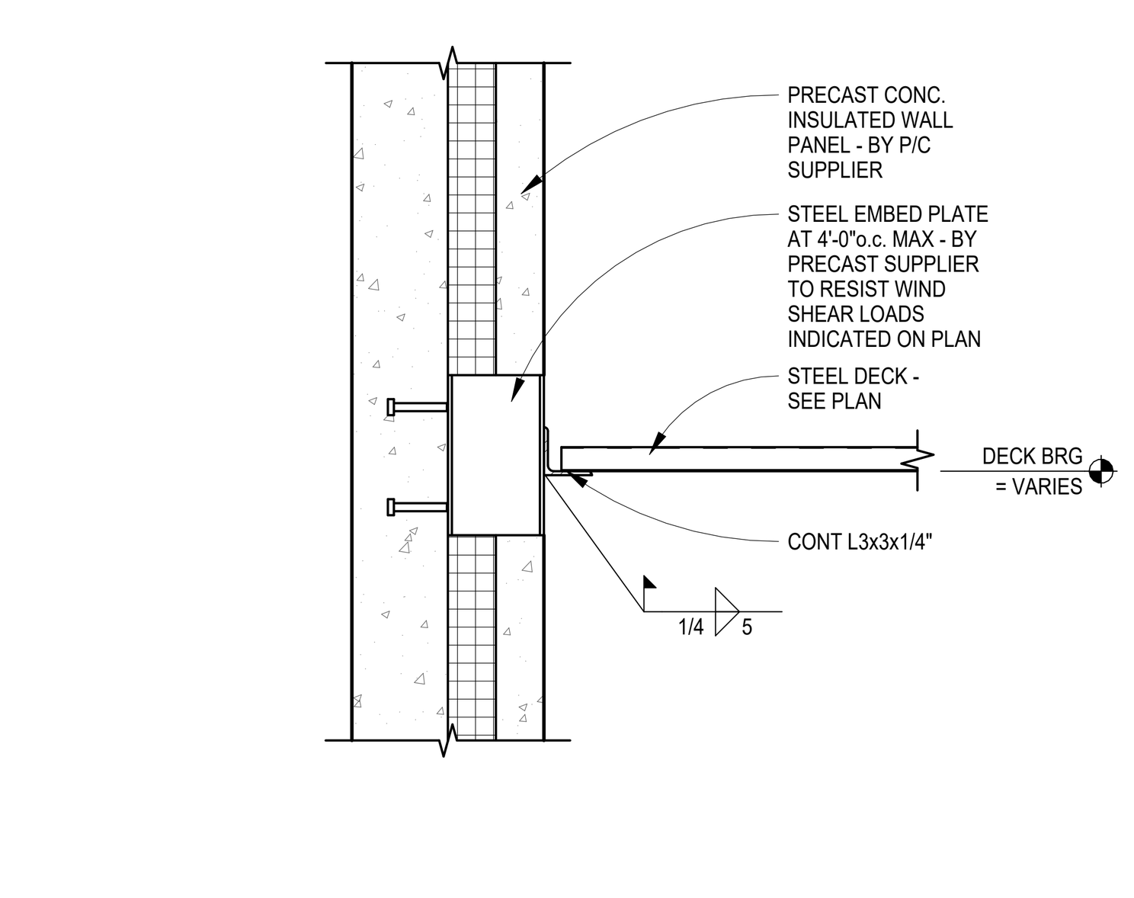
23 S504 **Beam Bearing on P/C Pocket**
1" = 1'-0"



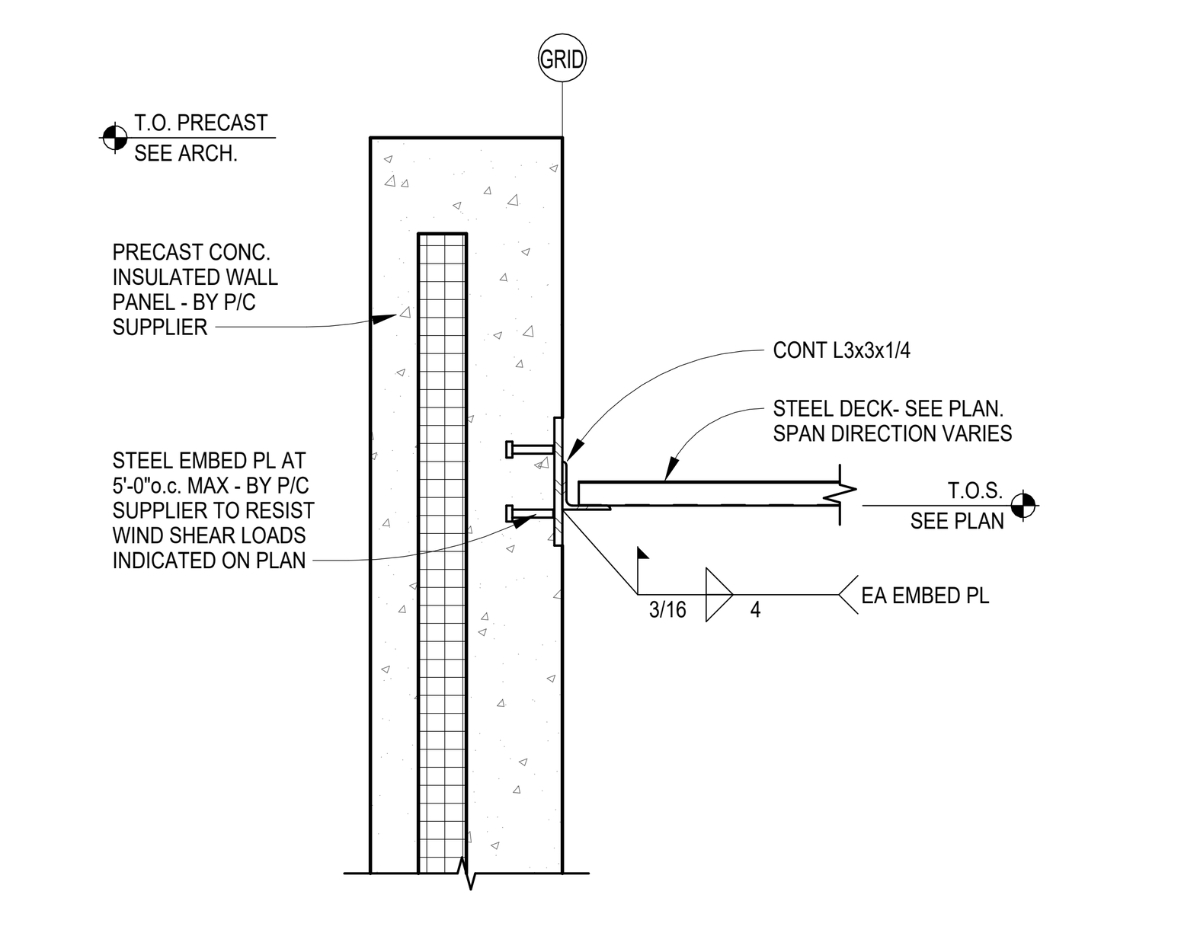
18 S504 **Deck Brg Both Sides Precast**
1" = 1'-0"



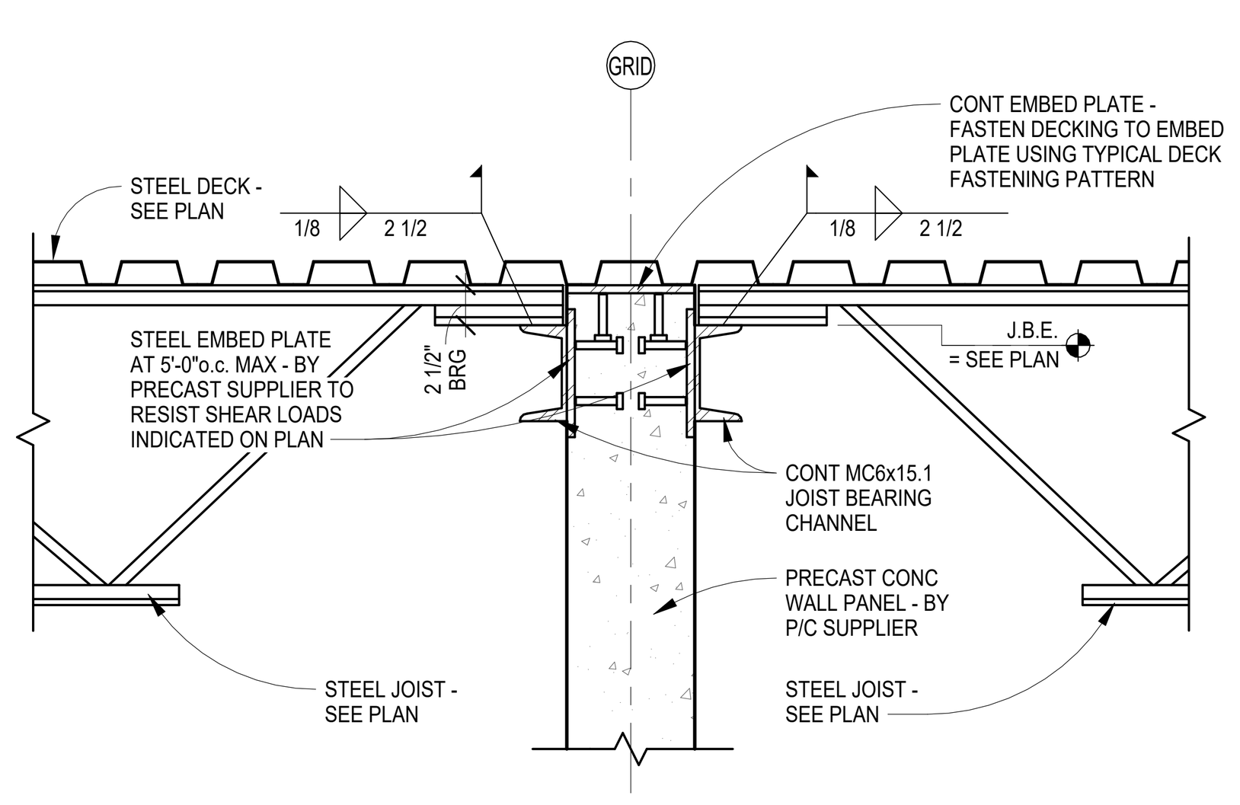
13 S504 **Roof Deck Bearing at Precast**
1" = 1'-0"



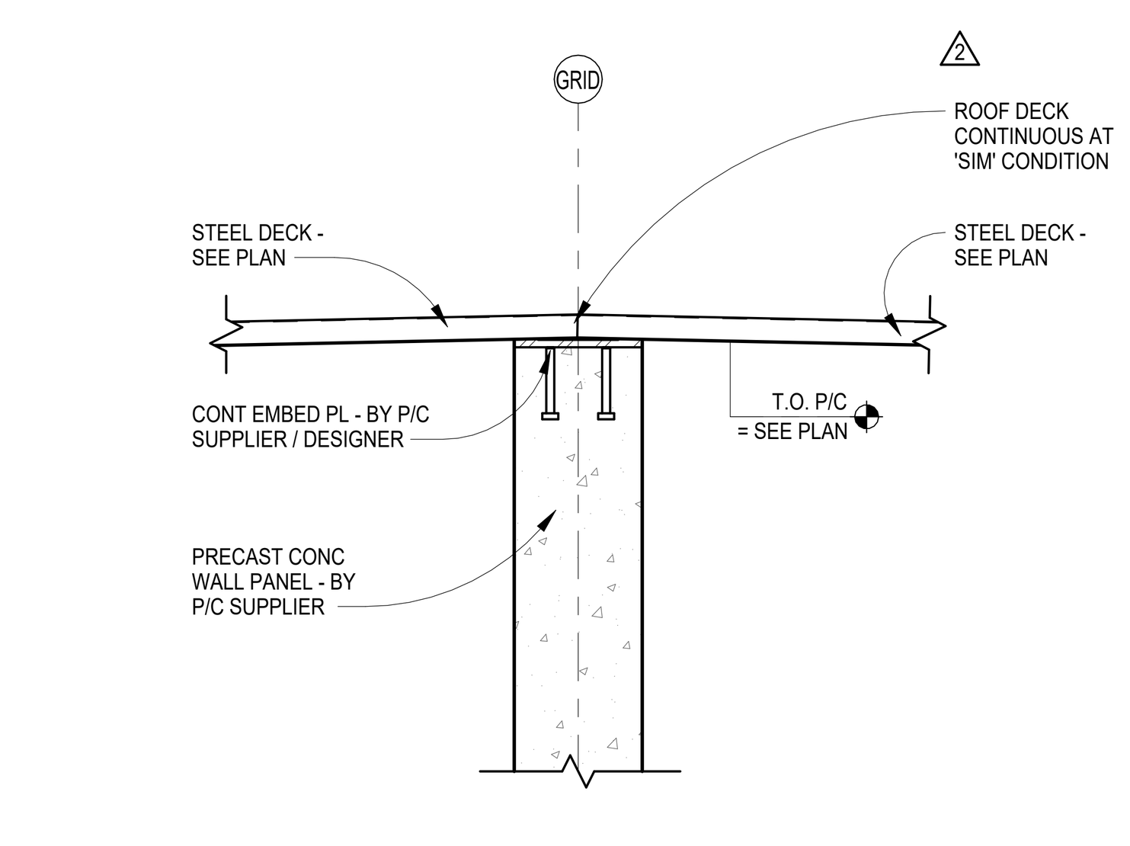
8 S504 **Roof Deck Bearing at P/C Exterior**
1" = 1'-0"



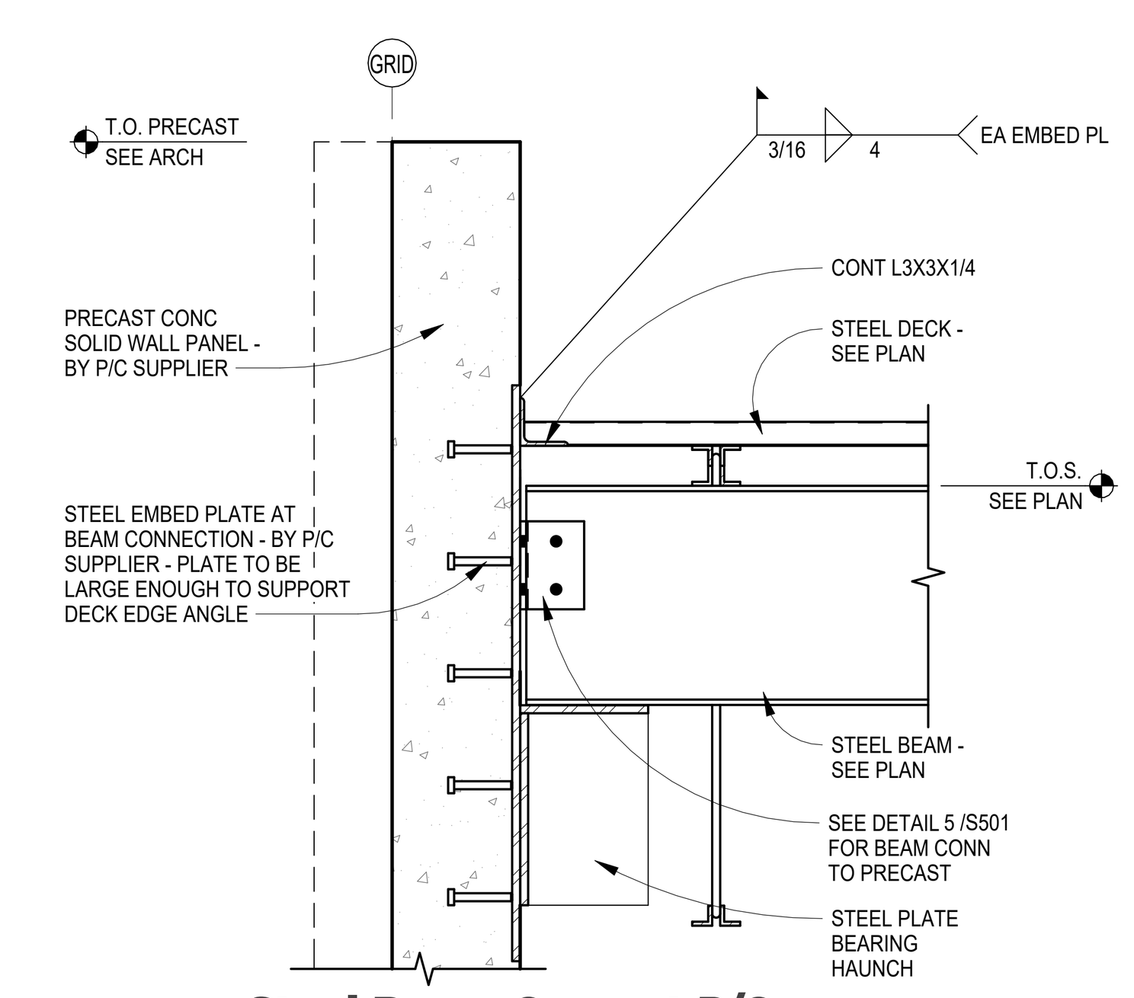
3 S504 **Roof Deck Bearing at Precast**
1" = 1'-0"



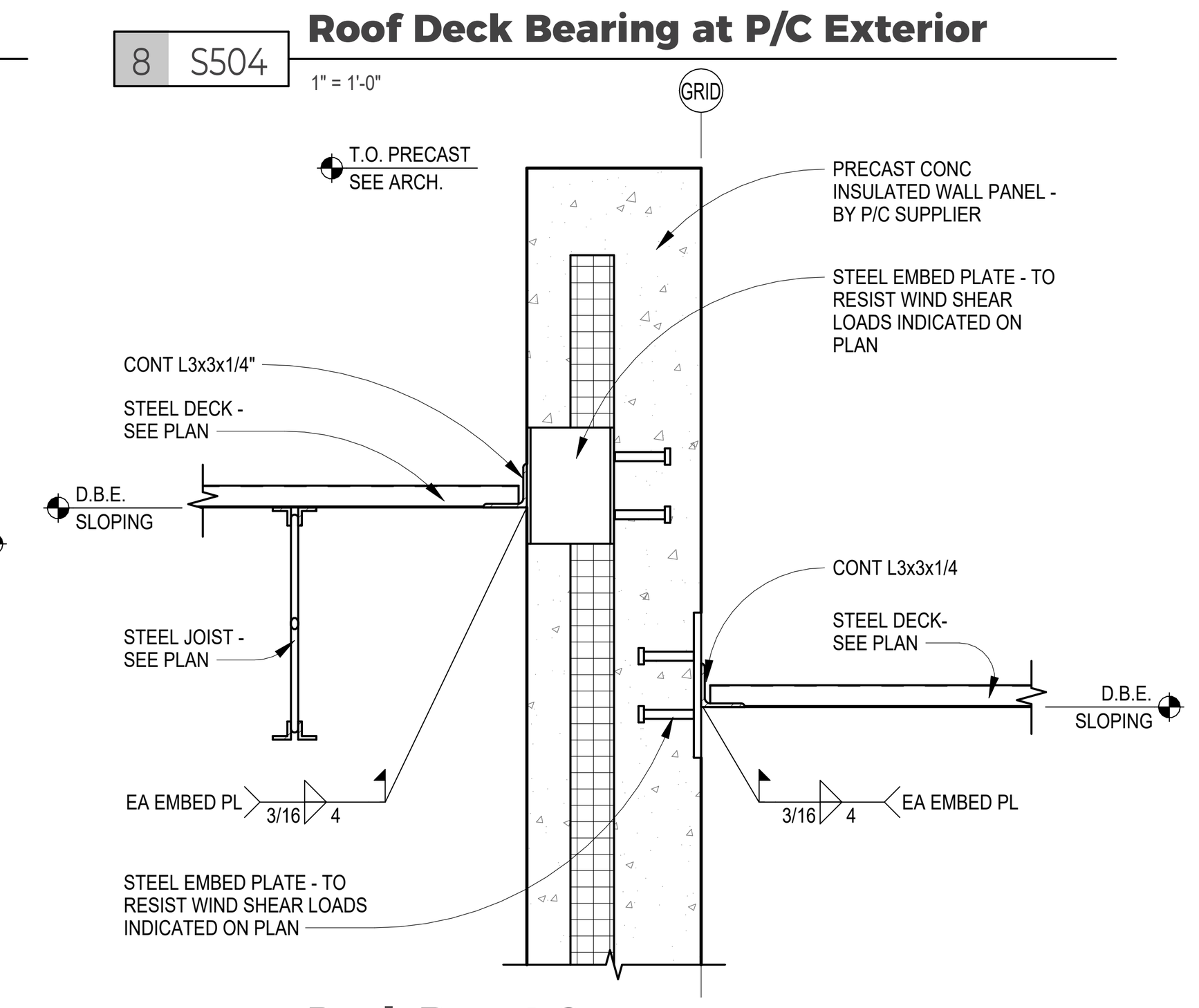
24 S504 **Double Joist Brg at 8" P/C**
1" = 1'-0"



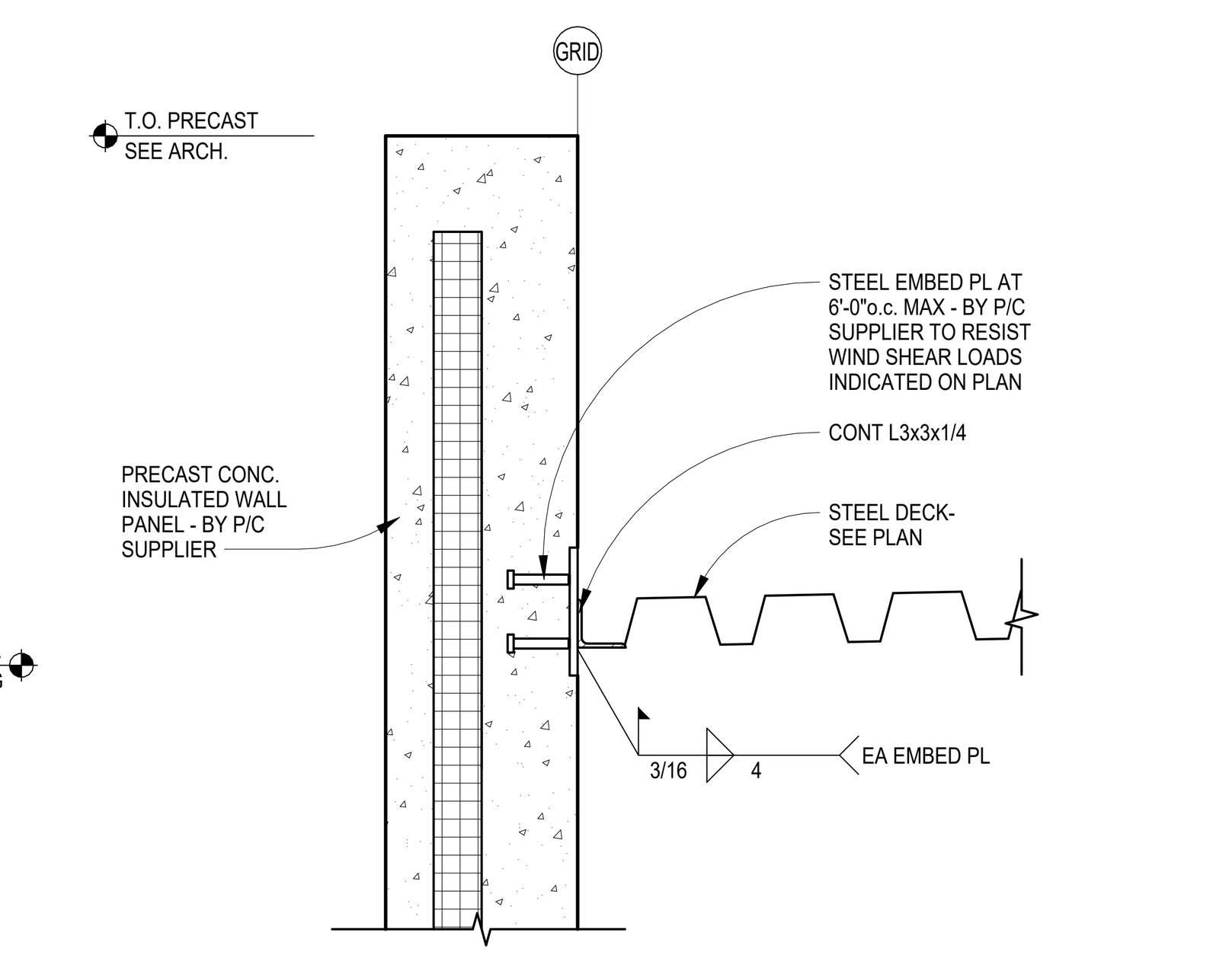
19 S504 **Deck Brg at T.O. P/C**
1" = 1'-0"



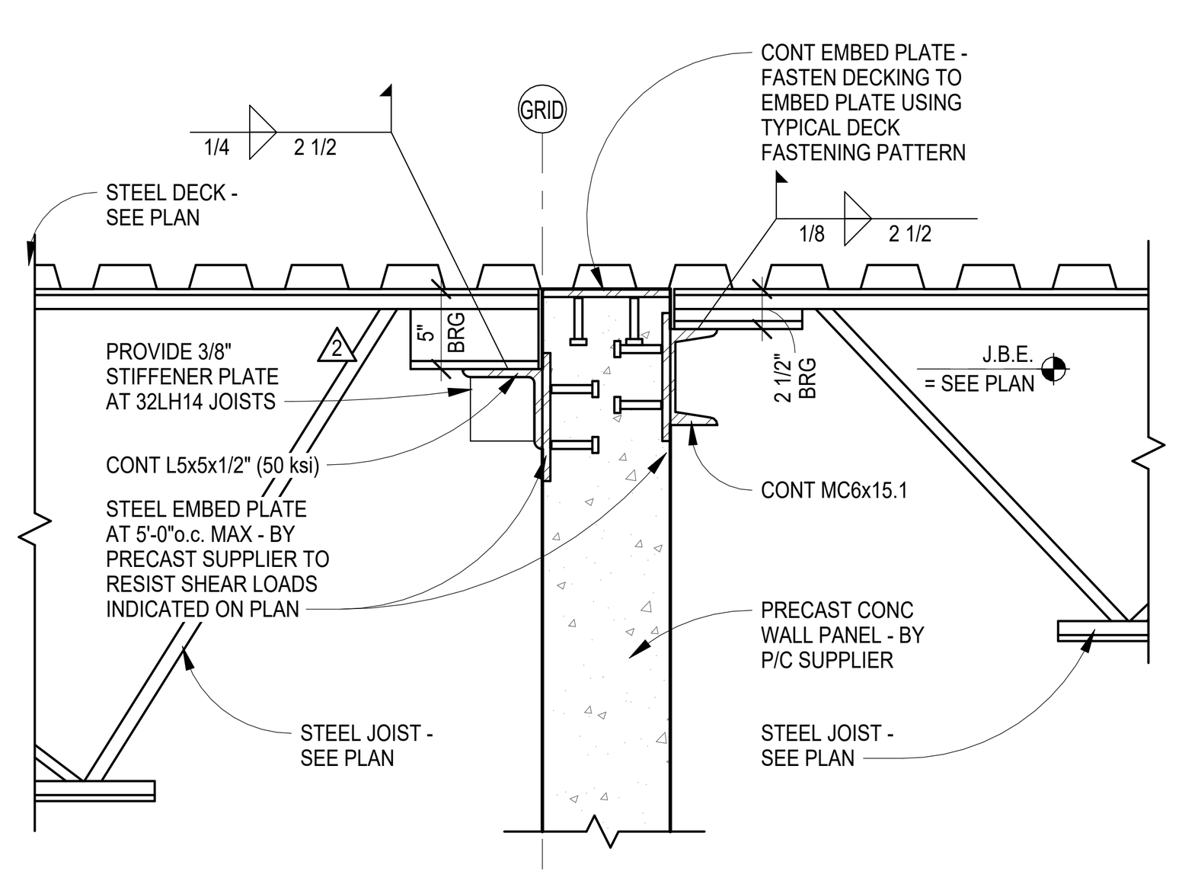
14 S504 **Steel Beam Conn at P/C**
1" = 1'-0"



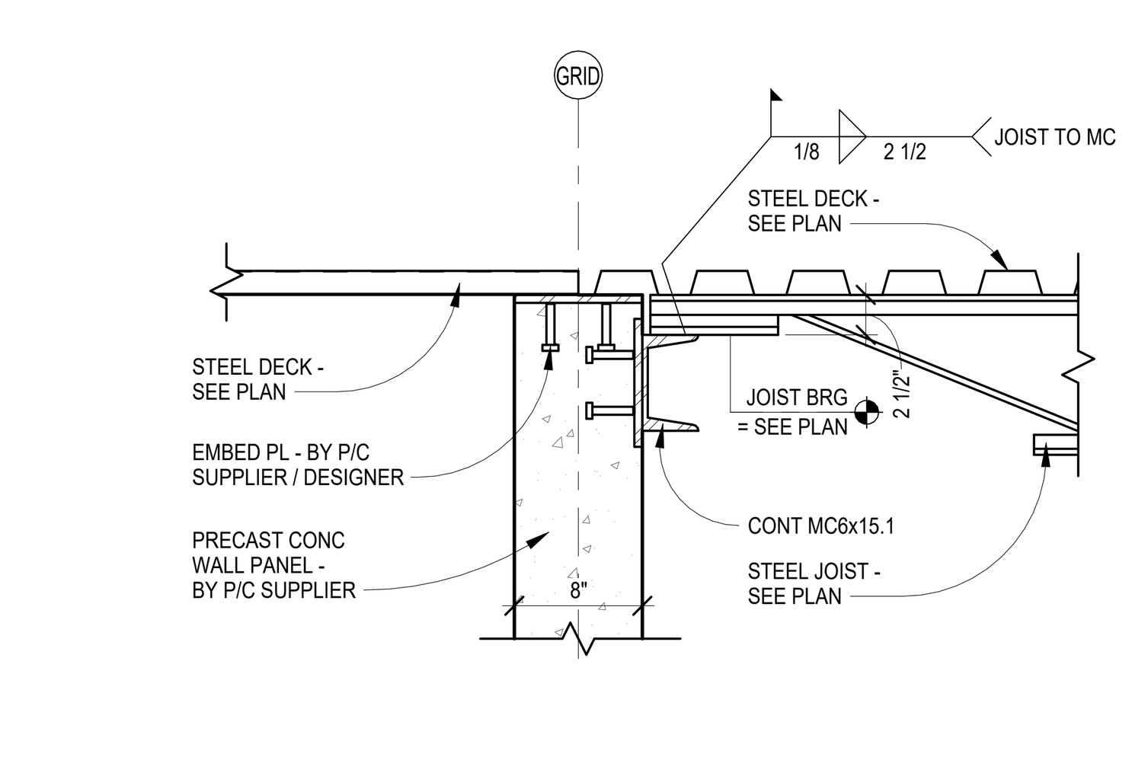
9 S504 **Deck Brg at Canopy**
1" = 1'-0"



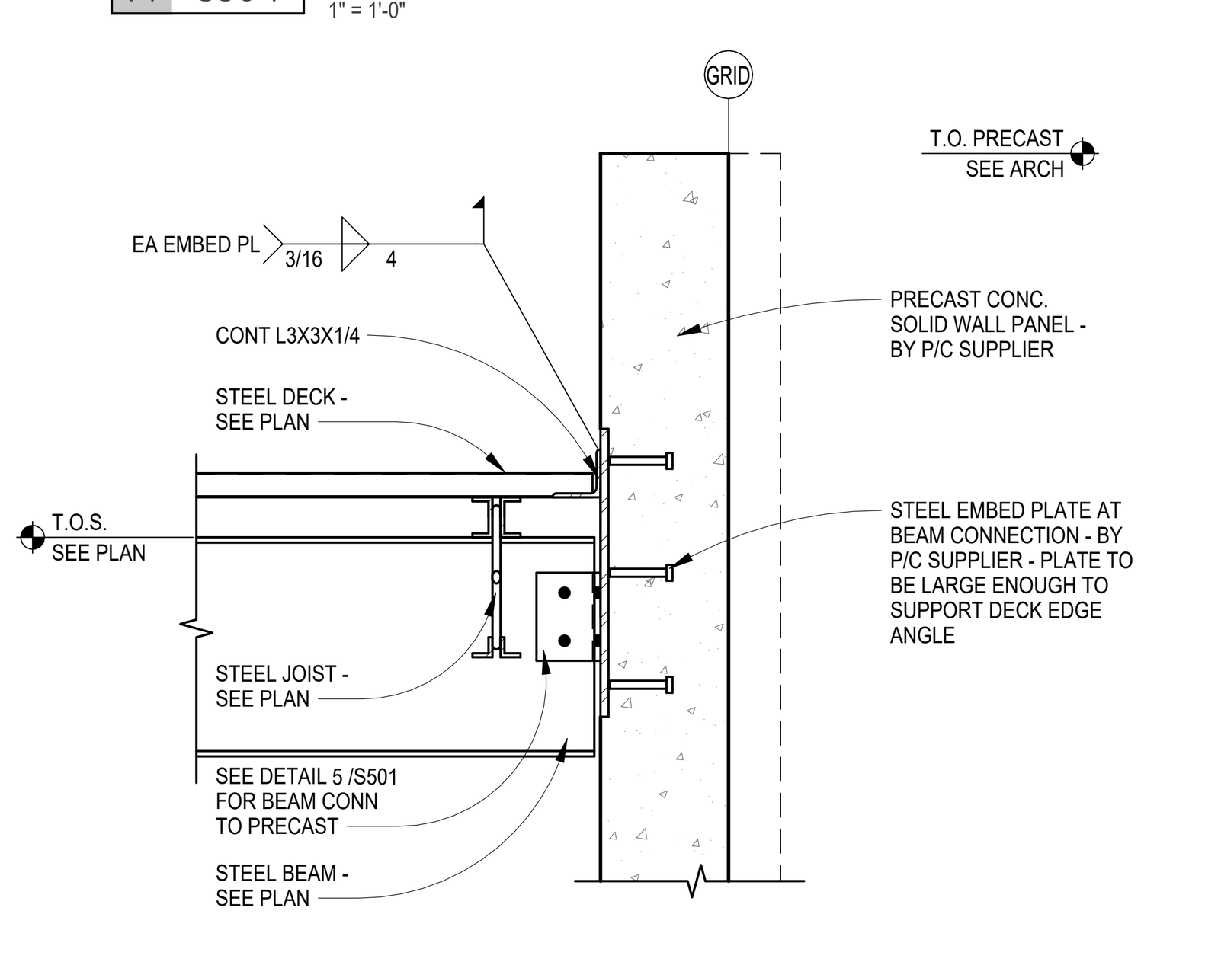
4 S504 **Roof Deck Bearing at Gym P/C**
1" = 1'-0"



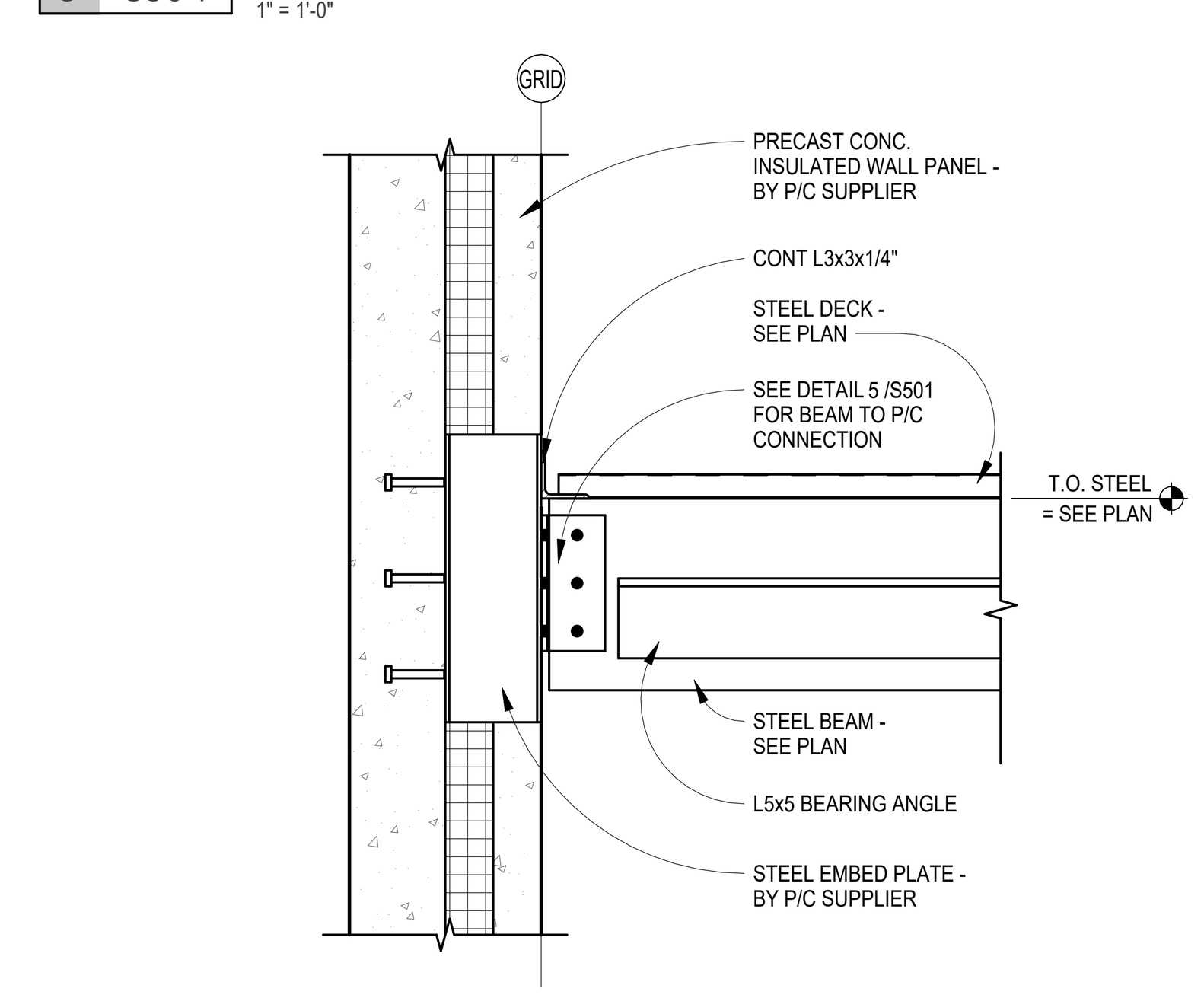
25 S504 **Double Joist Brg at 8" P/C**
1" = 1'-0"



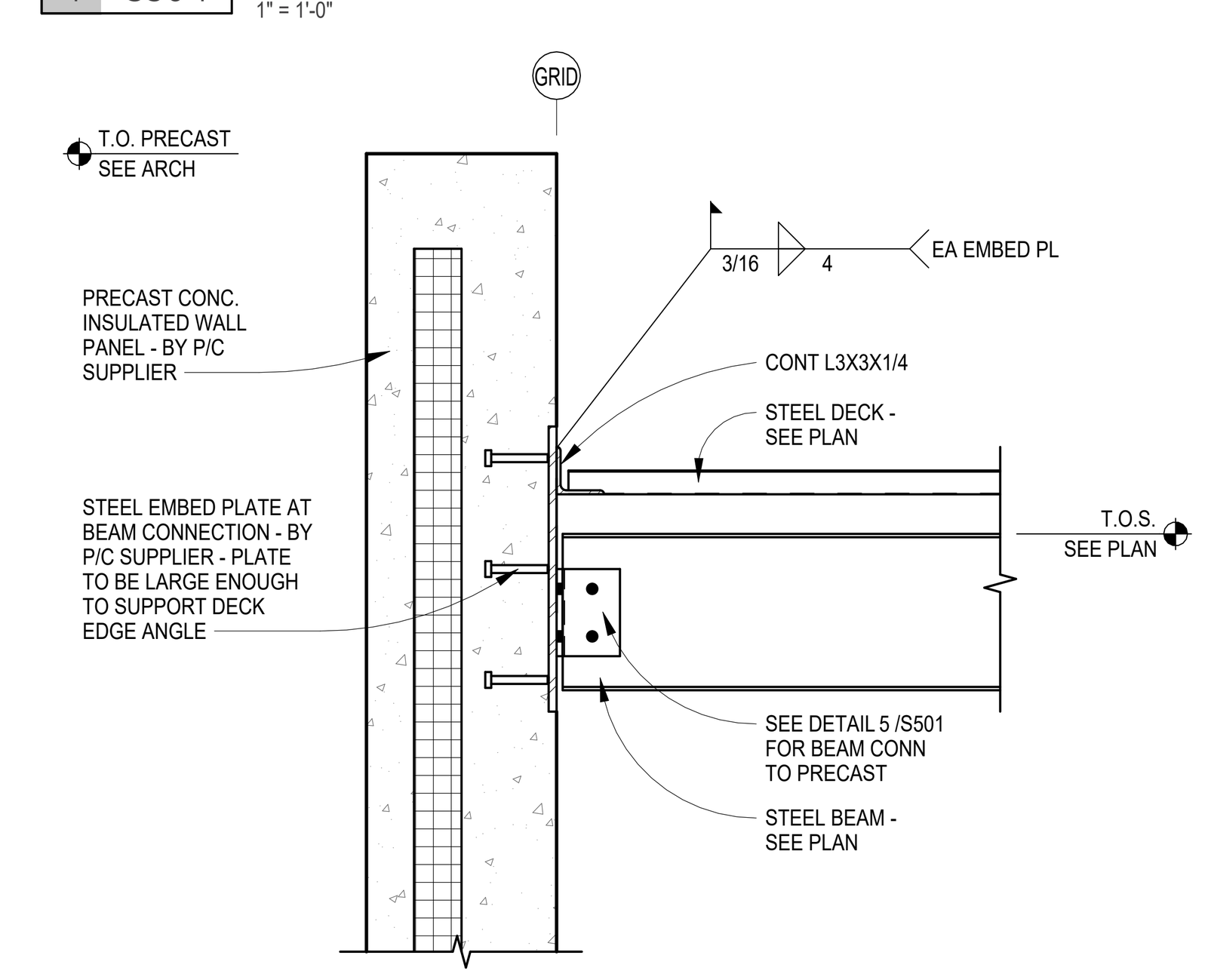
20 S504 **Joist / Deck Bearing on Precast**
1" = 1'-0"



15 S504 **Steel Beam Conn at P/C**
1" = 1'-0"



10 S504 **Beam Bearing at P/C Exterior**
1" = 1'-0"



5 S504 **Steel Beam Conn at Precast**
1" = 1'-0"

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School - STRUCTURAL
210 12th Street NE
Valley City, ND 58072

STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. JOCHIM
PE-9135
DATE 03-10-2026
NORTH DAKOTA

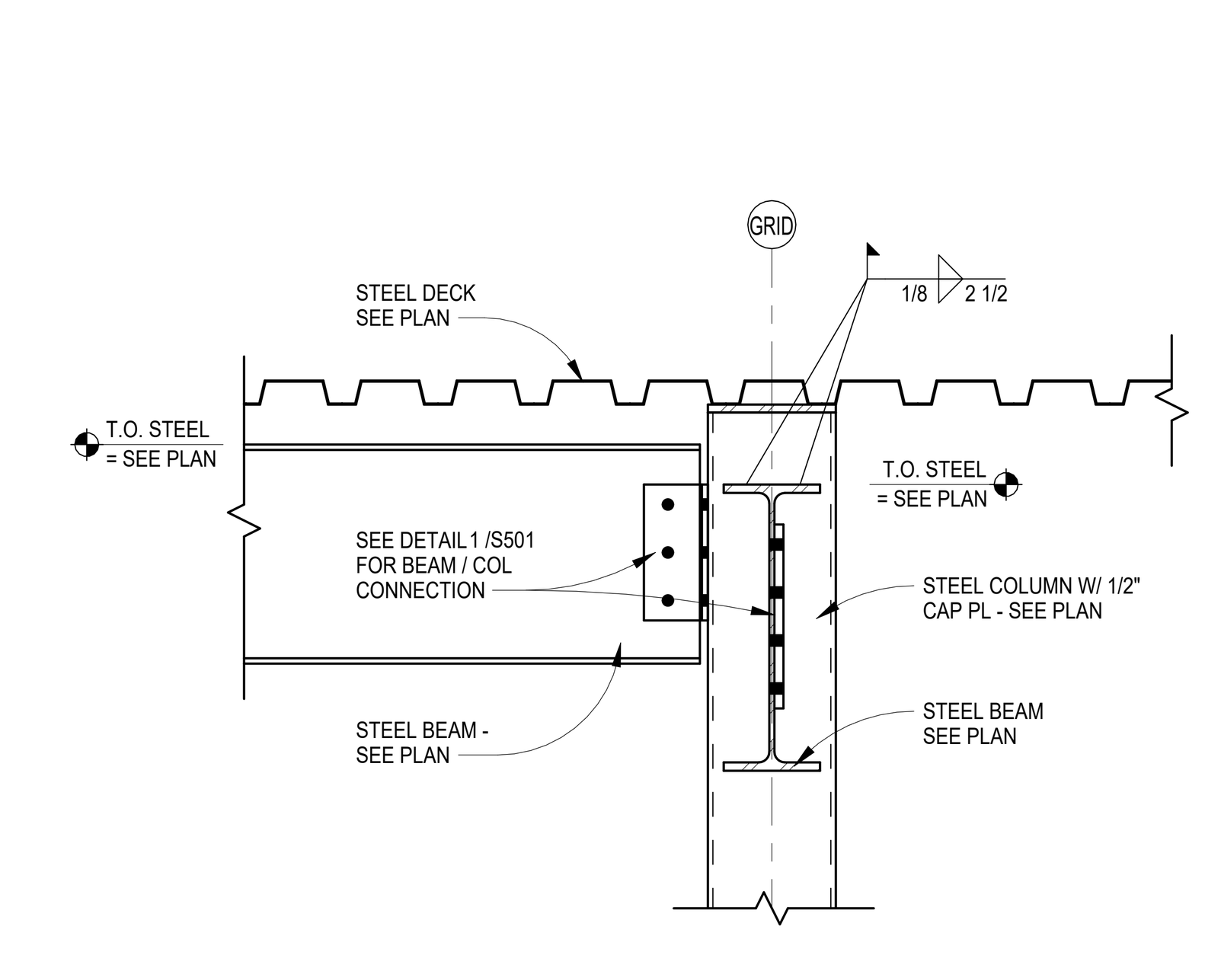
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	02/10/26
2	ADDENDUM #2	03/24/26
3	ADDENDUM #3	03/30/26

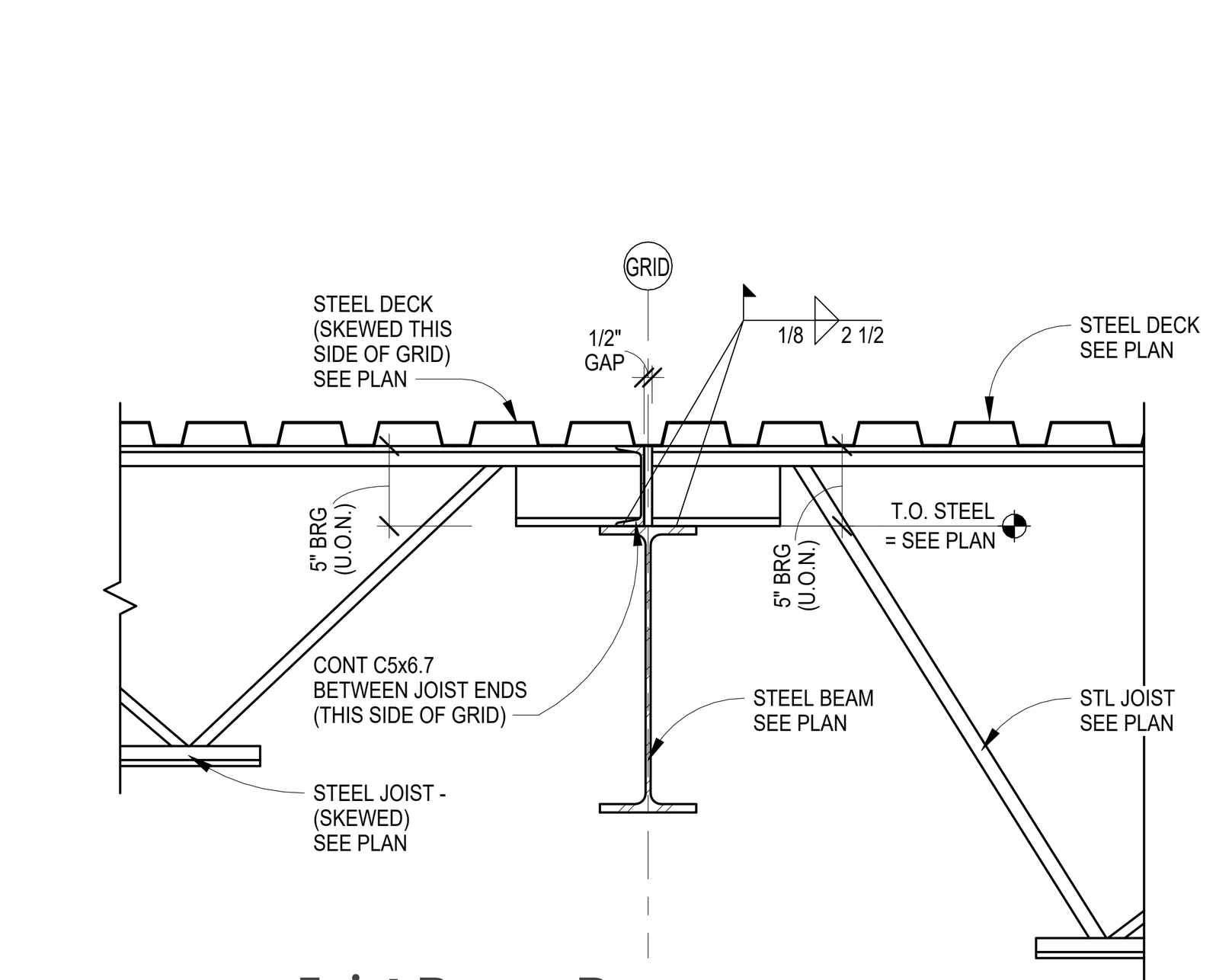
DRAWN BY: MFJ, CMM JN: 24-028

Roof Framing Details

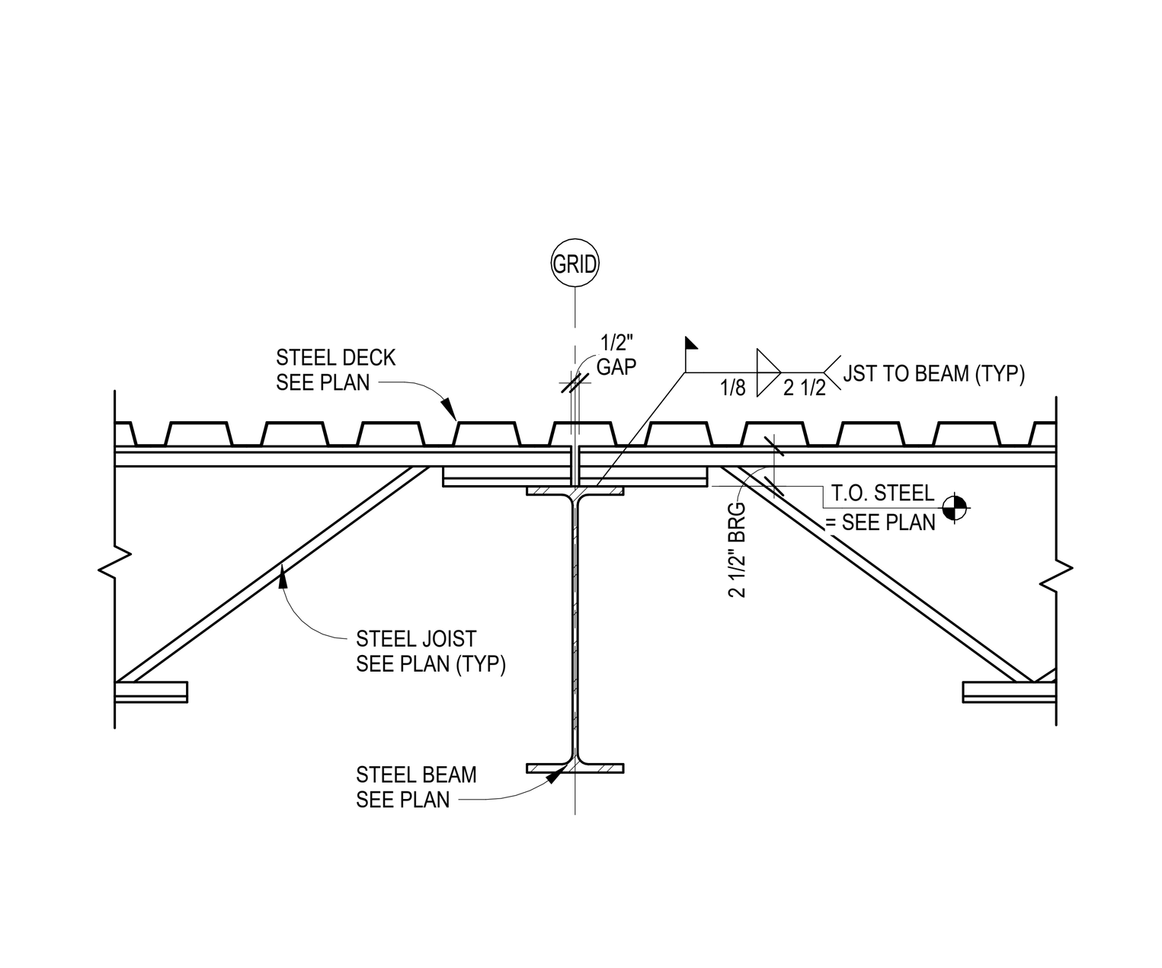
SHEET
S504



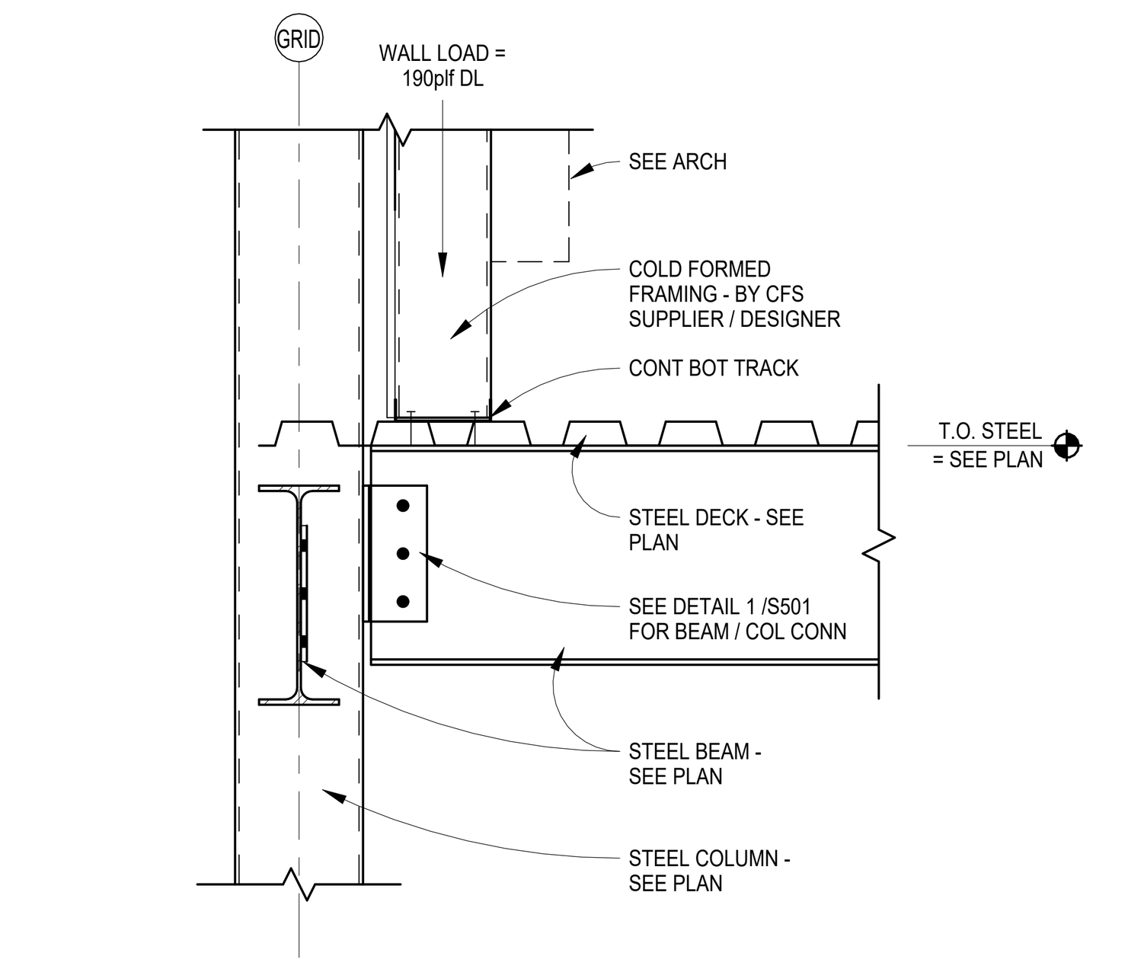
21 S505 **Beam Brg on Column**
1" = 1'-0"



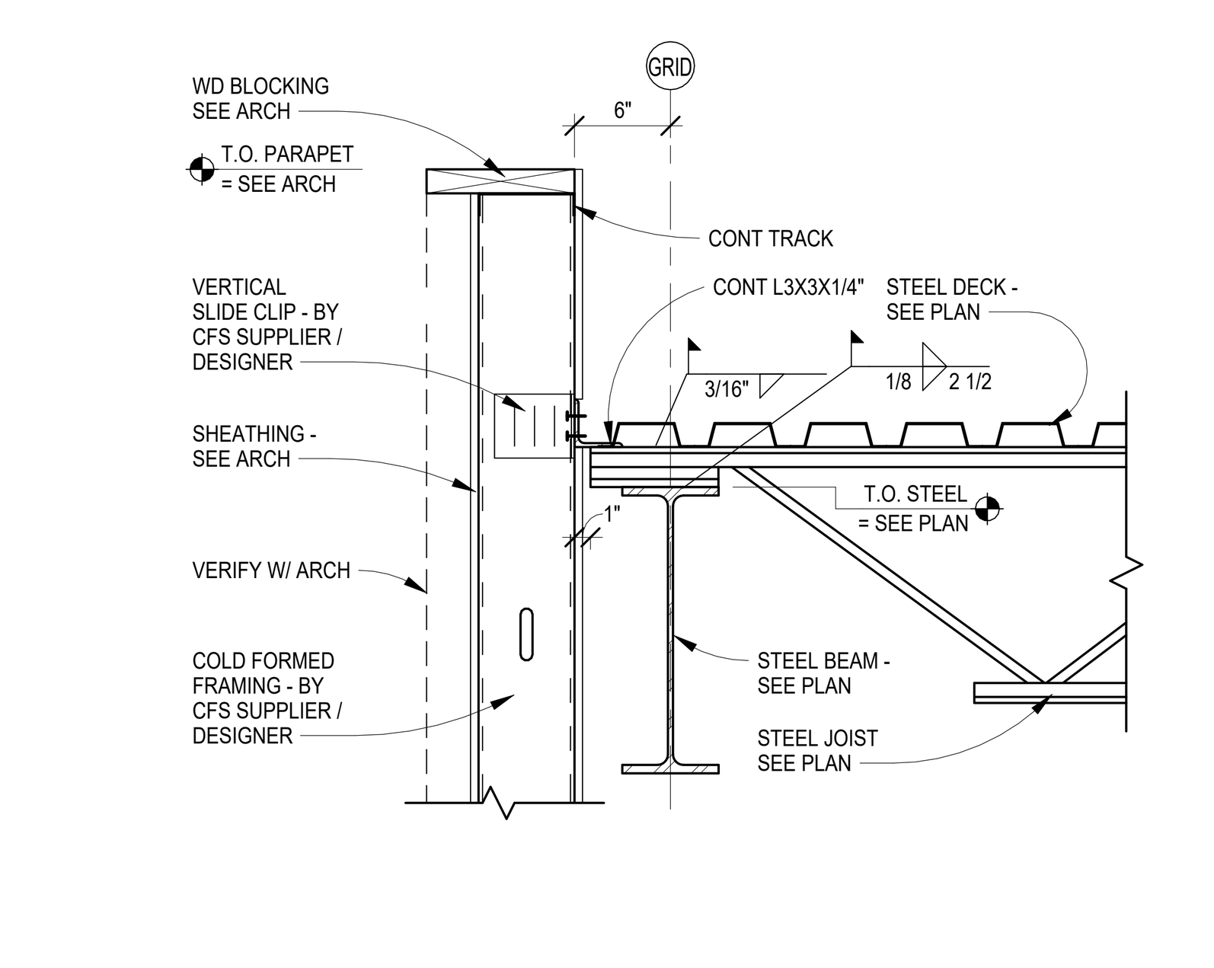
16 S505 **Joist Brg on Beam**
1" = 1'-0"



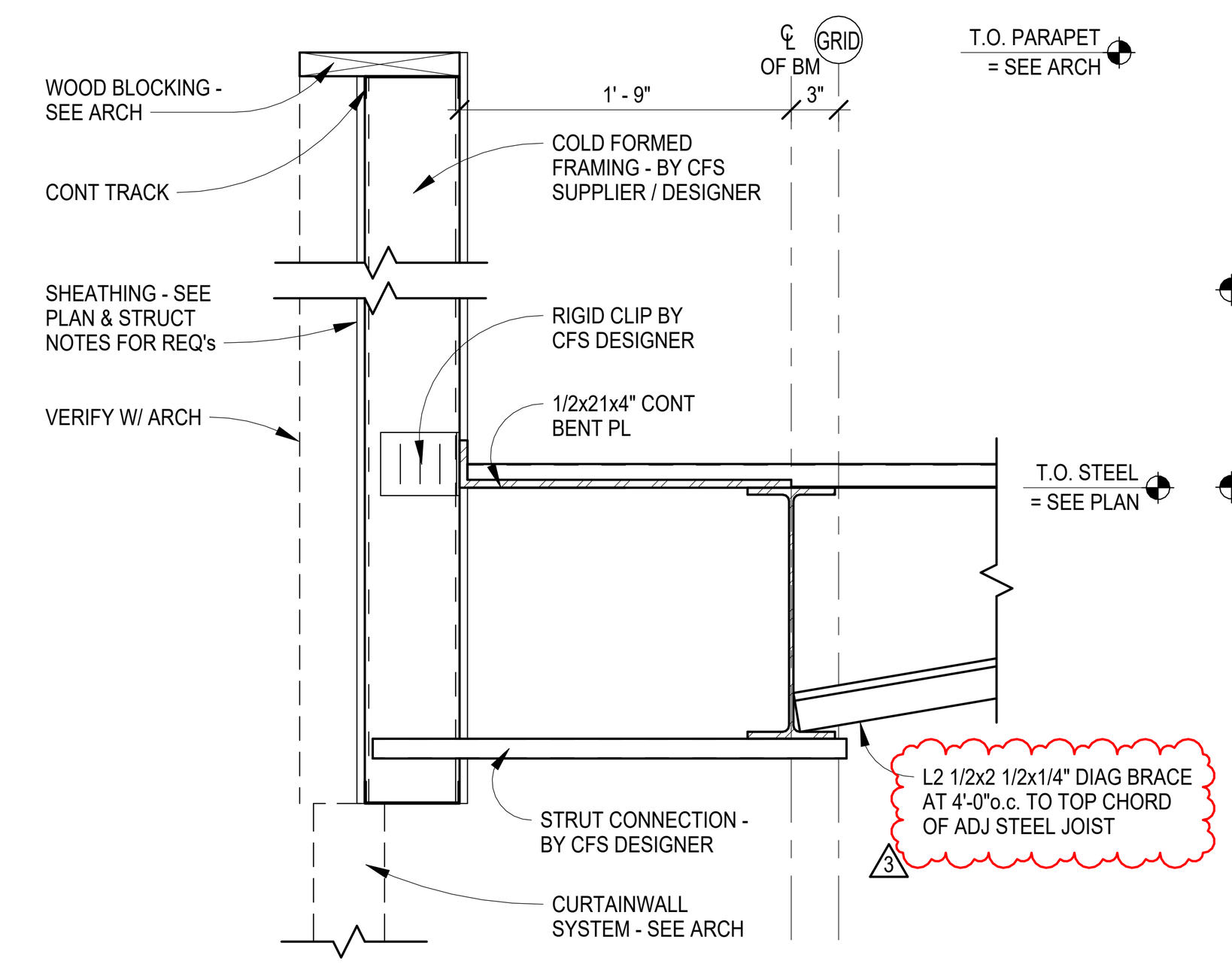
11 S505 **Joist Bearing on Beam**
1" = 1'-0"



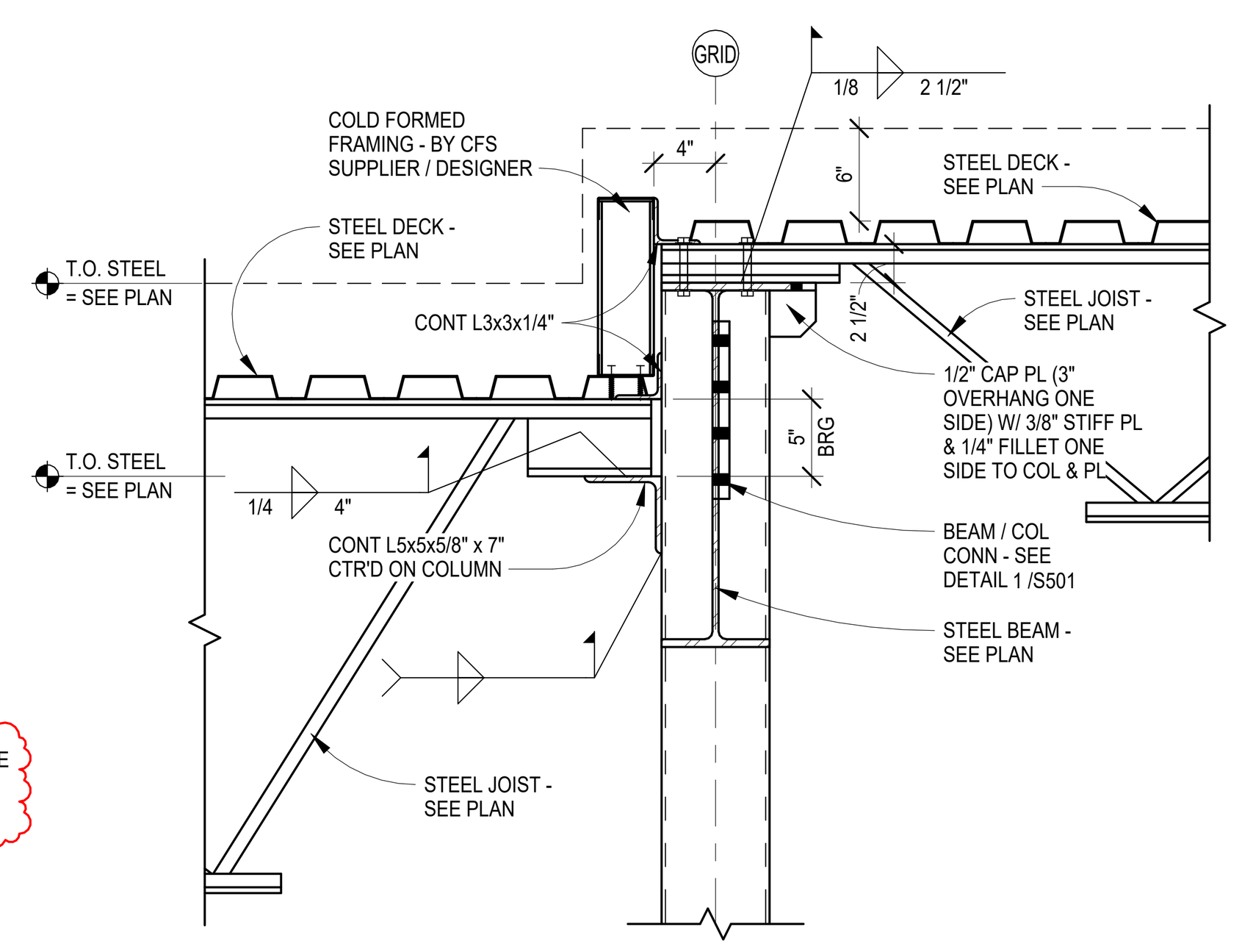
6 S505 **Detail at Clerestory Wall**
1" = 1'-0"



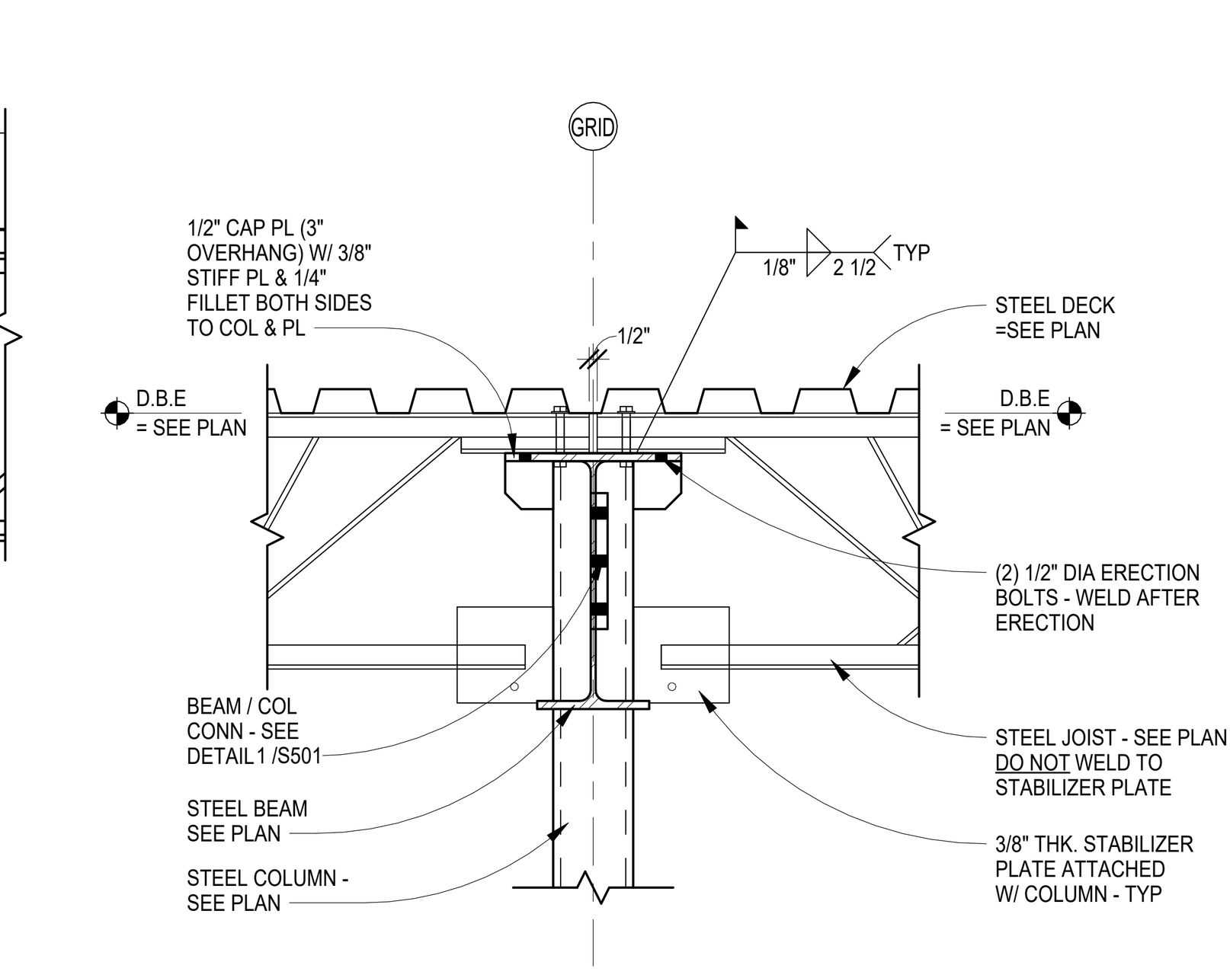
1 S505 **Joist Bearing**
1" = 1'-0"



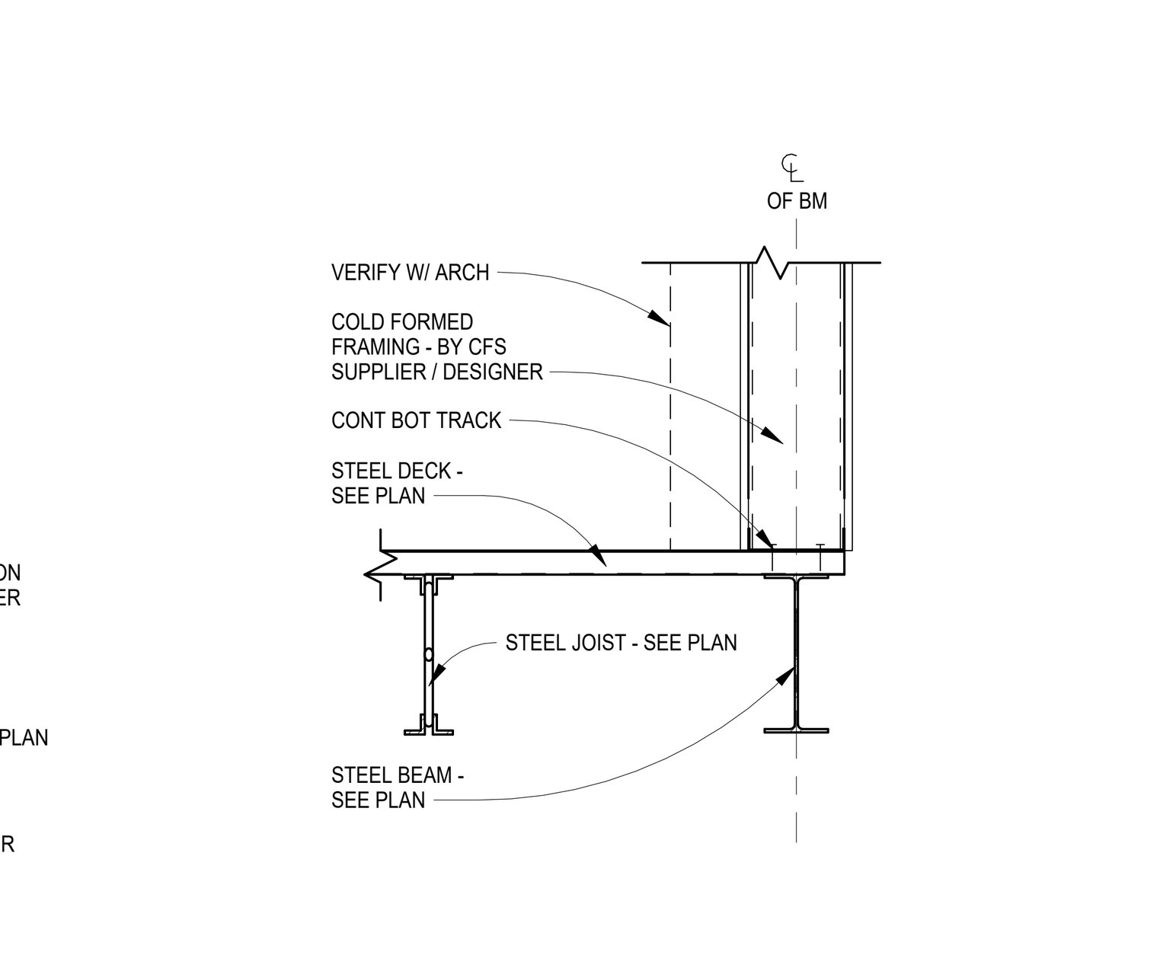
22 S505 **Deck Brg at Stud Boxout**
1" = 1'-0"



17 S505 **Joist Brg at Col / Roof Deck Step**
1" = 1'-0"

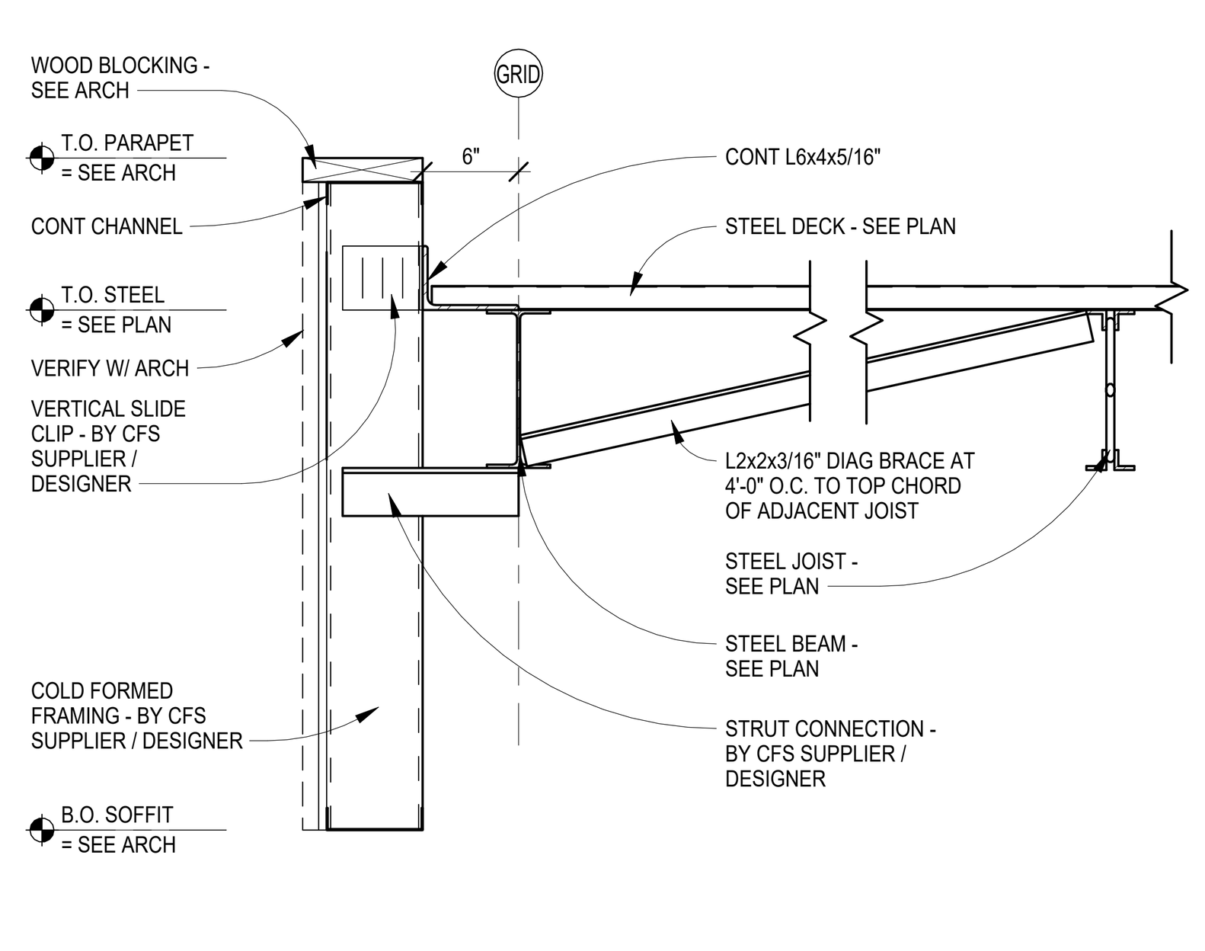


12 S505 **Joist Bearing at Column**
1" = 1'-0"

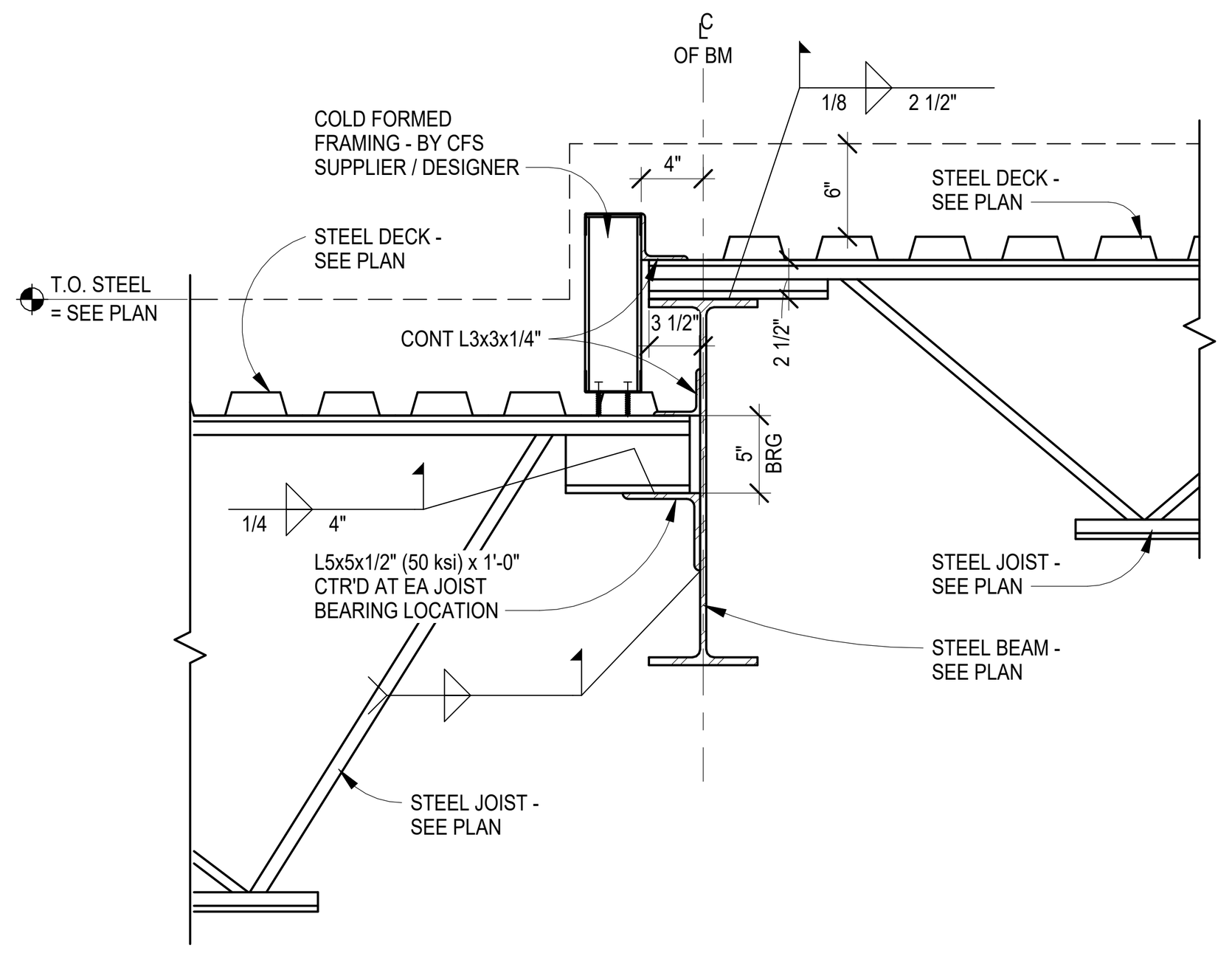


7 S505 **Steel Stud Wall / Deck Brg**
1" = 1'-0"

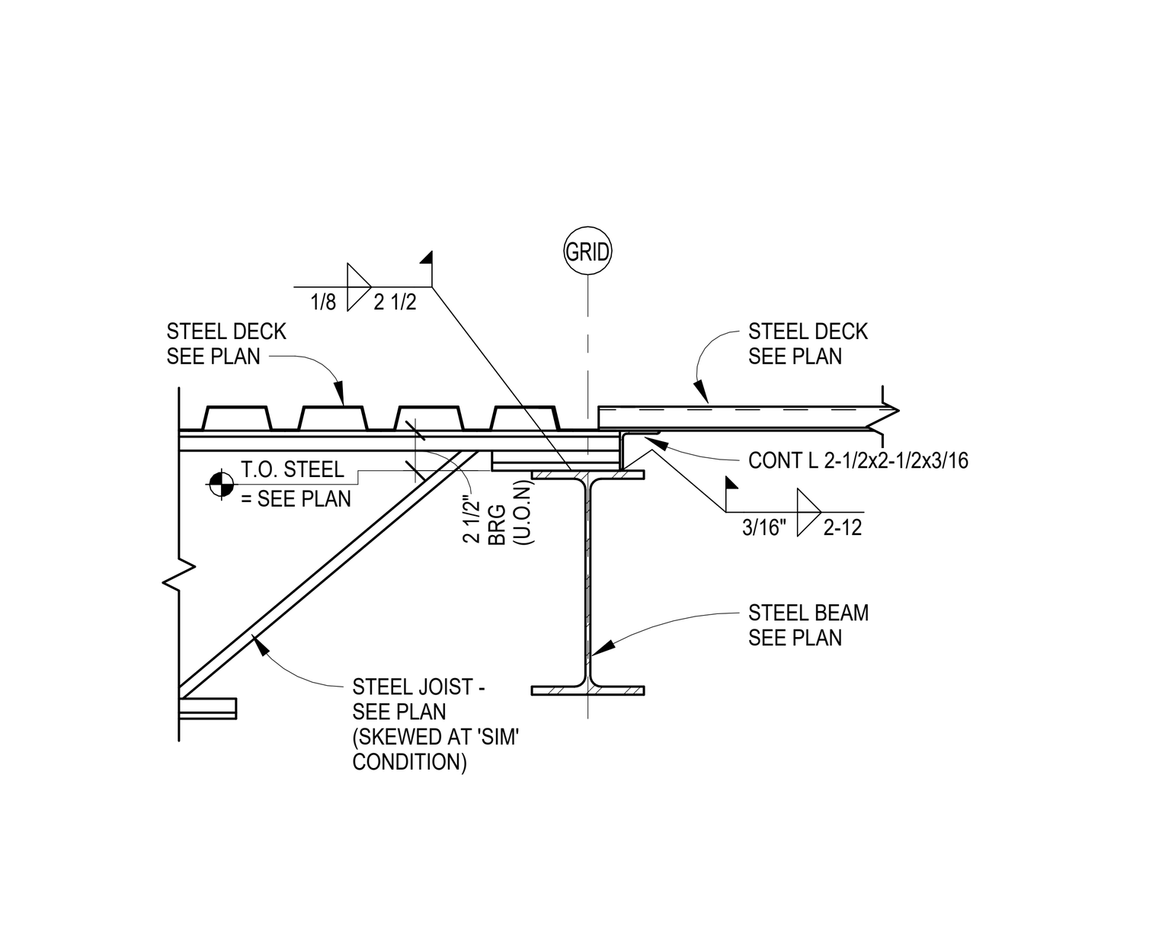
2 S505 **Detail Removed - Not Used**
1" = 1'-0"



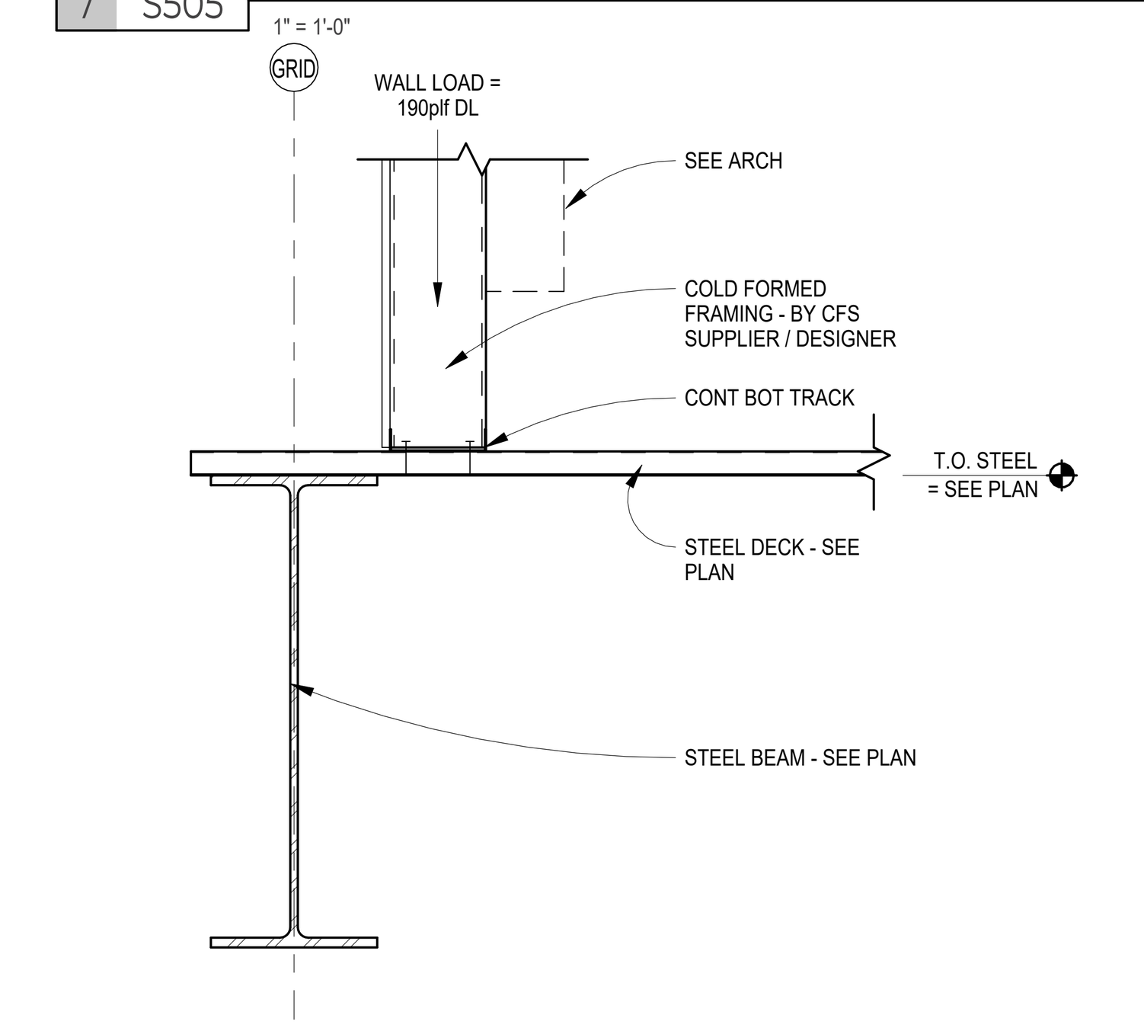
23 S505 **Deck Brg at Canopy Front**
1" = 1'-0"



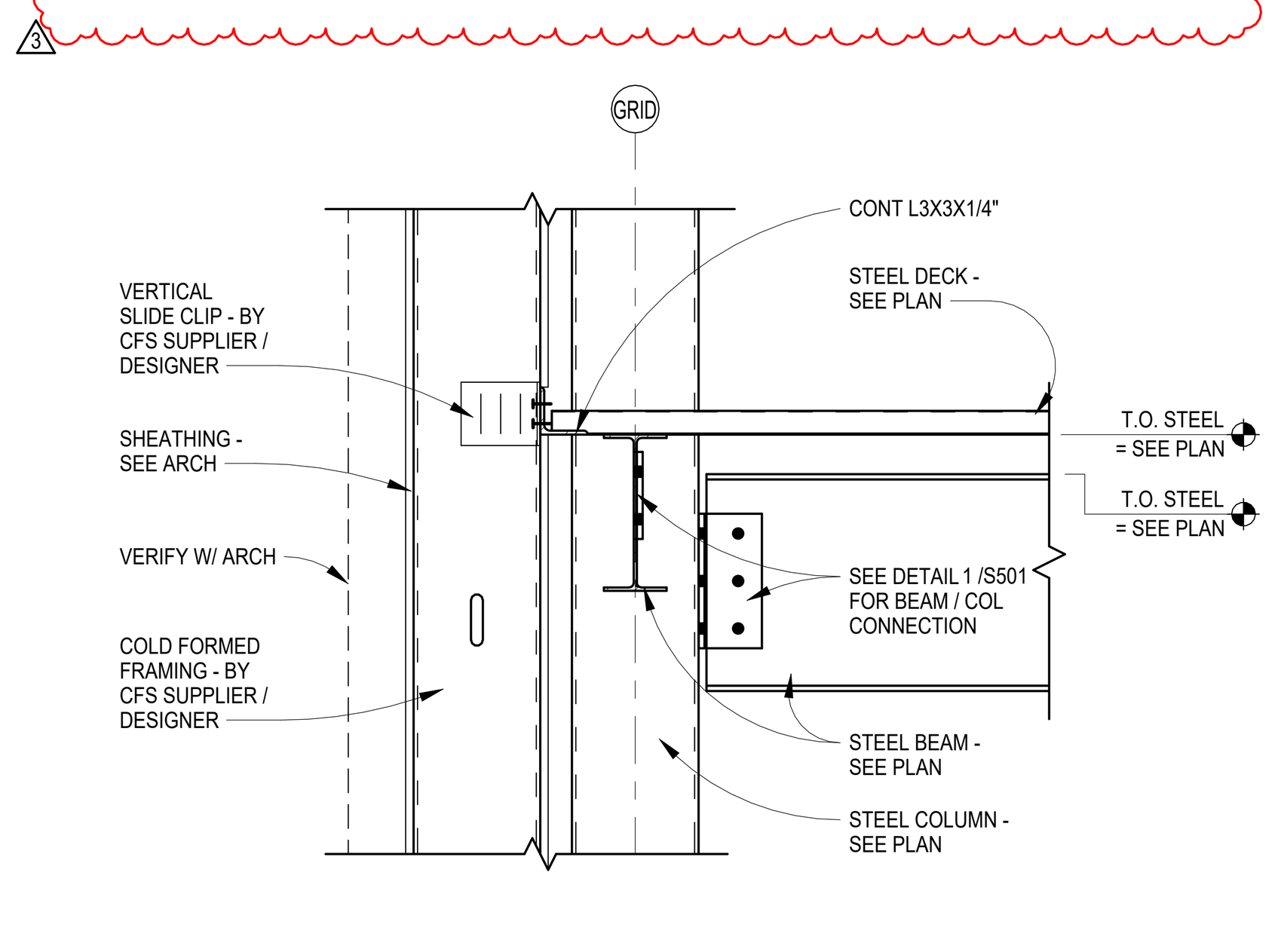
18 S505 **Joist Brg at Roof Deck Step**
1" = 1'-0"



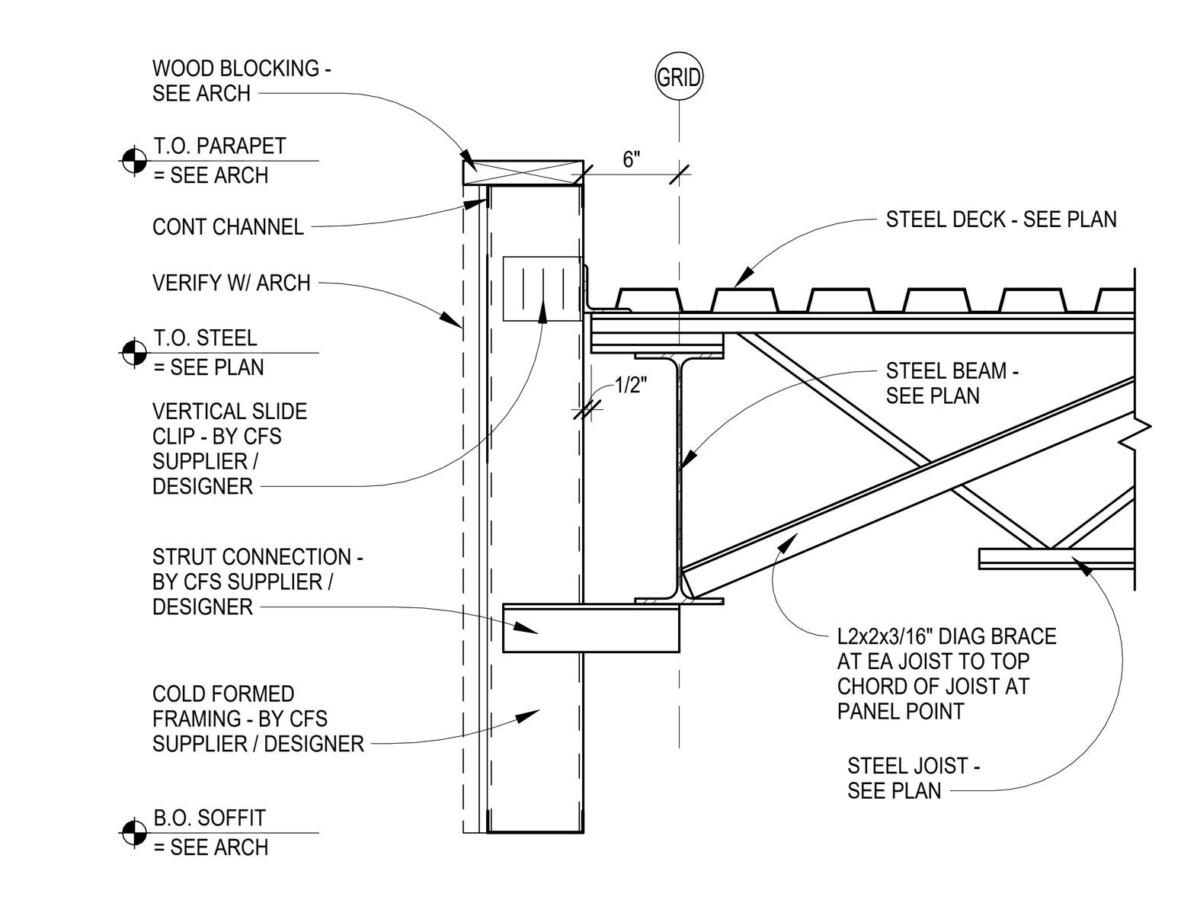
13 S505 **Joist/Deck Bearing**
1" = 1'-0"



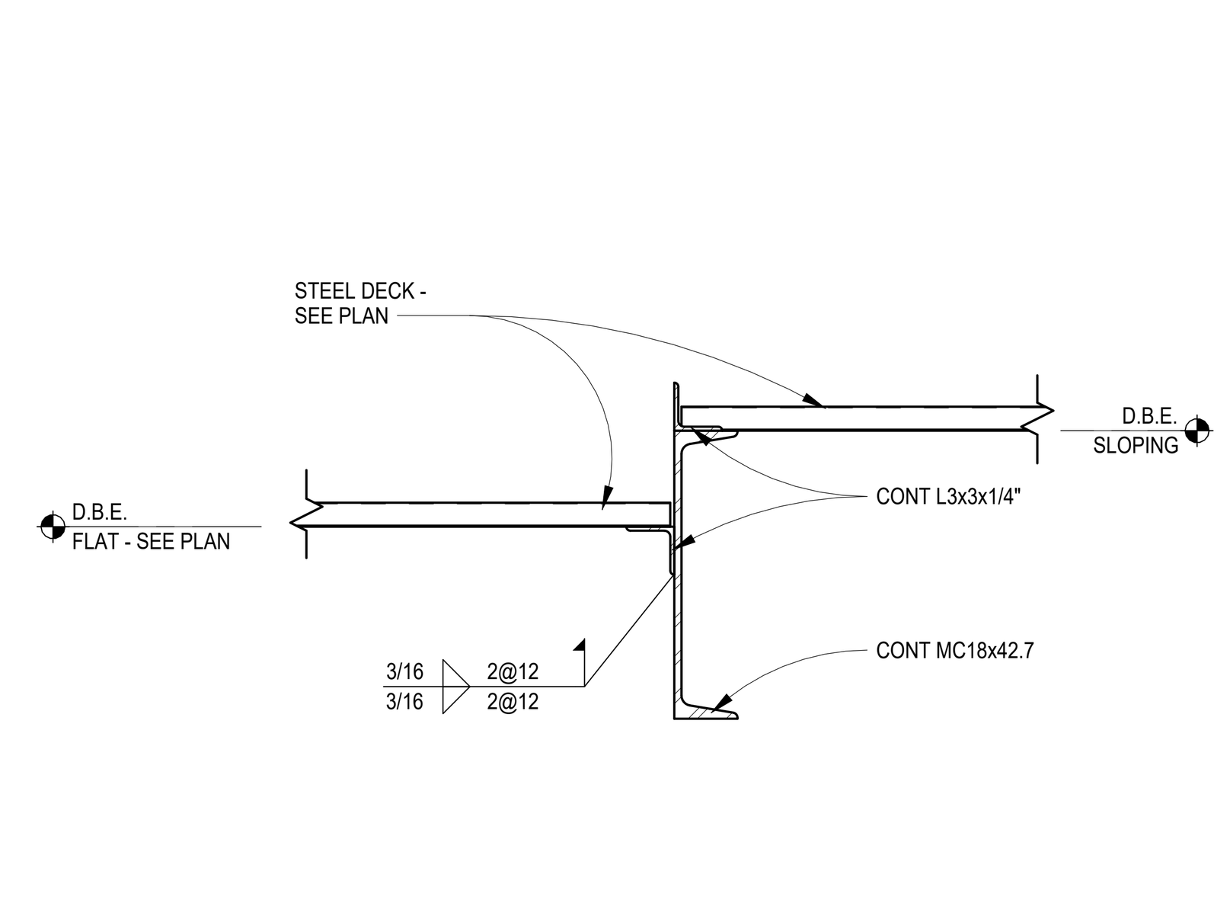
8 S505 **Clerestory Wall Support at Beam**
1" = 1'-0"



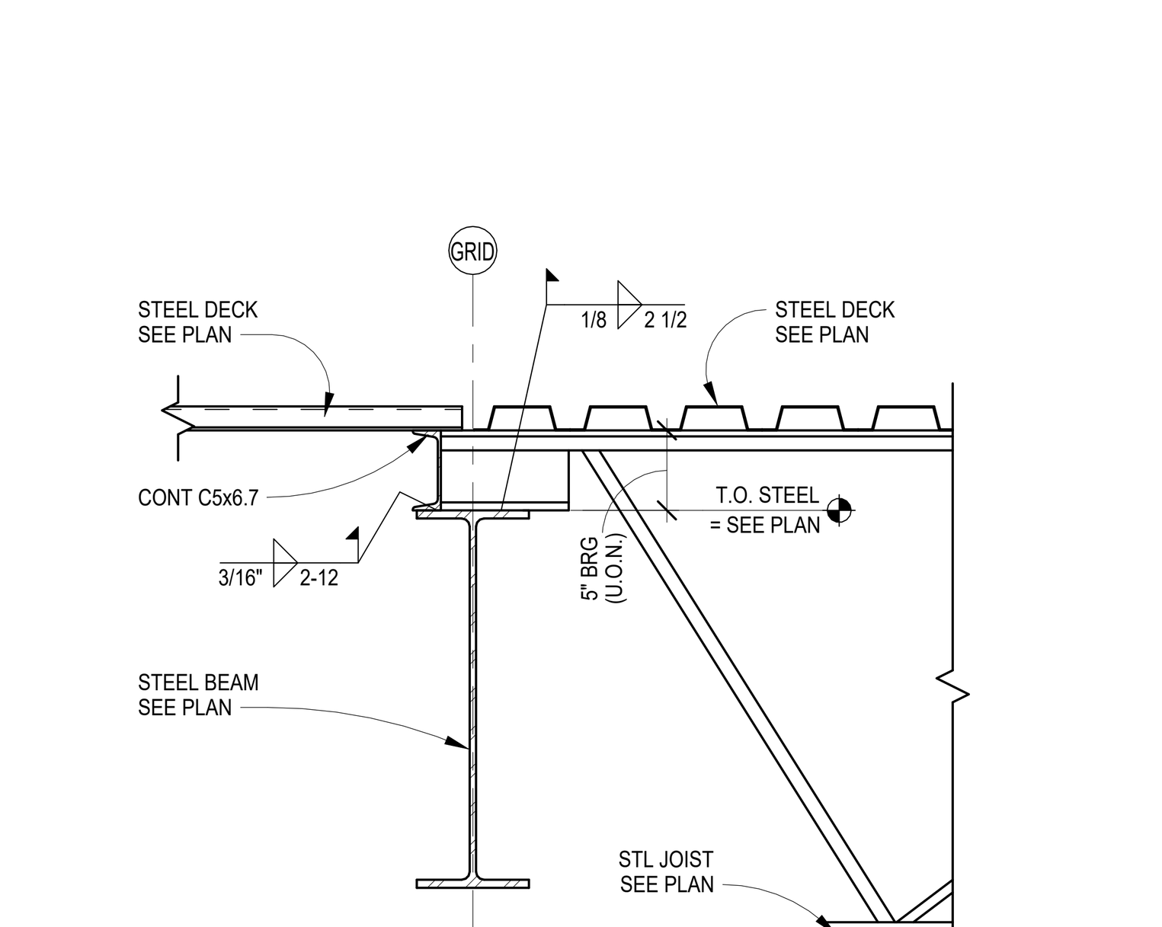
3 S505 **Beam Brg at Column**
1" = 1'-0"



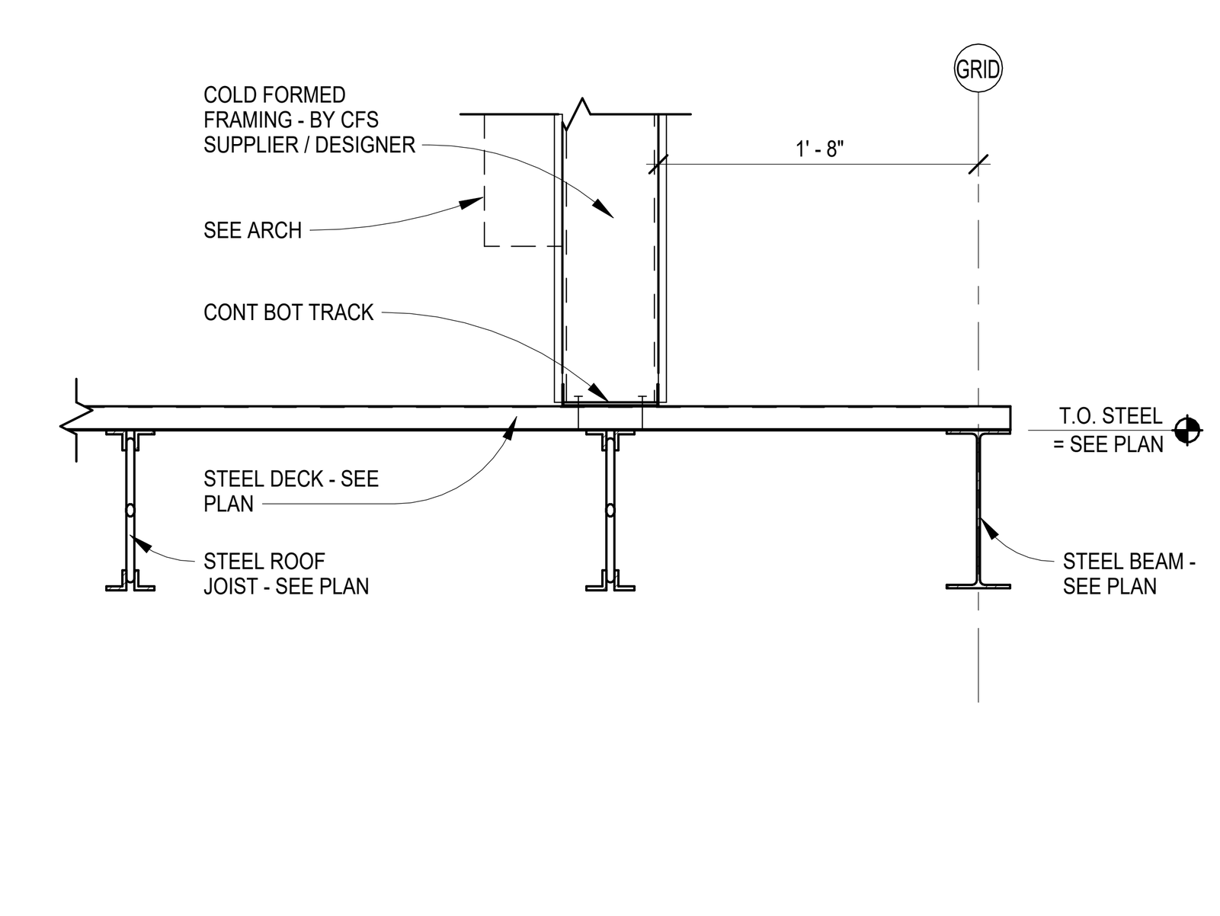
24 S505 **Detail at Front Canopy**
1" = 1'-0"



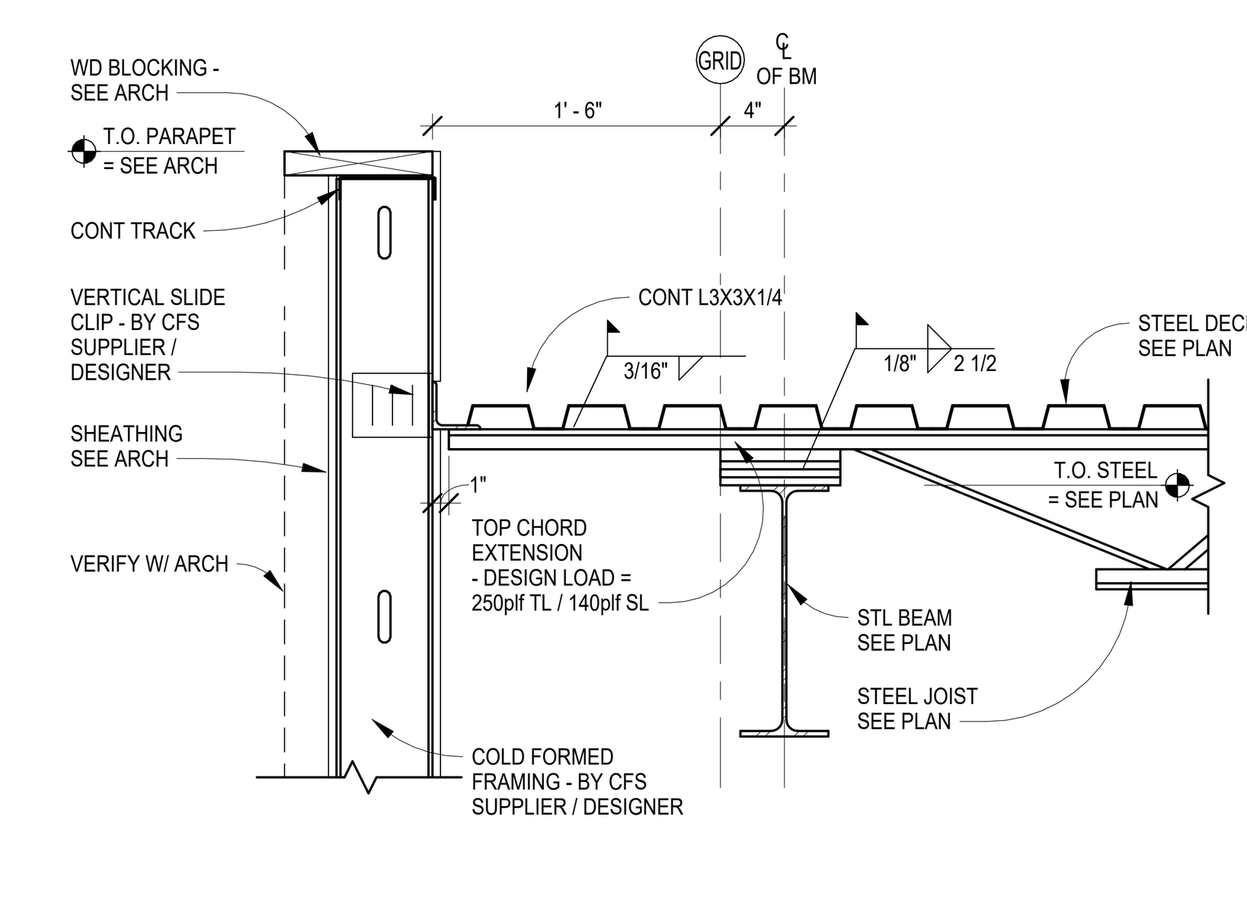
19 S505 **MC Angle at Roof Deck Step**
1" = 1'-0"



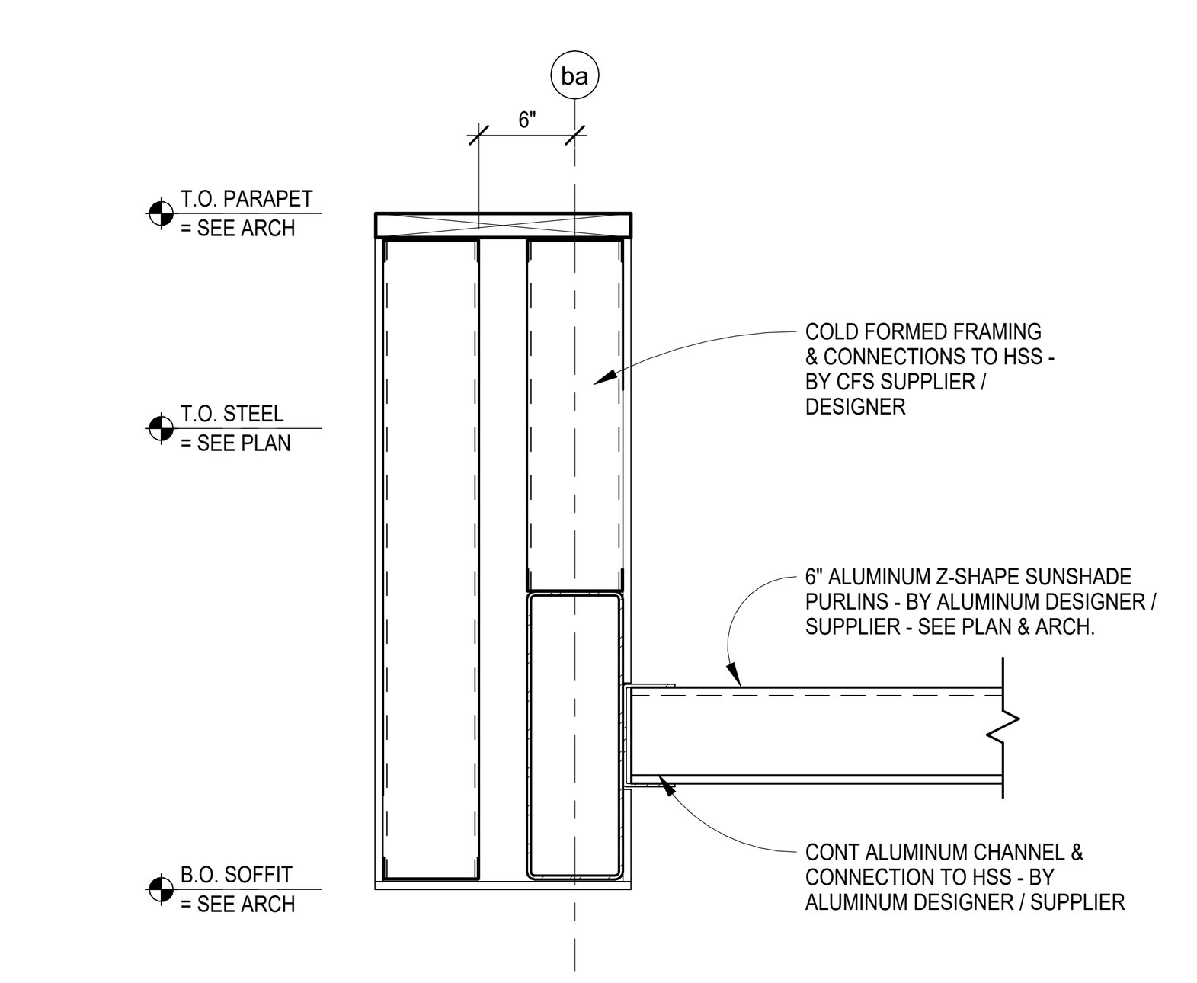
14 S505 **Joist Brg / Deck Change**
1" = 1'-0"



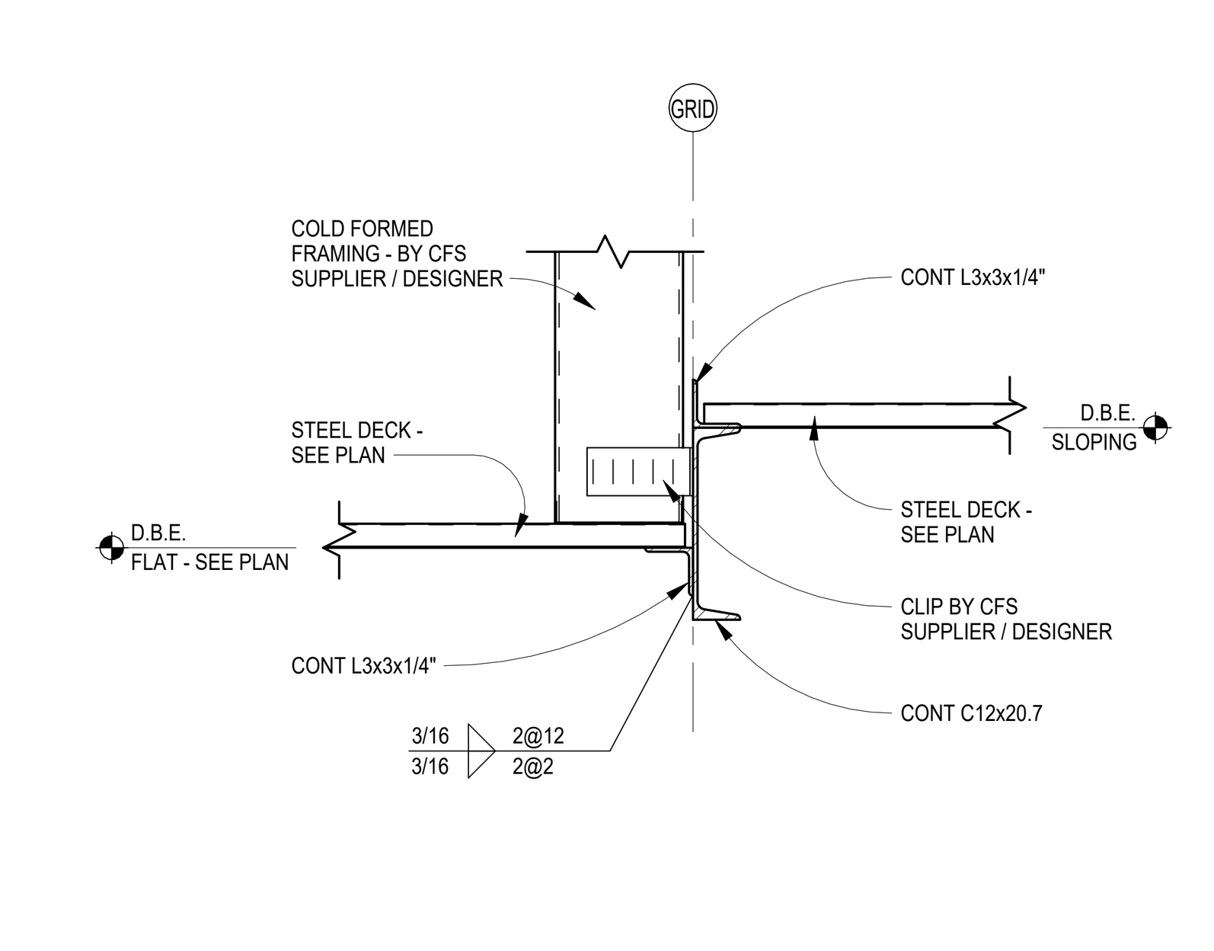
9 S505 **Clerestory Wall Support at Beam**
1" = 1'-0"



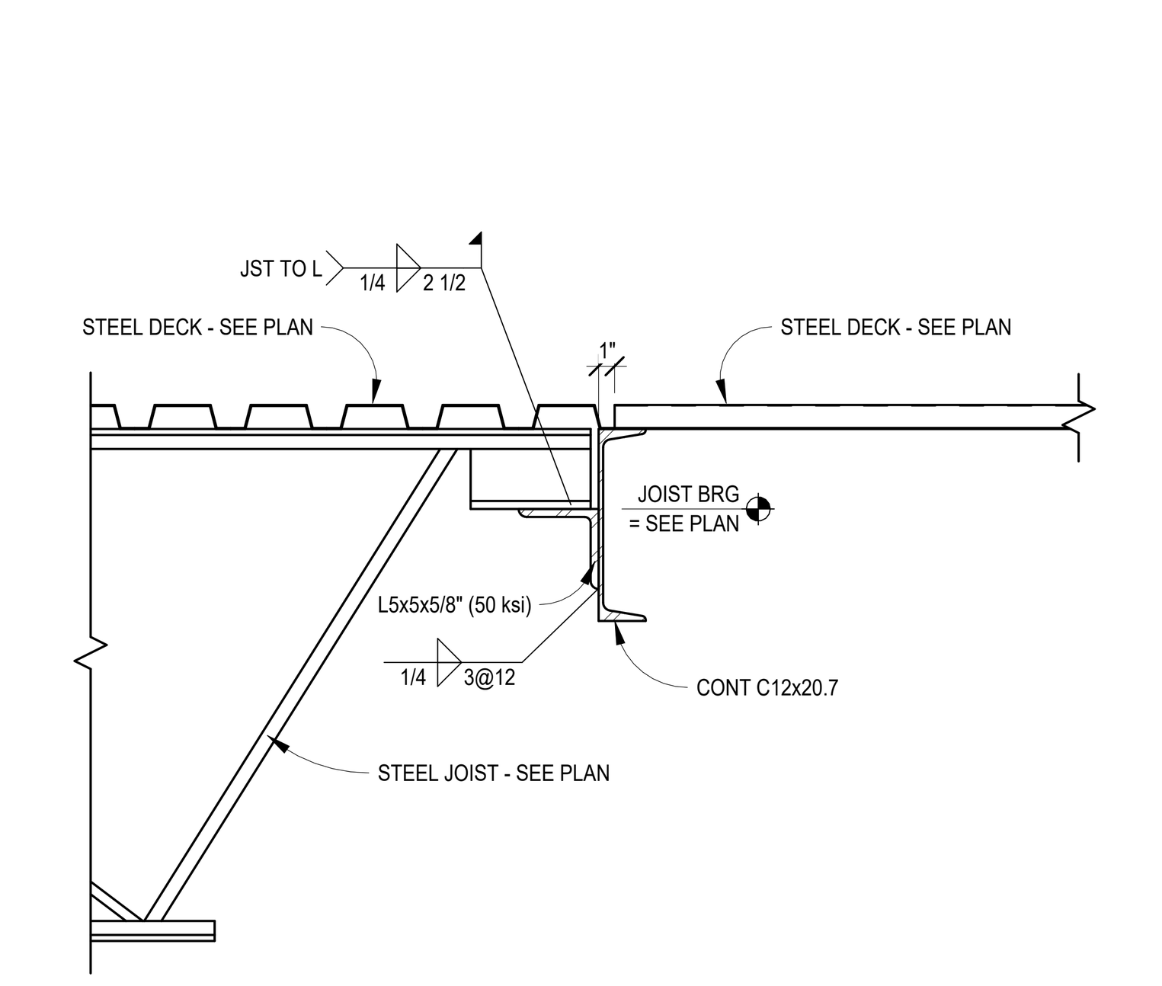
4 S505 **Joist Bearing**
1" = 1'-0"



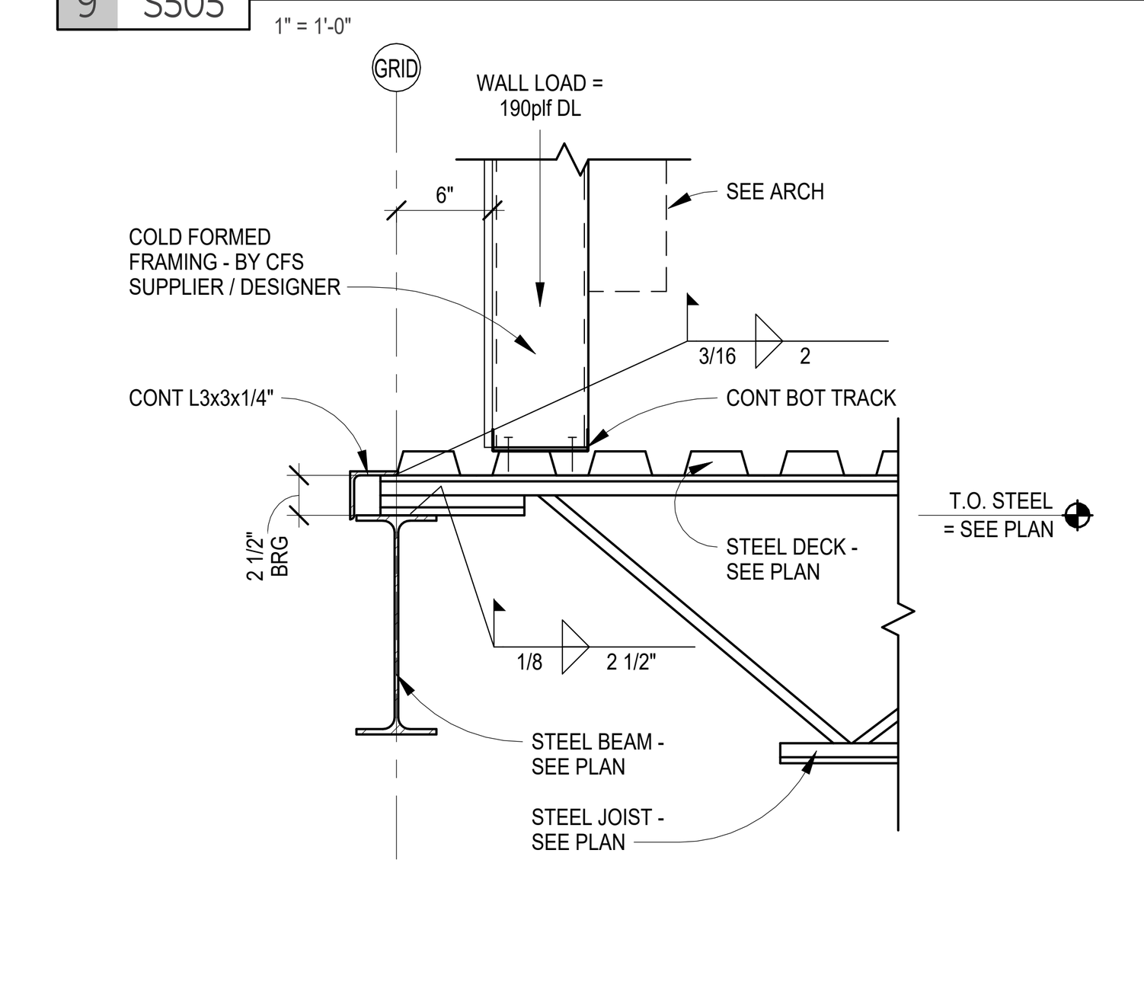
25 S505 **Canopy Detail**
1" = 1'-0"



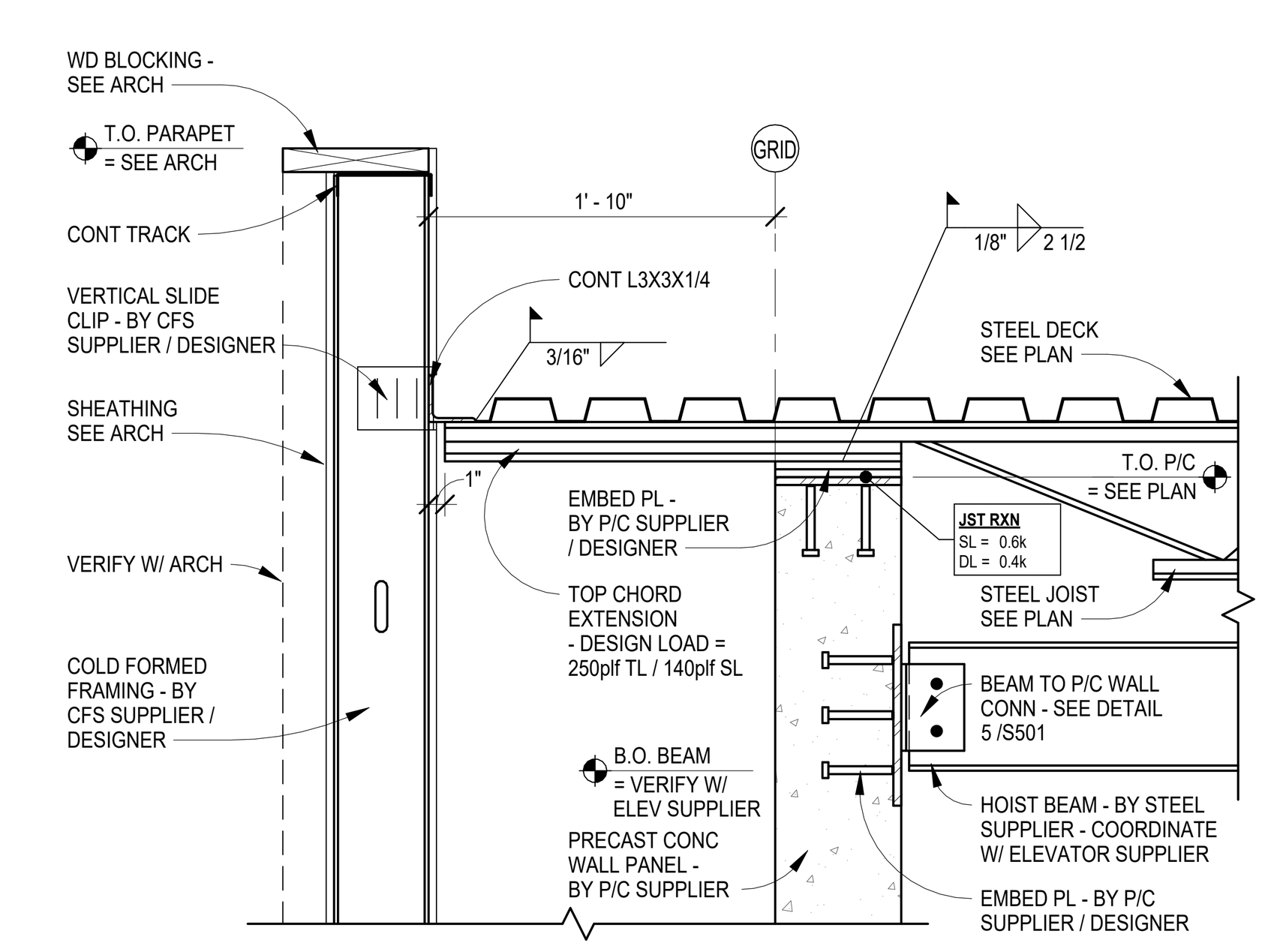
20 S505 **Roof Deck Step**
1" = 1'-0"



15 S505 **Joist / Deck Brg at C Channel**
1" = 1'-0"



10 S505 **Joist Brg at Clerestory Wall**
1" = 1'-0"



5 S505 **Joist Bearing**
1" = 1'-0"

ICON
ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School - STRUCTURAL
210 12th Street NE
Valley City, ND 58072

STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. JOCHIM
PE-9135
DATE 03-10-2026
NORTH DAKOTA

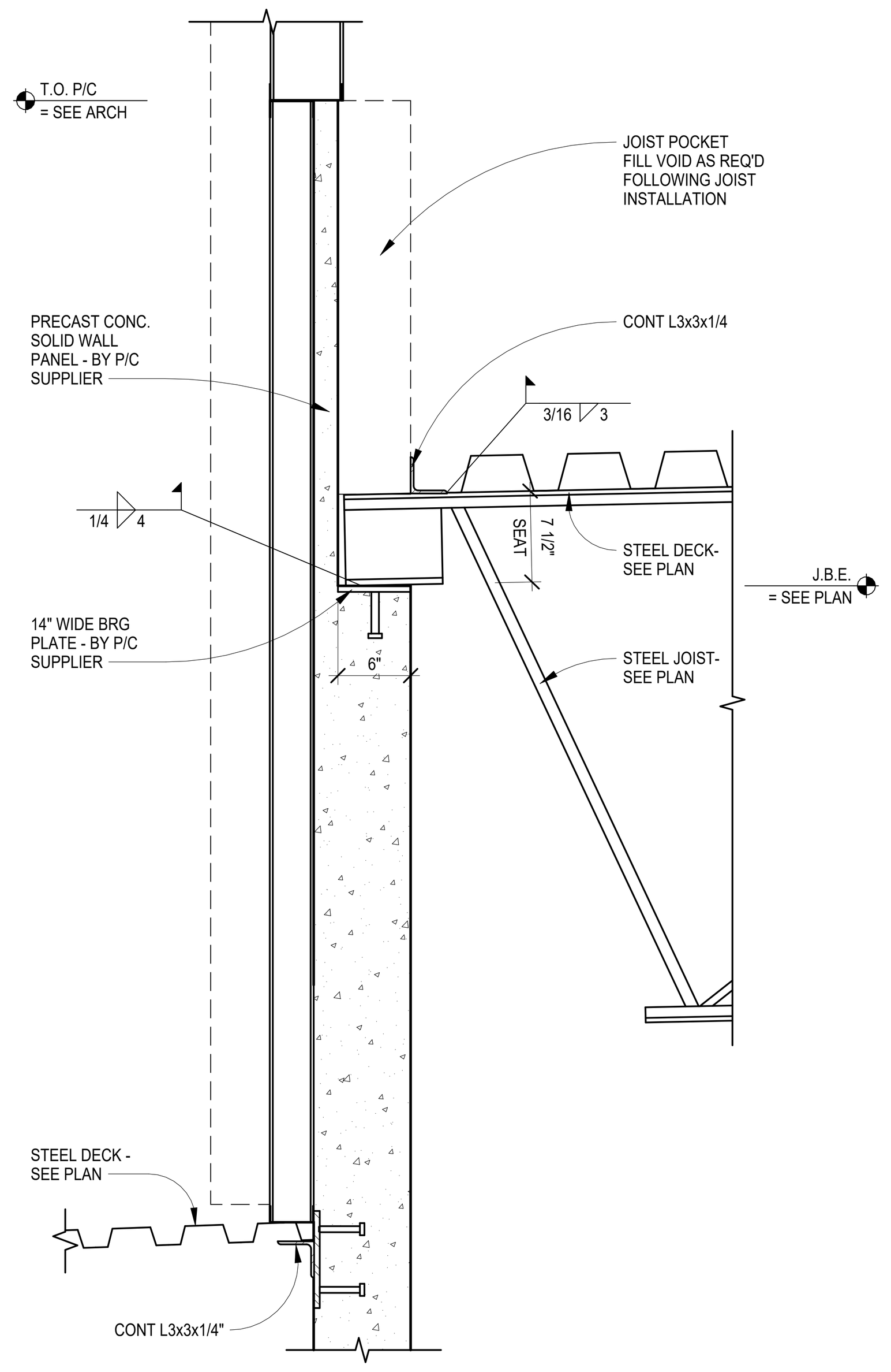
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
2	ADDENDUM #2	03/24/26
3	ADDENDUM #3	03/30/26

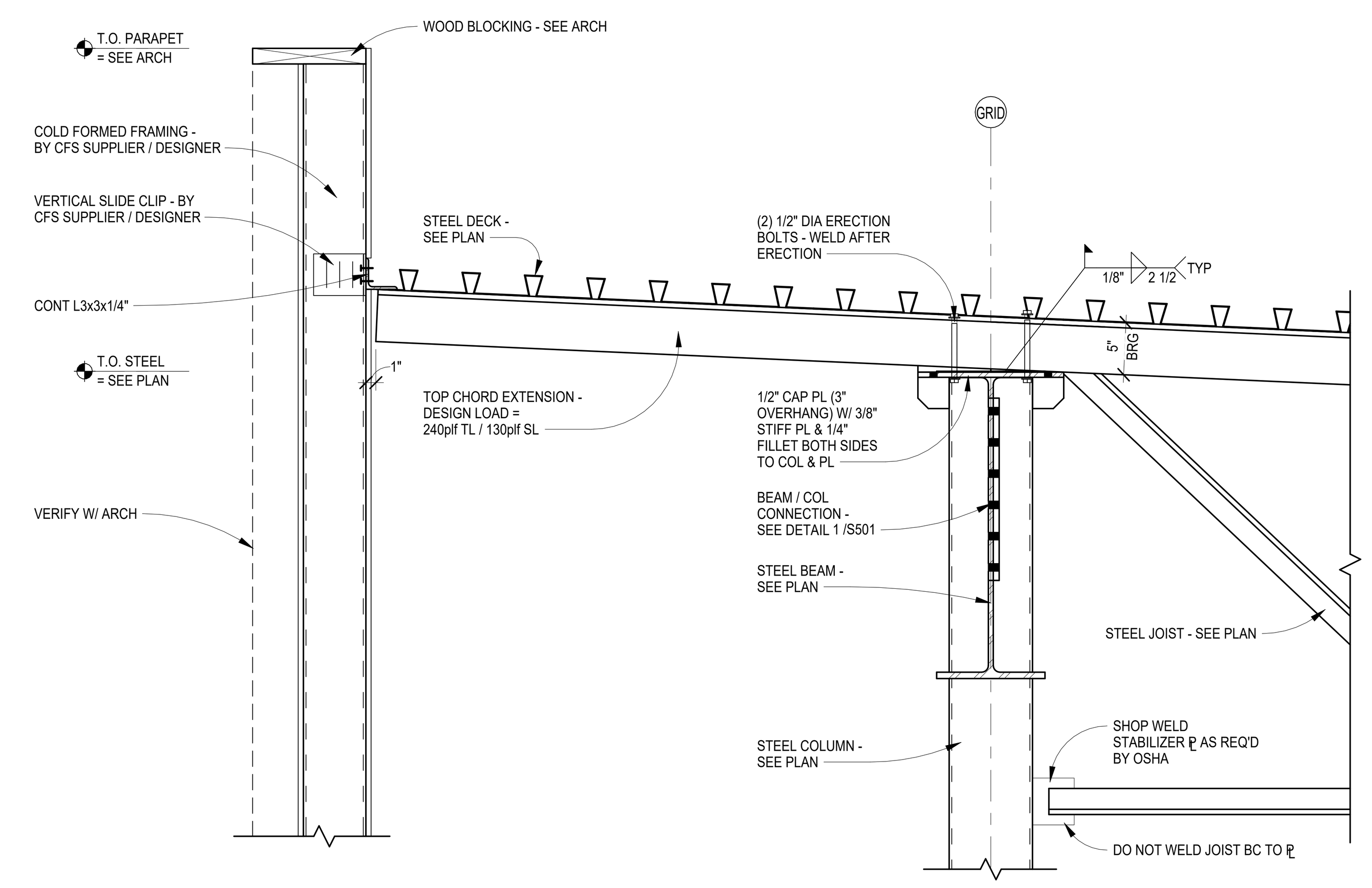
DRAWN BY: MFJ, CMM JN: 24-028

Roof Framing Details

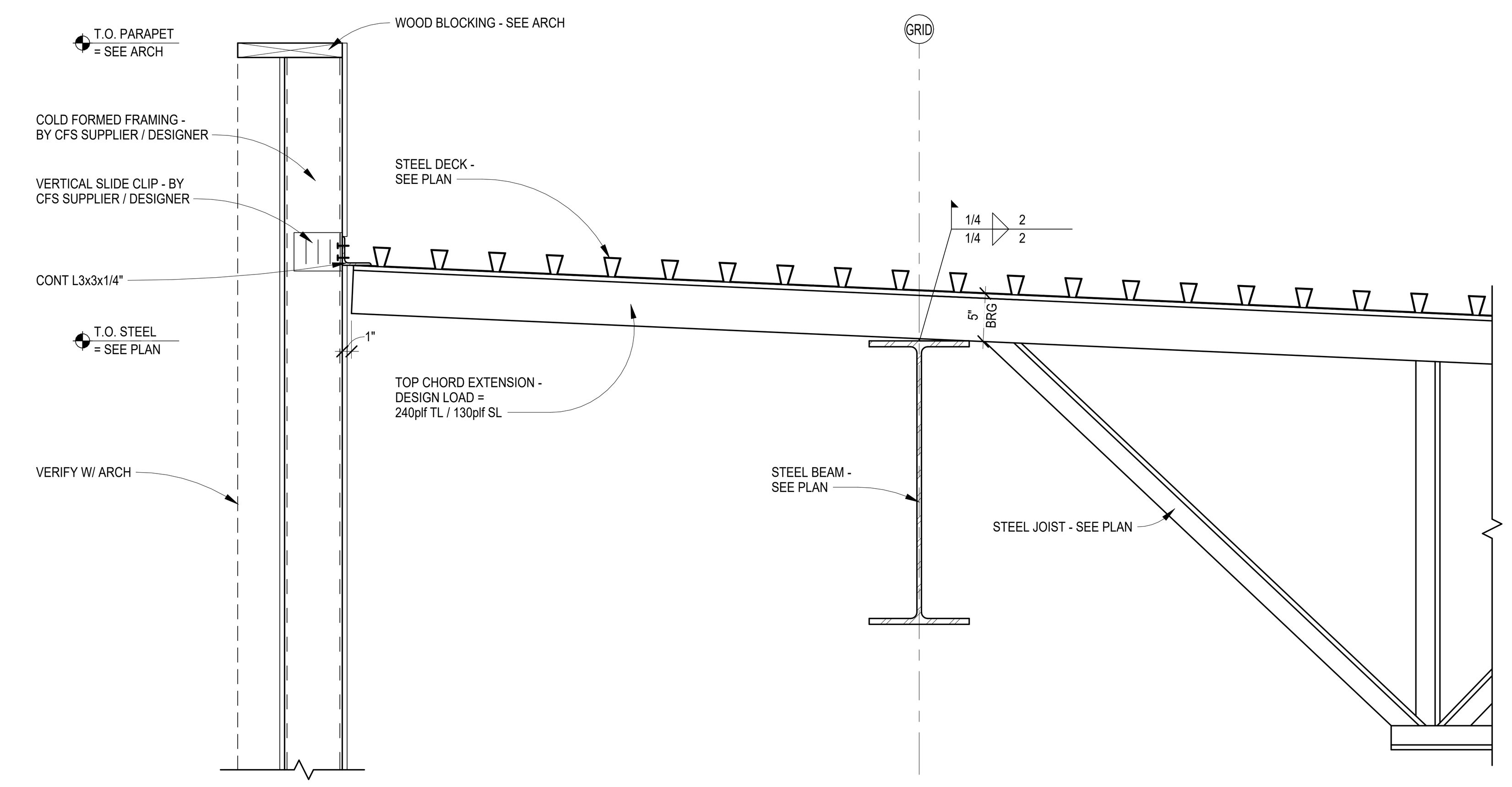
SHEET
S505



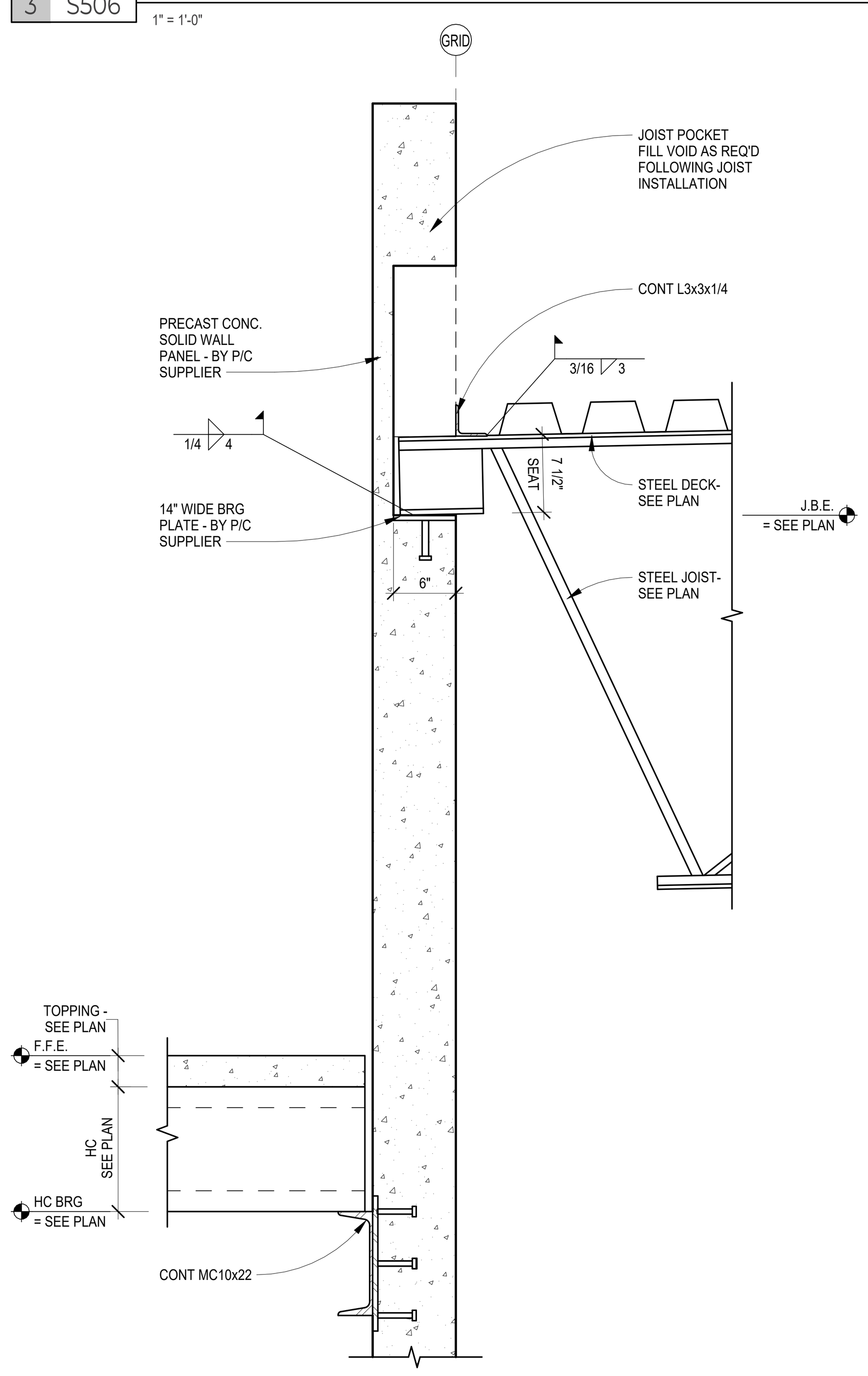
3 S506 **Roof Joist Bearing at P/C (High)**
1" = 1'-0"



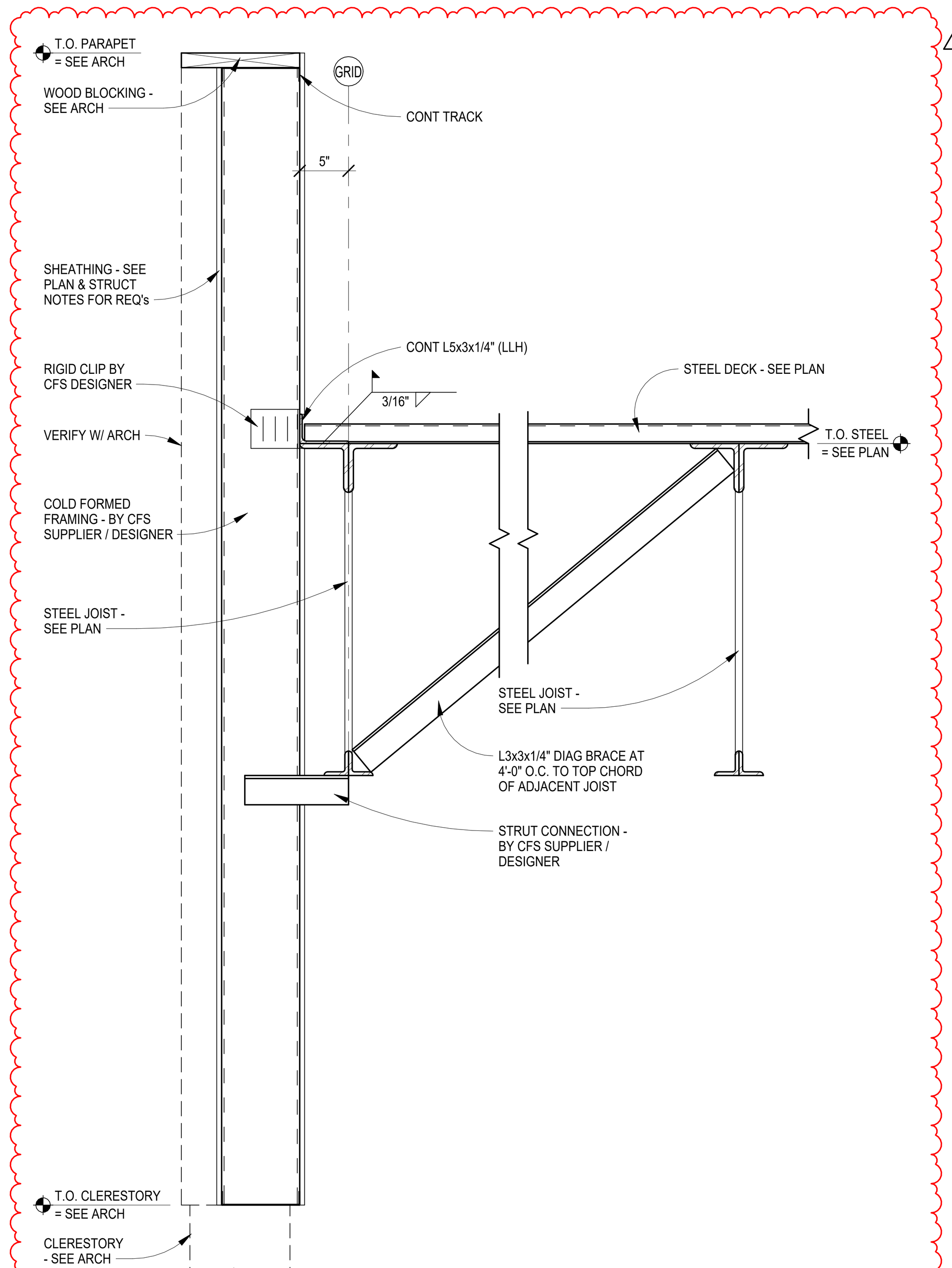
2 S506 **Commons Joist Bearing at Column**
1" = 1'-0"



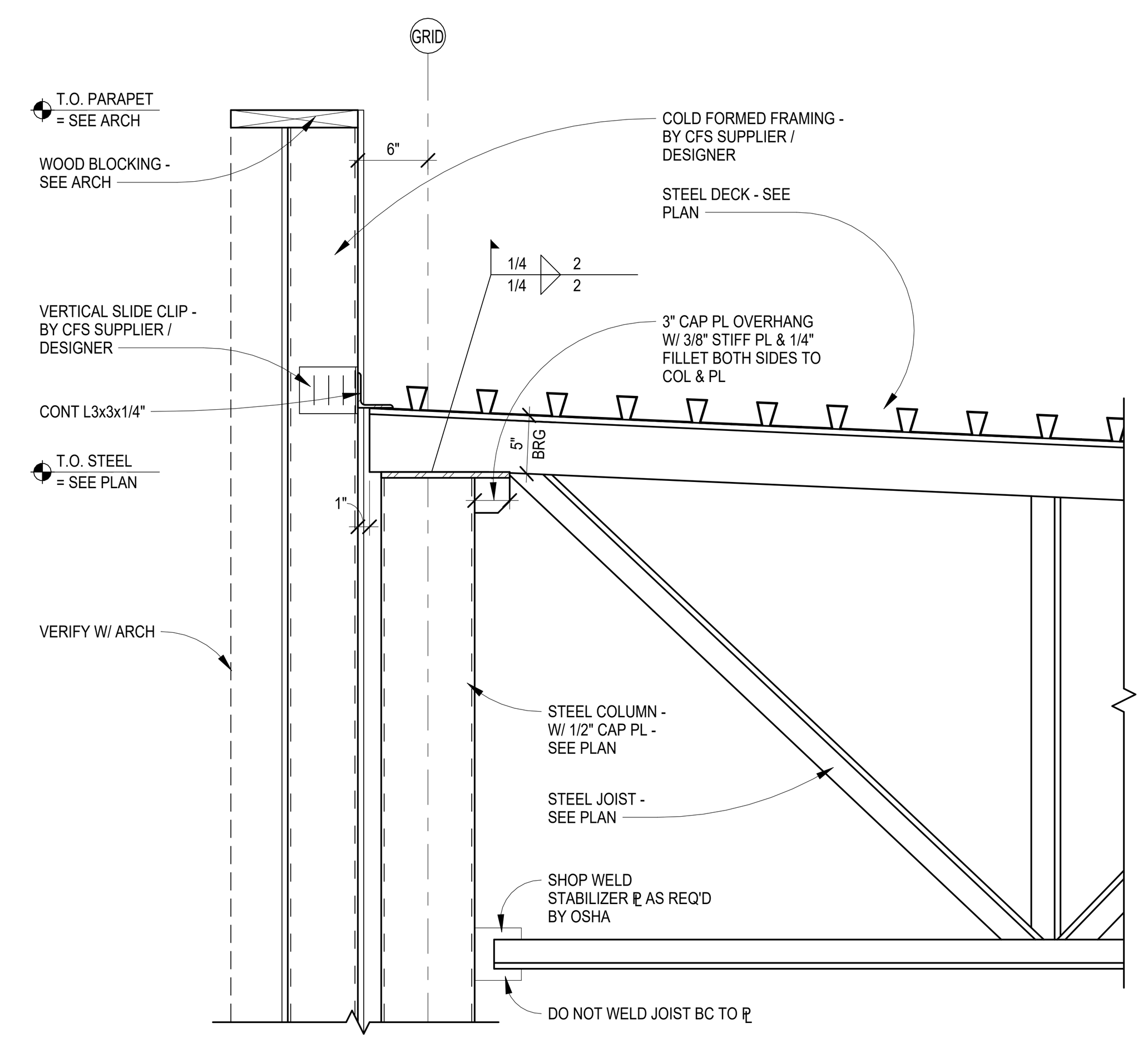
1 S506 **Commons Joist Bearing**
1" = 1'-0"



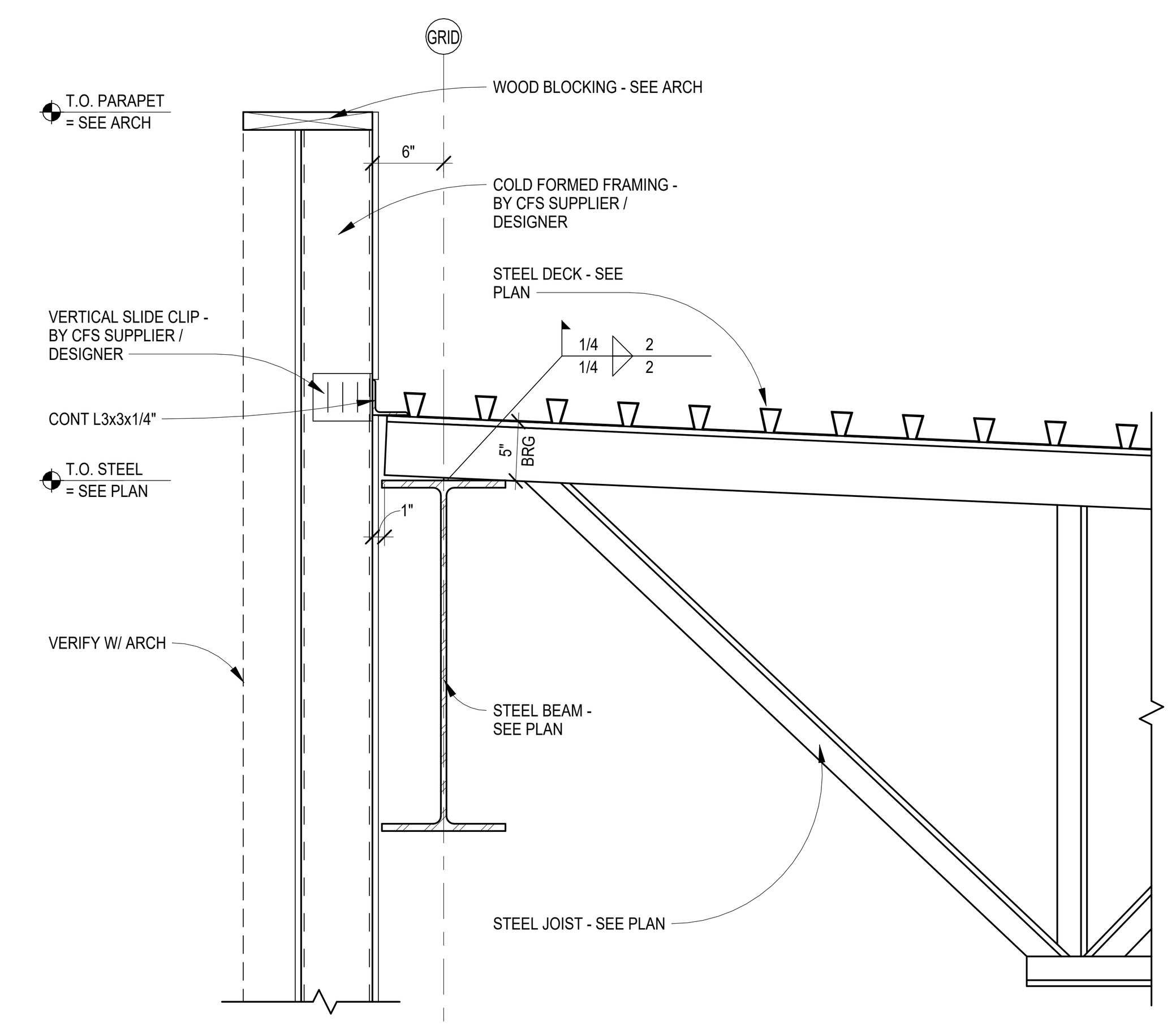
7 S506 **Roof Joist Bearing at P/C (High)**
1" = 1'-0"



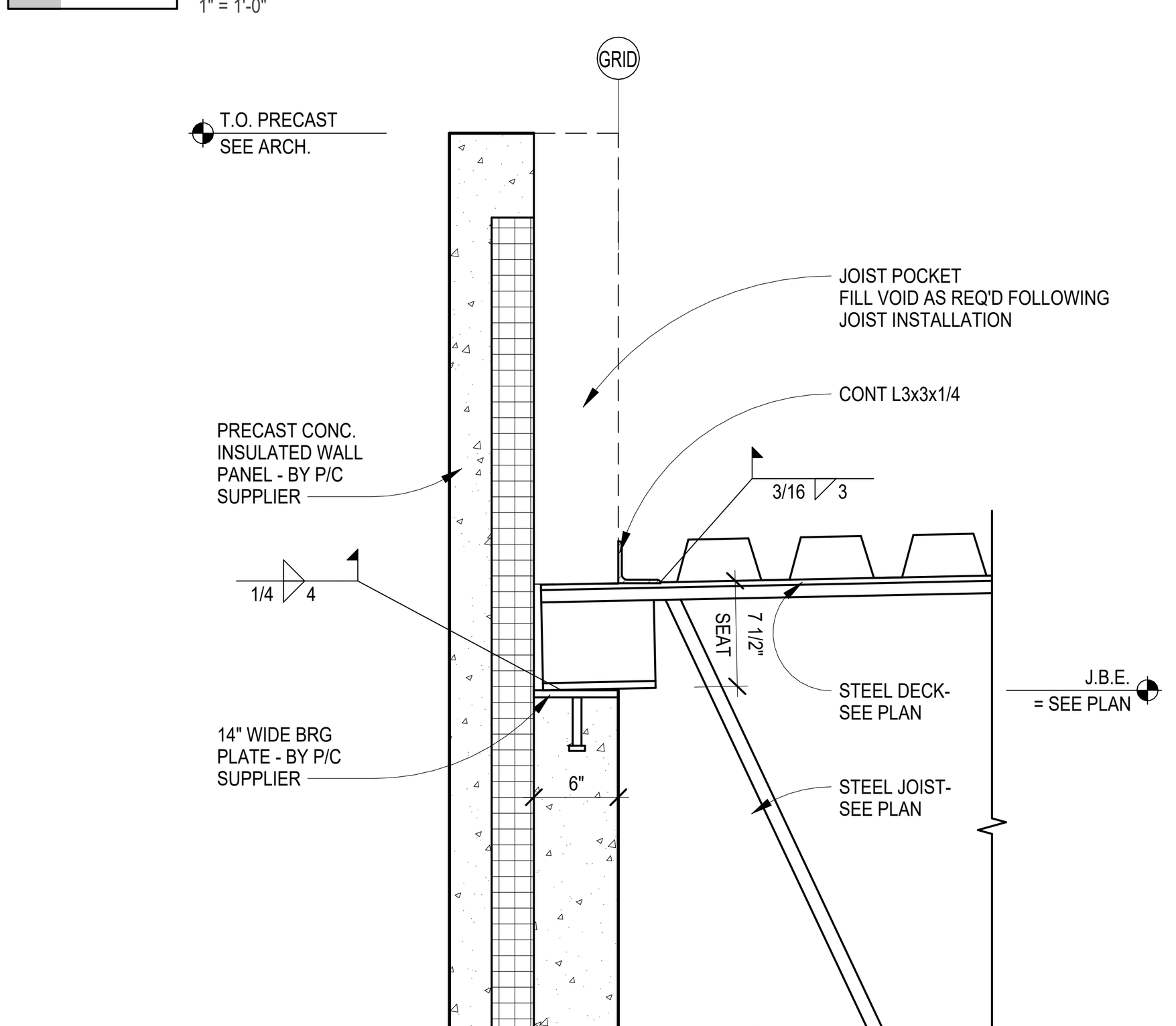
6 S506 **Deck Bearing**
1" = 1'-0"



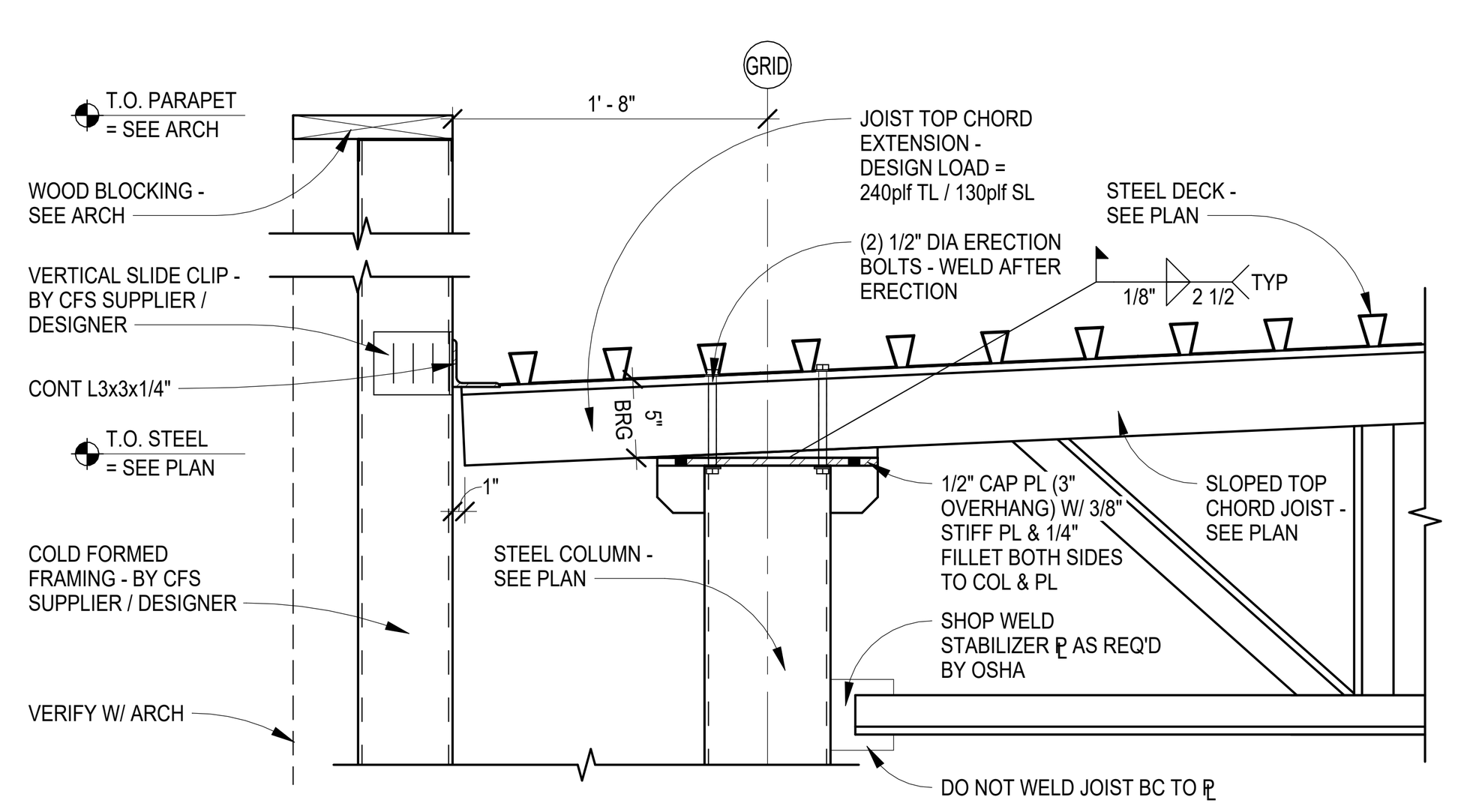
5 S506 **Commons Joist Bearing at Column**
1" = 1'-0"



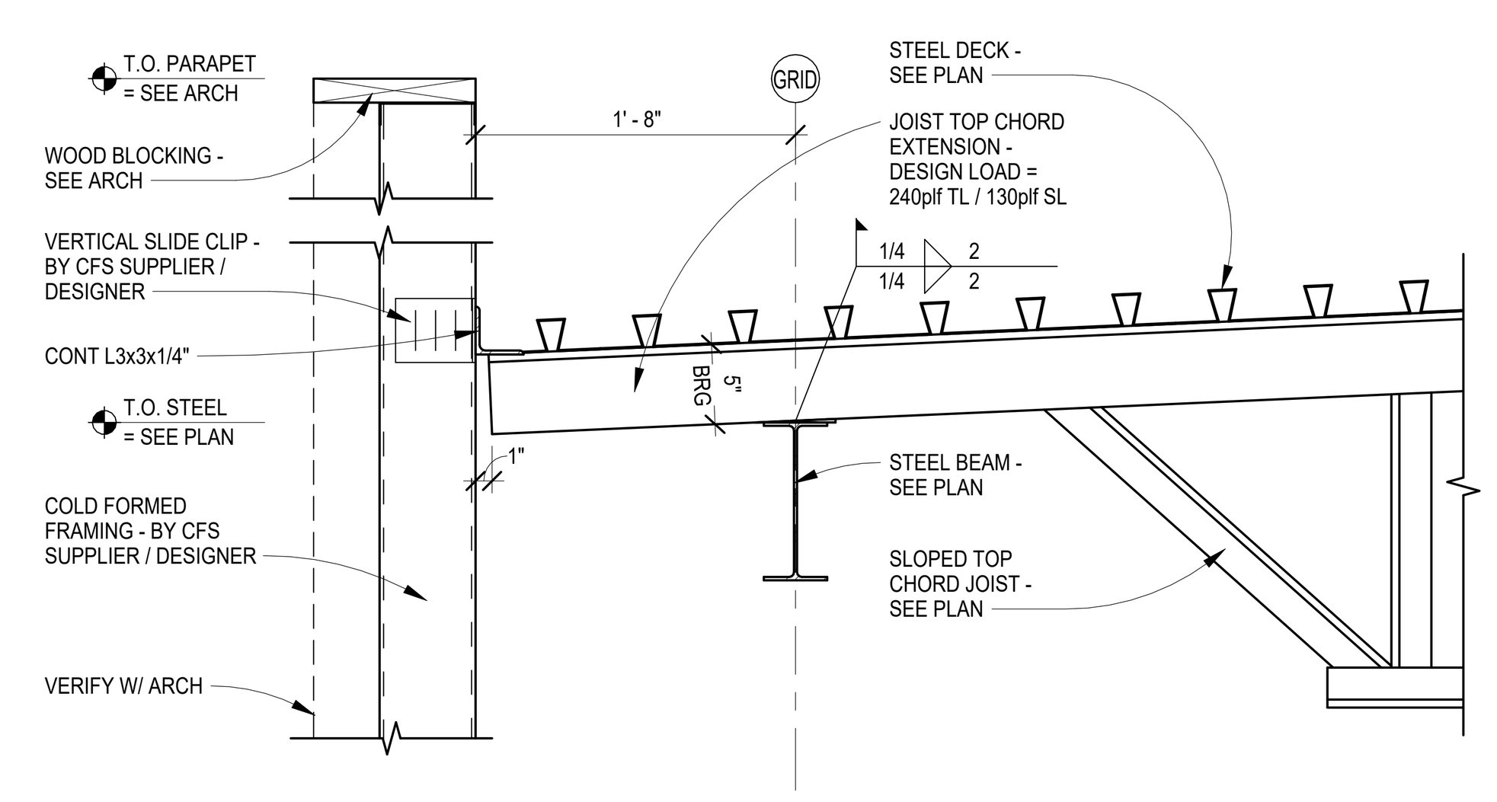
4 S506 **Commons Joist Bearing**
1" = 1'-0"



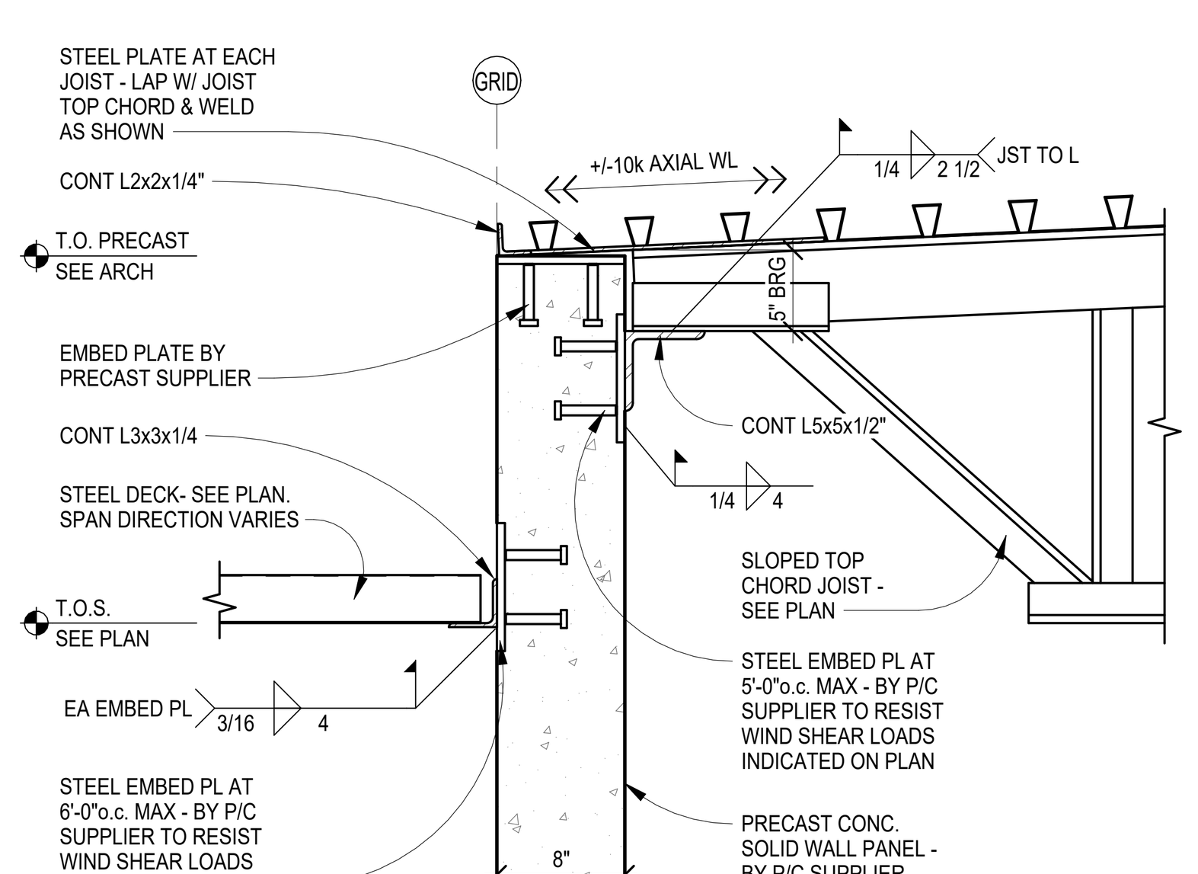
11 S506 **Roof Joist Bearing at P/C (High)**
1" = 1'-0"



10 S506 **Commons Joist Brg at Column - Low End**
1" = 1'-0"



9 S506 **Commons Joist Brg - Low End**
1" = 1'-0"



8 S506 **Commons Joist / Deck Brg at P/C**
1" = 1'-0"

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School - STRUCTURAL

210 12th Street NE
Valley City, ND 58072

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. JOCHIM
PE-9135
DATE 03-10-2026
NORTH DAKOTA

DRAWING HISTORY

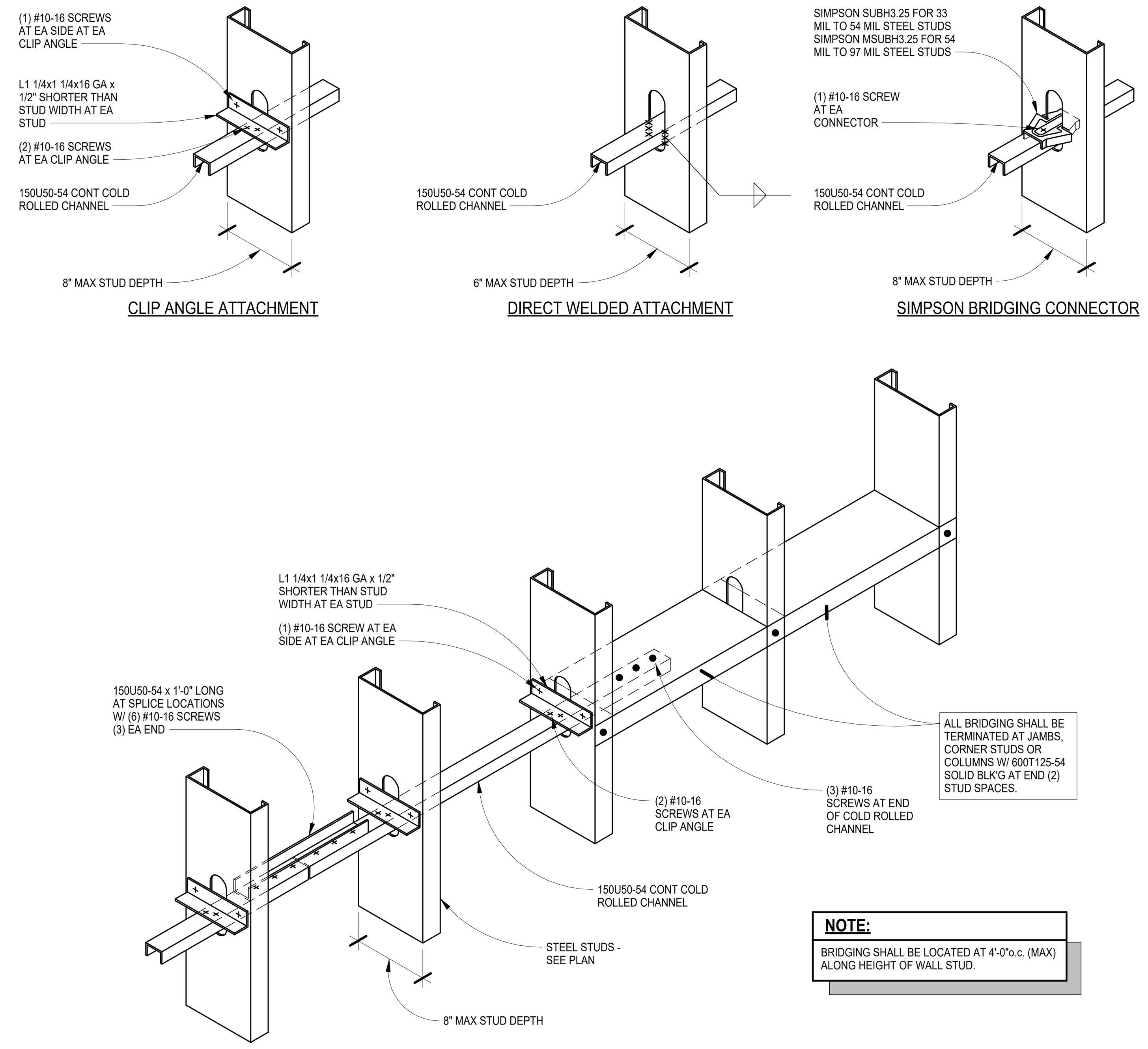
NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
3	ADDENDUM #3	03/30/26

DRAWN BY: MFJ, CMM   JN: 24-028

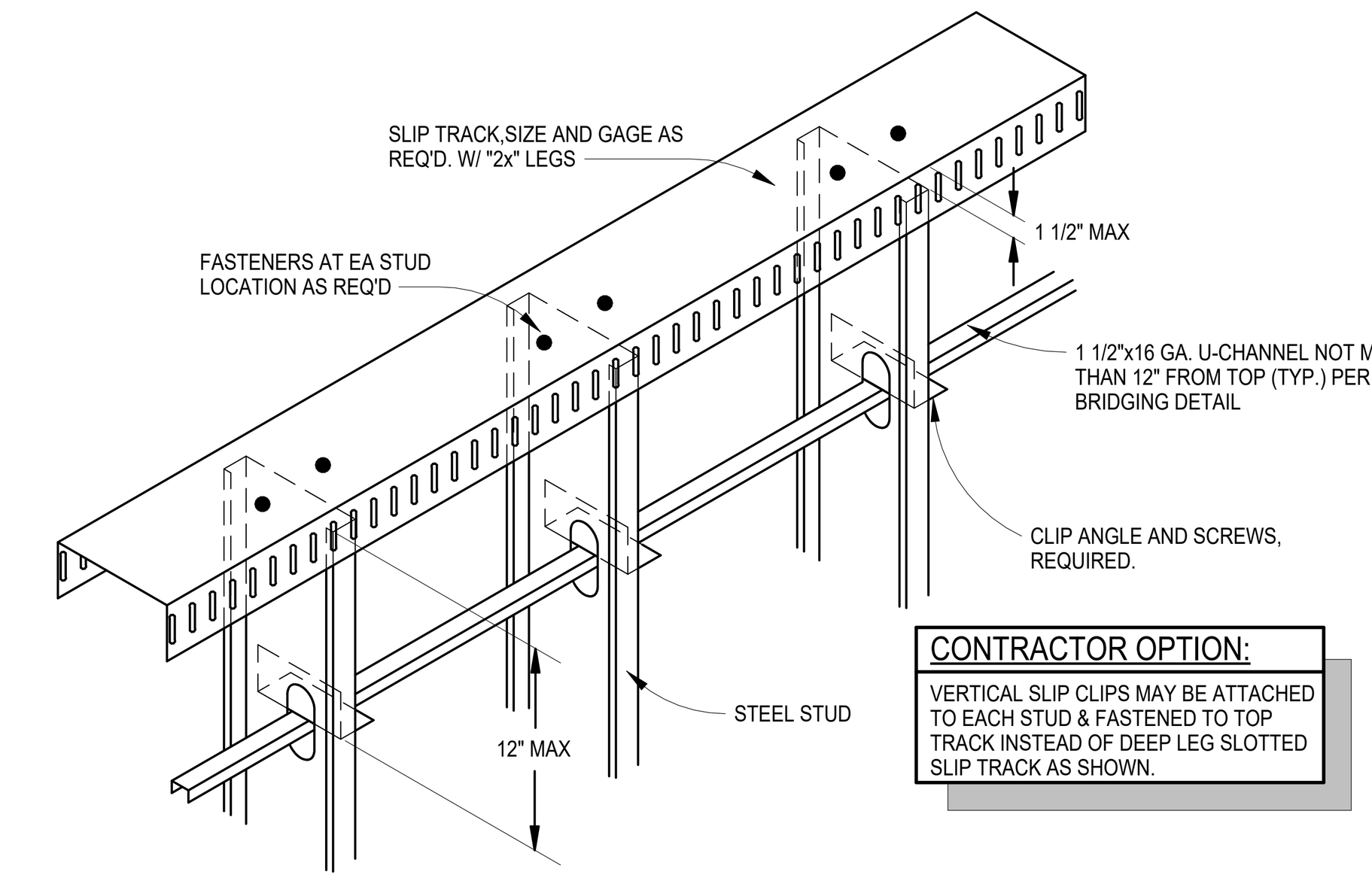
Roof Framing Details

SHEET

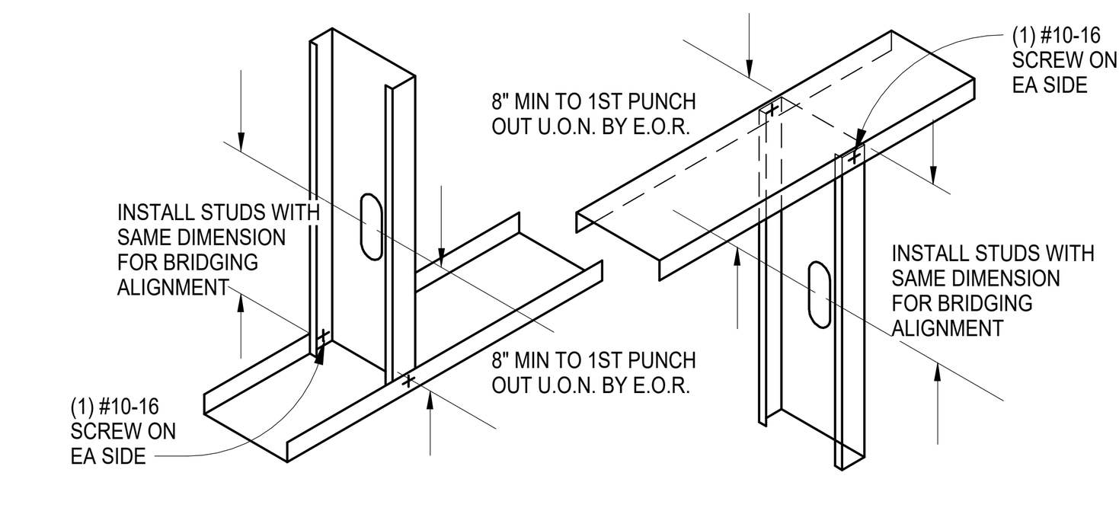
S506



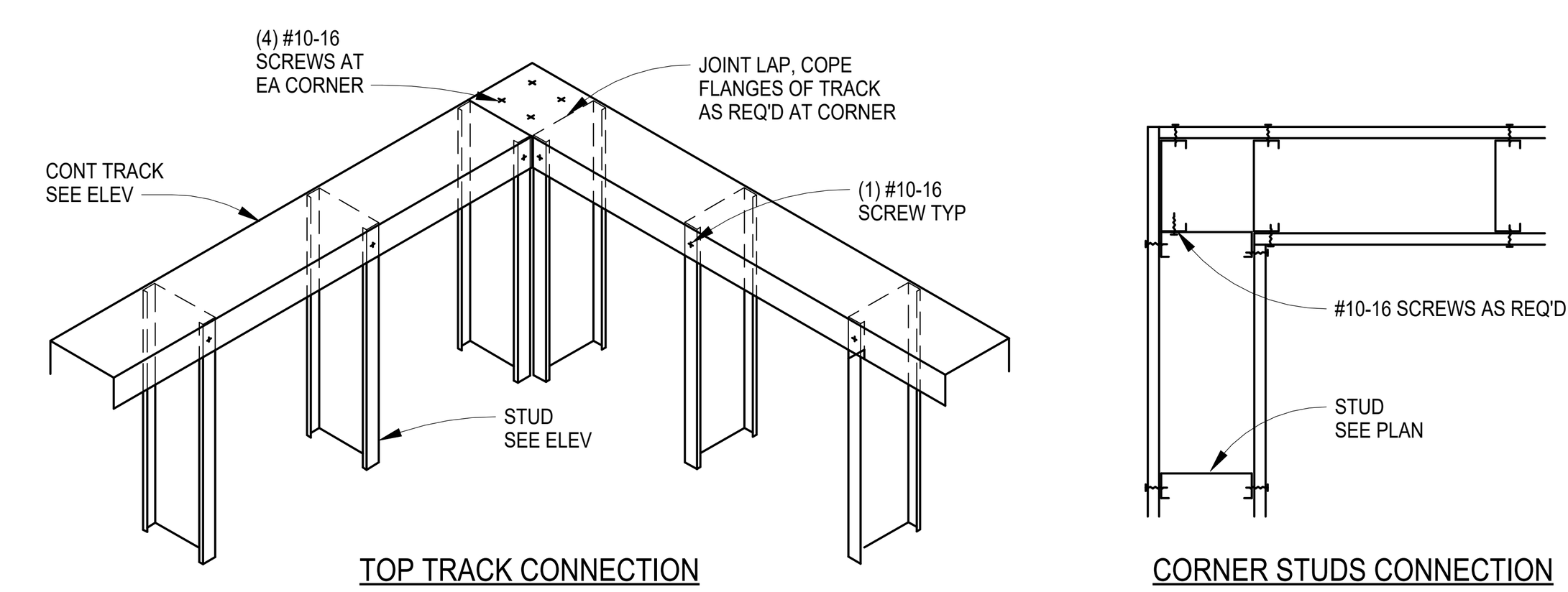
11 S507 **Cold Formed Stud Bridging**
1" = 1'-0"



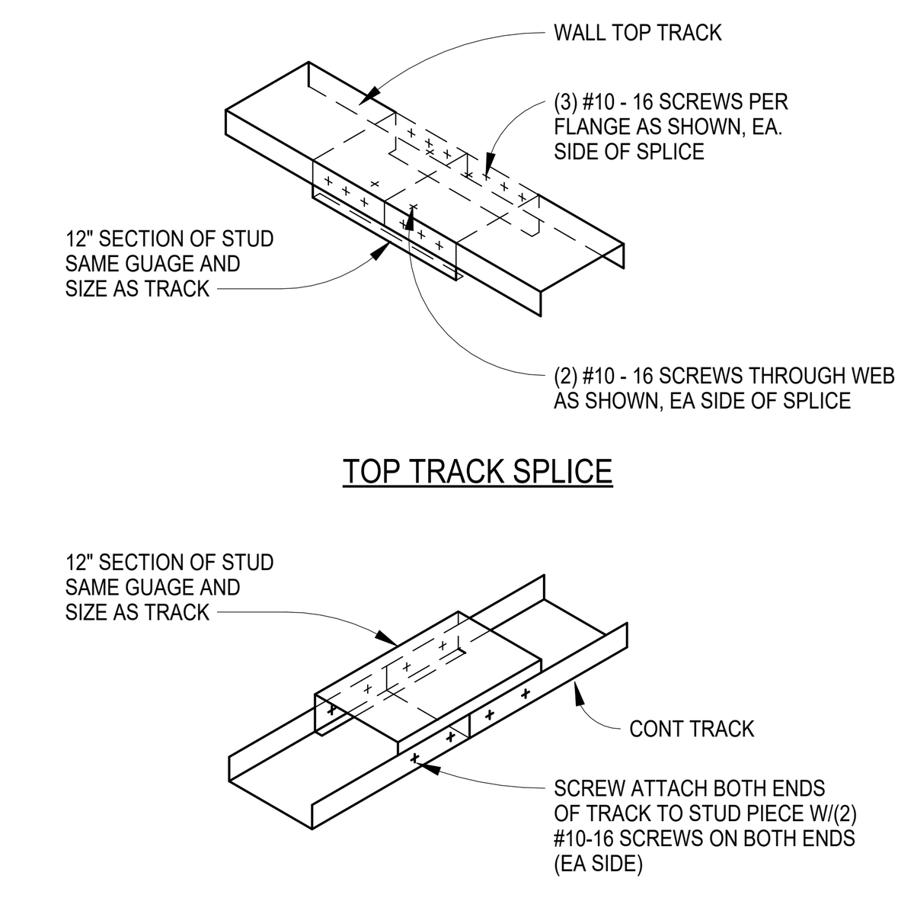
6 S507 **Light Gauge Framing Standard Details**
1" = 1'-0"



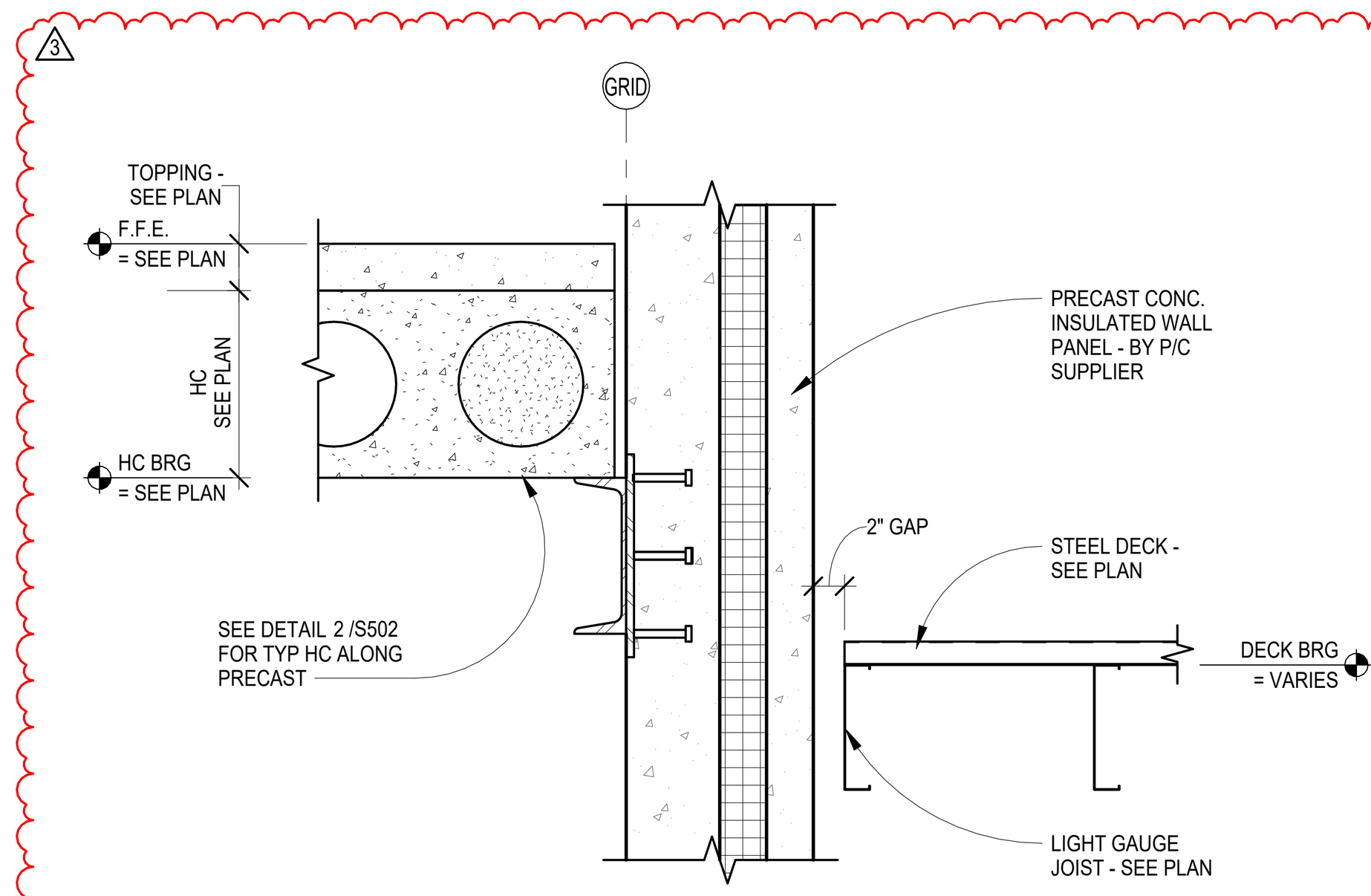
1 S507 **Stud/Track Connection**
3/4" = 1'-0"



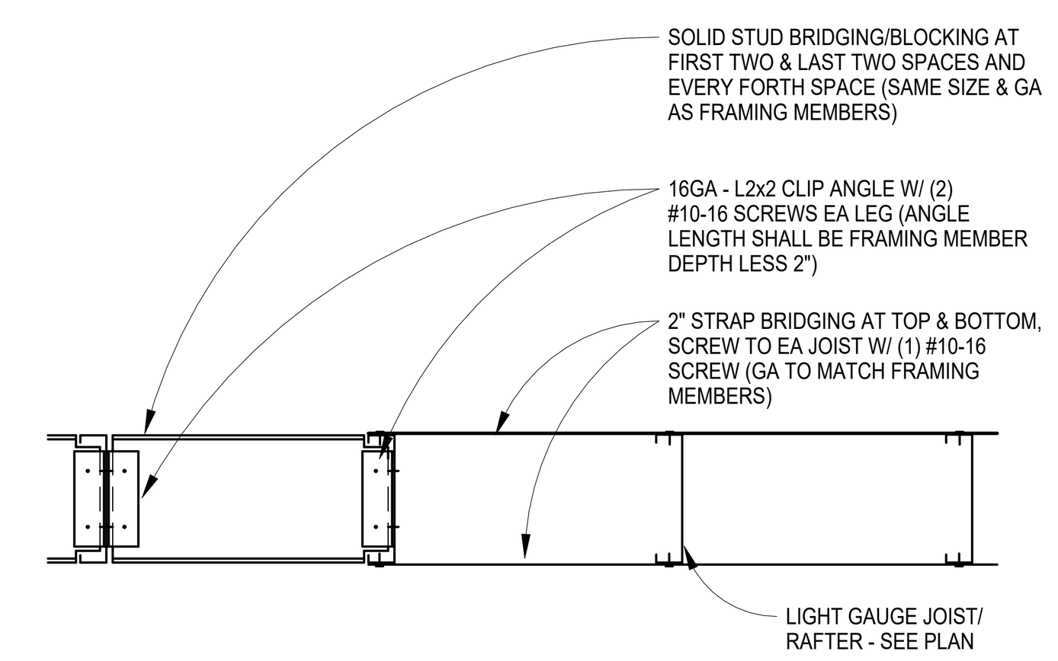
7 S507 **Wall Corner**
1" = 1'-0"



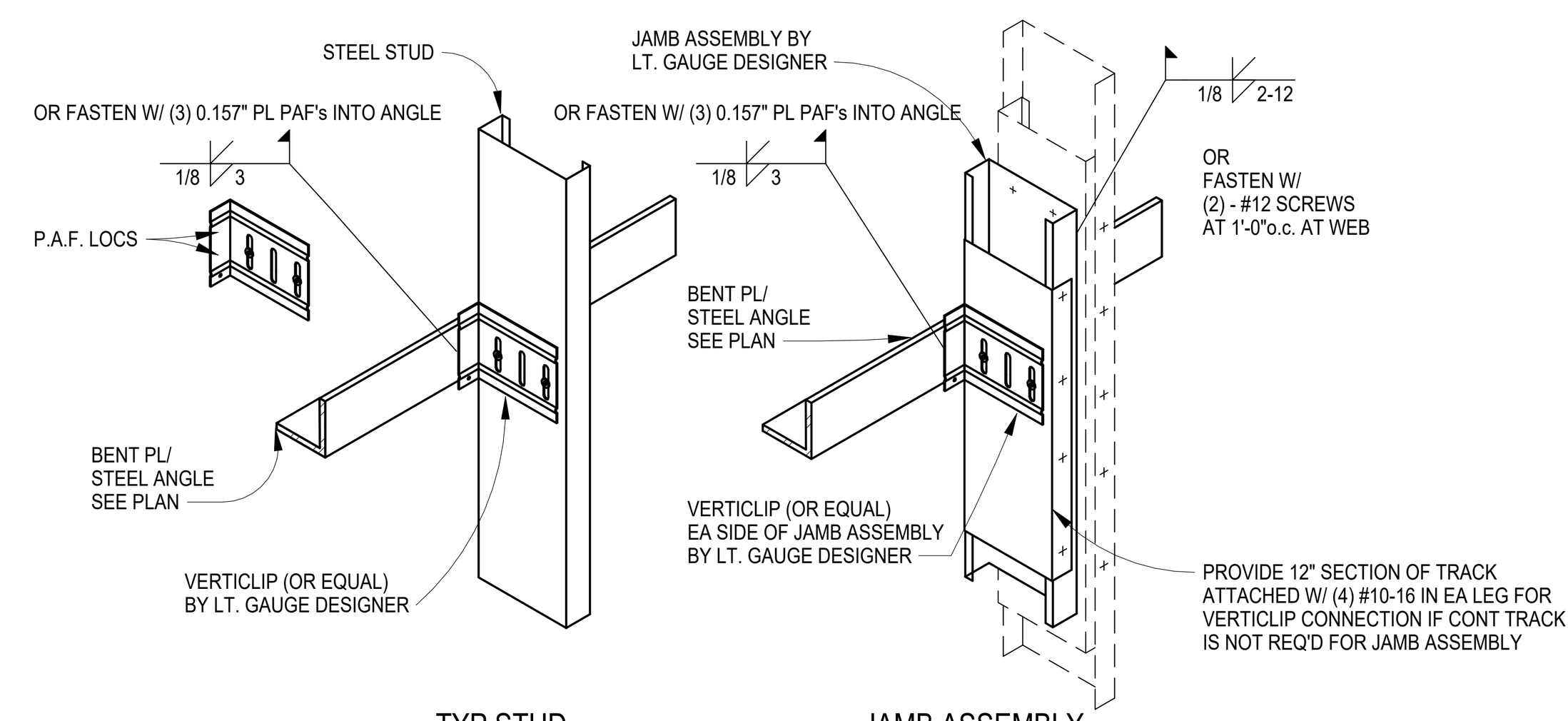
2 S507 **Track Splice**
3/4" = 1'-0"



15 S507 **Deck Brg along Precast Exterior**
1" = 1'-0"

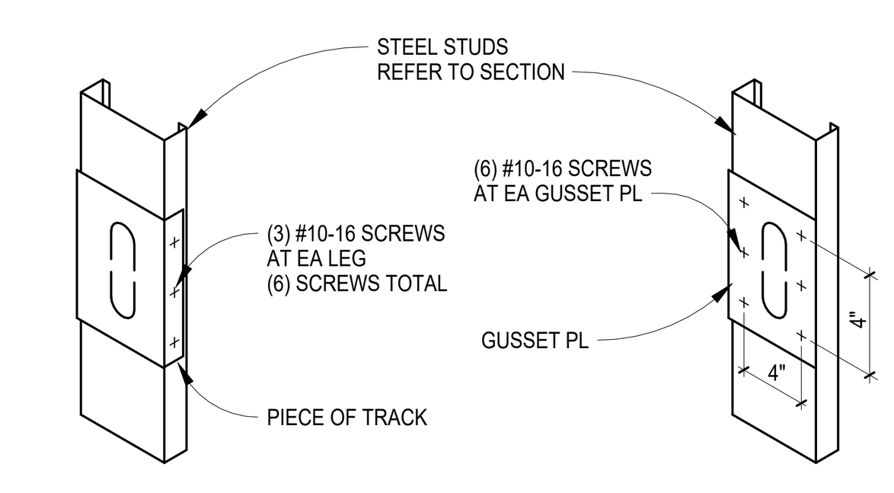


12 S507 **Joist/ Rafter Bridging**
1" = 1'-0"

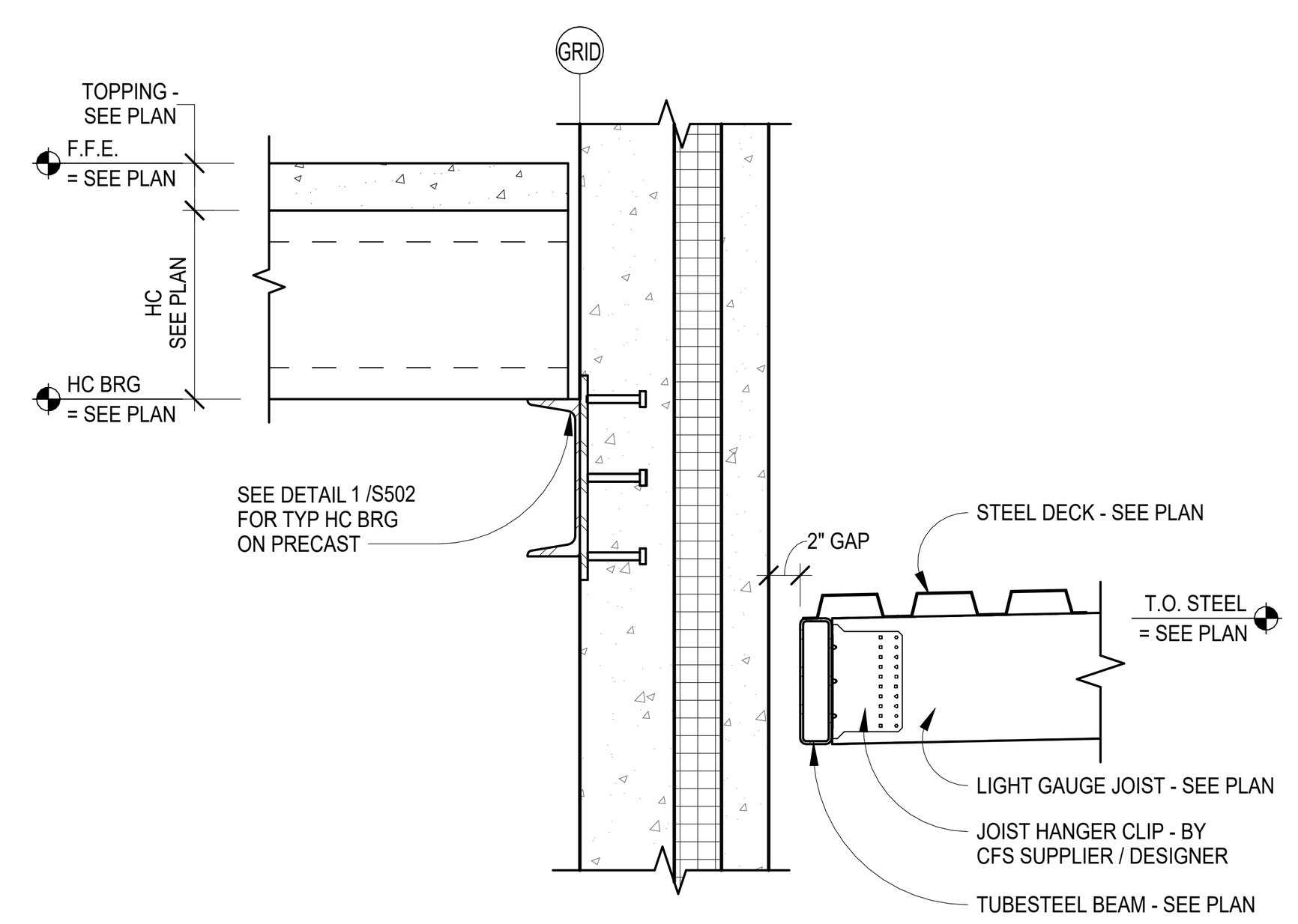


8 S507 **Bypass Slide Clip Detail**
1" = 1'-0"

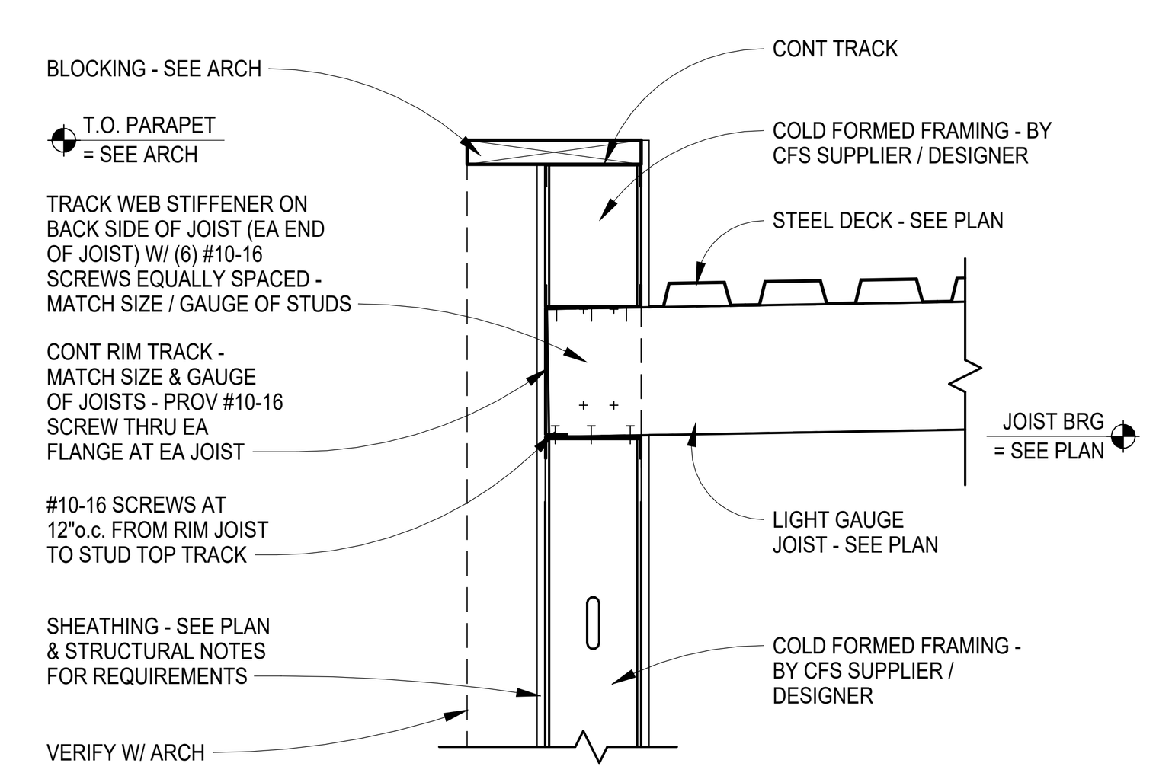
NOTES:
1) TRACK OR GUSSET PL TO BE SAME WIDTH AND GAUGE AS STUD.
2) 6" MIN LENGTH FOR TRACK OR GUSSET PL.



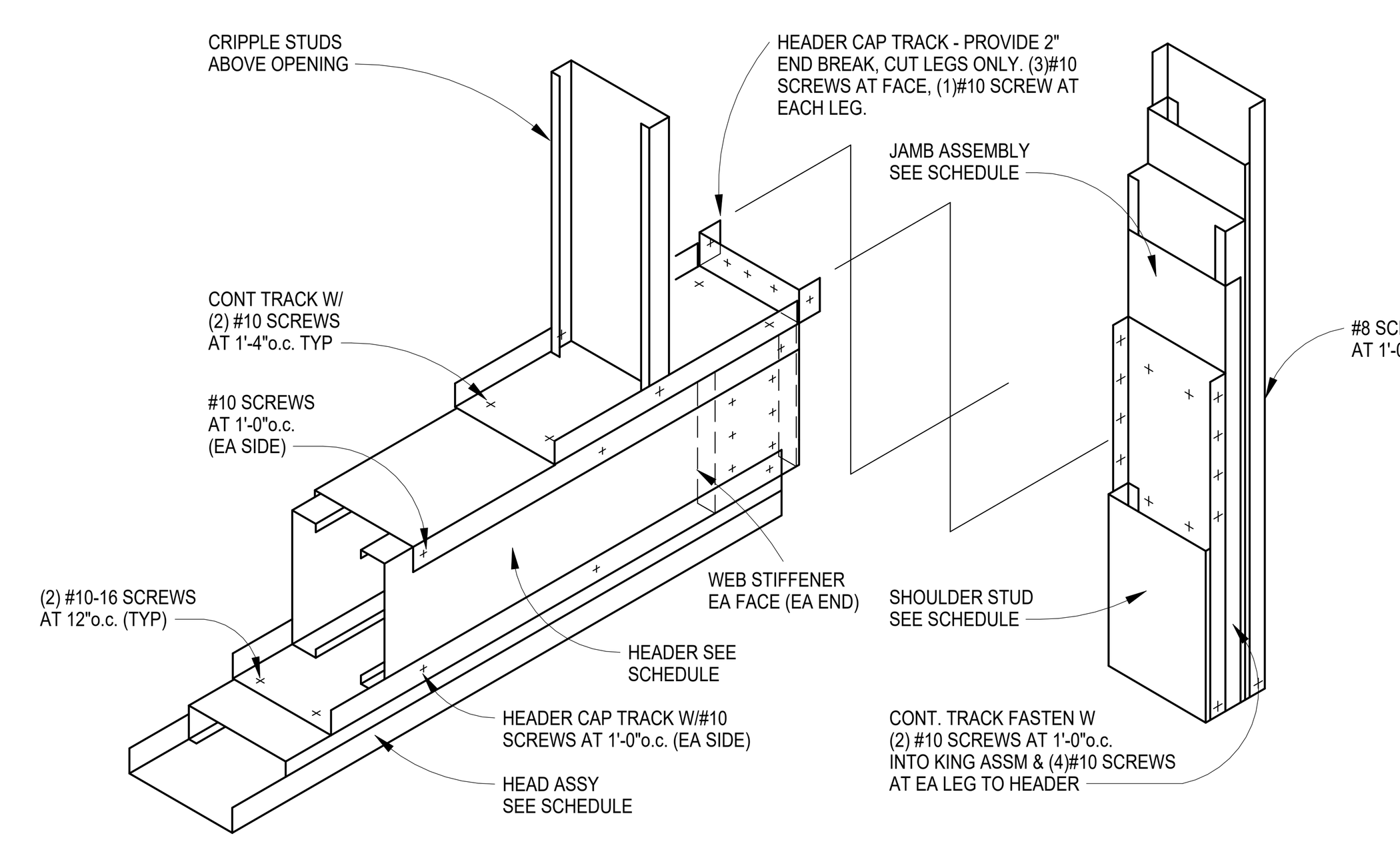
3 S507 **Punchout Reinforcing Detail**
1" = 1'-0"



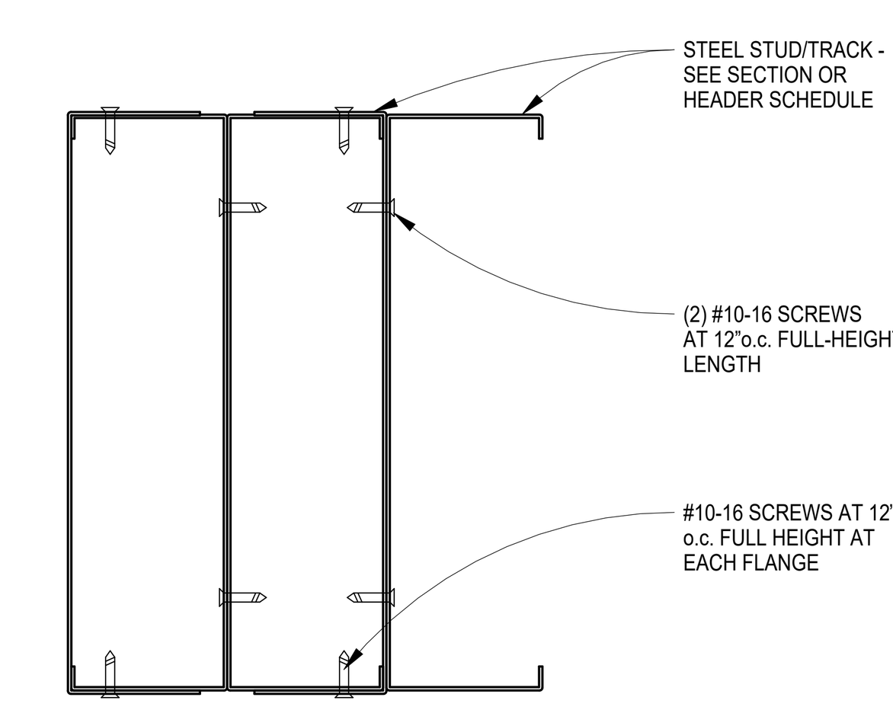
16 S507 **Light Gauge Joist Brg along Precast**
1" = 1'-0"

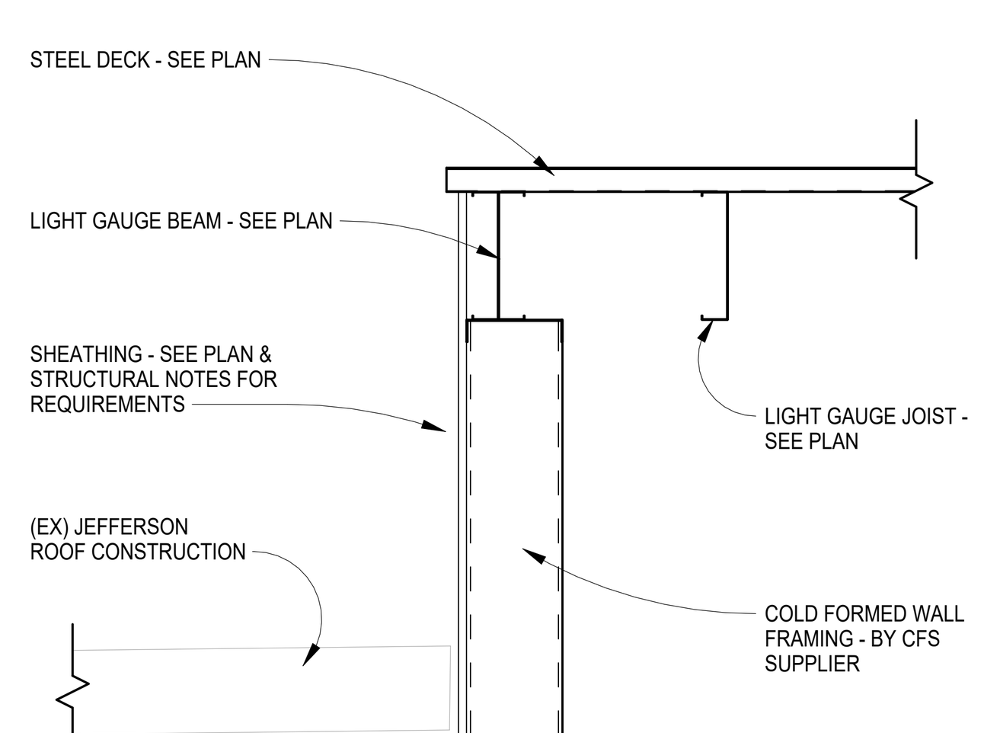


13 S507 **Light Gauge Roof Joist Bearing - Low Side**
1" = 1'-0"

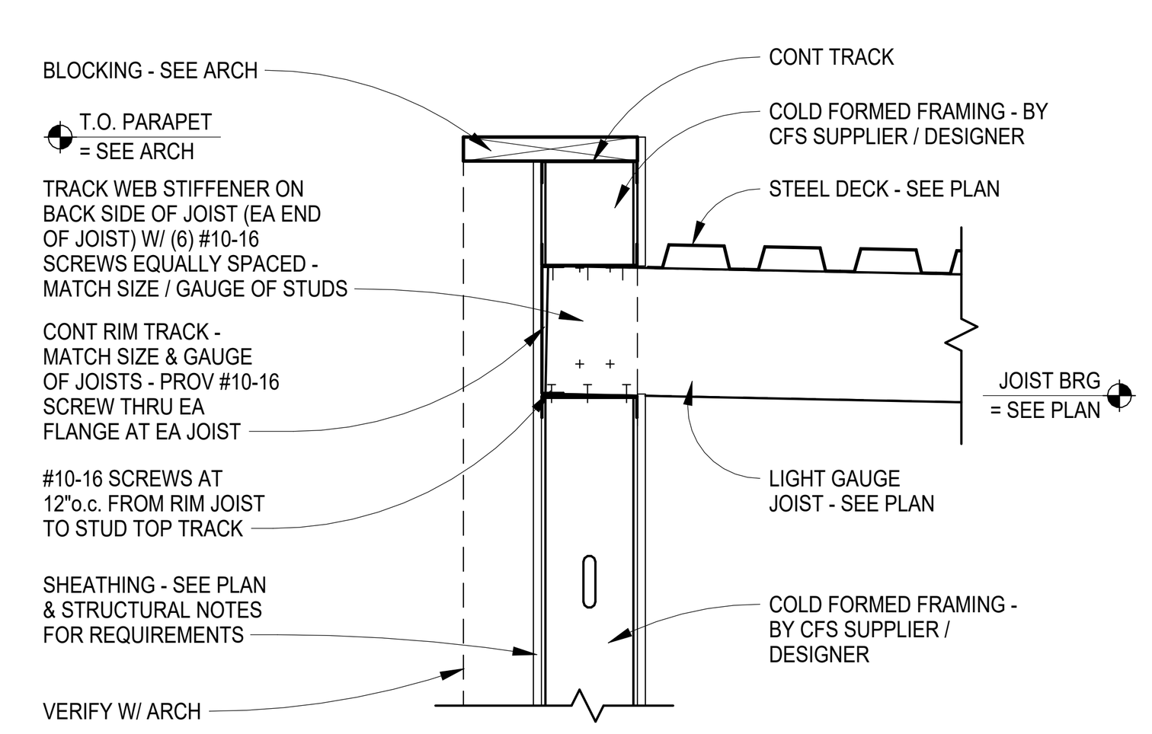


9 S507 **Box Header & Jamb Assembly**
1" = 1'-0"

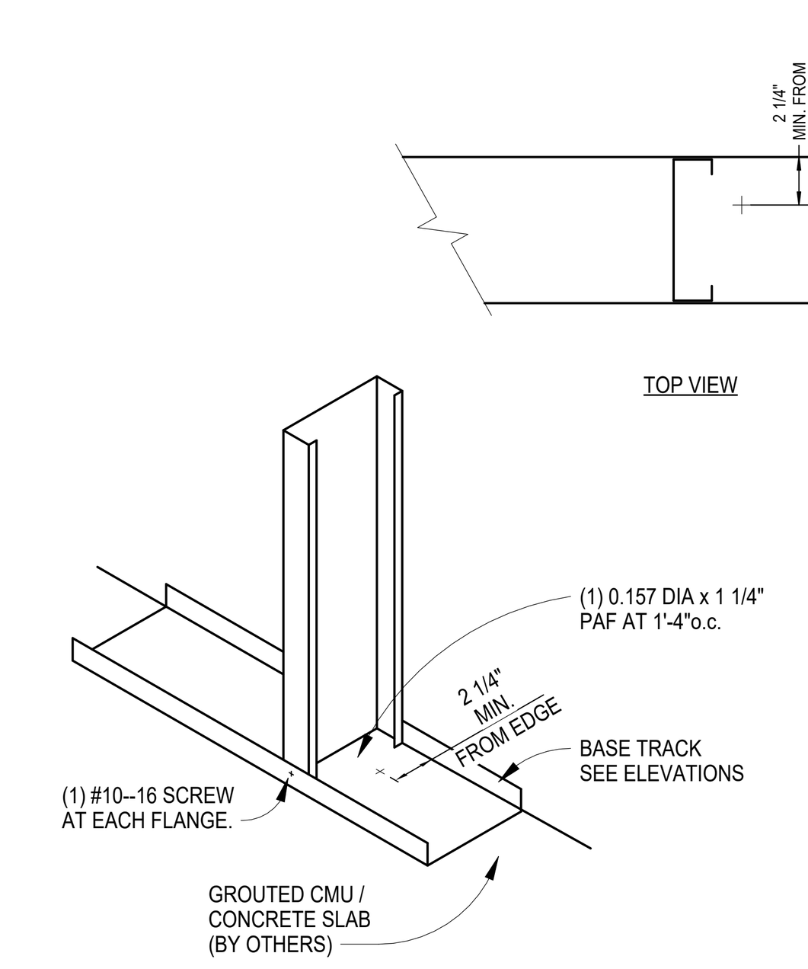

4 S507 **Multi-Ply Fastening Detail**
6" = 1'-0"



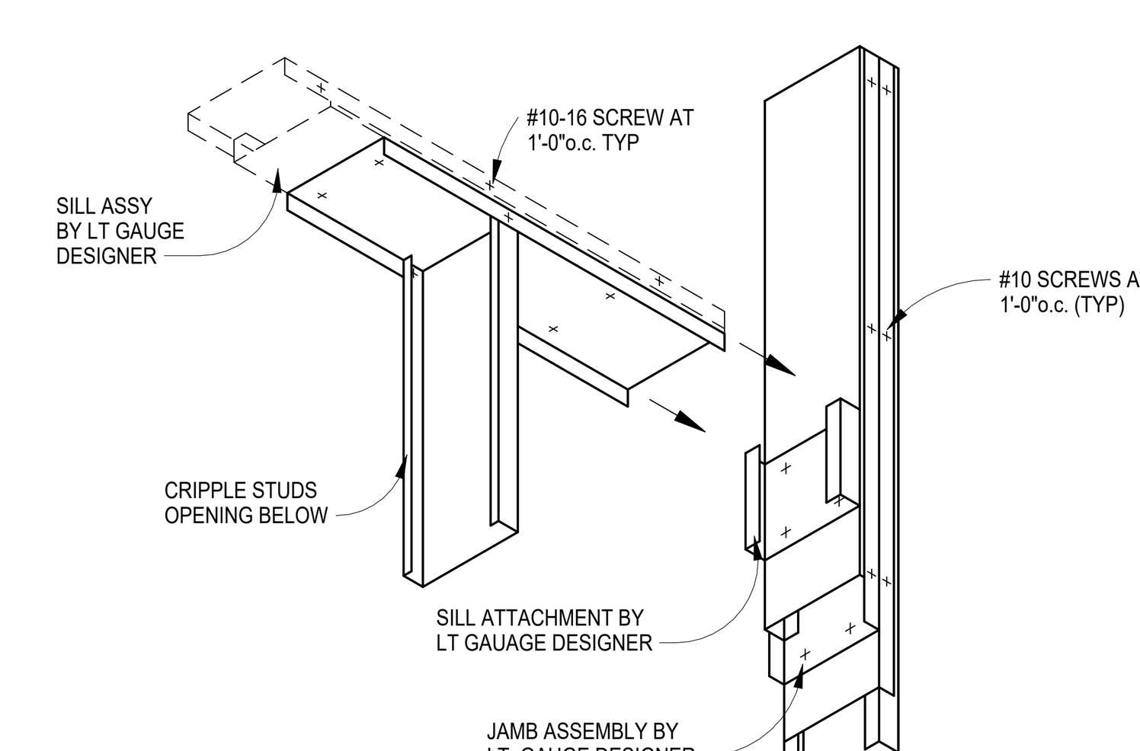
17 S507 **New Roof Framing along (EX)**
1" = 1'-0"



14 S507 **Light Gauge Roof Joist Bearing - High Side**
1" = 1'-0"



10 S507 **Stud Base**
3/4" = 1'-0"



5 S507 **Sill Assembly**
1" = 1'-0"

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School - STRUCTURAL
210 12th Street NE
Valley City, ND 58072

STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. JOCHIM
PE-9135
DATE 03-10-2026
NORTH DAKOTA

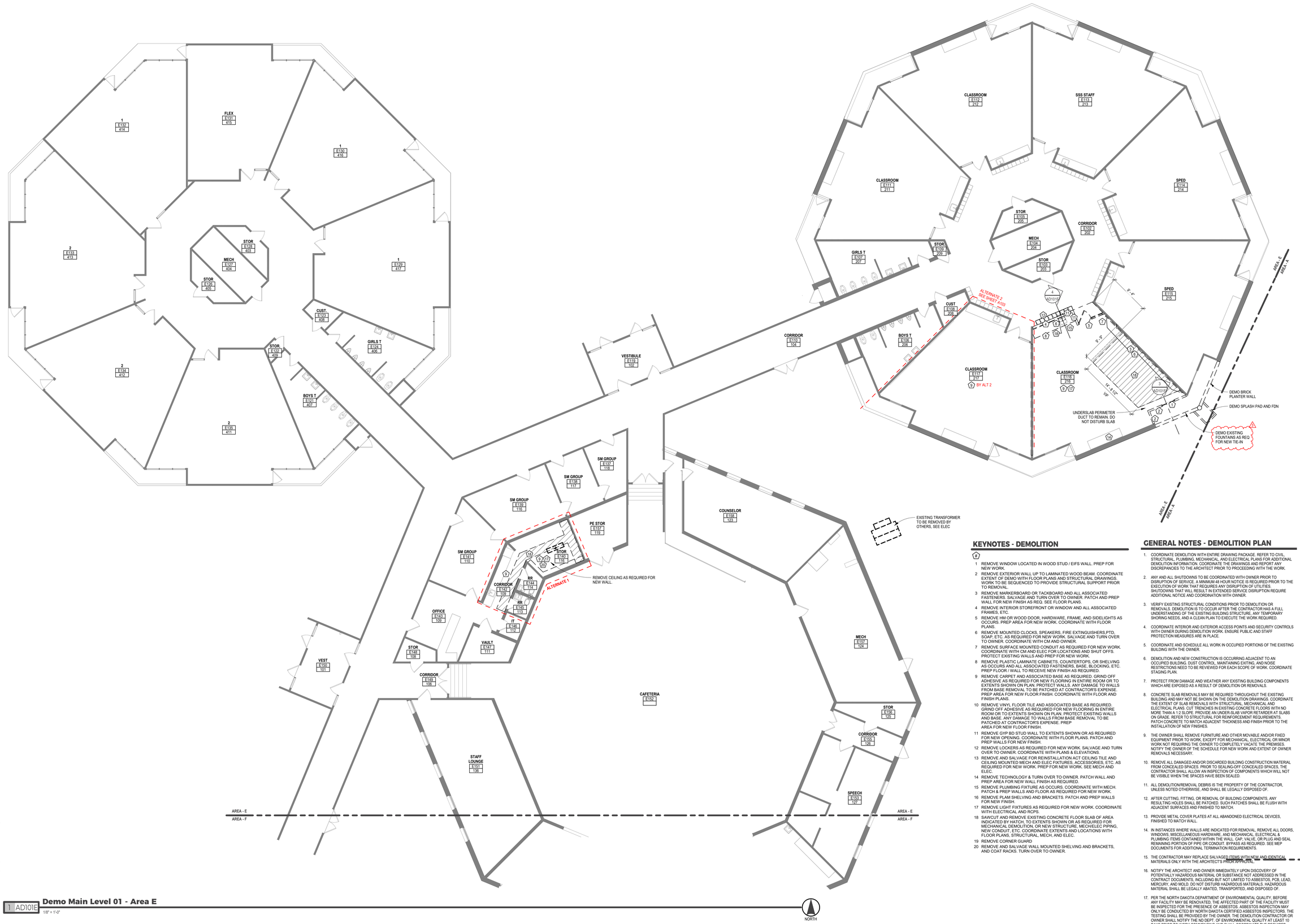
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
3	ADDENDUM #3	03/30/26

DRAWN BY: MFJ, CMM JN: 24-028

CFS / Roof Framing Details

SHEET
S507



1 AD101E **Demo Main Level 01 - Area E**

1/8" = 1'-0"

KEYNOTES - DEMOLITION

1. REMOVE WINDOW LOCATED IN WOOD STUD / EIFS WALL. PREP FOR NEW WORK.
2. REMOVE EXTERIOR WALL UP TO LAMINATED WOOD BEAM. COORDINATE EXTENT OF DEMO WITH FLOOR PLANS AND STRUCTURAL DRAWINGS. WORK TO BE SEQUENCED TO PROVIDE STRUCTURAL SUPPORT PRIOR TO REMOVAL.
3. REMOVE MARKERBOARD OR TACKBOARD AND ALL ASSOCIATED FASTENERS. SALVAGE AND TURN OVER TO OWNER. PATCH AND PREP WALL FOR NEW FINISH AS REQ. SEE FLOOR PLANS.
4. REMOVE INTERIOR STOREFRONT OR WINDOW AND ALL ASSOCIATED FRAMES, ETC.
5. REMOVE HM OR WOOD DOOR, HARDWARE, FRAME, AND SIDELIGHTS AS OCCURS. PREP AREA FOR NEW WORK. COORDINATE WITH FLOOR PLANS.
6. REMOVE MOUNTED CLOCKS, SPEAKERS, FIRE EXTINGUISHERS,PTD, SOAP, ETC. AS REQUIRED FOR NEW WORK, SALVAGE AND TURN OVER TO OWNER. COORDINATE WITH CM AND OWNER.
7. REMOVE SURFACE MOUNTED CONDUIT AS REQUIRED FOR NEW WORK. COORDINATE WITH CM AND ELEC FOR LOCATIONS AND SHUT OFFS. PROTECT EXISTING WALLS AND PREP FOR NEW WORK.
8. REMOVE PLASTIC LAMINATE CABINETS, COUNTERTOPS, OR SHELVING AS OCCURS AND ALL ASSOCIATED FASTENERS, BASE, BLOCKING, ETC. PREP FLOOR / WALL TO RECEIVE NEW FINISH AS REQUIRED.
9. REMOVE CARPET AND ASSOCIATED BASE AS REQUIRED. GRIND OFF ADHESIVE AS REQUIRED FOR NEW FLOORING IN ENTIRE ROOM OR TO EXTENTS SHOWN ON PLAN. PROTECT WALLS. ANY DAMAGE TO WALLS FROM BASE REMOVAL TO BE PATCHED AT CONTRACTOR'S EXPENSE. PREP AREA FOR NEW FLOOR FINISH. COORDINATE WITH FLOOR AND FINISH PLANS.
10. REMOVE VINYL FLOOR TILE AND ASSOCIATED BASE AS REQUIRED. GRIND OFF ADHESIVE AS REQUIRED FOR NEW FLOORING IN ENTIRE ROOM OR TO EXTENTS SHOWN ON PLAN. PROTECT EXISTING WALLS AND BASE. ANY DAMAGE TO WALLS FROM BASE REMOVAL TO BE PATCHED AT CONTRACTOR'S EXPENSE. PREP AREA FOR NEW FLOOR FINISH.
11. REMOVE GYP BD STUD WALL TO EXTENTS SHOWN OR AS REQUIRED FOR NEW OPENING. COORDINATE WITH FLOOR PLANS. PATCH AND PREP WALLS FOR NEW FINISH.
12. REMOVE LOCKERS AS REQUIRED FOR NEW WORK, SALVAGE AND TURN OVER TO OWNER. COORDINATE WITH PLANS & ELEVATIONS.
13. REMOVE AND SALVAGE FOR REINSTALLATION ACT CEILING TILE AND CEILING MOUNTED MECH AND ELEC FIXTURES, ACCESSORIES, ETC. AS REQUIRED FOR NEW WORK. PREP FOR NEW WORK. SEE MECH AND ELEC.
14. REMOVE TECHNOLOGY & TURN OVER TO OWNER. PATCH WALL AND PREP AREA FOR NEW WALL FINISH AS REQUIRED.
15. REMOVE PLUMBING FIXTURE AS OCCURS. COORDINATE WITH MECH. PATCH & PREP WALLS AND FLOOR AS REQUIRED FOR NEW WORK.
16. REMOVE PLAM SHELVING AND BRACKETS. PATCH AND PREP WALLS FOR NEW FINISH.
17. REMOVE LIGHT FIXTURES AS REQUIRED FOR NEW WORK. COORDINATE WITH ELECTRICAL AND RCPS.
18. SAWCUT AND REMOVE EXISTING CONCRETE FLOOR SLAB OF AREA INDICATED BY HATCH, TO EXTENTS SHOWN OR AS REQUIRED FOR MECHANICAL DEMOLITION, OR NEW STRUCTURE, MECH/ELEC PIPING, NEW CONDUIT, ETC. COORDINATE EXTENTS AND LOCATIONS WITH FLOOR PLANS, STRUCTURAL, MECH, AND ELEC.
19. REMOVE CORNER GUARD
20. REMOVE AND SALVAGE WALL MOUNTED SHELVING AND BRACKETS, AND COAT RACKS. TURN OVER TO OWNER.

GENERAL NOTES - DEMOLITION PLAN

1. COORDINATE DEMOLITION WITH ENTIRE DRAWING PACKAGE. REFER TO CIVIL, STRUCTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL PLANS FOR ADDITIONAL DEMOLITION INFORMATION. COORDINATE THE DRAWINGS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
2. ANY AND ALL SHUTDOWNS TO BE COORDINATED WITH OWNER PRIOR TO DISRUPTION OF SERVICE. A MINIMUM 48 HOUR NOTICE IS REQUIRED PRIOR TO THE EXECUTION OF WORK THAT REQUIRES ANY DISRUPTION OF UTILITIES. SHUTDOWNS THAT WILL RESULT IN EXTENDED SERVICE DISRUPTION REQUIRE ADDITONAL NOTICE AND COORDINATION WITH OWNER.
3. VERIFY EXISTING STRUCTURAL CONDITIONS PRIOR TO DEMOLITION OR REMOVALS. DEMOLITION IS TO OCCUR AFTER THE CONTRACTOR HAS A FULL UNDERSTANDING OF THE EXISTING BUILDING STRUCTURE. ANY TEMPORARY SHORING NEEDS, AND A CLEAN PLAN TO EXECUTE THE WORK REQUIRED.
4. COORDINATE INTERIOR AND EXTERIOR ACCESS POINTS AND SECURITY CONTROLS WITH OWNER DURING DEMOLITION WORK. ENSURE PUBLIC AND STAFF PROTECTION MEASURES ARE IN PLACE.
5. COORDINATE AND SCHEDULE ALL WORK IN OCCUPIED PORTIONS OF THE EXISTING BUILDING WITH THE OWNER.
6. DEMOLITION AND NEW CONSTRUCTION IS OCCURRING ADJACENT TO AN OCCUPIED BUILDING. DUST CONTROL, MAINTAINING EXITING, AND NOISE RESTRICTIONS NEED TO BE REVIEWED FOR EACH SCOPE OF WORK. COORDINATE STAGING PLAN.
7. PROTECT FROM DAMAGE AND WEATHER ANY EXISTING BUILDING COMPONENTS WHICH ARE EXPOSED AS A RESULT OF DEMOLITION OR REMOVALS.
8. CONCRETE SLAB REMOVALS MAY BE REQUIRED THROUGHOUT THE EXISTING BUILDING AND MAY NOT BE SHOWN ON THE DEMOLITION DRAWINGS. COORDINATE THE EXTENT OF SLAB REMOVALS WITH STRUCTURAL, MECHANICAL AND ELECTRICAL PLANS. CUT TRENCHES IN EXISTING CONCRETE FLOORS WITH NO MORE THAN A 1:2 SLOPE. PROVIDE AN UNDER-SLAB VAPOR RETARDER AT SLABS ON GRADE. REFER TO STRUCTURAL FOR REINFORCEMENT REQUIREMENTS. PATCH CONCRETE TO MATCH ADJACENT THICKNESS AND FINISH PRIOR TO THE INSTALLATION OF NEW FINISHES.
9. THE OWNER SHALL REMOVE FURNITURE AND OTHER MOVABLE AND/OR FIXED EQUIPMENT PRIOR TO WORK, EXCEPT FOR MECHANICAL, ELECTRICAL OR MINOR WORK NOT REQUIRING THE OWNER TO COMPLETELY VACATE THE PREMISES. NOTIFY THE OWNER OF THE SCHEDULE FOR NEW WORK AND EXTENT OF OWNER REMOVALS NECESSARY.
10. REMOVE ALL DAMAGED AND/OR DISCARDED BUILDING CONSTRUCTION MATERIAL FROM CONCEALED SPACES. PRIOR TO SEALING-OFF CONCEALED SPACES, THE CONTRACTOR SHALL ALLOW AN INSPECTION OF COMPONENTS WHICH WILL NOT BE VISIBLE WHEN THE SPACES HAVE BEEN SEALED.
11. ALL DEMOLITION/REMOVAL DEBRIS IS THE PROPERTY OF THE CONTRACTOR, UNLESS NOTED OTHERWISE, AND SHALL BE LEGALLY DISPOSED OF.
12. AFTER CUTTING, FITTING, OR REMOVAL OF BUILDING COMPONENTS, ANY RESULTING HOLES SHALL BE PATCHED. SUCH PATCHES SHALL BE FLUSH WITH ADJACENT SURFACES AND FINISHED TO MATCH.
13. PROVIDE METAL COVER PLATES AT ALL ABANDONED ELECTRICAL DEVICES, FINISHED TO MATCH WALL.
14. IN INSTANCES WHERE WALLS ARE INDICATED FOR REMOVAL, REMOVE ALL DOORS, WINDOWS, MISCELLANEOUS HARDWARE, AND MECHANICAL, ELECTRICAL & PLUMBING ITEMS CONTAINED WITHIN THE WALL. CAP, VALVE, OR PLUG AND SEAL REMAINING PORTION OF PIPE OR CONDUIT. BYPASS AS REQUIRED. SEE MEP DOCUMENTS FOR ADDITIONAL TERMINATION REQUIREMENTS.
15. THE CONTRACTOR MAY REPLACE SALVAGED ITEMS WITH NEW AND IDENTICAL MATERIALS ONLY WITH THE ARCHITECT'S PRIOR APPROVAL.
16. NOTIFY THE ARCHITECT AND OWNER IMMEDIATELY UPON DISCOVERY OF POTENTIALLY HAZARDOUS MATERIAL OR SUBSTANCE NOT ADDRESSED IN THE CONTRACT DOCUMENTS, INCLUDING BUT NOT LIMITED TO ASBESTOS, PCB, LEAD, MERCURY, AND MOLD. DO NOT DISTURB HAZARDOUS MATERIALS. HAZARDOUS MATERIAL SHALL BE LEGALLY ABATED, TRANSPORTED, AND DISPOSED OF.
17. PER THE NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY, BEFORE ANY FACILITY MAY BE RENOVATED, THE AFFECTED PART OF THE FACILITY MUST BE INSPECTED FOR THE PRESENCE OF ASBESTOS. ASBESTOS INSPECTION MAY ONLY BE CONDUCTED BY NORTH DAKOTA CERTIFIED ASBESTOS INSPECTORS. THE TESTING SHALL BE PROVIDED BY THE OWNER. THE DEMOLITION CONTRACTOR OR OWNER SHALL NOTIFY THE ND DEPT. OF ENVIRONMENTAL QUALITY AT LEAST 10 DAYS PRIOR TO WORK COMMENCING AND SHALL COORDINATE THE REQUIRED NDDEQ NOTIFICATIONS WITH THE OWNER AND CONSTRUCTION MANAGER. THE BUILDING OWNER AND CONTRACTOR(S) ARE DIRECTLY RESPONSIBLE FOR COMPLIANCE WITH STATE AND FEDERAL ASBESTOS REQUIREMENTS DURING DEMOLITION AND RENOVATION PROJECTS. ARCHITECT SHALL NOT BE RESPONSIBLE FOR ANY DISCOVERY, PRESENCE, HANDLING, REMOVAL, DISPOSAL, OR EXPOSURE OF PERSONS TO, HAZARDOUS MATERIALS ON THIS PROJECT SITE.

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School

210 12th Street NE
Valley City, ND 58072

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

LICENSED ARCHITECT HEIDI BRENNAN 6830 STATE OF NORTH DAKOTA
Date 03/30/26

DRAWING HISTORY

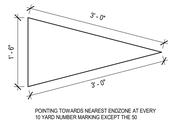
NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/30/26
3	Addendum #3	03/30/26

DRAWN BY: AS/HO/JT JN: 24-028

Demo Main Level 01 - Area E

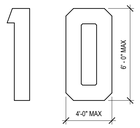
SHEET
AD101E

1 A002 **Boundary Line Marking, Typ**
3/4" = 1'-0"



2 A002 **Directional Arrow, Typ**
3/4" = 1'-0"

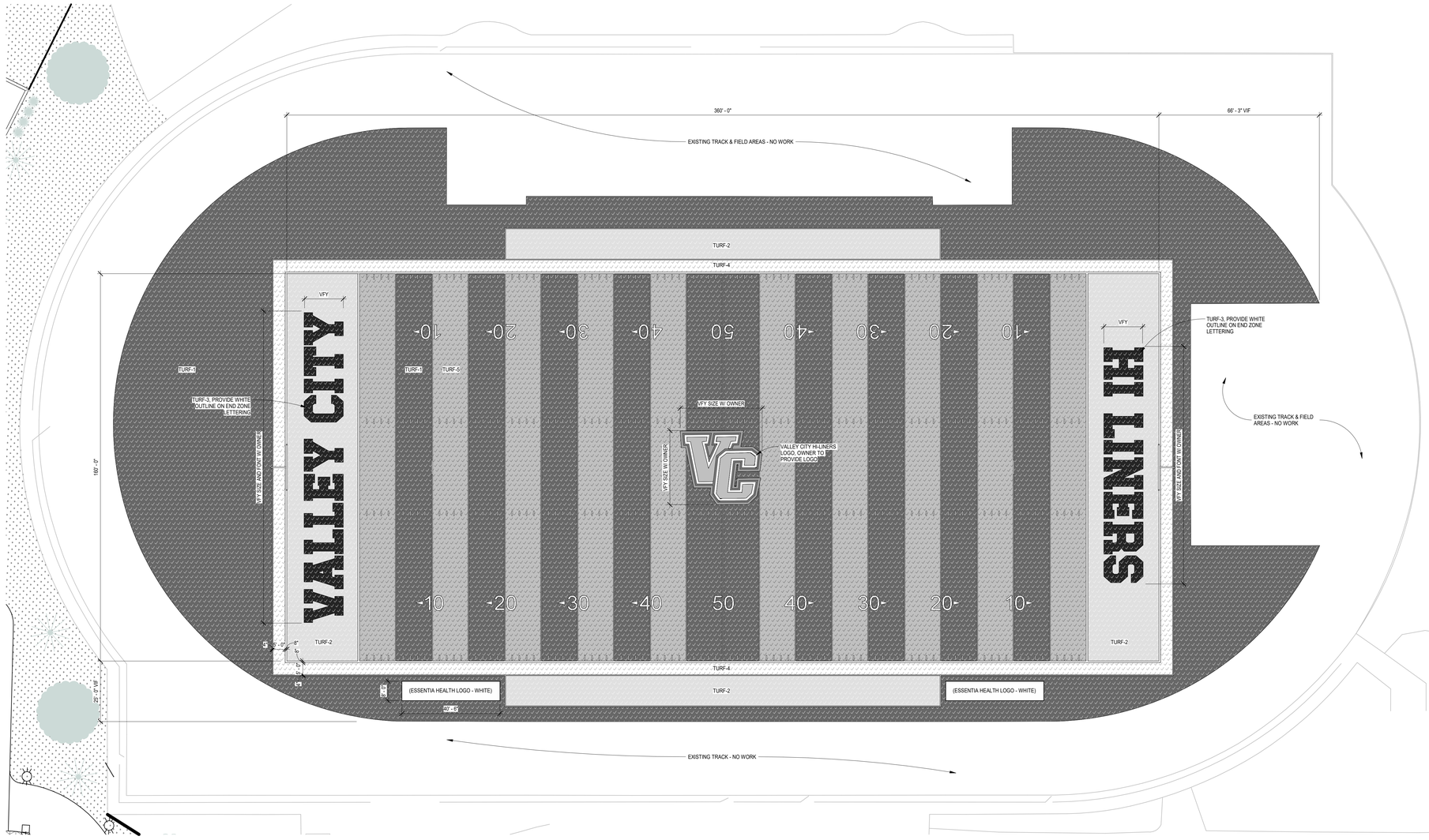
3 A002 **Yard Line Hash Marking, Typ**
3/4" = 1'-0"



4 A002 **Yard Number Marking, Typ**
1/4" = 1'-0"

5 A002 **Media Marking, Typ**
3/4" = 1'-0"

6 A002 **Line Marking, Typ**
3/4" = 1'-0"



7 A002 **Football Field - Turf Plan**
1" = 20'-0"

GENERAL NOTES - SITE PLAN

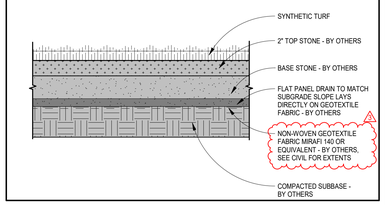
1. NFHS REGULATIONS GOVERN ALL LAYOUT, DIMENSIONS, AND TOLERANCES RELATED TO COMPETITION AREAS.

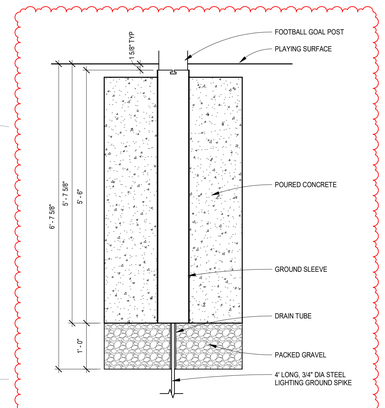
FINISH LEGEND:

TURF-1 FIELD GREEN	
TURF-2 LAGOON BLUE PCN: 192C	
TURF-3 NAUY PCN: 282C	
TURF-4 WHITE	
TURF-5 SUMMER GREEN	
STRIPING-1 WHITE	

* COLORS LISTED ARE BASIS OF DESIGN COLORS. COORDINATE FINAL COLOR SELECTIONS WITH OWNER

TU TURF FIELD ASSEMBLY





9 A002 **Football Goal Post Sleeve**
3/4" = 1'-0"

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School
210 12th Street NE
Valley City, ND 58072

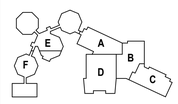
STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



LICENSED ARCHITECT
HEIDI BRENNAN
(8599)
Date 03/10/26
STATE OF NORTH DAKOTA

DRAWING HISTORY

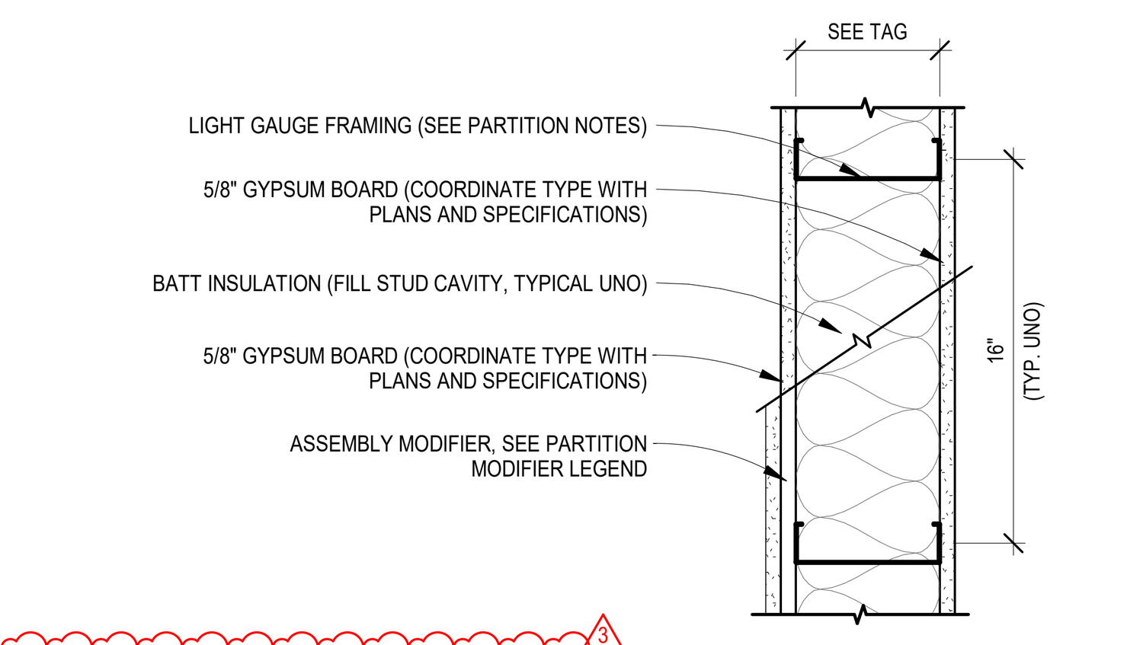
NO.	DESCRIPTION	DATE
2	Addendum #2	03/24/26
3	Addendum #3	03/30/26

DRAWN BY: AS/HO/DT JN: 24-028

Site Plan - Football Turf

SHEET
A002

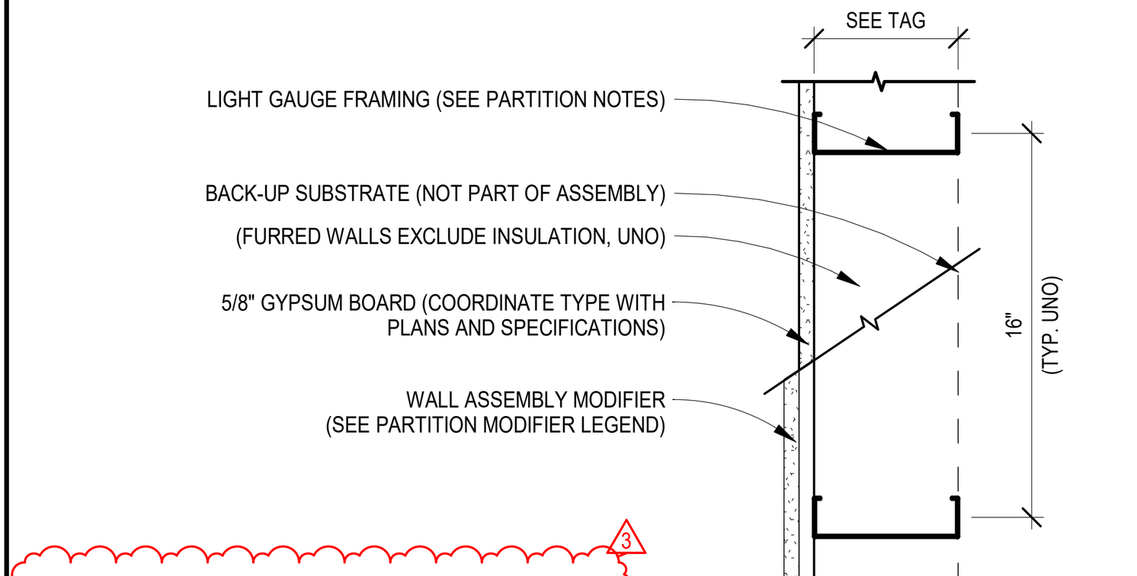
S — STEEL STUD W/ GYPSUM - STANDARD



UL 263 - 1 HOUR RATING
(ASSEMBLY DESIGN REQUIRED WHEN RATING IS PRESENT)

WALL TAG	STUD WIDTH	ASSEMBLY WIDTH	NOTES
S3	3 5/8"	4 7/8" + MODIFIER	STC RATING: 44
S6	6"	7 1/4" + MODIFIER	
S8	8"	9 1/4" + MODIFIER	

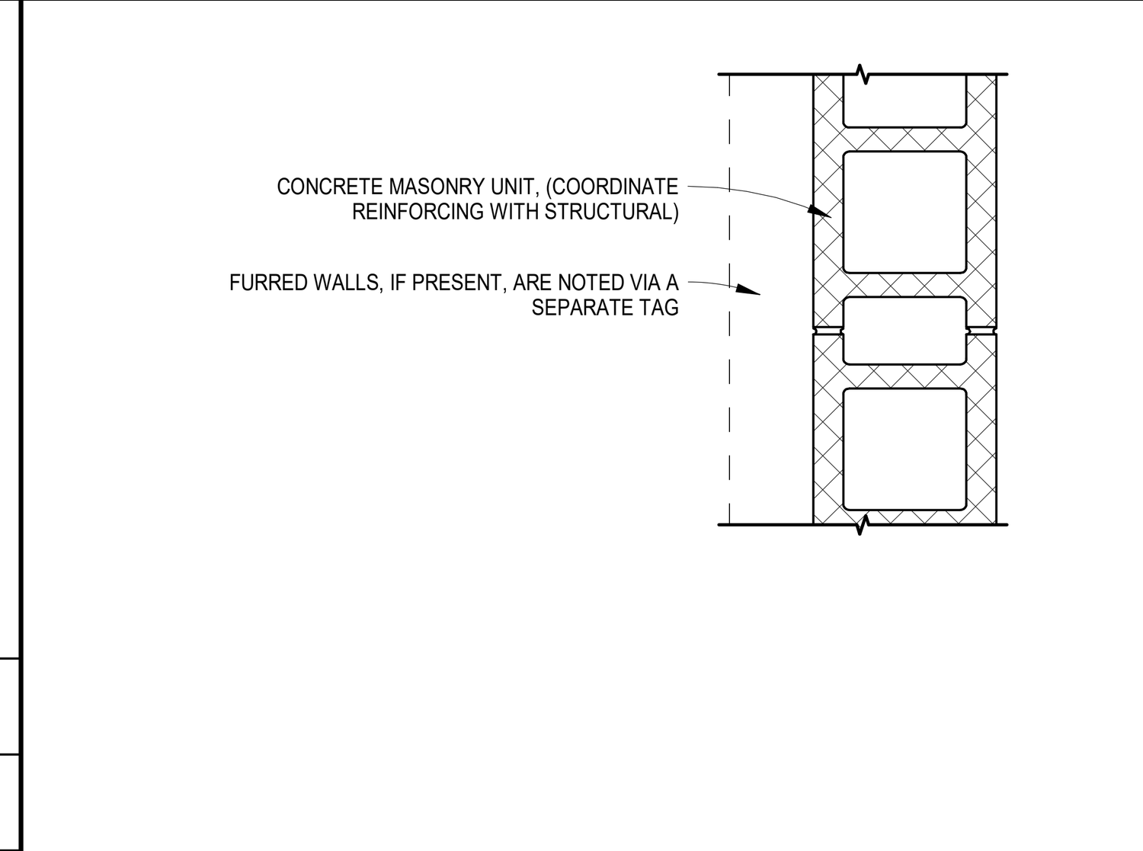
SF — STEEL STUD FURRING W/ GYPSUM



UL V497 - 1 HOUR RATING
(ASSEMBLY DESIGN REQUIRED WHEN RATING IS PRESENT)

WALL TAG	STUD WIDTH	ASSEMBLY WIDTH	NOTES
SF2	2 1/2"	3 1/8" + MODIFIER	
SF3	3 5/8"	4 1/4" + MODIFIER	
SF6	6"	6 5/8" + MODIFIER	
SF8	8"	8 5/8" + MODIFIER	

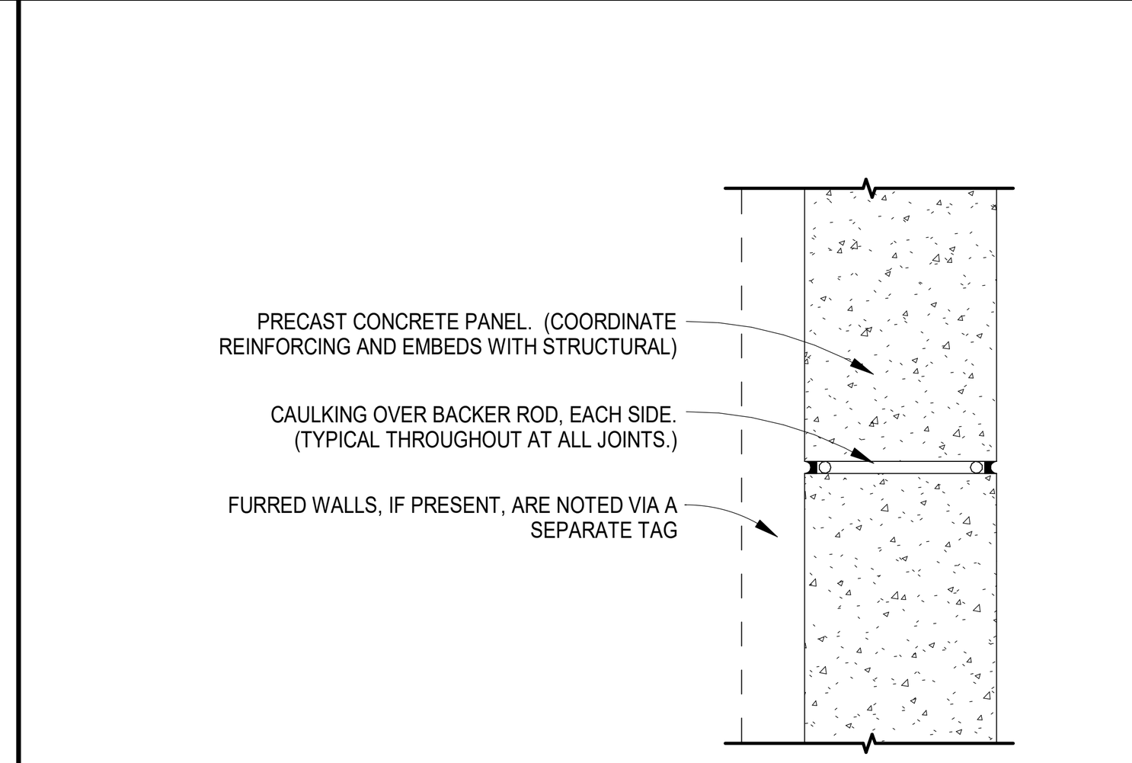
M — CONCRETE MASONRY UNIT ASSEMBLIES



UL #906 - 2 HOUR RATING (AVAILABLE AT WALLS ≥ M8)
(ASSEMBLY DESIGN REQ'D WHEN RATING IS PRESENT)

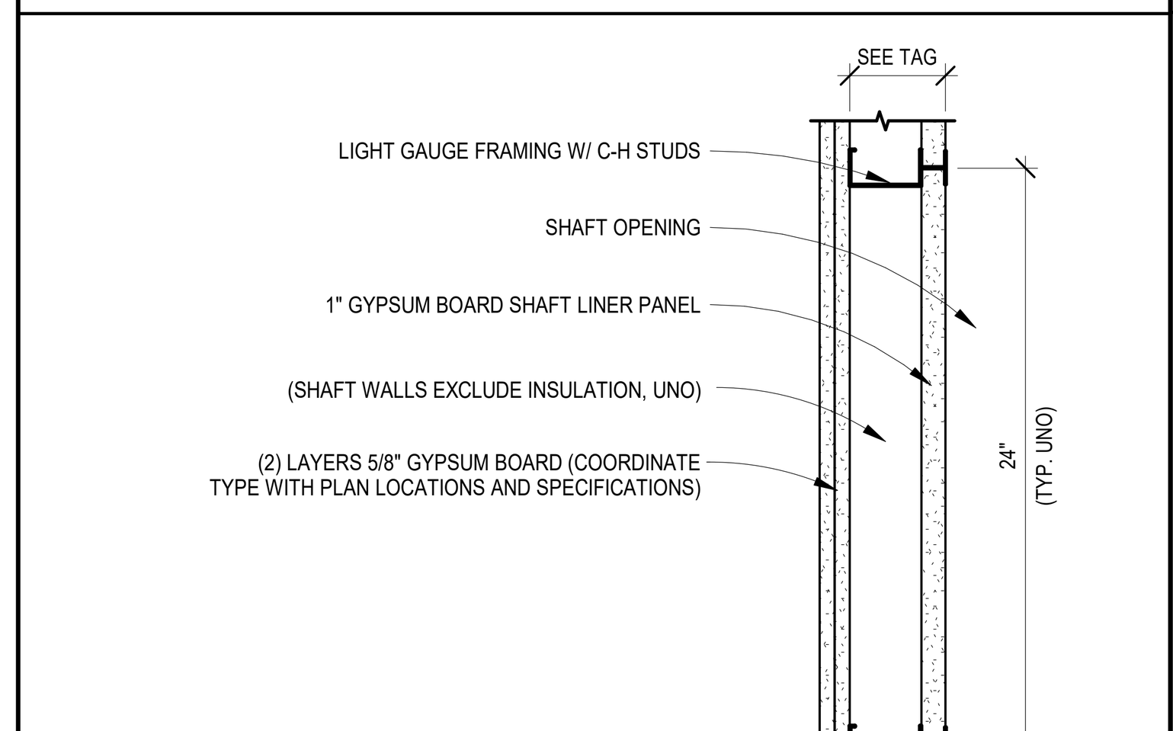
WALL TAG	CMU WIDTH	ASSEMBLY WIDTH	NOTES
M8	7 5/8"	7 5/8" + FURRING	STC: HOLLOW - 48; GROUTED - 55; SAND - 52

P — PRECAST CONCRETE ASSEMBLIES



WALL TAG	PANEL WIDTH	ASSEMBLY WIDTH	NOTES
P8	8"	8" + FURRING	

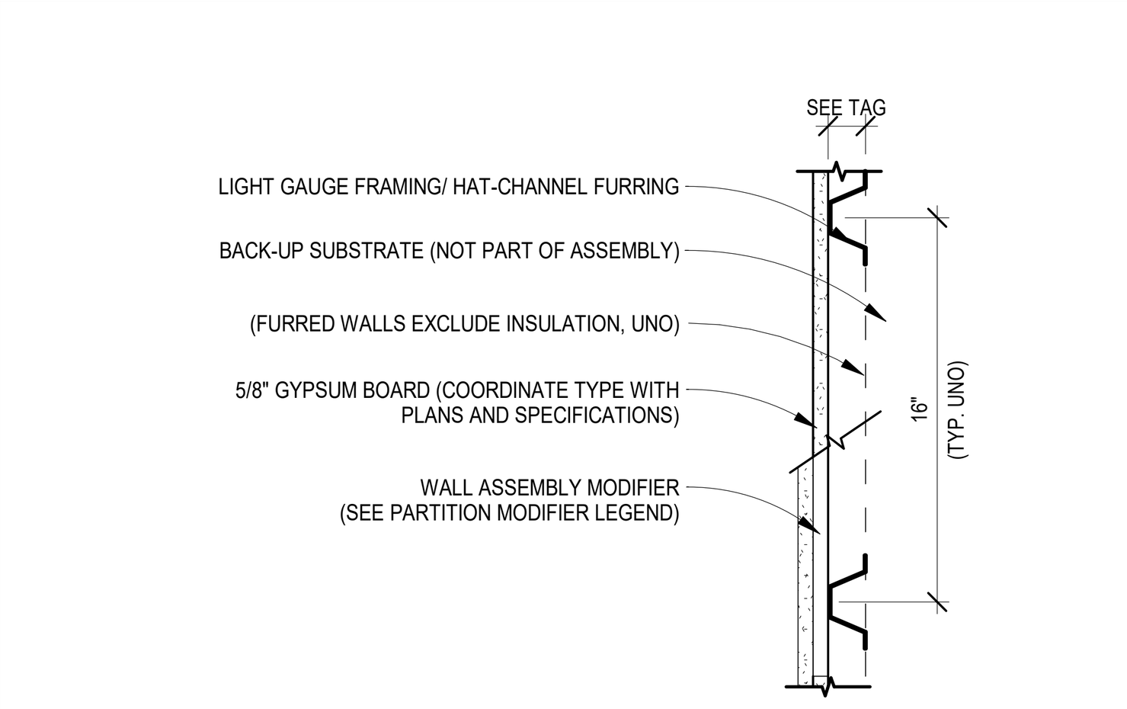
SR — STEEL C-H STUD W/ GYPSUM SHAFT LINER (2 HR)



UL #415 - 2 HOUR RATING
UL #428 - 2 HOUR RATING (ASSEMBLY W/ INSULATION)
(ASSEMBLY DESIGN REQ'D WHEN RATING IS PRESENT)

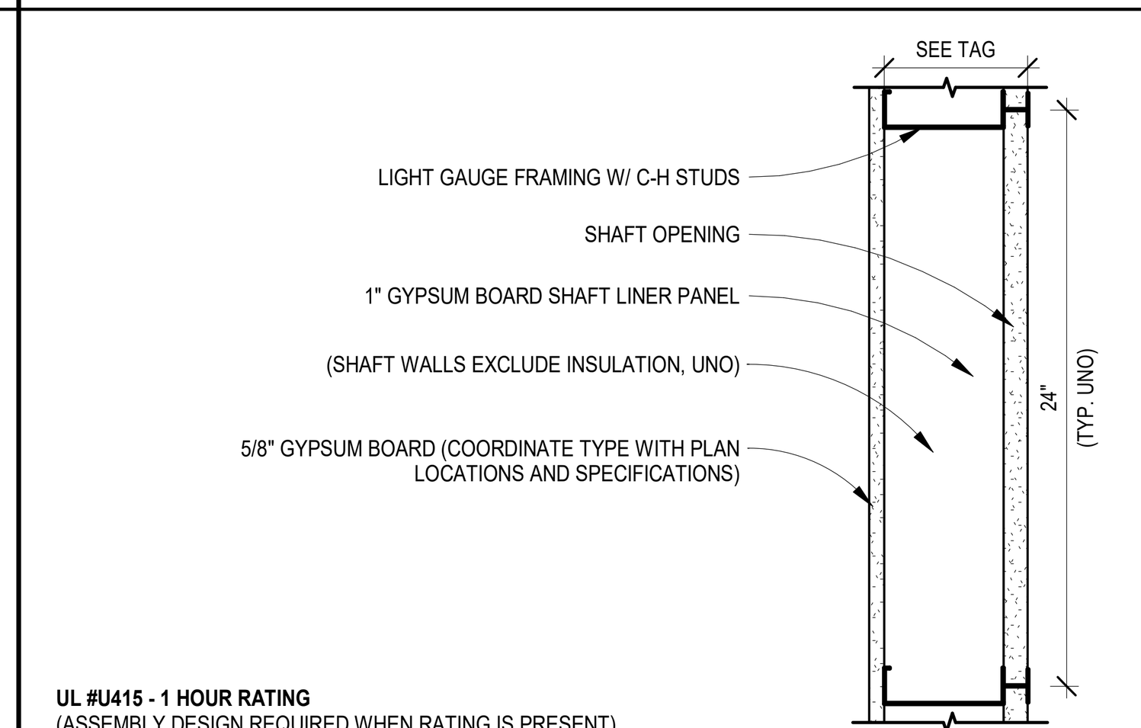
WALL TAG	STUD WIDTH	ASSEMBLY WIDTH	NOTES
SR2	2 1/2"	3 3/4"	STC RATING: 39 STC RATING: 46 (W/ INSULATION)

SH — STEEL STUD HAT CHANNEL FURRING W/ GYPSUM



WALL TAG	STUD WIDTH	ASSEMBLY WIDTH	NOTES
SH1	7/8"	1 1/2" + MODIFIER	
SH2	1 1/2"	2 1/8" + MODIFIER	

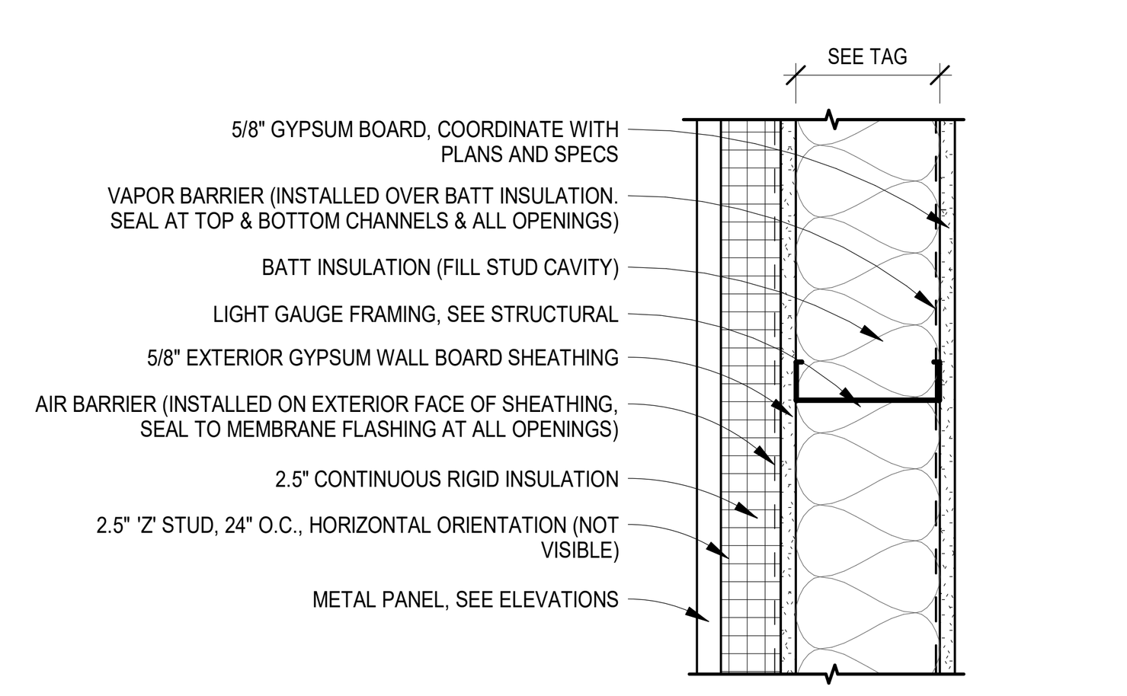
SC — STEEL I-STUD / C-H STUD W/ GYPSUM SHAFT LINER (1 HR)



UL #U415 - 1 HOUR RATING
(ASSEMBLY DESIGN REQ'D WHEN RATING IS PRESENT)

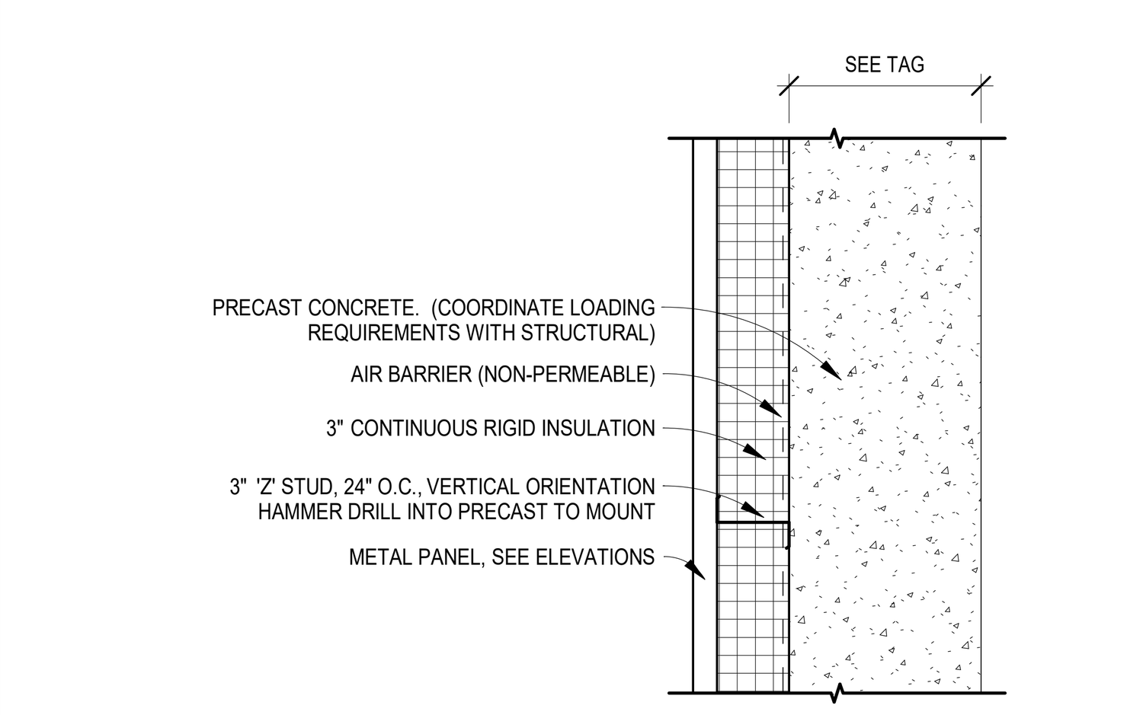
WALL TAG	STUD WIDTH	ASSEMBLY WIDTH	NOTES
SC6	6"	6 5/8"	.0329MM STEEL THICKNESS ALLOWABLE SPAN IS 14'-10"

NS — METAL PANEL/ STEEL STUD ASSEMBLIES



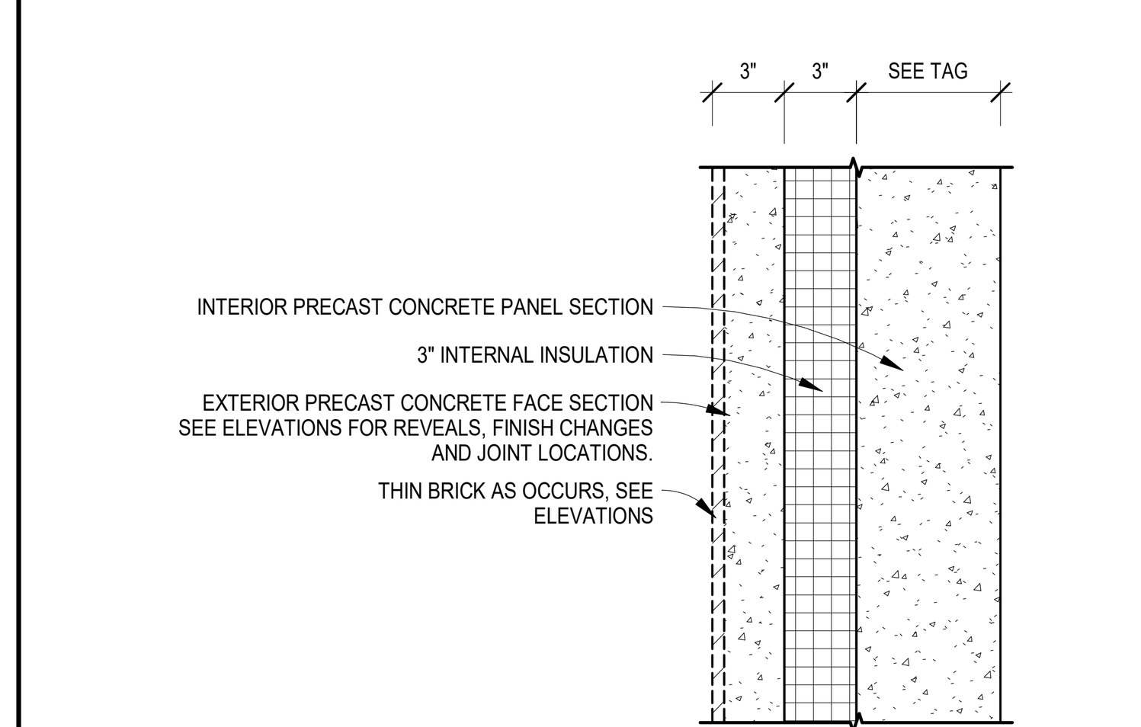
WALL TAG	STUD WIDTH	ASSEMBLY WIDTH	NOTES
NS4	4"	+/- 7 3/4" (+ MTL PANEL)	
NS6	6"	+/- 9 3/4" (+ MTL PANEL)	
NS8	8"	+/- 11" (+ MTL PANEL)	

NP — METAL PANEL / PRECAST CONCRETE ASSEMBLIES



WALL TAG	PRECAST WIDTH	ASSEMBLY WIDTH	NOTES
NP6	6"	+/- 9" (+ MTL PANEL)	
NP8	8"	+/- 11" (+ MTL PANEL)	

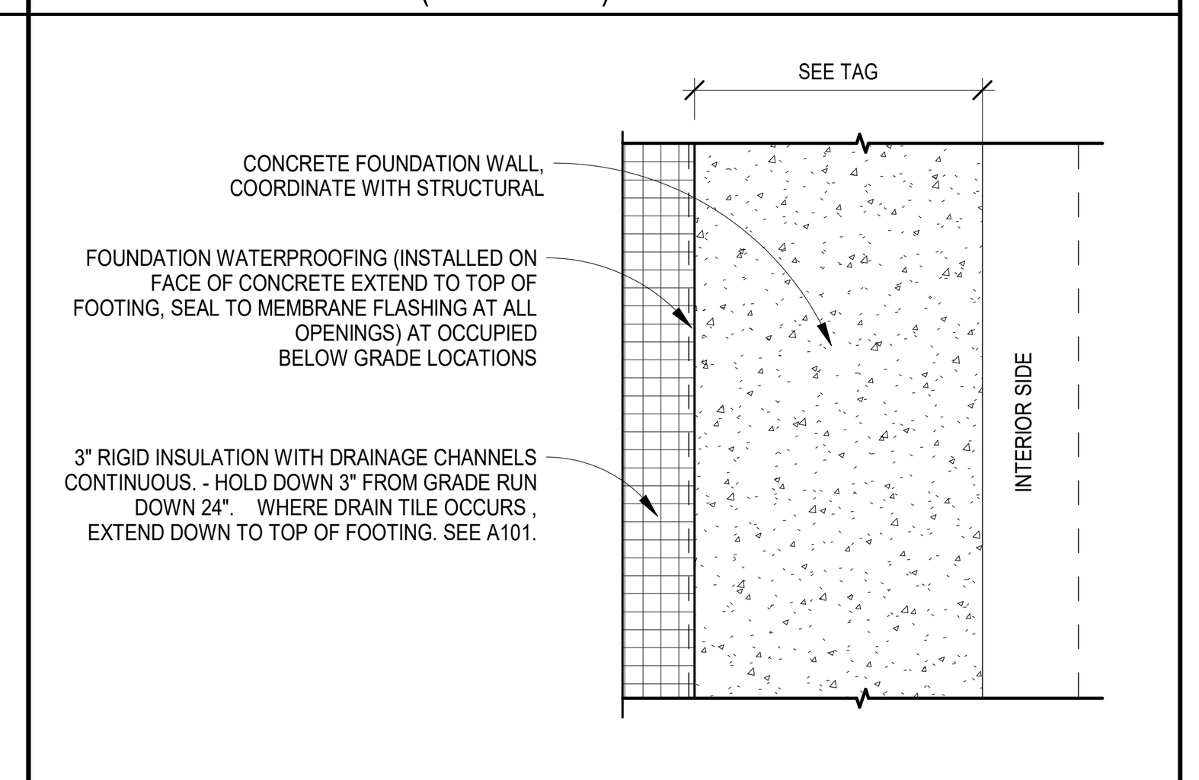
PP — PRECAST CONCRETE INSULATED WALL PANEL



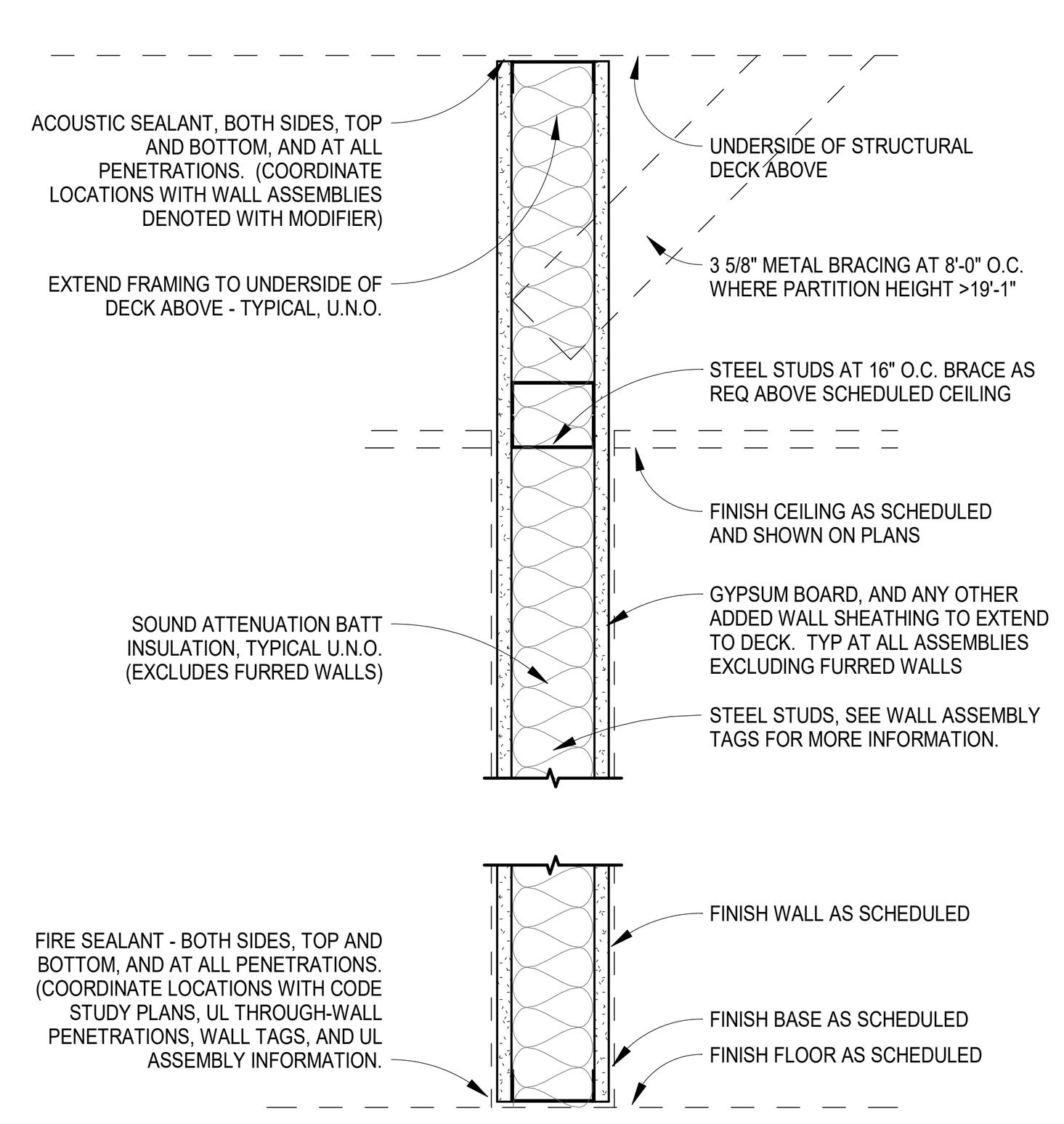
UL ASSEMBLY RATING BY MANUFACTURER, AS REQUIRED TO MEET THE NOTED RATING. (REQUIRED WHEN RATING IS PRESENT.)

WALL TAG	INSIDE PANEL WIDTH	ASSEMBLY WIDTH	NOTES
PP6	6"	12"	

IC — INSULATED POURED-IN-PLACE CONCRETE ASSEMBLIES (BASEMENT)



WALL TAG	WIDTH	ASSEMBLY WIDTH	NOTES
IC8	8"	-	
IC10	10"	-	
IC12	12"	-	



2 **Typical Steel Stud Wall Assembly**
1 1/2" = 1'-0"

INTERIOR WALL TYPE TAG DESCRIPTION LEGEND

TYPICAL WALL TAG: ??? / ? HR

WALL TYPE DESIGNATION SYMBOL:
SEE SPECIFIC WALL TYPE ASSEMBLY FOR DESCRIPTION OF WALL COMPONENTS.

FIRST LETTER INDICATES CONSTRUCTION MATERIAL OF PARTITION WALL:

MATERIAL LEGEND:
S = **S**TEEL STUDS
M = **M**ASONRY
P = **P**RECAST

WALL TYPE MODIFIERS:
IF MODIFIER LETTERS ARE LOCATED ON THE TAG, THE FOLLOWING REQUIREMENTS SHALL BE IMPLEMENTED INTO THE WALL ASSEMBLY:

R = IMPACT **R**ESISTANT GYPSUM BOARD *(INSTALL FROM FLOOR TO 6' A.F.F.)*
A = **A**COUSTICAL SEAL ALL PENETRATIONS, AND SIDES, TOP AND BOTTOM OF WALL - BOTH SIDES

WALL TAG W/ MODIFIERS: ? ??? / ? ? AFF

FIRE RATING AT WALL ASSEMBLY:
IF AN HOURLY FIRE RATING IS PRESENT, CONSTRUCT WALL PER LISTED UL DESIGN NOTED IN THE WALL TYPE ASSEMBLY. (WALL RATINGS ARE ALSO INDICATED ON CODE STUDY PLANS, IF NOT TAGGED. THE MOST RESTRICTIVE SHALL GOVERN.)

WALL HEIGHT INDICATOR:
IF A NUMBER IS NOTED, FOLLOWED BY AFF, THE REFERENCE IS TO INDICATE WALL HEIGHT ABOVE FINISHED FLOOR.

EXTERIOR WALL TYPE TAG DESCRIPTION LEGEND

TYPICAL WALL TAG: ??? / ? HR

WALL TYPE DESIGNATION SYMBOL:
SEE SPECIFIC WALL TYPE ASSEMBLY FOR DESCRIPTION OF WALL COMPONENTS.

FIRST LETTER INDICATES FINISH MATERIAL ON THE EXTERIOR WALL SURFACE:

N = METAL PA**N**EL
P = **P**RECAST

SECOND LETTER INDICATES CONSTRUCTION MATERIAL OF THE BACK-UP WALL:

S = **S**TEEL STUDS
P = **P**RECAST
C = **C**ONCRETE

NUMBER INDICATES DEPTH OF THE BACK-UP WALL CONSTRUCTION MATERIAL.

WALL TYPE MODIFIERS:
IF MODIFIER LETTERS ARE LOCATED ON THE TAG, THE FOLLOWING REQUIREMENTS SHALL APPLY TO THE WALL ASSEMBLY:

R = IMPACT **R**ESISTANT GYPSUM BOARD *(INSTALL FROM FLOOR TO 6' A.F.F.)*
A = **A**COUSTICAL SEAL ALL PENETRATIONS, AND SIDES, TOP AND BOTTOM OF WALL - BOTH SIDES

WALL TAG W/ MODIFIERS: ??? / ? HR

FIRE RATING AT WALL ASSEMBLY:
IF AN HOURLY FIRE RATING IS PRESENT, CONSTRUCT WALL PER LISTED UL DESIGN NOTED IN THE WALL TYPE ASSEMBLY. (WALL RATINGS ARE ALSO INDICATED ON CODE STUDY PLANS, IF NOT TAGGED. THE MOST RESTRICTIVE SHALL GOVERN.)

GENERAL NOTES - FRAMED PARTITIONS

1. ALL LOAD BEARING WALLS TO BE CONSTRUCTED PER STRUCTURAL ENGINEERS DESIGN REQUIREMENTS. SEE STRUCTURAL SHEETS FOR INFORMATION.
2. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES TO BE FIRE SAFE BY THE TRADE/ CONTRACTOR THAT CREATED THE PENETRATION.
3. ALL STEEL STUD AND WOOD STUD PARTITIONS TO HAVE BATT INSULATION U.N.O. ON PLANS
4. ALL UL ASSEMBLIES SHOWN ARE REPRINTED FROM THE ONLINE CERTIFICATIONS DIRECTORY WITH PERMISSION FROM UNDERWRITERS LABORATORIES INC. COPYRIGHT 2015 UNDERWRITERS LABORATORIES, INC. CONTRACTORS MAY REFER TO WWW.UL.COM FOR ONLINE ACCESS TO ALL ASSEMBLIES AND MODIFICATIONS.
5. PARTITION HEIGHT IS ASSUMED TO EXTEND TO BOTTOM OF ROOF/ FLOOR DECK ABOVE U.N.O. FRAMING AND GYPSUM BOARD TO JOG AROUND JOIST AND BEAMS. WHERE NECESSARY FIRE SAFE GAP WHERE FIRE RATING IS REQUIRED.
6. PARTITIONS WITHIN WET AREAS INCLUDING BUT NOT LIMITED TO RESTROOMS AND KITCHENS SHALL HAVE WATER RESISTANT GYPSUM BOARD WHEN GYPSUM BOARD IS CALLED OUT AS THE FINISH IN THE WALL ASSEMBLY.
7. CONTRACTOR IS RESPONSIBLE FOR BLOCKING NEEDED FOR ANY WALL MOUNTED ACCESSORY.
8. STEEL STUD PARTITIONS ARE TO HAVE DEFLECTION TRACK U.N.O.
9. DEFLECTION TRACK TO BE INSTALLED AT TOP OF STEEL STUD PARTITIONS WHERE METAL STUD PARTITIONS ARE INSTALLED TO HORIZONTAL HOLLOW CORE PLANK.
10. SEE STRUCTURAL DRAWINGS FOR SHEAR WALL LOCATIONS AND SCHEDULES. THE NOTED WALL ASSEMBLY WIDTHS MAY NOT ACCOUNT FOR STRUCTURAL SHEAR PANELS.

GENERAL NOTES - UL WALL ASSEMBLIES

1. WHEN HOURLY RATING IS SHOWN ON A WALL TAG, OR ON THE CODE STUDY PLAN, THE WALL IS TO BE CONSTRUCTED PER THE UL ASSEMBLY REQUIREMENTS.

NOTE: UNDERWRITERS LABORATORIES ALLOWS FOR MODIFICATIONS TO INDIVIDUAL DESIGNS. SOME MODIFICATIONS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING: SCREWS MAY BE SUBSTITUTED FOR NAILS, ONE FOR ONE WHEN THE HEAD DIAMETER, LENGTH, AND SPACING EQUALS OR EXCEEDS THE REQUIREMENTS FOR THE SPECIFIED NAILS.

GYPSUM BOARD THICKNESS SPECIFIED IN SPECIFIC DESIGNS ARE MINIMUMS. GREATER THICKNESS OF GYPSUM BOARD ARE PERMITTED AS LONG AS THE FASTENER LENGTH IS INCREASED PROPORTIONALLY, ADDITIONAL LAYERS OF GYPSUM BOARD ARE PERMITTED TO BE ADDED TO ANY DESIGN. THE SIZE OF THE STUDS ARE MINIMUMS UNLESS OTHERWISE STATED IN THE DESIGN.

THE GENERIC WALL MAKE-UP SHOWN UNDER EACH WALL TYPE DESIGNATION SHOWS THE DESIGN INTENT FOR THAT SPECIFIC PARTITION, ALTHOUGH IT MAY NOT EXACTLY MATCH THE UL ASSEMBLY. IT HAS BEEN DESIGNED USING THE ALLOWED MODIFICATIONS. THE CONTRACTOR IS TO CONSTRUCT THE WALL BASED ON THE GENERIC MAKE-UP FOLLOWING THE UL DESIGN STANDARD WHEN THE WALL IS RATED. IF THE CONTRACTOR WISHES TO MODIFY COMPONENTS AND REQUIREMENTS OUTLINED IN THE UL ASSEMBLY, APPROVAL FOR A SUBSTITUTION MUST BE PROVIDED BY ARCHITECT PRIOR TO IMPLEMENTING.

GENERAL NOTES - MASONRY PARTITIONS

1. ALL MASONRY PARTITIONS TO HAVE HORIZONTAL JOINT REINFORCEMENT at 16" O.C. VERTICALLY.
2. ALL MASONRY PARTITIONS TO HAVE BULLNOSE EDGES AT ALL DOOR AND WINDOW JAMBS, SILL, AND HEADS UNLESS DOOR FRAMES COVER CORNERS OR IF NOTED OTHERWISE.
3. PARTITION HEIGHT IS ASSUMED TO EXTEND TO BOTTOM OF ROOF/ FLOOR DECK ABOVE U.N.O. ALL MASONRY PARTITIONS SHALL HAVE 1/2" TO 1" GAP TO ALLOW STRUCTURE ABOVE TO DEFLECT WITHOUT LOADING NON-BEARING WALL U.N.O. ON DRAWINGS. CUT BLOCK AROUND JOIST AND BEAMS WHERE NECESSARY. FIRE SAFE GAP WHERE FIRE RATING IS REQUIRED. ACOUSTICAL SPRAY FOAM GAPS WHERE FIRE RATING IS NOT REQUIRED.
4. ALL NON LOAD BEARING MASONRY PARTITIONS TO FOLLOW THE MASONRY LINTEL SCHEDULE PROVIDED ON THIS DRAWING.
5. NON-BEARING MASONRY LINTEL SCHEDULE NOTE:
MAXIMUM ALLOWABLE WALL HEIGHT ABOVE OPENINGS IS 8'-0".
CMU WALL IS ASSUMED TO BE GROUTED AT 4'-0"o.c.
TIGHTER GROUT SPACING WILL AFFECT MAXIMUM ALLOWABLE WALL HEIGHT ABOVE OPENING.

NON-BEARING MASONRY LINTEL SCHEDULE

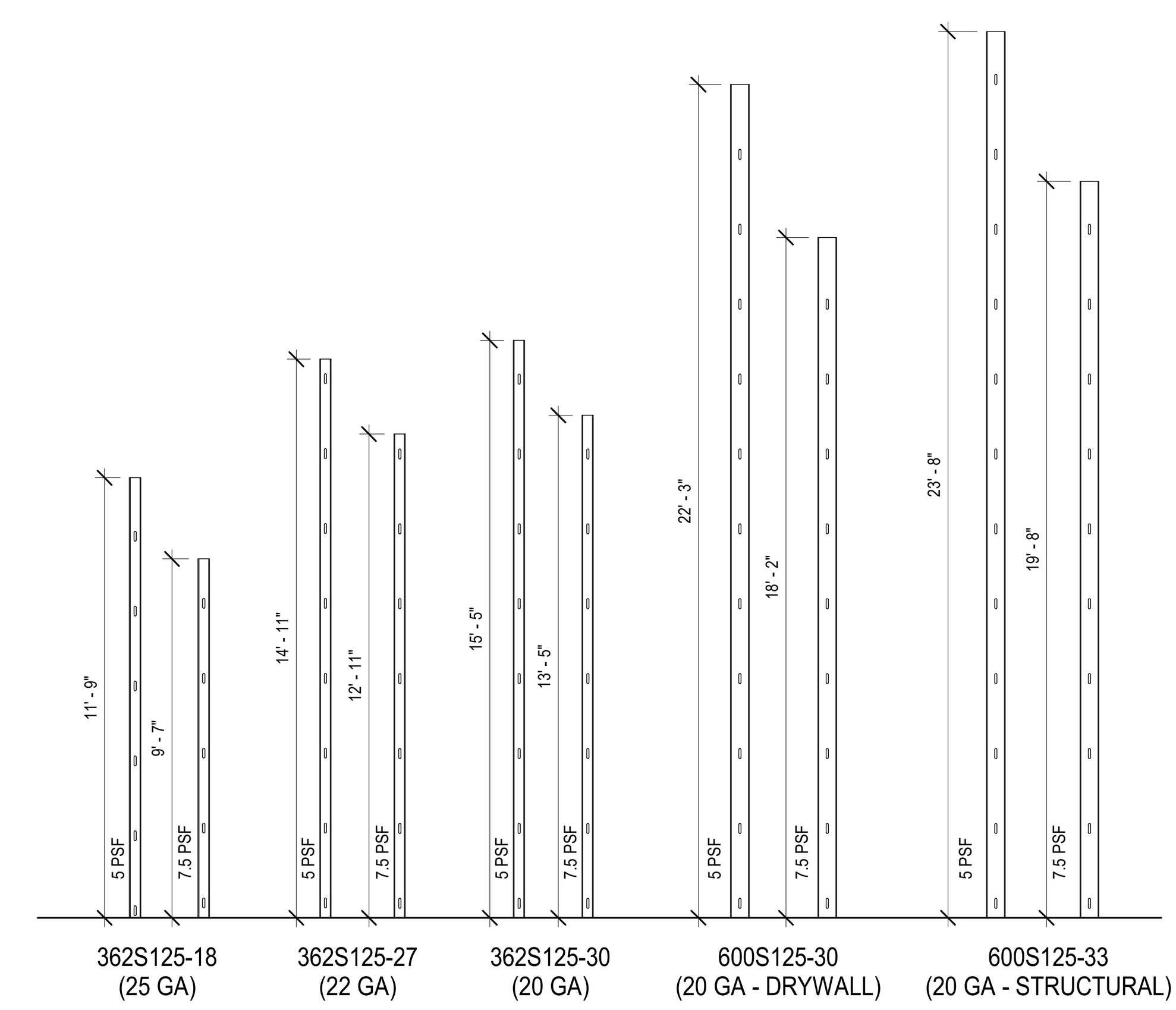
SPAN	NON-BEARING 8" WALLS: STEEL LINTEL OPTION	CMU LINTEL OPTION	REINF.	BEARING
< 4'-0"	N/A	8" DEEP BOND BEAM	2 - #5	8" EACH END
4'-0" - 6'-0"	2 = L4x3 1/2x1/4" (LLBB)	16" DEEP BOND BEAM	2 - #5	8" EACH END
6'-0" - 8'-0"	2 = L5x3 1/2x1/4" (LLBB)	16" DEEP BOND BEAM	2 - #5	8" EACH END
8'-0" - 10'-0"	2 = L6x3 1/2x5/16" (LLBB)	16" DEEP BOND BEAM	2 - #5	8" EACH END
> 10'-0"	CONTACT ARCHITECT / STRUCTURAL ENGINEER	CONTACT ARCHITECT / STRUCTURAL ENGINEER	-	-

NOTES:
MAXIMUM ALLOWABLE WALL HEIGHT ABOVE OPENINGS IS 8'-0".
CMU WALL IS ASSUMED TO BE GROUTED AT 4'-0"o.c. TIGHTER GROUT SPACING WILL AFFECT MAXIMUM ALLOWABLE WALL HEIGHT ABOVE OPENING.

GENERAL NOTES

5 PSF = TYP FOR 5/8" GWB EA SIDE
7.5 PSF = TYP FOR WALLS BACKED WITH CEMENTITIOUS BACKER BOARD AND TILE; WALL MOUNTED EQUIPMENT

1. BASED ON 16" O.C. STUD SPACING
2. USE ONLY FOR NON-LOAD BEARING INTERIOR STEEL STUD PARTITION WALLS - DIVISION 9
3. BRIDGING SHALL BE REQUIRED ABOVE WHERE GYPSUM BOARD STOPS OR WHERE GYPSUM BOARD IS ONLY ON ONE SIDE OF STUD. LOCATION OF BRIDGING SHALL BE 24" O.C.
4. GRAPHIC IS A GENERAL GUIDELINE AND IS NOT LIMITED TO THE OPTIONS GUIDED BY THE STEEL FRAMING INDUSTRY ASSOCIATION (SFIA) TECHNICAL GUIDE FOR COLD-FORMED STEEL FRAMING PRODUCTS - "LIMITING WALL HEIGHTS - NON-COMPOSITE." TECHNICAL GUIDE COMPLIES WITH THE 2021 IBC, AISI S100-16 AND AISI S240-15. CONTRACTOR SHALL COORDINATE WITH DRAWINGS FOR DESIGN INTENT AND WALL SIZES INDICATED AND COMMUNICATE ANY DISCREPANCIES TO THE ARCHITECT PROMPTLY.



ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School
210 12th Street NE
Valley City, ND 58072

STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

LICENSED ARCHITECT HEIDI BRENNA (1859) Date 03/10/26 STATE OF NORTH DAKOTA

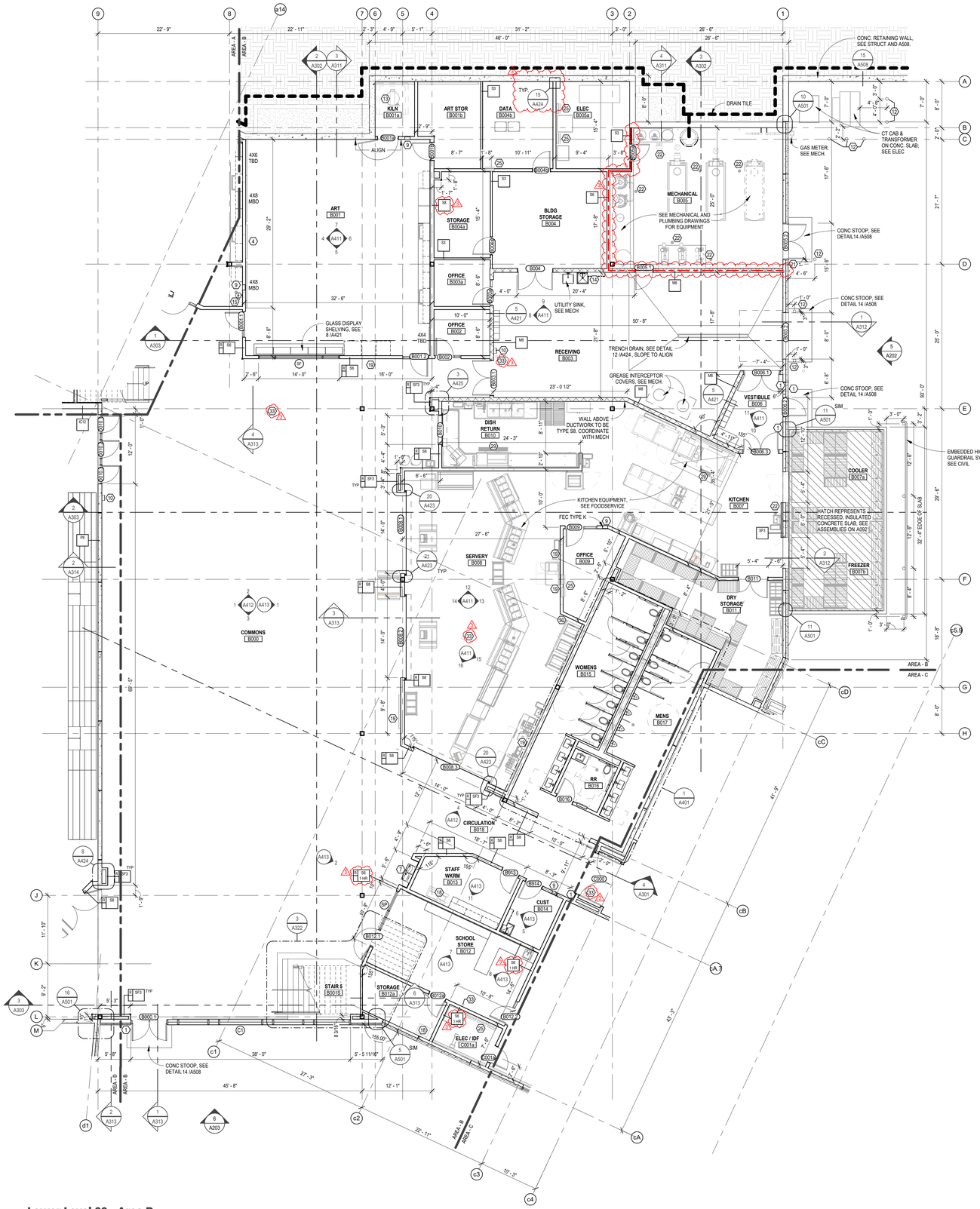
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
3	Addendum #3	03/30/26

DRAWN BY: AS/HO/JT JN: 24-028

Wall Assemblies

SHEET
A091



1 A100B **Lower Level 00 - Area B**
1/8" = 1'-0"

GENERAL NOTES - FLOOR PLAN

1. COORDINATE WALL TYPES AND RATINGS, AND HORIZONTAL ASSEMBLY RATINGS & TAGS, WITH CODE STUDY DRAWINGS AND ASSEMBLY TYPE DRAWINGS.
2. ALL INTERIOR WALLS TO BE TYPE S6, UNLESS NOTED OTHERWISE. ALL INTERIOR FURRING WALLS TO BE TYPE SF3, UNLESS NOTED OTHERWISE.
3. EXTERIOR DIMENSIONS ARE TO FACE OF STUD OR PRECAST.
4. INTERIOR DIMENSIONS ARE TO CENTER OF STUD OR FACE OF STUD AT FURRING WALLS. WHERE A 'CLR' NOTE IS PROVIDED, THE DISTANCE PROVIDED IS A MINIMUM BETWEEN FINISHED SURFACES. DIMENSIONS INDICATED AS "CLEAR" SHALL BE MAINTAINED IN CASE OF DISCREPANCY.
5. DIMENSIONS ARE SHOWN TO NOMINAL / WHOLE NUMBER. OPENING SIZES ARE TO ACCOUNT FOR WOOD BUCKING AND SEALANT JOINTS. COORDINATE ALL ROUGH OPENINGS WITH THE ACTUAL DOOR FRAME, CURTAIN WALL/STOREFRONT, OR LOUVER SIZES AND REQUIREMENTS. COORDINATE WITH DETAILS.
6. WORK FROM GIVEN DIMENSIONS. IN GENERAL, LARGE-SCALE DETAILS TAKE PRECEDENCE OVER SMALLER SCALE PLANS, ELEVATIONS, AND BUILDING SECTIONS. NOTIFY THE ARCHITECT OF ANY DIMENSIONAL DISCREPANCIES PRIOR TO COMMENCING THE WORK, AND DO NOT BEGIN WORK UNTIL SUCH DISCREPANCIES ARE RESOLVED BY THE ARCHITECT.
7. DO NOT SCALE THE DRAWINGS.
8. UNLESS NOTED OTHERWISE, THE LOCATION OF DOOR FRAMES SHALL BE 4" FROM THE ADJACENT WALL STUDS TO THE HINGE SIDE OF THE ROUGH OPENING.
9. GM TO PROVIDE BLOCKING AS REQUIRED FOR INSTALLATION OF CASEWORK, EQUIPMENT, AND ACCESSORIES.
10. ITEMS BY OWNER OR NIC SHOWN DASHED GRAY.

KEYNOTES - FLOOR PLAN

#	
1	CARD READER, SEE ELEC
4	FUTURE TECHNOLOGY LOCATION, NIC. COORDINATE POWER ROUGH-IN REQUIREMENTS WITH ELEC. PROVIDE PLYWOOD BLOCKING IN WALL (2'-0" X 2'-0") AND ROUGH-INS FOR A/V MOUNT. COORDINATE FINAL SIZE AND LOCATION WITH OWNER.
7	DRINKING FOUNTAIN. SEE MECHANICAL.
9	FIRE EXTINGUISHER CABINET - SEMI-RECESSED AT GYP.
10	FIRE EXTINGUISHER CABINET - WALL MOUNTED AT CMU/PRECAST.
12	BOLLARD. SEE CIVIL
13	EXISTING KILN TO BE RELOCATED AND SET UP. 3'-0" DIAMETER, OFCI
14	MOP SINK. SEE MECHANICAL AND FINISH PLANS. PROVIDE CUSTODIAL MOP/BROOM HOLDER ADJACENT TO MOP SINK. MOUNT AT 48" AFF. COORDINATE WITH OWNER PRIOR TO INSTALL. SEE ELEVATIONS.
15	EMERGENCY SHOWER EYE WASH STATION. SEE MECH.
18	EQUIPMENT BY OWNER
19	FUTURE TECHNOLOGY LOCATION, NIC. COORDINATE POWER ROUGH-IN REQUIREMENTS WITH ELEC AT 66" AFF. PROVIDE PLYWOOD BLOCKING IN WALL (2'-0" X 2'-0") AND ROUGH-INS FOR FUTURE A/V MOUNT. COORDINATE FINAL SIZE AND LOCATION WITH OWNER.
21	EMERGENCY KEY BOX, INSTALL AT 40" AFF
22	FLOOR DRAIN. SLOPE MINIMUM 1/4"/12" COORDINATE WITH MECHANICAL OR FOODSERVICE.
25	ELECTRICAL PANEL, SEE ELEC.
29	FLOOR TROUGHS - SEE FOODSERVICE AND MECH.
30	COILING SECURITY DOOR OPERATORS, SEE ELEC.
33	FLOOR CLEANOUT, SEE MECH

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School
210 12th Street NE
Valley City, ND 58072

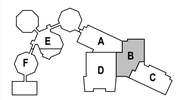
STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



LICENSED ARCHITECT
HEIDI BRENNAN
Date 03/10/26
STATE OF NORTH DAKOTA

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
3	Addendum #3	03/30/26

DRAWN BY: AS/HO/JT JN: 24-028

Lower Level 00 - Area B

SHEET
A100B

1 A101A **Main Level 01 - Area A**

1/8" = 1'-0"

GENERAL NOTES - FLOOR PLAN

1. COORDINATE WALL TYPES AND RATINGS, AND HORIZONTAL ASSEMBLY RATINGS & TAGS, WITH CODE STUDY DRAWINGS AND ASSEMBLY TYPE DRAWINGS.
2. ALL INTERIOR WALLS TO BE TYPE S6, UNLESS NOTED OTHERWISE. ALL INTERIOR FURRING WALLS TO BE TYPE SF3, UNLESS NOTED OTHERWISE.
3. EXTERIOR DIMENSIONS ARE TO FACE OF STUD OR PRECAST.
4. INTERIOR DIMENSIONS ARE TO CENTER OF STUD OR FACE OF STUD AT FURRING WALLS. WHERE A 'CLR NOTE IS PROVIDED, THE DISTANCE PROVIDED IS A MINIMUM BETWEEN FINISHED SURFACES. DIMENSIONS INDICATED AS "CLEAR" SHALL BE MAINTAINED IN CASE OF DISCREPANCY.
5. DIMENSIONS ARE SHOWN TO NOMINAL / WHOLE NUMBER. OPENING SIZES ARE TO ACCOUNT FOR WOOD BUCKING AND SEALANT JOINTS. COORDINATE ALL ROUGH OPENINGS WITH THE ACTUAL DOOR FRAME, CURTAIN WALL/STOREFRONT, OR LOUVER SIZES AND REQUIREMENTS. COORDINATE WITH DETAILS.
6. WORK FROM GIVEN DIMENSIONS. IN GENERAL, LARGE-SCALE DETAILS TAKE PRECEDENCE OVER SMALLER SCALE PLANS, ELEVATIONS, AND BUILDING SECTIONS. NOTIFY THE ARCHITECT OF ANY DIMENSIONAL DISCREPANCIES PRIOR TO COMMENCING THE WORK, AND DO NOT BEGIN WORK UNTIL SUCH DISCREPANCIES ARE RESOLVED BY THE ARCHITECT.
7. DO NOT SCALE THE DRAWINGS.
8. UNLESS NOTED OTHERWISE. THE LOCATION OF DOOR FRAMES SHALL BE 4" FROM THE ADJACENT WALL STUDS TO THE HINGE SIDE OF THE ROUGH OPENING.
9. GM TO PROVIDE BLOCKING AS REQUIRED FOR INSTALLATION OF CASEWORK, EQUIPMENT, AND ACCESSORIES.
10. ITEMS BY OWNER OR NIC SHOWN DASHED GRAY.

KEYNOTES - FLOOR PLAN

#	
1	CARD READER, SEE ELEC
2	HANDICAP DOOR ACTUATOR PUSH BUTTON. COORDINATE WITH ELECTRICAL AND HARDWARE SPECIFICATIONS.
4	FUTURE TECHNOLOGY LOCATION, NIC. COORDINATE POWER ROUGH-IN REQUIREMENTS WITH ELEC. PROVIDE PLYWOOD BLOCKING IN WALL (2'-0" X 2'-0") AND ROUGH-INS FOR A/V MOUNT. COORDINATE FINAL SIZE AND LOCATION WITH OWNER.
7	DRINKING FOUNTAIN. SEE MECHANICAL.
9	FIRE EXTINGUISHER CABINET - SEMI-RECESSED AT GYP.
14	MOP SINK, SEE MECHANICAL AND FINISH PLANS. PROVIDE CUSTODIAL MOP/BROOM HOLDER ADJACENT TO MOP SINK. MOUNT AT 48" AFF. COORDINATE WITH OWNER PRIOR TO INSTALL, SEE ELEVATIONS.
18	EQUIPMENT BY OWNER
19	FUTURE TECHNOLOGY LOCATION, NIC. COORDINATE POWER ROUGH-IN REQUIREMENTS WITH ELEC AT 66" AFF. PROVIDE PLYWOOD BLOCKING IN WALL (2'-0" X 2'-0") AND ROUGH-INS FOR FUTURE A/V MOUNT. COORDINATE FINAL SIZE AND LOCATION WITH OWNER.
20	BOTTLE FILLER, SEE MECH.
23	SPLASHBLOCK - SEE DETAIL 8/A508
25	ELECTRICAL PANEL, SEE ELEC.
26	FIN TUBE RADIATOR. COORDINATE WITH MECHANICAL AND ELECTRICAL.
27	RECESSED DISPLAY CASE. SEE INTERIOR ELEVATIONS AND DETAIL 9/A421
33	FLOOR CLEANOUT, SEE MECH

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School

210 12th Street NE
Valley City, ND 58072

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

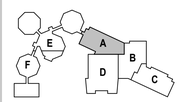
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



LICENSED ARCHITECT
HEIDI BRENNA
8459
STATE OF NORTH DAKOTA
Date 03/10/26

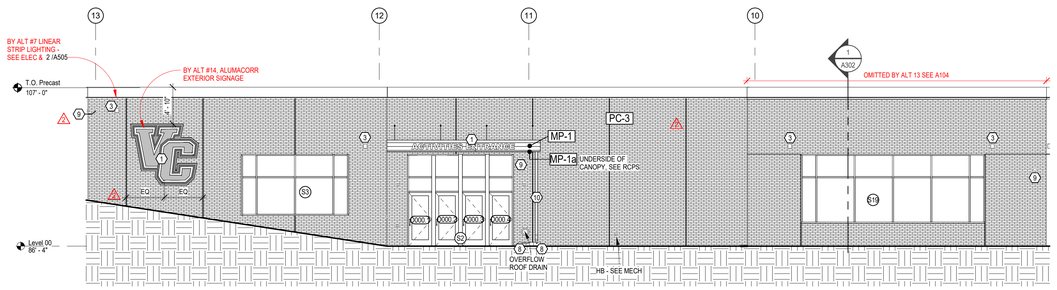
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
3	Addendum #3	03/30/26

DRAWN BY: AS/HO/JT JN: 24-028

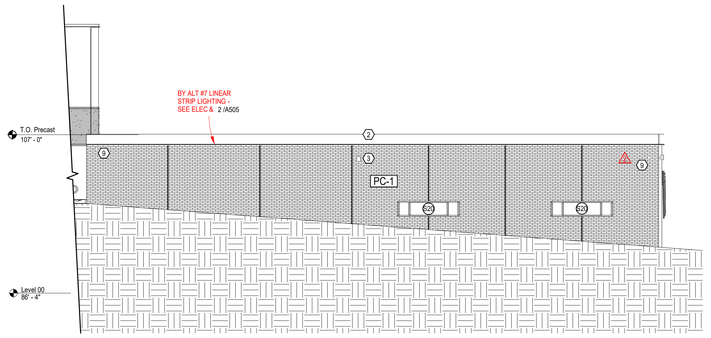
Main Level 01 - Area A

SHEET
A101A



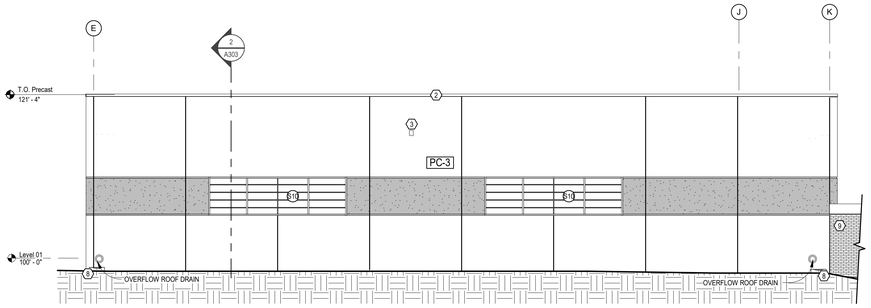
1 A204 South Elevation - Area D

1/8" = 1'-0"



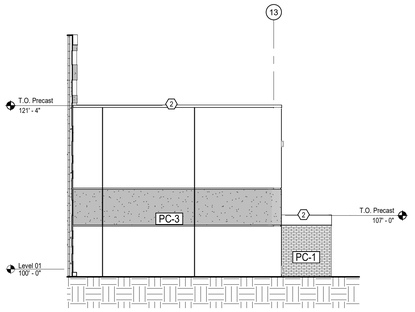
2 A204 Southwest Elevation - Area D

1/8" = 1'-0"



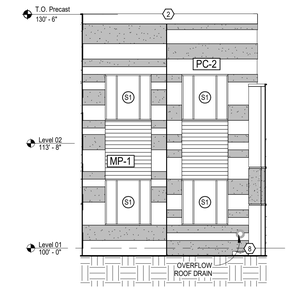
3 A204 West Elevation - Area D

1/8" = 1'-0"



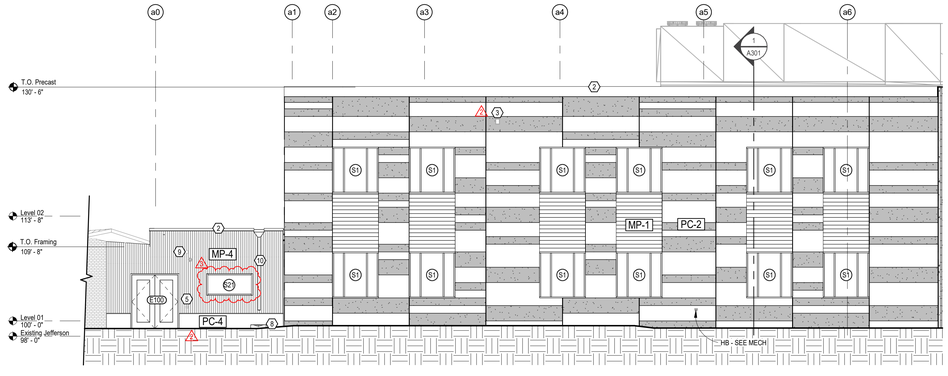
4 A204 North Elevation - Area D

1/8" = 1'-0"



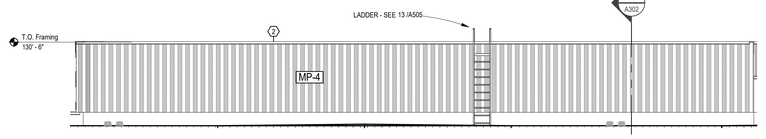
5 A204 Northwest Elevation - Area A

1/8" = 1'-0"



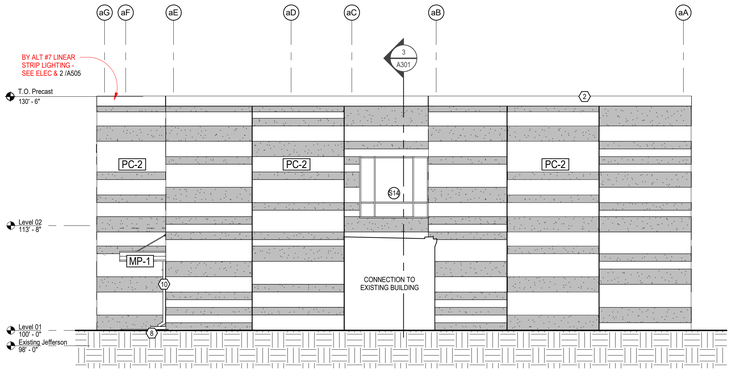
6 A204 Southwest Elevation - Area A

1/8" = 1'-0"



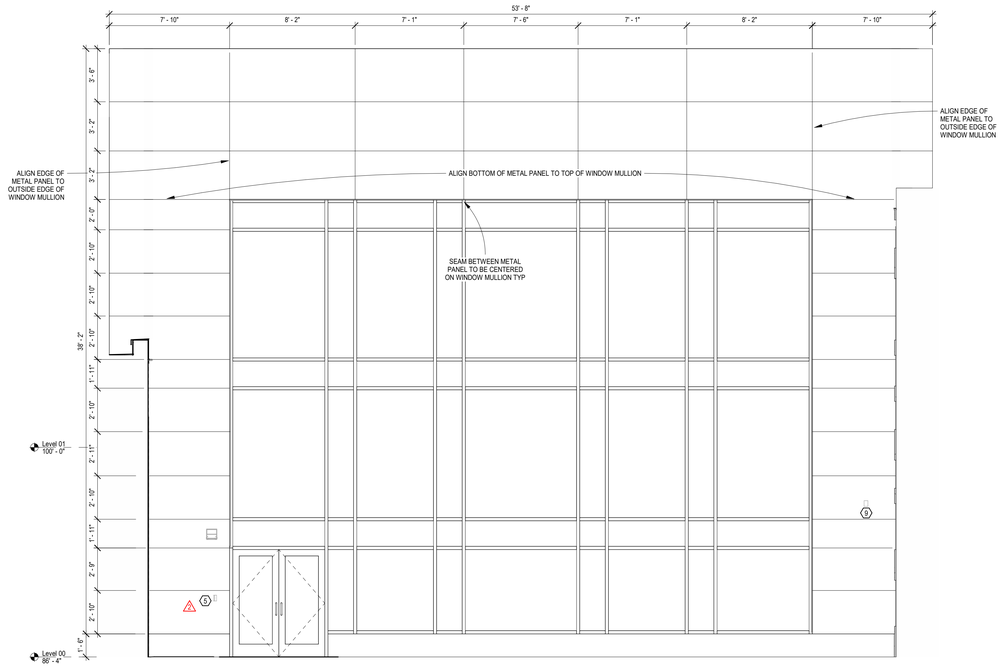
7 A204 South Elevation - Area A

1/8" = 1'-0"



8 A204 West Elevation - Area A

1/8" = 1'-0"



9 A204 Commons Metal Panel Dimensions

1/4" = 1'-0"

NOMINAL DIMENSIONS SHOWN. VERIFY IN FIELD

GENERAL NOTES - EXTERIOR ELEVATIONS

1. REVIEW EXTERIOR WALL TYPES AND DETAILS FOR ALL WALL COMPONENTS.
2. REVIEW SPECIFICATIONS FOR PRODUCT AND INSTALLATION REQUIREMENTS, AND ASSEMBLY MOCK-UPS.
3. SEE STOREFRONT TYPES AND OPENING DETAILS ON THE A600 DRAWINGS.
4. ARCHITECTURAL / STRUCTURAL ELEVATION 100' - 0" EQUALS ELEVATION 1291.10 ON CIVIL DRAWINGS.
5. COORDINATE LOCATIONS OF ALL EXTERIOR MOUNTED EQUIPMENT WITH MECH AND ELEC.

KEYNOTES - EXTERIOR ELEVATION

#	
1	BUILDING SIGNAGE. PROVIDE WALL BACKING AS REQUIRED. SEE SHEET A611 FOR DETAILS
2	METAL ROOF COPING. COLOR TO BE CLEAR ANODIZED EXCEPT FOR MP-2 AND MP-3 ASSEMBLIES: MATCH PANEL COLOR
3	BUILDING MOUNTED LIGHTING. SEE ELECTRICAL
5	CARD READER. SEE PLANS AND COORDINATE WITH ELEC
8	CONCRETE SPLASH BLOCK. SEE DETAIL 9/A508
9	CONNECTION FOR CAMERA. SEE ELEC
10	DOWNSPOUT. COLOR TO MATCH MP-1

EXTERIOR MATERIAL LEGEND

MP-1	METAL PANEL 1. TYPICAL. HORIZONTAL INSTALLATION. COLOR: WOOD TONE, TEAK. BASIS OF DESIGN: MAC METAL ARCHITECTURAL HARRYWOOD PLUS
MP-1a	MATAL PANEL 1a. SOFFIT INSTALLATION. COLOR: WOOD TONE, TEAK. BASIS OF DESIGN: MAC METAL ARCHITECTURAL HARRYWOOD PLUS AND HARRYWOOD PLUS VENTED
MP-2	COMPOSITE WALL PANEL. COLOR: SPIRE BLUE II. BASIS OF DESIGN: ALUCOBOND EASY FIX.
MP-3	VERTICAL INSTALLATION. COLOR: CUSTOM COLOR TO MATCH MP-2. BASIS OF DESIGN: PAC-CLAD BOX RIB 2
MP-4	VERTICAL INSTALLATION. COLOR: MUSKET GRAY. BASIS OF DESIGN: PAC-CLAD 7/8" CORRUGATED EXPOSED FASTENER PANELS
PC-1	PRECAST FINISH 1. PANELS TO BE FINISHED WITH MODULAR THIN BRICK IN A RUNNING BOND PATTERN. BASIS OF DESIGN: ENDICOTT: MANGANESE IRONSPOT
PC-2	PRECAST FINISH 2. MIX OF ACID ETCH AND SAND BLAST FINISH. SEE PRECAST ELEVATIONS
PC-3	PRECAST FINISH 3. MIX OF ACID ETCH AND SAND BLAST FINISH. SEE PRECAST ELEVATIONS.
PC-4	PRECAST FINISH 4. SANDBLAST FINISH. SEE PRECAST ELEVATIONS.

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School

210 12th Street NE
Valley City, ND 58072

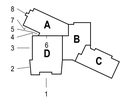
STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



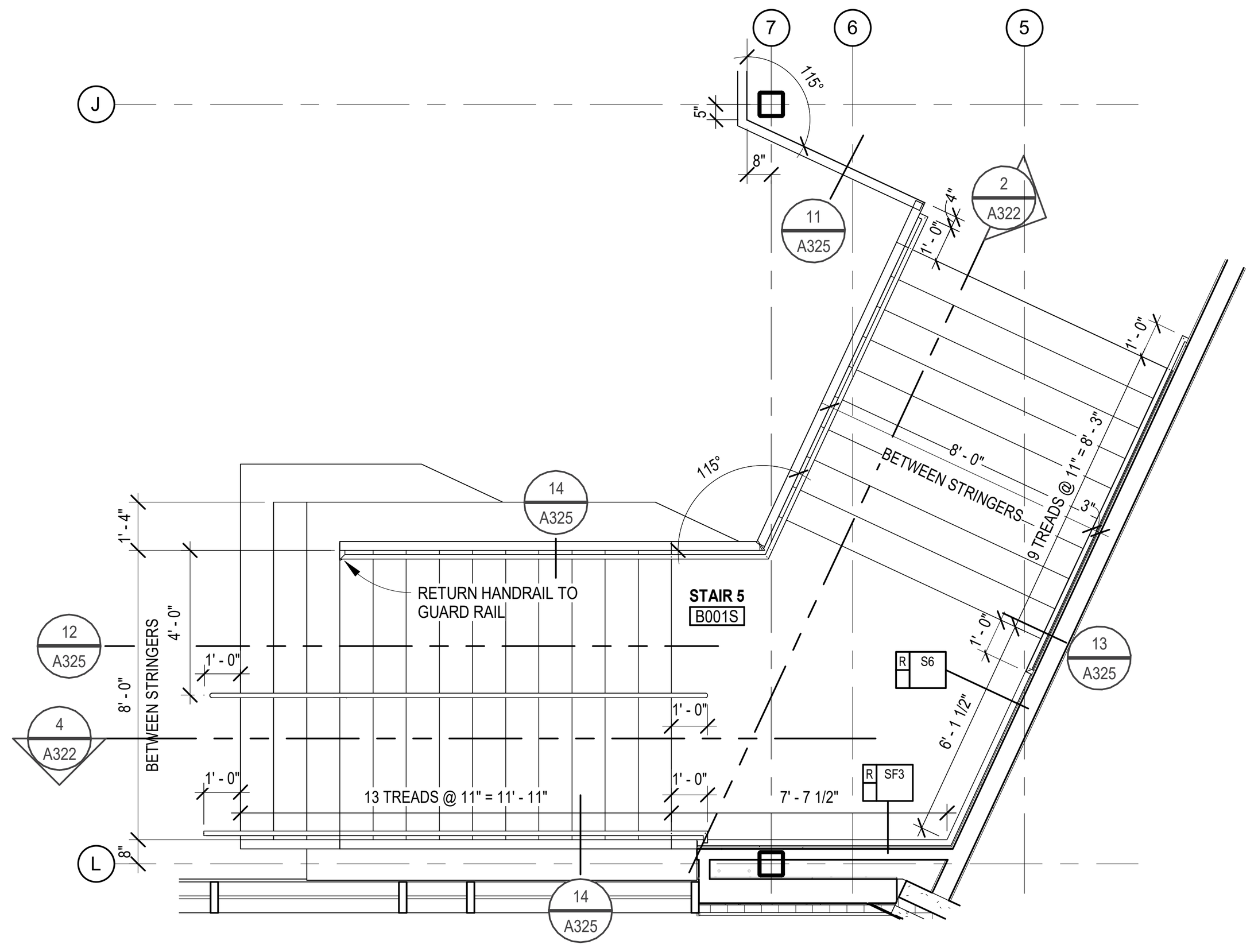
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
2	Addendum #2	03/24/26
3	Addendum #3	03/30/26

DRAWN BY: AS/HO/TWB JN: 24-028

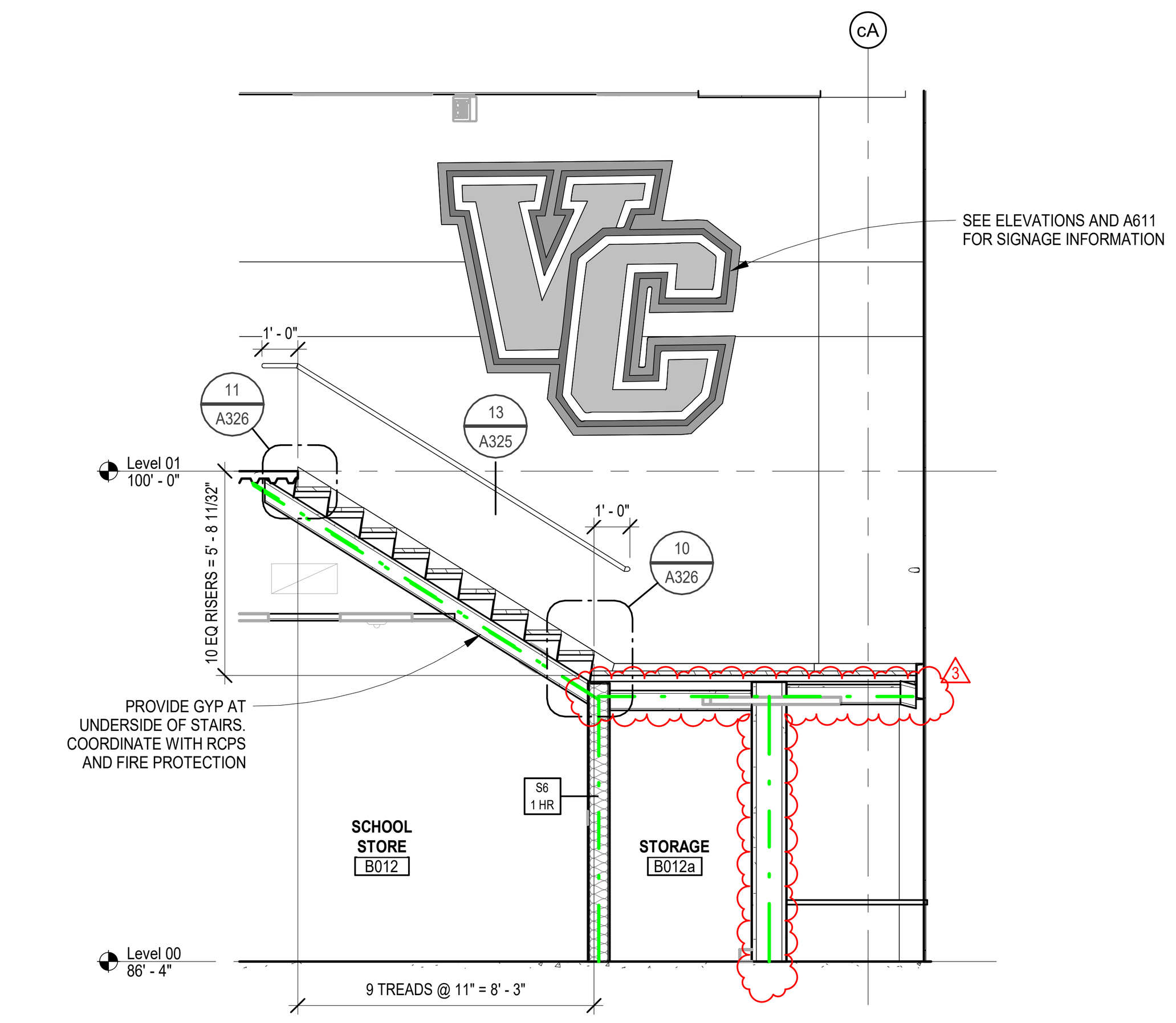
Exterior Elevations

SHEET
A204



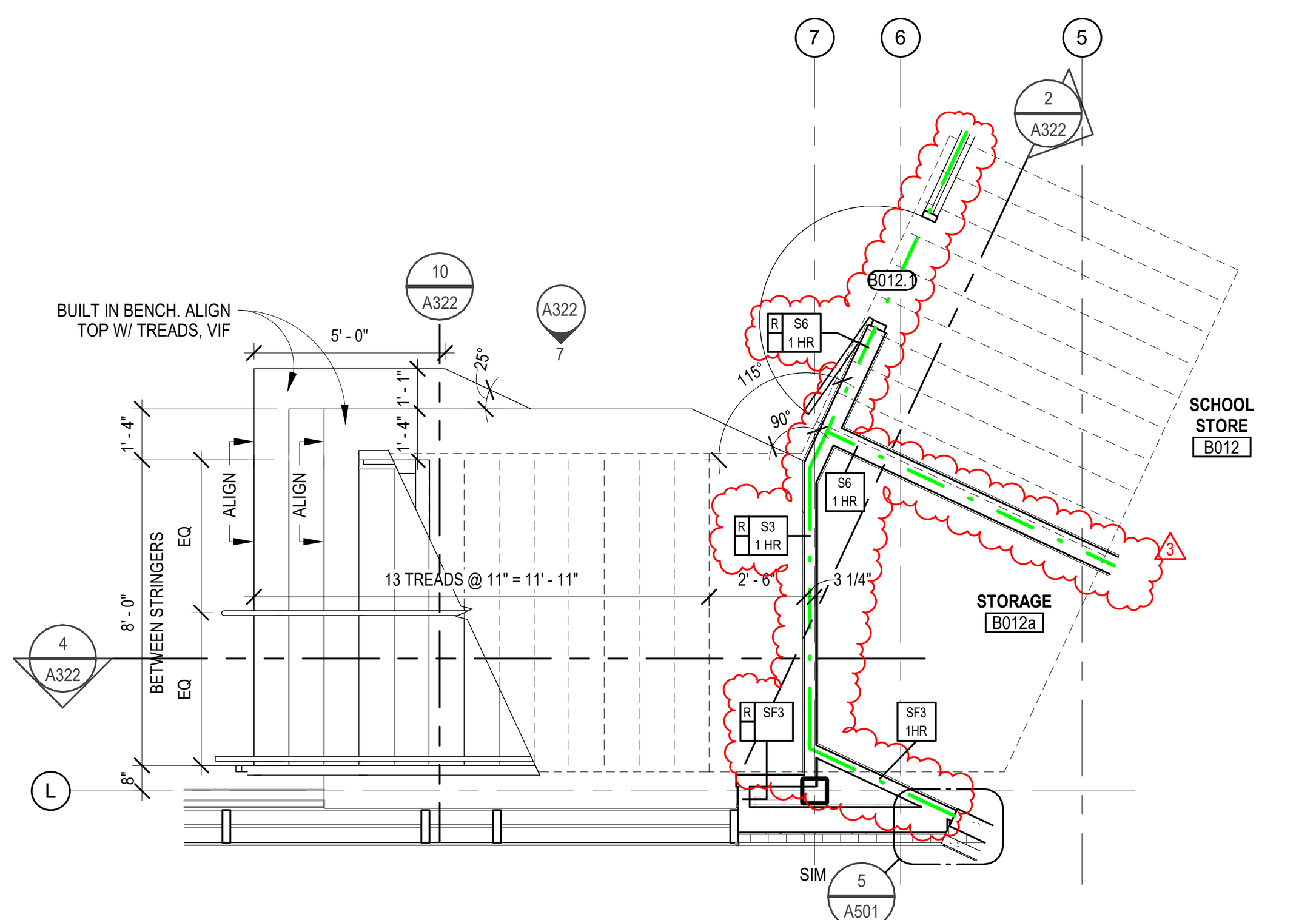
1 A322 **Stair 5 - Main Level Enlarged**

1/4" = 1'-0"



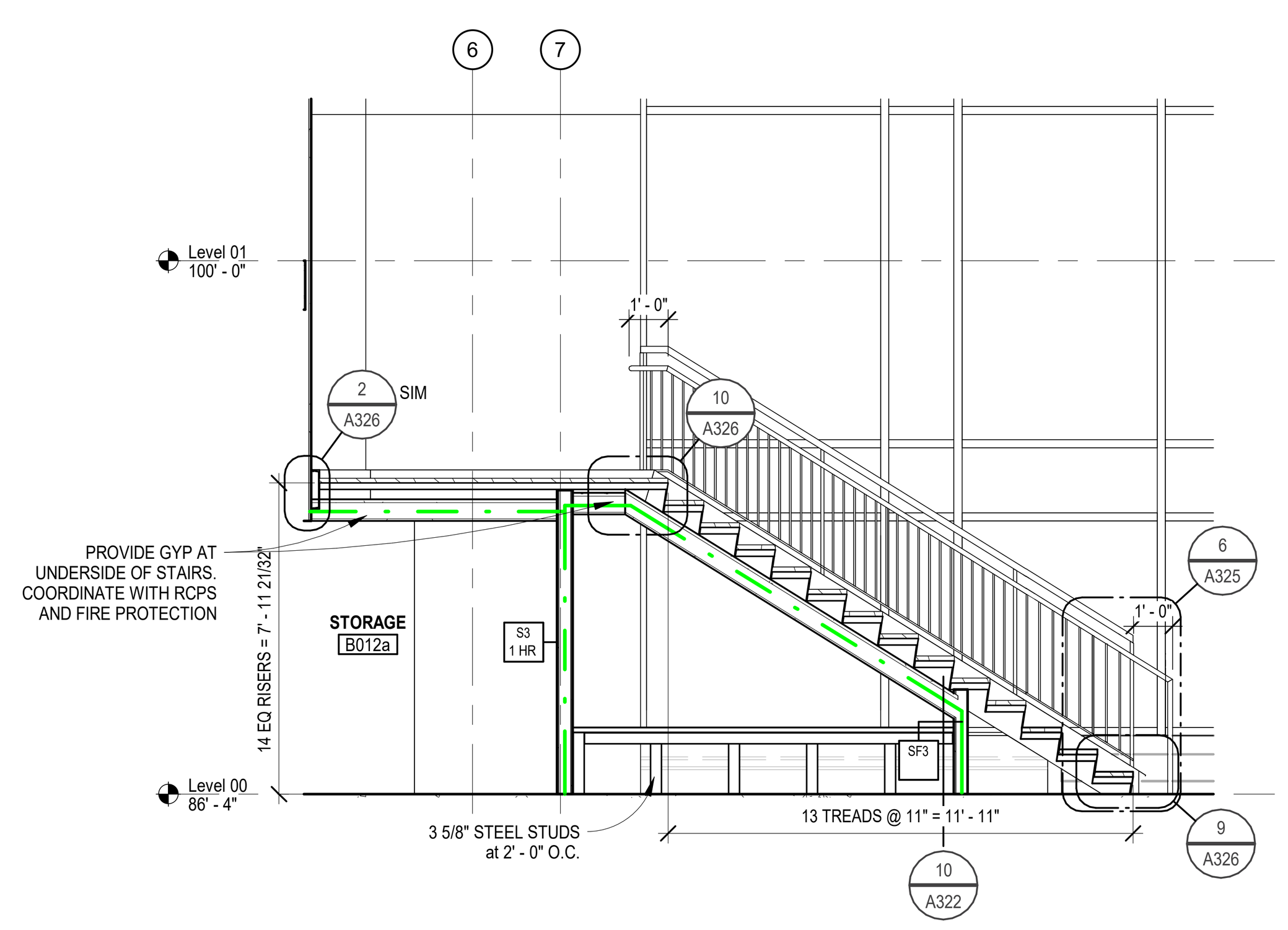
2 A322 **Section at Stair 5**

1/4" = 1'-0"



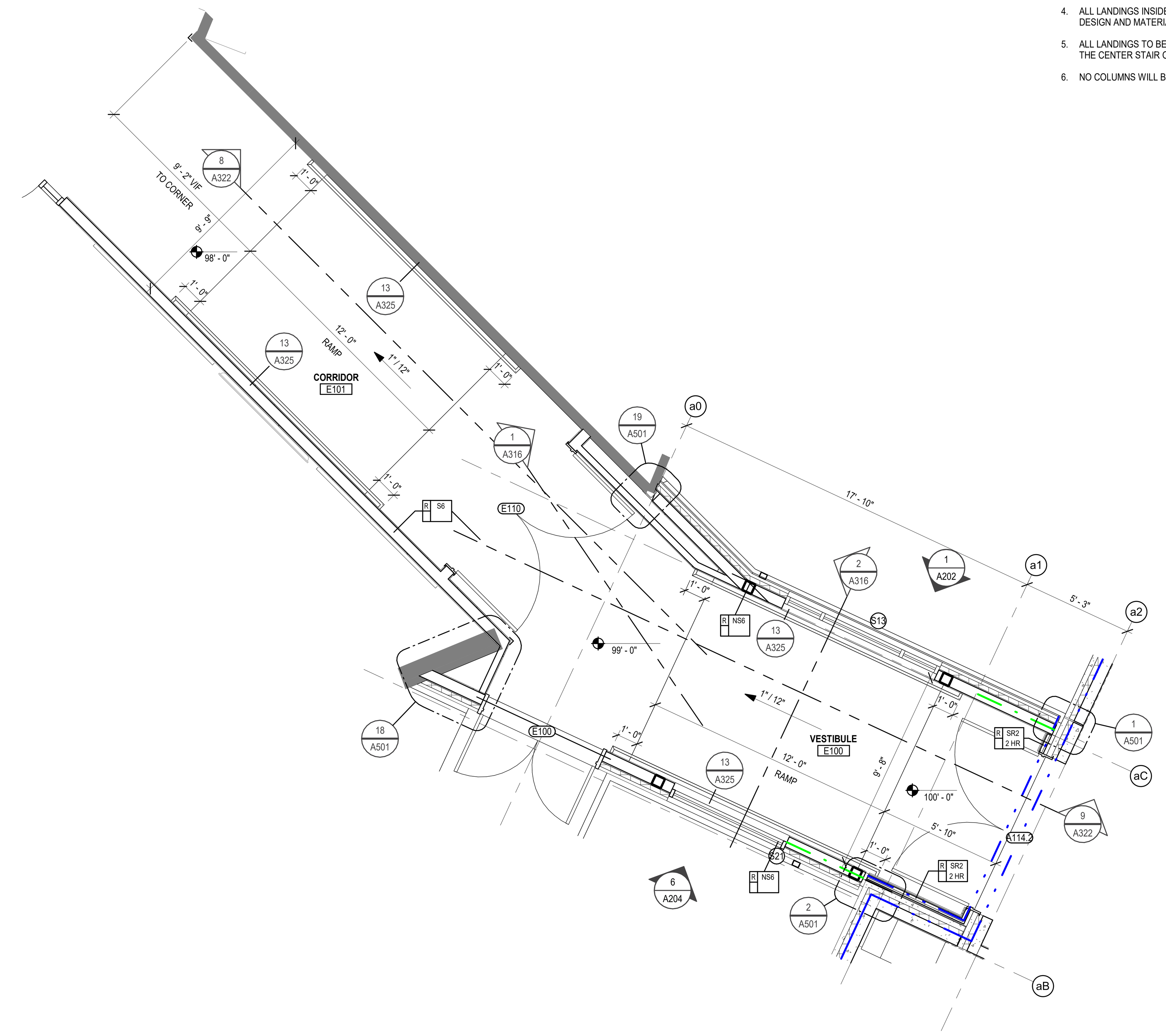
3 A322 **Stair 5 - Lower Level Enlarged**

1/4" = 1'-0"



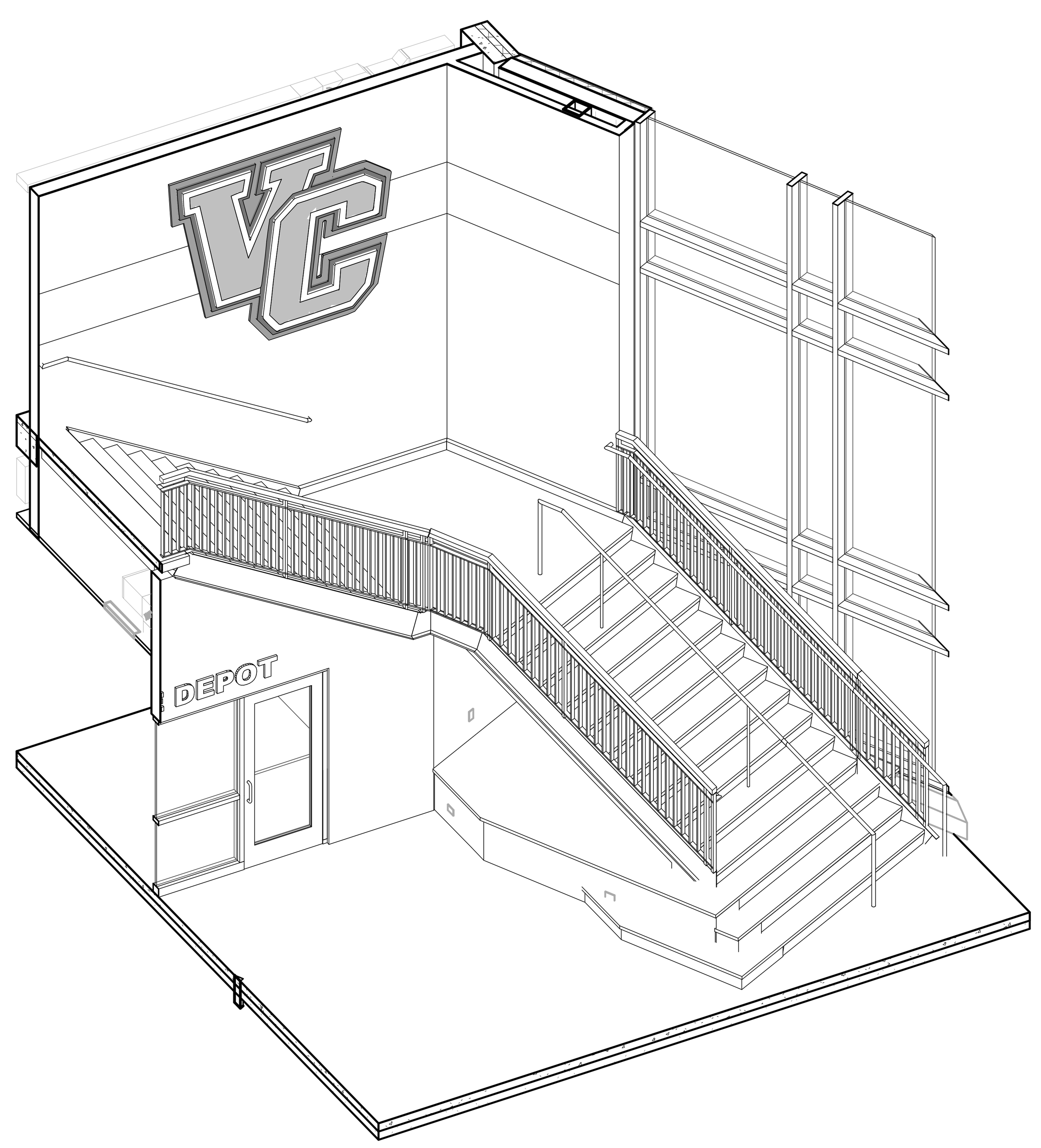
4 A322 **Section 2 at Stair 5**

1/4" = 1'-0"

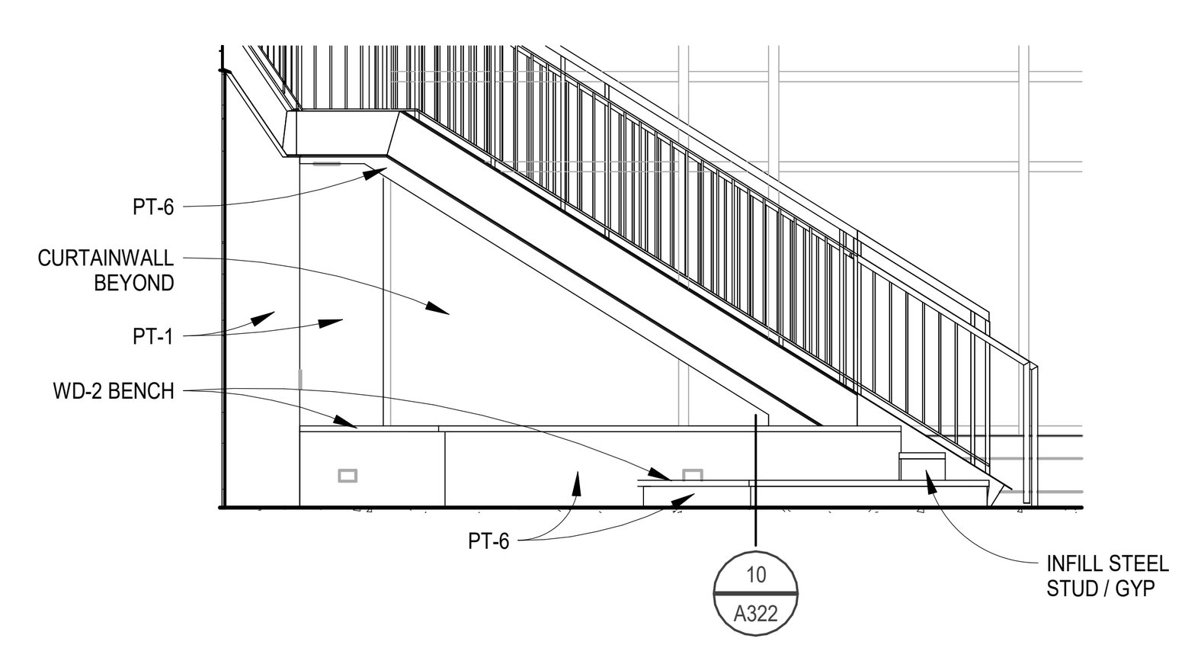


5 A322 **Enlarged Connection Ramp**

1/4" = 1'-0"

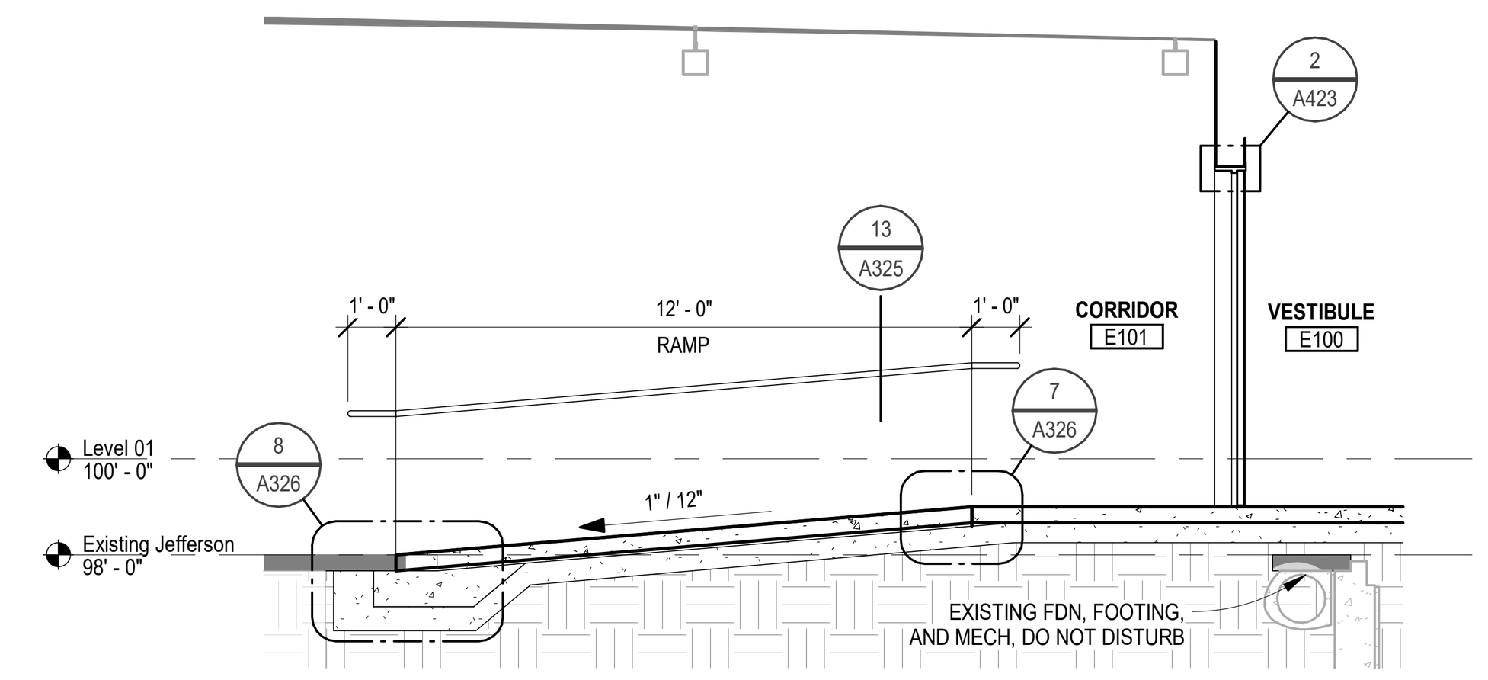


6 A322 **ISO - Stair 5**



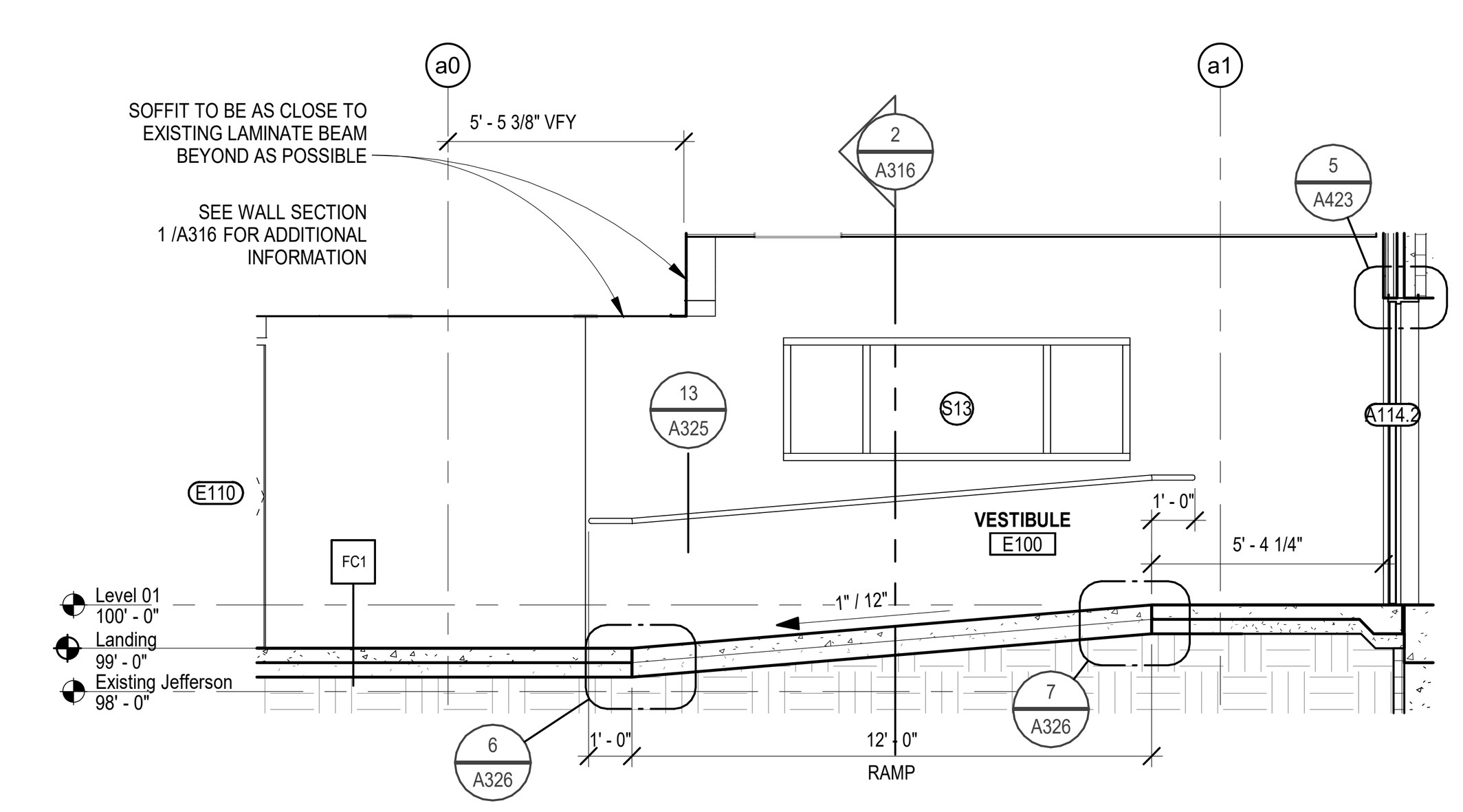
7 A322 **Stair 5 Built-in Bench - Elevation**

1/4" = 1'-0"



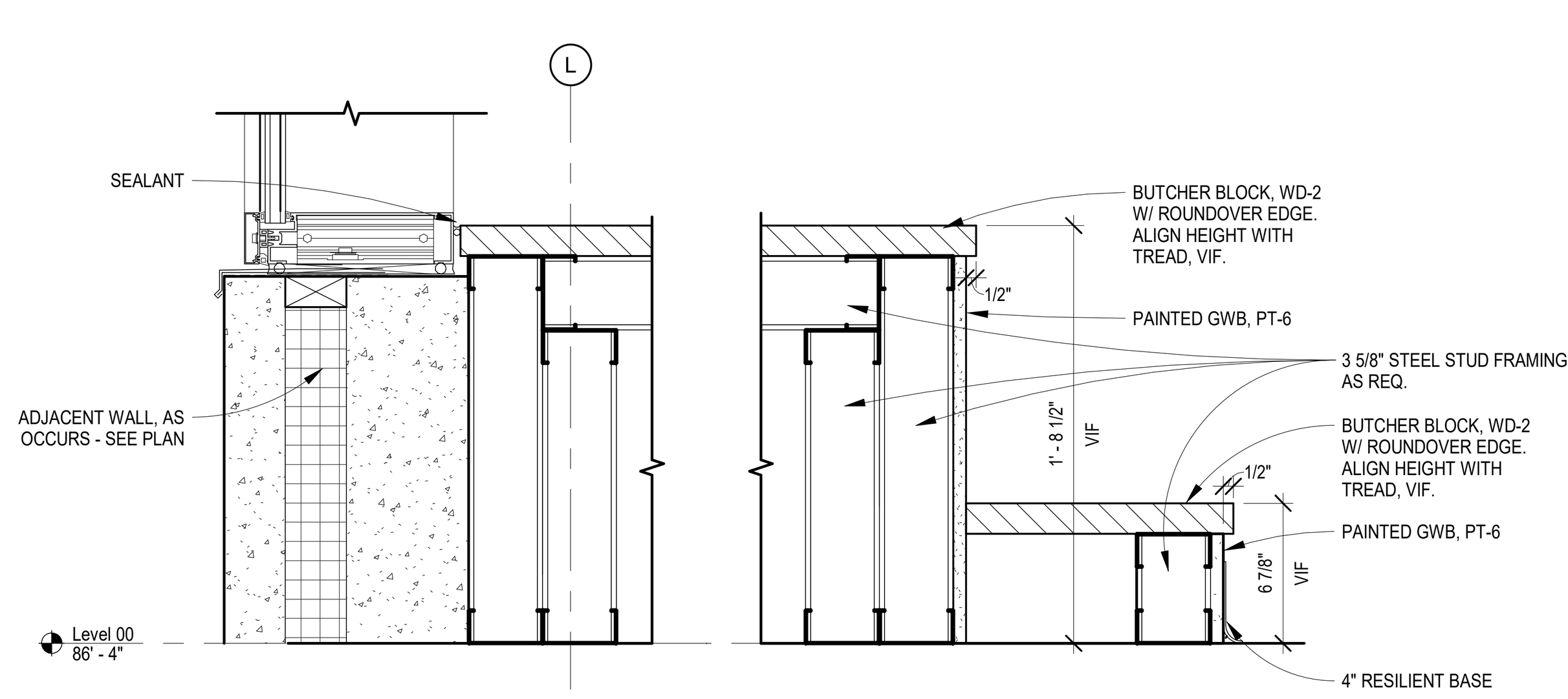
8 A322 **Section at Connection Ramp in Existing**

1/4" = 1'-0"



9 A322 **Section at Connection Ramp**

1/4" = 1'-0"



10 A322 **Section at Stair Bench**

1 1/2" = 1'-0"

GENERAL NOTES - STAIRWELLS

1. STAIRWELL STEEL AND LOADING CALCULATION DESIGN REQUIREMENTS PER SPECIFICATIONS. (DELEGATED DESIGN BY SUPPLIER REQUIRED.)
2. ALL PERIMETER WALL MOUNTED HANDRAILS TO EXTEND 12" PAST TOP AND BOTTOM TREADS AND PROVIDE A RETURNED END TO ABUT WALL. TOP HANDRAIL EXTENSIONS TO BE LEVEL. BOTTOM HANDRAIL EXTENSIONS CONTINUE AT ANGLE.
3. ALL HANDRAILS AND GUARDRAIL TO BE CONTINUOUS. JOINTS ARE TO BE WELDED, FILLED, AND SMOOTHED, PRIOR TO PAINT.
4. ALL LANDINGS INSIDE STAIRWELLS TO BE PART OF THE STAIRWELL PROVIDER'S DESIGN AND MATERIAL REQUIREMENTS.
5. ALL LANDINGS TO BE PROVIDED WITH A CONTINUOUS +/- 4" STEEL CURB AROUND THE CENTER STAIR OPENING. CURB TO CONNECT AND ALIGN WITH STRINGERS.
6. NO COLUMNS WILL BE ACCEPTABLE

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School

210 12th Street NE
Valley City, ND 58072

STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

LICENSED ARCHITECT HEIDI BRENNA (1859) Date 03/10/26 STATE OF NORTH DAKOTA

DRAWING HISTORY

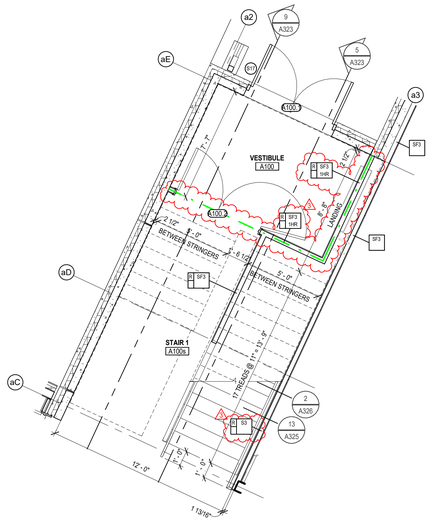
NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
3	Addendum #3	03/30/26

DRAWN BY: AS/HO/JT JN: 24-028

Circulation Sections & Enlarged Plans

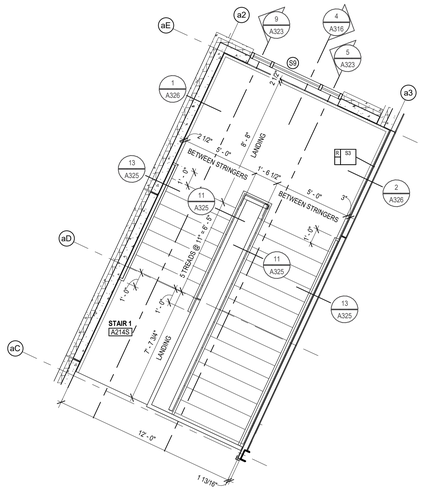
SHEET

A322



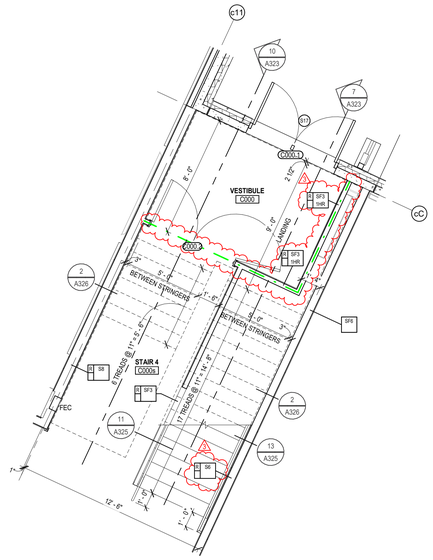
1 A323 **Plan at Main Level Stair 1 - A100S**

1/4" = 1'-0"



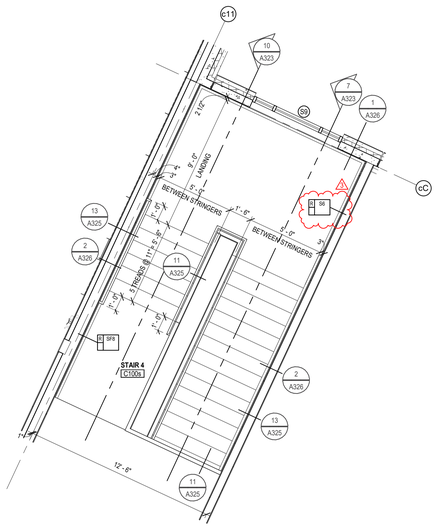
2 A323 **Plan at Upper Level Stair 1 - A214S**

1/4" = 1'-0"



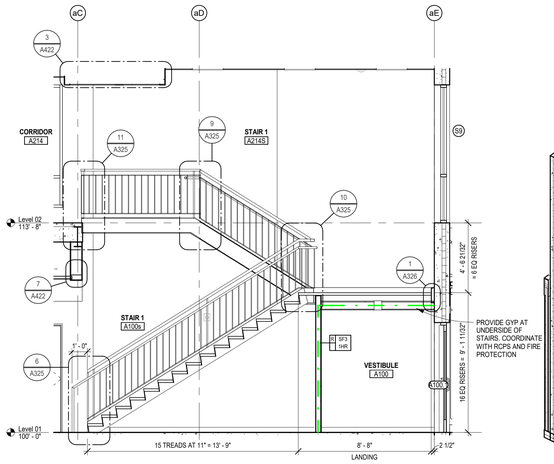
3 A323 **Plan at Lower Level Stair 4 - C000S**

1/4" = 1'-0"



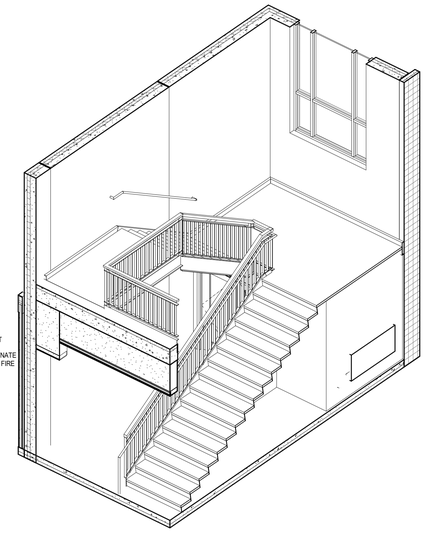
4 A323 **Plan at Main Level Stair 4 - C100S**

1/4" = 1'-0"

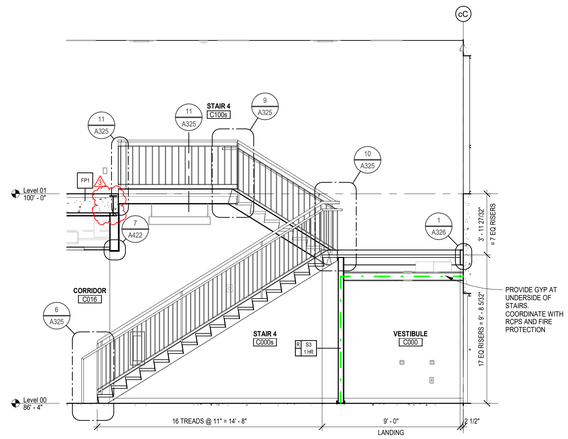


5 A323 **Section at Stair 1**

1/4" = 1'-0"

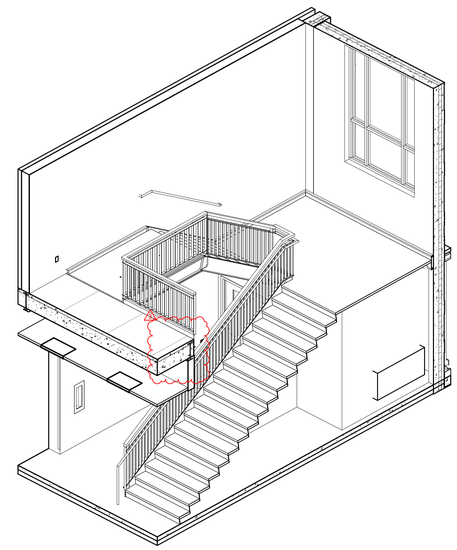


6 A323 **ISO - Stair 1**

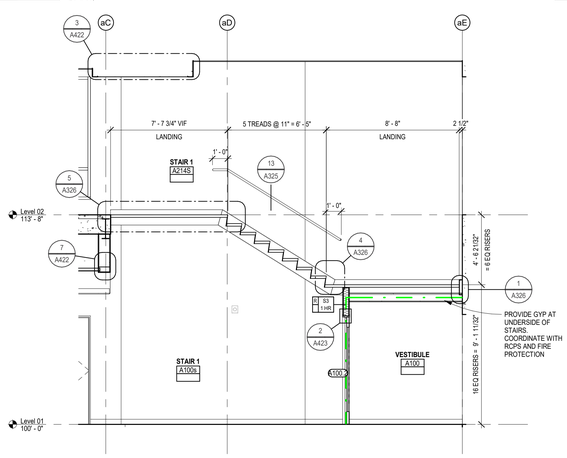


7 A323 **Section at Stair 4**

1/4" = 1'-0"

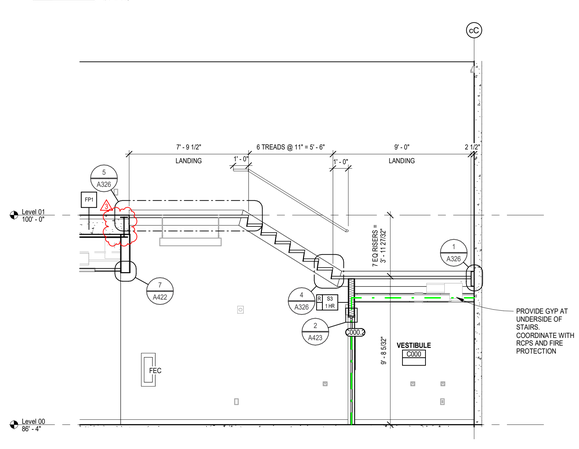


8 A323 **ISO - Stair 4**



9 A323 **Section at Stair 1**

1/4" = 1'-0"



10 A323 **Section at Stair 4**

1/4" = 1'-0"

ICON
ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School

210 12th Street NE
Valley City, ND 58072

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

LICENSED ARCHITECT
HEIDI BRUNS (8459)
STATE OF NORTH DAKOTA
Date 03/10/26

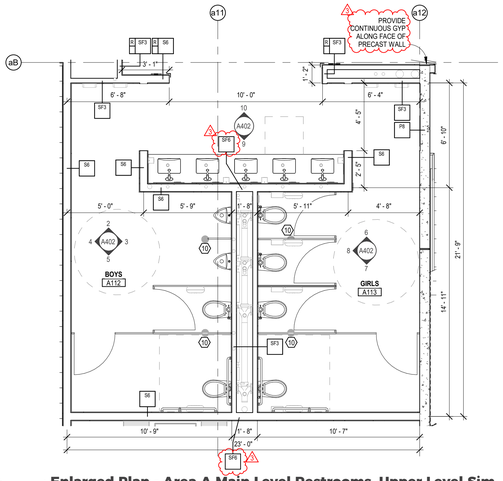
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
3	Addendum #3	03/30/26

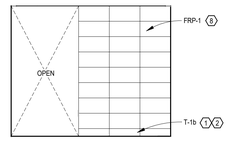
DRAWN BY: AS/HO/JT JN: 24-028

Circulation Sections & Enlarged Plans

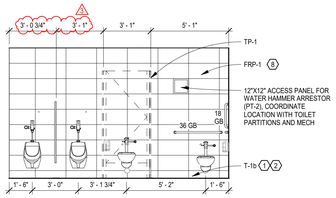
SHEET
A323



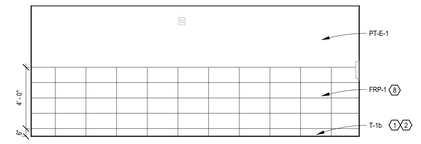
1 A402 **Enlarged Plan - Area A Main Level Restrooms, Upper Level Sim**
1/4" = 1'-0"



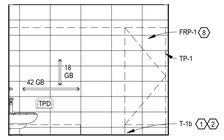
2 A402 **Boys A112/A212 - N**
1/4" = 1'-0"



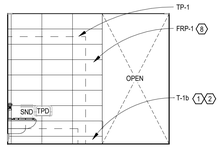
3 A402 **Boys A112/A212 - E**
1/4" = 1'-0"



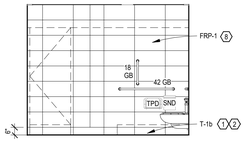
4 A402 **Boys A112/A212 - W**
1/4" = 1'-0"



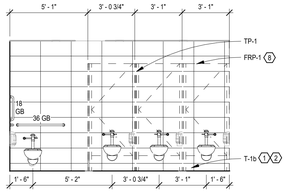
5 A402 **Boys A112/A212 - S**
1/4" = 1'-0"



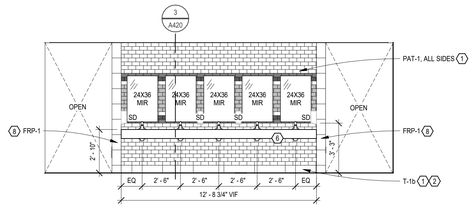
6 A402 **Girls A113/A213 - N**
1/4" = 1'-0"



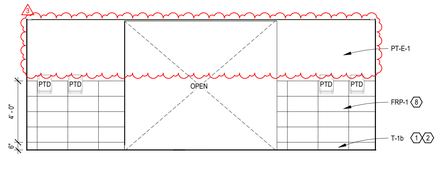
7 A402 **Girls A113/A213 - S**
1/4" = 1'-0"



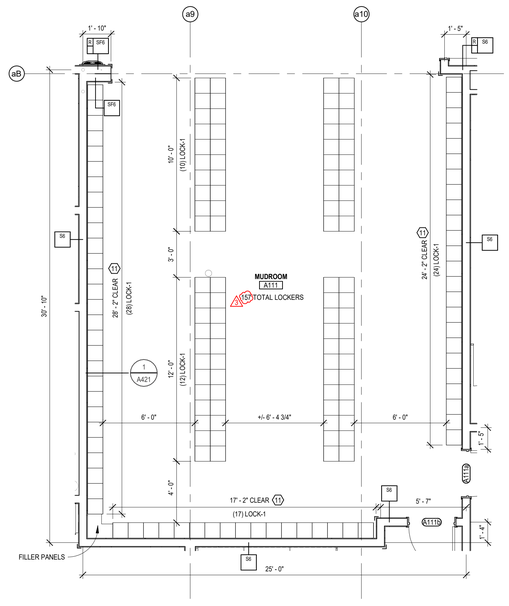
8 A402 **Girls A113/A213 - W**
1/4" = 1'-0"



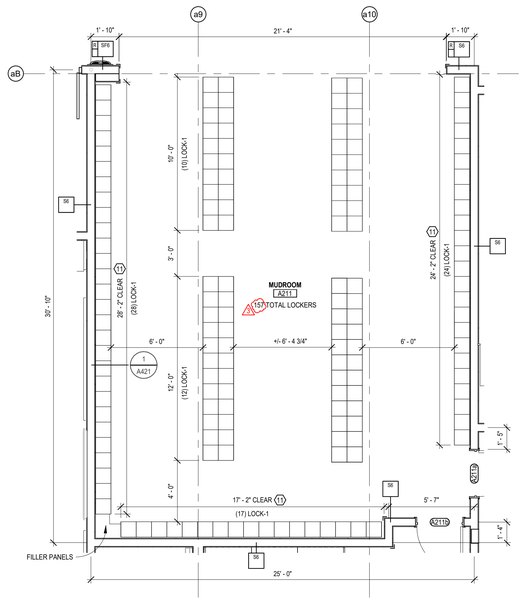
9 A402 **Entrance A112/A212 & A113/A213 - S**
1/4" = 1'-0"



10 A402 **Entrance A112/A212 & A113/A213 - N**
1/4" = 1'-0"



11 A402 **Mudroom A111**
1/4" = 1'-0"



12 A402 **Mudroom A211**
1/4" = 1'-0"

GENERAL NOTES - INTERIOR ELEVATIONS

1. REFER TO FINISH PLANS FOR WALL, BASE AND FLOOR FINISHES
2. REFER TO REFLECTED CEILING PLANS FOR CEILING HEIGHT & FINISHES
3. REFER TO G005 & G006 FOR STANDARD MOUNTING HEIGHTS
4. HALFTONE FURNITURE, EQUIPMENT AND ACCESSORIES FOR REFERENCE ONLY – BY OWNER
5. ALL TVS AND WALL BRACKETS BY OWNER; PROVIDE POWER, DATA AND BLOCKING AS REQUIRED
6. CP-1 TO BE USED ON ALL CABINETS UNO.
7. FINISHED CABINET END IDENTIFIED BY :

KEYNOTES - INTERIOR ELEVATION

(#)

1 MTLP-1 AT TOP OF WALL TILE AND OUTSIDE CORNERS. SEE TRANSITION DETAILS ON A610.
2 MTLP-2 AT BASE OF WALL TILE, COVE TRANSITION TO FLOOR TILE. SEE TRANSITION DETAILS ON A610.
6 SSF-2 COUNTER W/ 5" H APRON; INSTALL CONCEALED WALL BRACKETS AS REQUIRED
8 STANDARD FRP TRIM BASE OF FRP AND MTLP-1 AT TOP OF WALL TILE BASE. SEE TRANSITION DETAILS ON A610.
10 FLOOR DRAIN. COORDINATE WITH MECHANICAL
11 PROVIDE METAL FILLER PANELS AT EXPOSED ENDS OF LOCKERS

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School
210 12th Street NE
Valley City, ND 58072

STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

LICENSED ARCHITECT HEIDI BRENNAN 8591 STATE OF NORTH DAKOTA
Heidi Brennan
Date 03/10/26

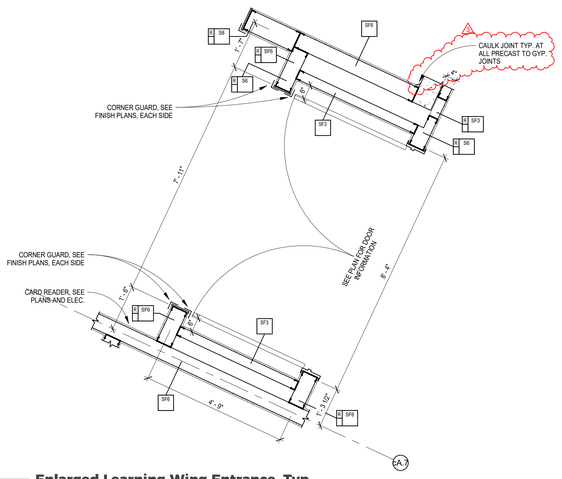
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
3	Addendum #3	03/30/26

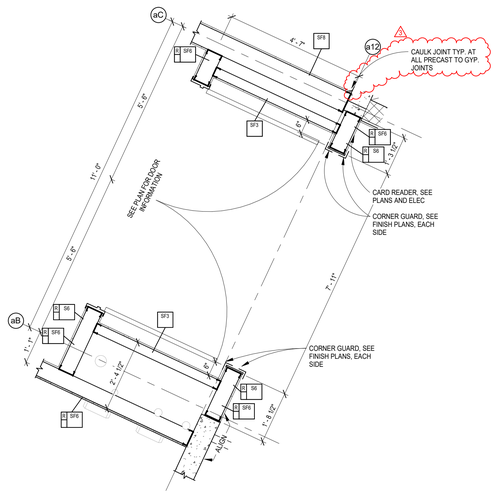
DRAWN BY: AN/JT JN: 24-028

Enlarged Plans & Elevations - Restrooms & Mudrooms

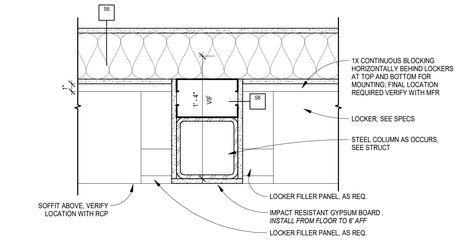
SHEET
A402



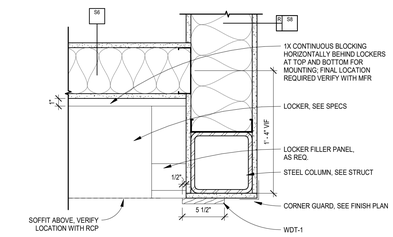
1 A424 **Enlarged Learning Wing Entrance, Typ.**
1/2" = 1'-0"



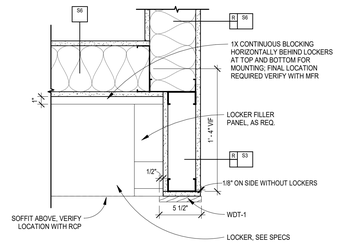
2 A424 **Enlarged Learning Wing Entrance, Upper Level Area A**
1/2" = 1'-0"



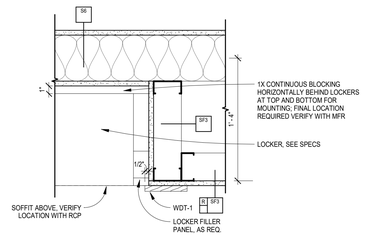
3 A424 **Jamb at Lockers - Column**
1 1/2" = 1'-0"



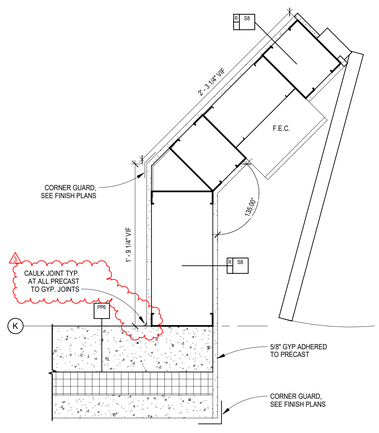
4 A424 **Jamb at Lockers - Door Alcove w/ Column**
1 1/2" = 1'-0"



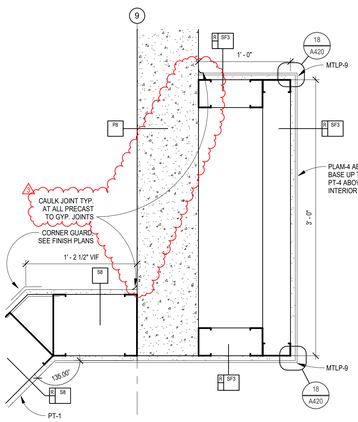
5 A424 **Jamb at Lockers - Door Alcove**
1 1/2" = 1'-0"



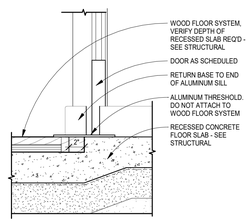
6 A424 **Jamb at Lockers**
1 1/2" = 1'-0"



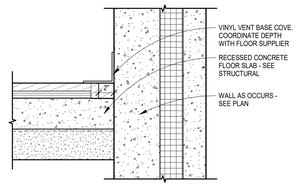
7 A424 **Plan Detail At Gym Entrance**
1 1/2" = 1'-0"



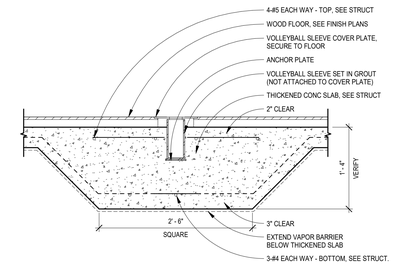
8 A424 **Plan Detail At Gym Entrance**
1 1/2" = 1'-0"



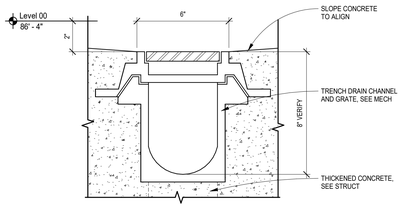
9 A424 **Section at Wood Flooring at Door**
1 1/2" = 1'-0"



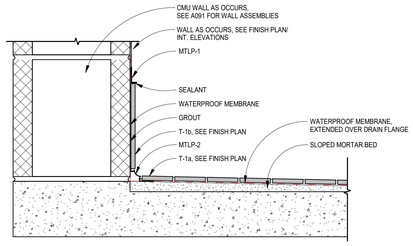
10 A424 **Section at Wood Flooring**
1 1/2" = 1'-0"



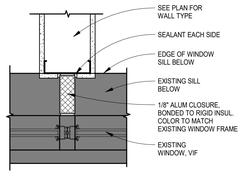
11 A424 **Section at Volleyball Standard**
1" = 1'-0"



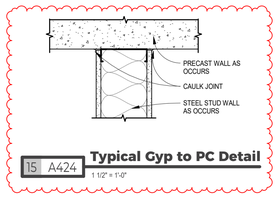
12 A424 **Trench Drain Section**
3" = 1'-0"



13 A424 **Section at Shower**
3" = 1'-0"



14 A424 **Plan Detail at Mullion/Wall**
1 1/2" = 1'-0"



15 A424 **Typical Gyp to PC Detail**
1 1/2" = 1'-0"

ICON
ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School
210 12th Street NE
Valley City, ND 58072

STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

LICENSED ARCHITECT HEIDI BRENNAN 6591 STATE OF NORTH DAKOTA
Date: 03/10/26

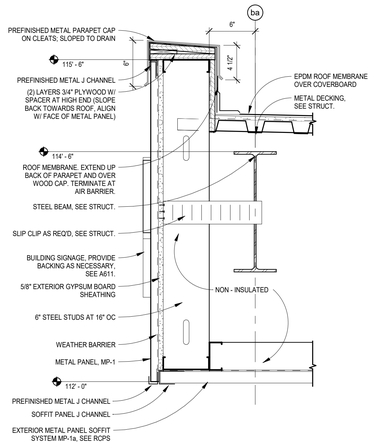
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
3.	Addendum #3	03/30/26

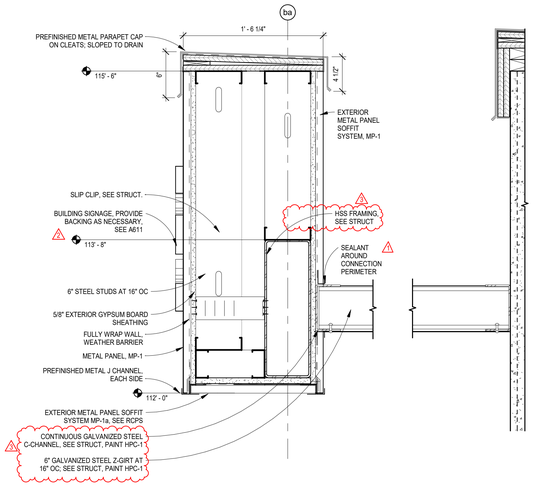
DRAWN BY: AS/HO/JT JN: 24-028

Details - Interior Plan Details

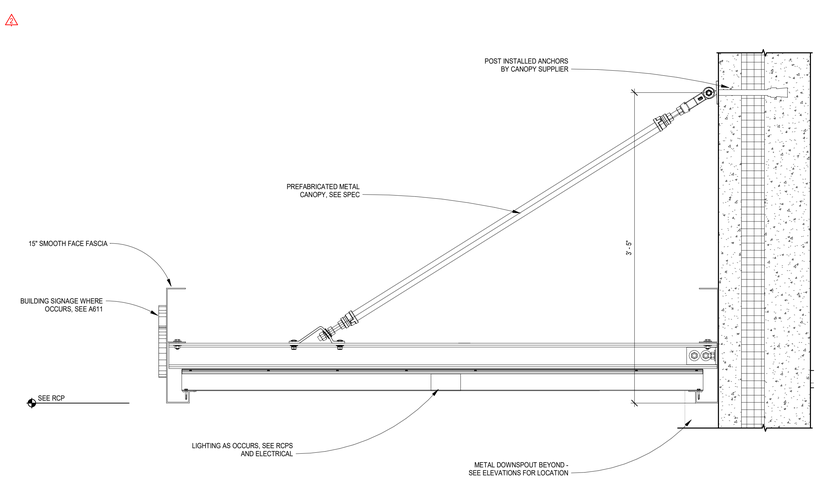
SHEET
A424



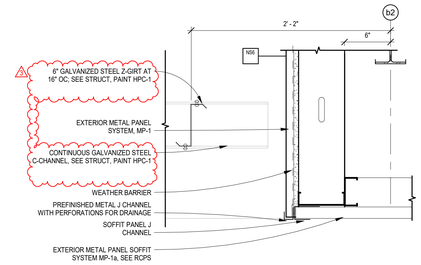
1 A506 **Canopy at Front Entrance**
1 1/2" = 1'-0"



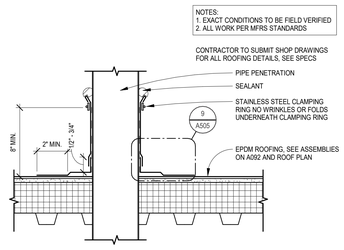
2 A506 **Canopy at Front Entrance Trellis**
1 1/2" = 1'-0"



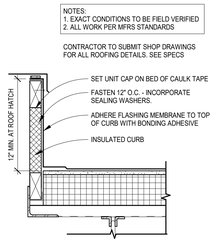
3 A506 **Canopy Section, Typ**
1 1/2" = 1'-0"



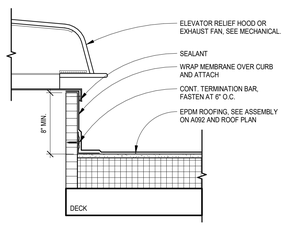
4 A506 **Section at Canopy**
1 1/2" = 1'-0"



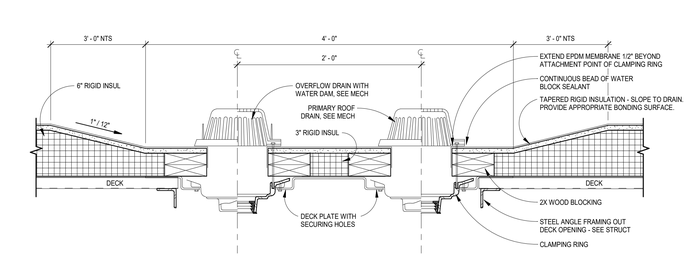
5 A506 **Pipe Flashing Detail, Typ**
1 1/2" = 1'-0"



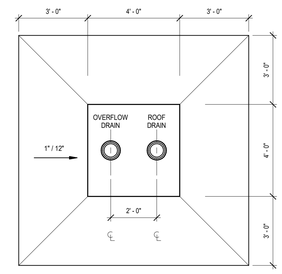
6 A506 **Curb Detail**
1 1/2" = 1'-0"



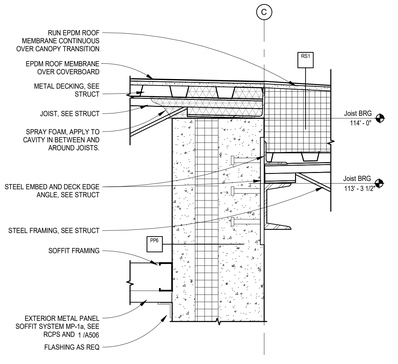
7 A506 **Pre-Fabricated Mech. Roof Curb**
1 1/2" = 1'-0"



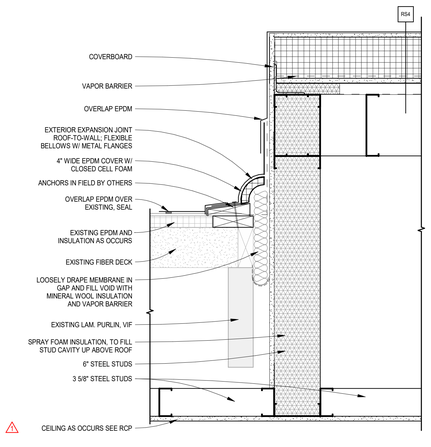
8 A506 **Roof Drain & Overflow Detail**
1 1/2" = 1'-0"



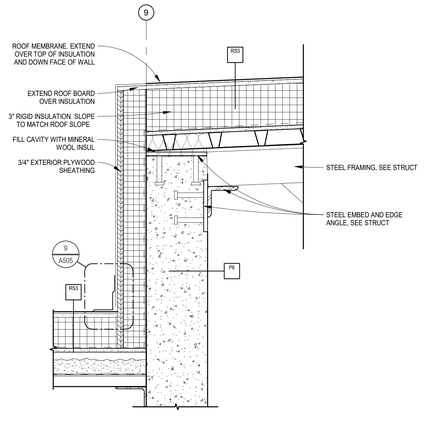
9 A506 **Roof Drain Plan Detail**
3/8" = 1'-0"



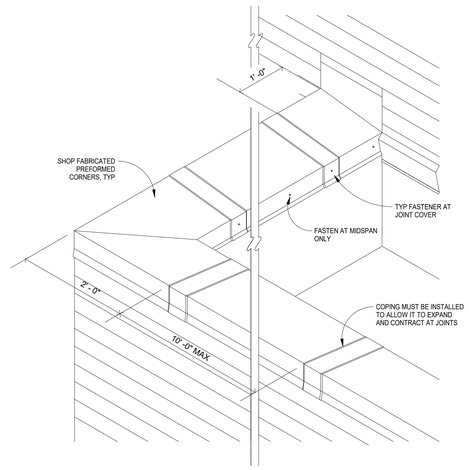
10 A506 **Entry Canopy Transition Detail**
1 1/2" = 1'-0"



11 A506 **Roof Connection at Jefferson**
1 1/2" = 1'-0"



12 A506 **Roof Edge at Gym / Commons**
1 1/2" = 1'-0"



13 A506 **COPING DETAILS**
3/4" = 1'-0"

ICON
ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School
210 12th Street NE
Valley City, ND 58072

STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

LICENSED ARCHITECT
HEIDI BRENNAN
18591
Heidi Brennan
Date: 03/10/26
STATE OF NORTH DAKOTA

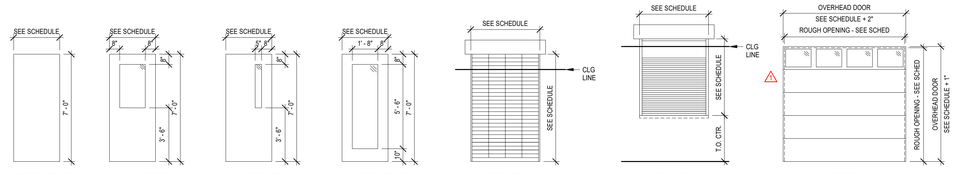
DRAWING HISTORY

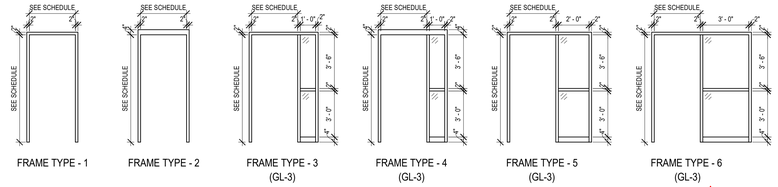
NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
1	Addendum #1	03/17/26
2	Addendum #2	03/24/26
3	Addendum #3	03/30/26

DRAWN BY: AS/HO/JT JN: 24-028

Details - Roof Details

SHEET
A506





DOOR SCHEDULE - LOWER LEVEL 00

Door Number	Room	Exterior Door	Door Pair	Door							Hardware	Fire Rating	Frame			Comments
				Width	Height	Thickness	Type	Material	Finish	Glazing			Type	Material	Finish	
Area A																
A001	TECH ED		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
A002	ROBOTICS STORAGE		N	4' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		15		1	HM	PT-6	
Area B																
B000.1	COMMONS	Y	Y	6' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-1	36		C1	AL	-	
B001.1	ART		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		39		3	HM	PT-6	
B001.2	ART		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		40		3	HM	PT-6	
B001a	KILN		N	3' - 6"	7' - 0"	1 3/4"	F	HM	PT-6		03		1	HM	PT-6	
B001b	ART STOR		N	3' - 0"	7' - 0"	1 3/4"	F	HM	PT-6		03		1	HM	PT-6	
B002	OFFICE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		02		3	HM	PT-6	
B003.1	RECEIVING		Y	6' - 0"	7' - 0"	1 3/4"	F	HM	PT-6		45		2	HM	PT-6	
B003.2	RECEIVING	Y	-	8' - 0"	8' - 0"	2"	O.S.D.	STEEL	-		57		-	STEEL	-	
B003a	OFFICE		N	3' - 0"	7' - 0"	1 3/4"	F	HM	PT-6		02		4	HM	PT-6	
B004	BLDG STORAGE		Y	6' - 0"	7' - 0"	1 3/4"	F	HM	PT-6		20		2	HM	PT-6	
B004a	STORAGE		N	3' - 0"	7' - 0"	1 3/4"	F	HM	PT-6		14		1	HM	PT-6	
B004b	DATA		N	3' - 0"	7' - 0"	1 3/4"	F	HM	PT-6		15		1	HM	PT-6	
B005.1	MECHANICAL		N	3' - 0"	7' - 0"	1 3/4"	F	HM	PT-6		46	SMOKE	2	HM	PT-6	
B005.2	MECHANICAL	Y	Y	6' - 0"	7' - 0"	1 3/4"	F	HM	PT-6		50		1	HM	PT-6	
B005a	ELEC		N	3' - 0"	7' - 0"	1 3/4"	F	HM	PT-6		47	SMOKE	1	HM	PT-6	
B006.1	VESTIBULE		Y	6' - 0"	7' - 0"	1 3/4"	N	HM	PT-6	GL-3	30		2	HM	PT-6	
B006.2	VESTIBULE	Y	N	3' - 0"	7' - 0"	1 3/4"	N	HM	PT-6	GL-1	34A		1	HM	PT-6	
B006.3	VESTIBULE		Y	6' - 0"	7' - 0"	1 3/4"	N	HM	PT-6	GL-3	30		2	HM	PT-6	
B008.1	SERVERY		N	14' - 0"	8' - 0"	1 1/4"	C.S.G.	ANODIZED ALUM	CLEAR		57		-	STEEL	PT-6	MOTORIZED
B008.2	SERVERY		N	14' - 0"	8' - 0"	1 1/4"	C.S.G.	ANODIZED ALUM	CLEAR		57		-	STEEL	PT-6	MOTORIZED
B008.3	SERVERY		N	14' - 0"	8' - 0"	1 1/4"	C.S.G.	ANODIZED ALUM	CLEAR		57		-	STEEL	PT-6	MOTORIZED
B009	OFFICE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		02		5	HM	PT-6	
B010	DISH RETURN		N	4' - 8"	5' - 0"	1 1/2"	R.C.D.	ANODIZED ALUM	CLEAR		57		-	STEEL	PT-6	MOTORIZED
B011	DRY STORAGE		Y	5' - 0"	7' - 0"	1 3/4"	F	HM	PT-6		11		1	HM	PT-6	3' LEAF & 2' LEAF
B012.1	SCHOOL STORE		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-2	09	45 MIN.	SP	AL	-	
B012.2	SCHOOL STORE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		09	45 MIN.	3	HM	PT-6	
B012a	STORAGE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		14	45 MIN.	1	HM	PT-6	
B013	STAFF WKRM		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		07		1	HM	PT-6	
B014	CUST		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		17		1	HM	PT-6	
B016	RR		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		12		1	HM	PT-6	
Area C																
C000.1	VESTIBULE	Y	Y	6' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-1	35		S17	AL	-	
C000.2	VESTIBULE		Y	6' - 0"	7' - 0"	1 3/4"	FG	HM	PT-6	GL-2	55	60 MIN.	1	HM	PT-6	
C001	BUSINESS		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
C001a	ELEC / IDF		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		15		1	HM	PT-6	
C001B	CORRIDOR		Y	8' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		28		1	HM	PT-6	
C002	ILC		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
C003	SPED		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		39		3	HM	PT-6	
C004.1	ALC		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
C004.2	ALC	Y	N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-1	33		S15	AL	-	
C005	SPED		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		39		3	HM	PT-6	
C006a	CALM		N	3' - 0"	7' - 0"	1 3/4"	N	WOOD	PLAM-1	GL-3	01		1	HM	PT-6	
C006b	GROUP		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-3	01		SG	AL	-	
C007	1 SS		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
C008	1 MATH		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
C009	2 SS		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
C010	2 MATH		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
C011	3 SS		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
C012	3 MATH		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
C013	4 SS		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	SEE ALTERNATE 12
C014	4 MATH		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	SEE ALTERNATE 12
C015	GROUP		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-3	01		SH	AL	-	
Area D																
D000.1	VESTIBULE	Y	N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-1	33		S2	AL	-	
D000.2	VESTIBULE	Y	N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-1	27		S2	AL	-	
D000.3	VESTIBULE	Y	N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-1	27		S2	AL	-	
D000.4	VESTIBULE	Y	N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-1	27		S2	AL	-	
D000.5	CORRIDOR		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-3	32		SA	AL	-	
D000.6	CORRIDOR		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-3	26		SA	AL	-	
D000.7	CORRIDOR		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-3	26		SA	AL	-	
D000.8	CORRIDOR		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-3	26		SA	AL	-	
D001	PRACTICE		N	3' - 0"	7' - 0"	1 3/4"	N	WOOD	PLAM-1	GL-3	05		1	HM	PT-6	
D002	WOMENS LOCKER ROOM		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		56		1	HM	PT-6	
D002a	OFFICE		N	3' - 0"	7' - 0"	1 3/4"	F	HM	PLAM-1		02		4	HM	PT-6	
D003.1	MUSIC		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		37		3	HM	PT-6	
D003.2	MUSIC		Y	6' - 0"	7' - 0"	1 3/4"	N	WOOD	PLAM-1	GL-3	43		1	HM	PT-6	
D003a	OFFICE		N	3' - 0"	7' - 0"	1 3/4"	N	WOOD	PLAM-1	GL-3	02		1	HM	PT-6	
D003b	PRACTICE		N	3' - 0"	7' - 0"	1 3/4"	N	WOOD	PLAM-1	GL-3	06		1	HM	PT-6	
D003c	MUSIC STOR		N	3' - 0"	7' - 0"	1 3/4"	N	WOOD	PLAM-1	GL-3	03		1	HM	PT-6	
D004	MENS LOCKER ROOM		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		56		1	HM	PT-6	
D004a	OFFICE		N	3' - 0"	7' - 0"	1 3/4"	F	HM	PLAM-1		02		4	HM	PT-6	
D005	CUST		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		17		1	HM	PT-6	
D006.1	INSTRUMENT STORAGE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		03		1	HM	PT-6	
D006.2	INSTRUMENT STORAGE		N	4' - 0"	7' - 0"	1 3/4"	N	WOOD	PLAM-1	GL-3	03		1	HM	PT-6	
D007.1	CONCESSIONS		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		03		1	HM	PT-6	
D007.2	CONCESSIONS		N	5' - 0"	4' - 4"	1 1/2"	R.C.D.	STEEL	-		57		-	STEEL	-	MOTORIZED
D008	TRAINING		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		03		1	HM	PT-6	
D009.1	WEIGHT ROOM		Y	6' - 0"	7' - 0"	1 3/4"	FG	AL	-	SLG-5	42		SR	AL	-	SEE ALTERNATE 13
D009.2	WEIGHT ROOM		Y	6' - 0"	7' - 0"	1 3/4"	FG	AL	-	SLG-5	36		S4	AL	-	SEE ALTERNATE 13
D010.1	GYMNASIUM		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	SLG-5	51		SD	AL	-	
D010.2	GYMNASIUM		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	SLG-5	51		SD	AL	-	
D010.3	GYMNASIUM		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	SLG-5	51		SD	AL	-	
D010.4	GYMNASIUM		Y	6' - 0"	7' - 0"	1 3/4"	FG	AL	-	SLG-5	52		SC	AL	-	
D010.5	GYMNASIUM		Y	6' - 0"	7' - 0"	1 3/4"	FG	AL	-	SLG-5	52		SC	AL	-	
D010.6	GYMNASIUM		N	3' - 0"	7' - 0"	1 3/4"	N	WOOD	PLAM-1	SLG-5	48		1	HM	PT-6	
D010.7	GYMNASIUM		Y	6' - 0"	7' - 0"	1 3/4"	N	WOOD	PLAM-1	SLG-5	49		1	HM	PT-6	
D010a	GYM STORAGE		Y	6' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		10		1	HM	PT-6	
D010b.1	STORAGE		Y	6' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		10		1	HM	PT-6	
D010b.2	STORAGE		Y	6' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		19		1	HM	PT-6	

DOOR SCHEDULE - MAIN LEVEL 01

Door Number	Room	Exterior Door	Door Pair	Door							Hardware	Fire Rating	Frame			Comments
				Width	Height	Thickness	Type	Material	Finish	Glazing			Type	Material	Finish	
Area A																
A100.1	VESTIBULE	Y	Y	6' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-1	35		S17	AL	-	
A100.2	VESTIBULE		Y	6' - 0"	7' - 0"	1 3/4"	FG	HM	PT-6	GL-2	55	60 MIN.	1	HM	PT-6	
A101	3RD		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
A102	3RD		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
A103	3RD		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
A104	4TH		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
A105	4TH		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
A106	4TH		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
A107	SPED		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
A108	FLEX/SPED		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
A109a	GROUP		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-3	01		SG	AL	-	
A109b	CALM		N	3' - 0"	7' - 0"	1 3/4"	N	WOOD	PLAM-1	GL-3	01		1	HM	PT-6	
A109c	RR		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		12		1	HM	PT-6	
A110	FLEX/SPED		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
A111a	ELEC/IDF		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		16		1	HM	PT-6	
A111b	STAFF WKRM		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		07		1	HM	PT-6	
A114.1	CORRIDOR		Y	8' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		28		1	HM	PT-6	
A114.2	VESTIBULE		Y	8' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		28	90 MIN.	1	HM	PT-6	
A115	STAIR 2		Y	6' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		44		1	HM	PT-6	
A117	CUST		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		17		1	HM	PT-6	
A118	SRO		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		02		3	HM	PT-6	
A119.1	RECEPTION		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	SLG-5	31		SN	AL	-	
A119.2	RECEPTION		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		25		5	HM	PT-6	
A119a	OFFICE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		02		3	HM	PT-6	
A119b	OFFICE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		02		3	HM	PT-6	
A119c	OFFICE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		02		3	HM	PT-6	
A119d	NURSE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		03		1	HM	PT-6	
A119e	GROUP		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		03		3	HM	PT-6	

DOOR SCHEDULE - MAIN LEVEL 01

Door Number	Room	Exterior Door	Door Pair	Door							Hardware	Fire Rating	Frame			Comments
				Width	Height	Thickness	Type	Material	Finish	Glazing			Type	Material	Finish	
Area B																
B100.1	VESTIBULE	Y	N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-1	27		S8	AL	-	
B100.2	VESTIBULE	Y	N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-1	27		S8	AL	-	
B100.3	VESTIBULE	Y	N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-1	34		S8	AL	-	
B100.4	VESTIBULE		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	SLG-5	26		SM	AL	-	
B100.5	VESTIBULE		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	SLG-5	26		SM	AL	-	
B100.6	VESTIBULE		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	SLG-5	32		SM	AL	-	
B101.1	VESTIBULE		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	SLG-5	31		SN	AL	-	
B101.2	RECEPTION		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		25		5	HM	PT-6	
B101.3	RECEPTION		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		21		3	HM	PT-6	
B101a	CONF RM		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		02		5	HM	PT-6	
B101b	STOR		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		04		1	HM	PT-6	
B101c	OFFICE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		02		3	HM	PT-6	
B101d	OFFICE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		02		3	HM	PT-6	
B101e	RR		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		12		1	HM	PT-6	
B101g	RR		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		12		1	HM	PT-6	
B102.1	VESTIBULE	Y	N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-1	34		S5	AL	-	
B102.2	VESTIBULE		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	SLG-5	53		SL	AL	-	
B103a	CONF RM		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-3	02		SK	AL	-	
B103b	OFFICE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		02		3	HM	PT-6	
B103c	FILE STORAGE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		08		1	HM	PT-6	
B103d	OFFICE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		02		3	HM	PT-6	
B104.1	STAFF LOUNGE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		23		3	HM	PT-6	
B104.2	STAFF LOUNGE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		22		3	HM	PT-6	
B105a	MEDIA CENTER		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-3	01		SB	AL	-	
B106	TECH WKRM		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		1	HM	PT-6	
B107	MEDIA WKRM		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		1	HM	PT-6	
B108	CUSTODIAL		N	3' - 6"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		17		1	HM	PT-6	
B109	STAFF WKRM		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		07		1	HM	PT-6	
B111	RR		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		12		1	HM	PT-6	
Area C																
C101	HEALTH		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
C101a	ELEC/IDF		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		15		1	HM	PT-6	
C101b	STORAGE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		03		1	HM	PT-6	
C102.1	SCI LAB		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		41	SMOKE	1	HM	PT-6	
C102.2	SCI LAB		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		41	SMOKE	3	HM	PT-6	
C103	SCI CLASS		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		41	SMOKE	3	HM	PT-6	
C104.1	CHEM LAB		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		41	SMOKE	3	HM	PT-6	
C104.2	CHEM LAB		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		41	SMOKE	3	HM	PT-6	
C105	1 ENG		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
C106	STOR		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		07	SMOKE	1	HM	PT-6	
C106a	STOR		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		14	SMOKE	1	HM	PT-6	
C106b	CHEM		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		14	SMOKE	1	HM	PT-6	
C107	2 ENG		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
C108.1	SCI LAB		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		41	SMOKE	3	HM	PT-6	
C108.2	SCI LAB		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		41	SMOKE	3	HM	PT-6	
C109	3 ENG		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
C110	GROUP		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-3	01		SG	AL	-	
C111	4 ENG		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	SEE ALTERNATE 12
C112	WL		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	SEE ALTERNATE 12
C113	CORRIDOR		Y	8' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		28		1	HM	PT-6	
Area E																
E100	VESTIBULE	Y	Y	6' - 0"	7' - 0"	1 3/4"	FG	HM	PT-6	GL-1	35		1	HM	PT-6	
E110	VESTIBULE		Y	8' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		28		1	HM	PT-6	
E116	CLASSROOM		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
E140	RR		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		12		1	HM	PT-6	ALTERNATE 1
Area F																
F101	ADMIN		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	SLG-5	23A		SN	AL	-	ALTERNATE 1
F103	STORAGE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		03		1	HM	PT-6	ALTERNATE 1
F104	PRINCIPAL		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		02		3	HM	PT-6	ALTERNATE 1
F105	GROUP		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		02		3	HM	PT-6	ALTERNATE 1
F106	NURSE / QUIET		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		02		1	HM	PT-6	ALTERNATE 1

DOOR SCHEDULE - UPPER LEVEL 02

Door Number	Room	Exterior Door	Door Pair	Door							Hardware	Fire Rating	Frame			Comments
				Width	Height	Thickness	Type	Material	Finish	Glazing			Type	Material	Finish	
Area A																
A201	5TH		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
A202	6TH		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
A203	5TH		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
A204	6TH		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
A205	FLEX / SPED		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
A206	5TH SCIENCE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
A207	SPED		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
A207a	STORAGE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		04		1	HM	PT-6	
A208	6TH SCIENCE		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		13		3	HM	PT-6	
A209	GROUP		N	3' - 0"	7' - 0"	1 3/4"	FG	AL	-	GL-3	01		SG	AL	-	
A210	CUST		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		18		1	HM	PT-6	
A211a	ELEC/IDF		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		16		1	HM	PT-6	
A211b	STAFF WKRM		N	3' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		07		1	HM	PT-6	
A214	CORRIDOR		Y	8' - 0"	7' - 0"	1 3/4"	F	WOOD	PLAM-1		28		1	HM	PT-6	

DOOR TYPE - F

DOOR TYPE - G

DOOR TYPE - N

DOOR TYPE - FG

DOOR TYPE - C.S.G.
(COILING SECURITY GRILLE)

DOOR TYPE - R.C.D.
(ROLLING COUNTER DOOR
BOX ABOVE CEILING)

DOOR TYPE - O.S.D.
(OVERHEAD SECTIONAL DOOR)

1 A601 Panel Types - Doors

1/4" = 1'-0"

FRAME TYPE - 1

FRAME TYPE - 2

FRAME TYPE - 3
(GL-3)

FRAME TYPE - 4
(GL-3)

FRAME TYPE - 5
(GL-3)

FRAME TYPE - 6
(GL-3)

2 A601 Frame Types - Doors

1/4" = 1'-0"

GENERAL NOTES - DOORS AND FRAMES

1. ALL EXISTING DOOR AND FRAMES SHOULD BE FIELD VERIFIED WHEN AFFECTED BY NEW WORK.
2. INTERIOR HOLLOW METAL FRAMES IN CMU AND PRECAST TO BE FILLED WITH GROUT. ALL EXTERIOR HOLLOW METAL FRAMES TO BE FILLED WITH MINERAL WOOL INSULATION.
3. ALL ALUMINUM FRAMES TO BE DARK BRONZE, TYPICAL U.N.O.

GLAZING SCHEDULE

GL-1 = LOW-E, TINTED, TEMPERED, INSULATING GLASS AT EXTERIOR
1/4" GLAZING, 1/2" AIR GAP, 1/4" GLAZING

GL-2 = TEMPERED FIRE RATED GLAZING

GL-3 = TEMPERED GLASS, NON-FIRE RATED AT INTERIOR
1/4" TYPICAL, 3/8" AT SPANS OVER 6'; 1/2" AT SPANS OVER 8'

GL-4 = TRANSLUCENT INSULATED PANEL

SLG-5 = SECURITY LAMINATED GLAZING

ICON
ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School

210 12th Street NE
Valley City, ND 58072

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

HEIDI BRENNA
(1859)
Heidi Brenna
Date 03/10/26

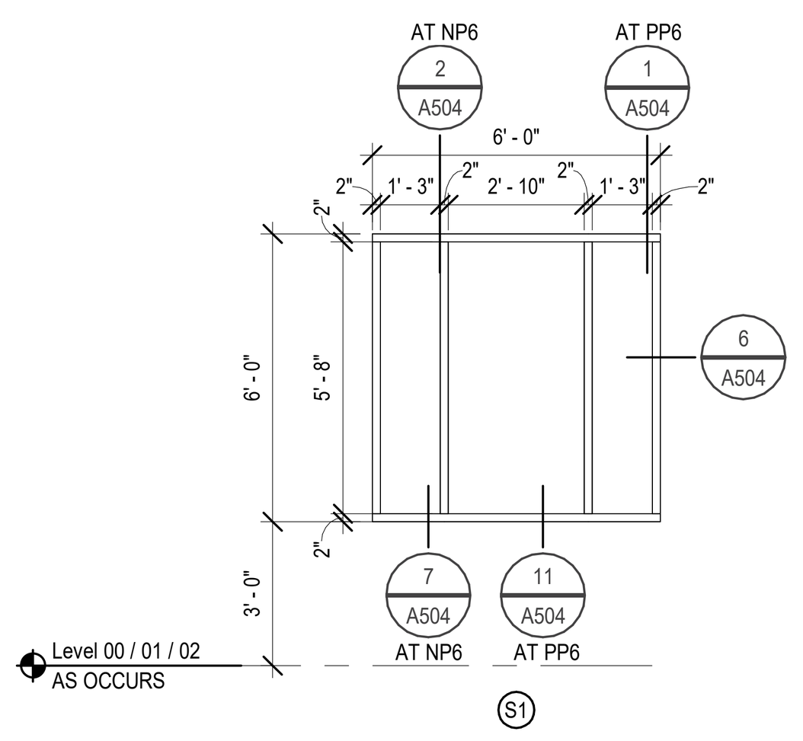
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
1	Addendum #1	03/17/26
2	Addendum #2	03/24/26
3	Addendum #3	03/30/26

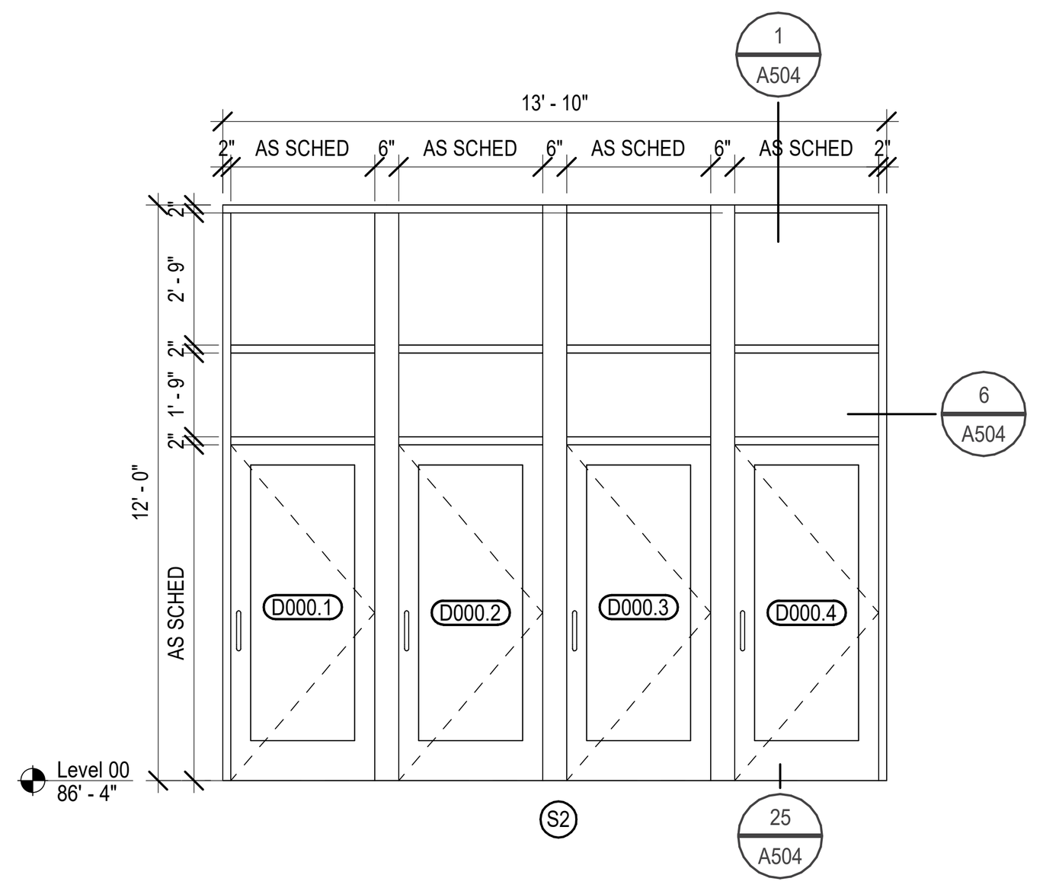
DRAWN BY: AS/HO/JT
JN: 24-028

Door Schedule

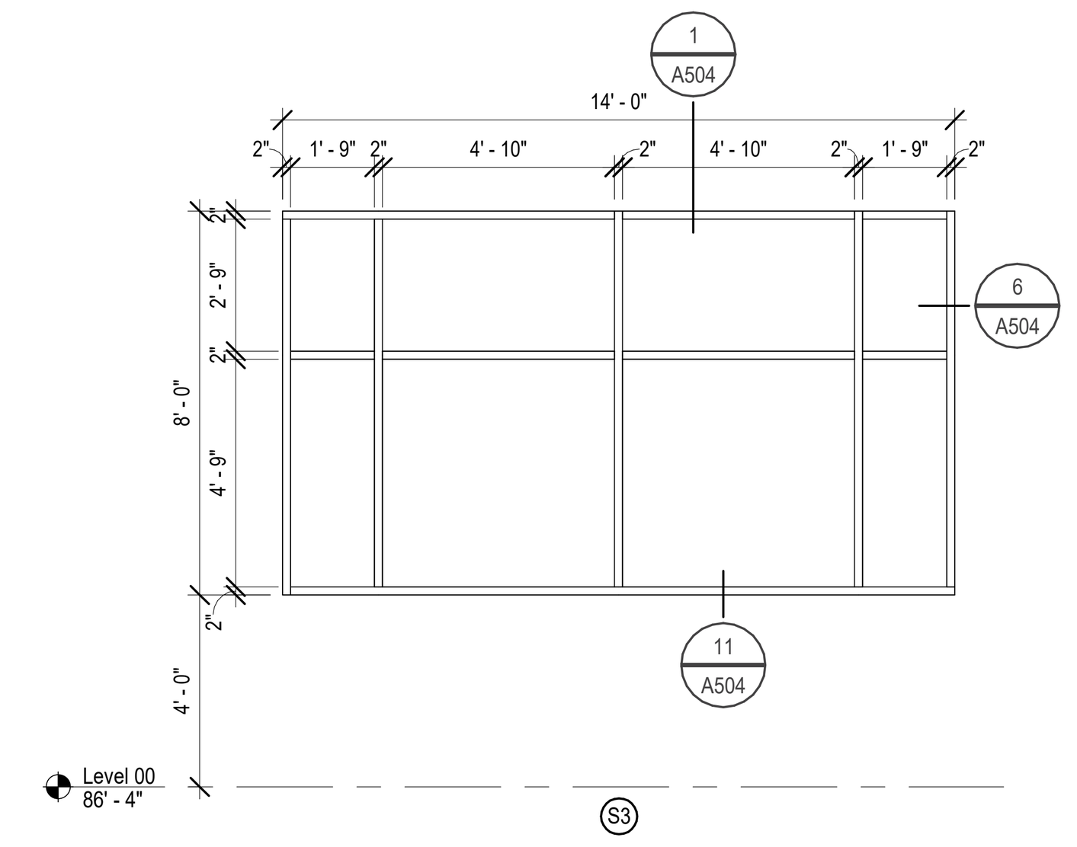
SHEET
A601



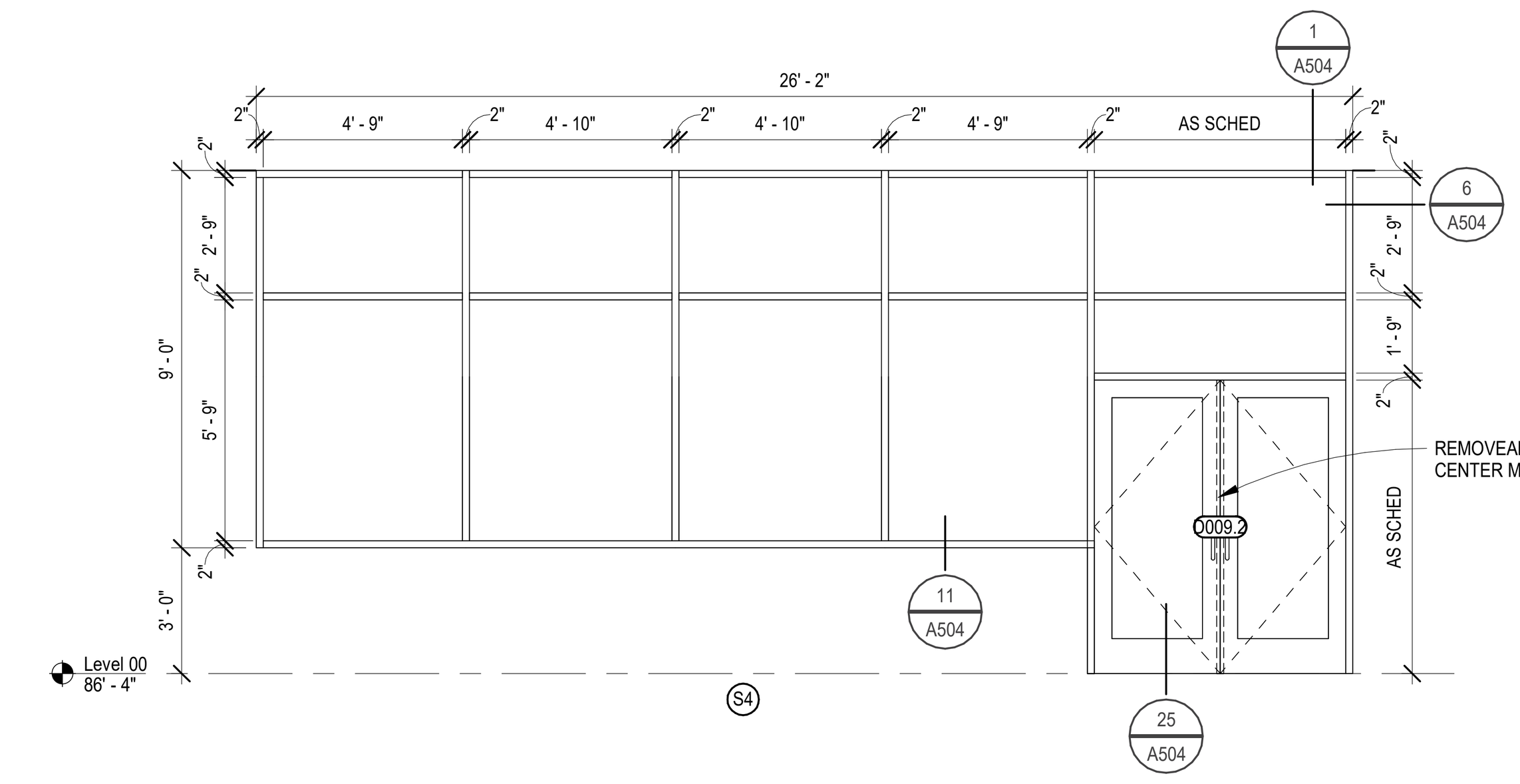
1 A603 **Storefront S1 - GL-1**
1/4" = 1'-0"



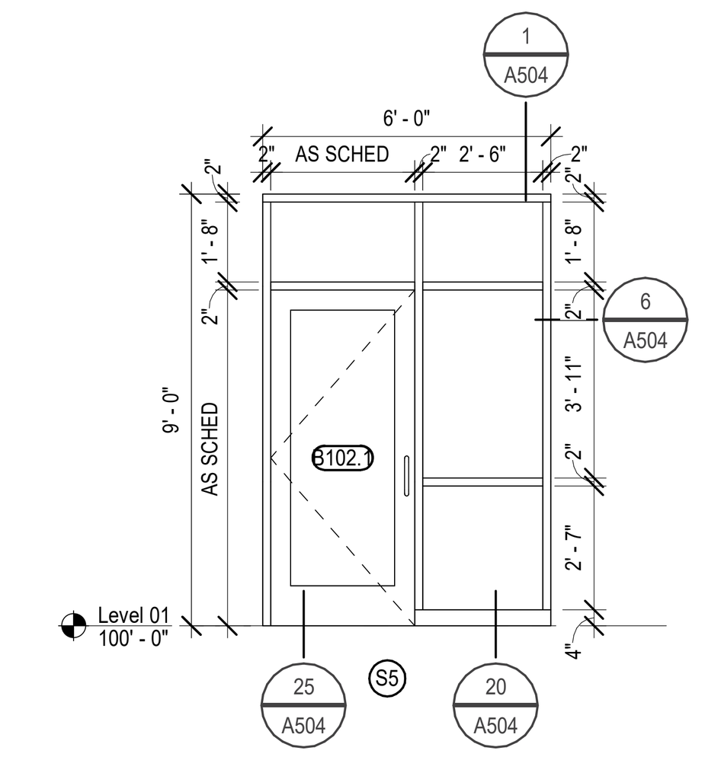
2 A603 **Storefront S2 - GL-1**
1/4" = 1'-0"



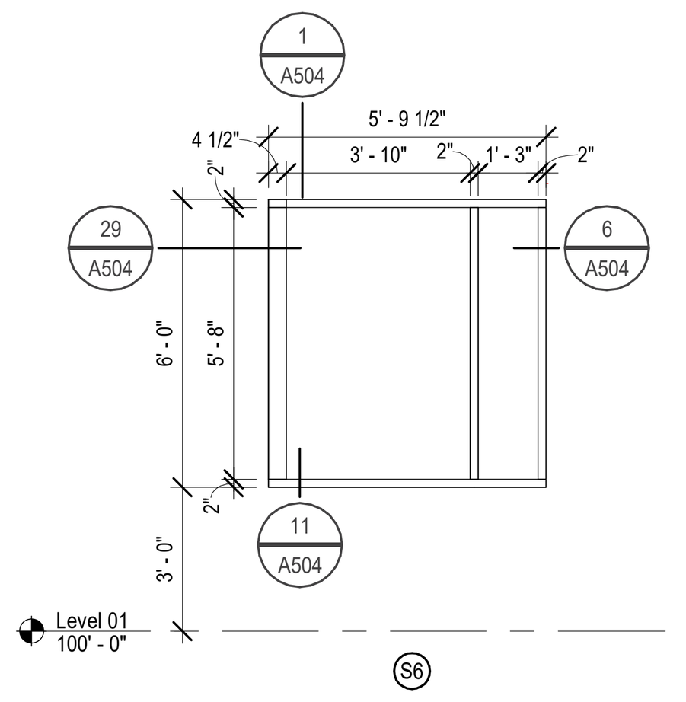
3 A603 **Storefront S3 - GL-1**
1/4" = 1'-0"



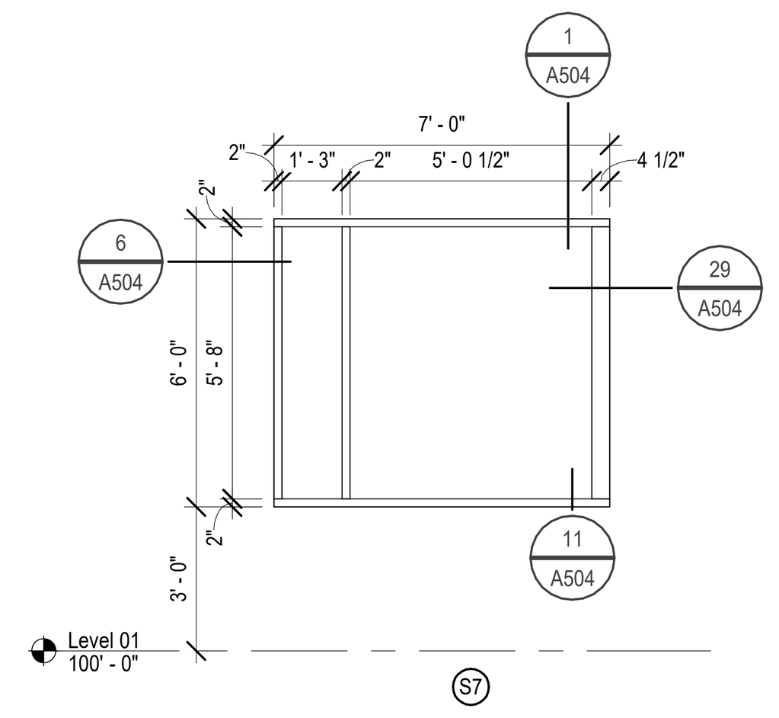
4 A603 **Storefront S4 - GL-1**
1/4" = 1'-0"



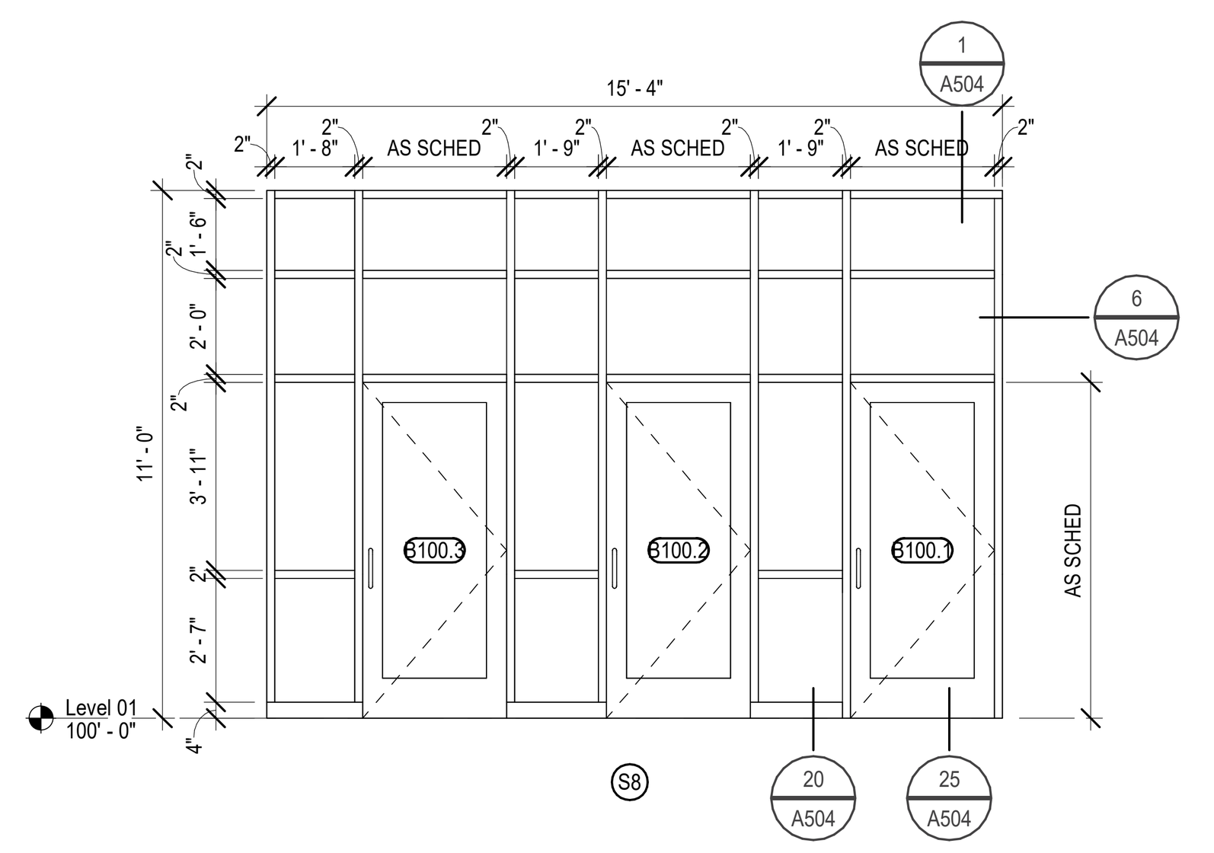
5 A603 **Storefront S5 - GL-1**
1/4" = 1'-0"



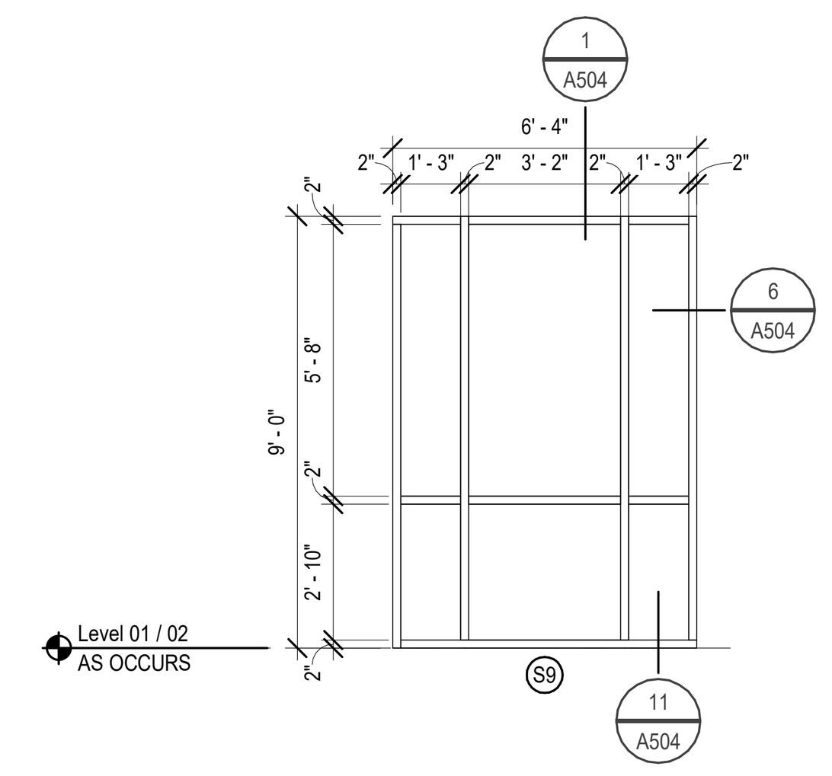
6 A603 **Storefront S6 - GL-1**
1/4" = 1'-0"



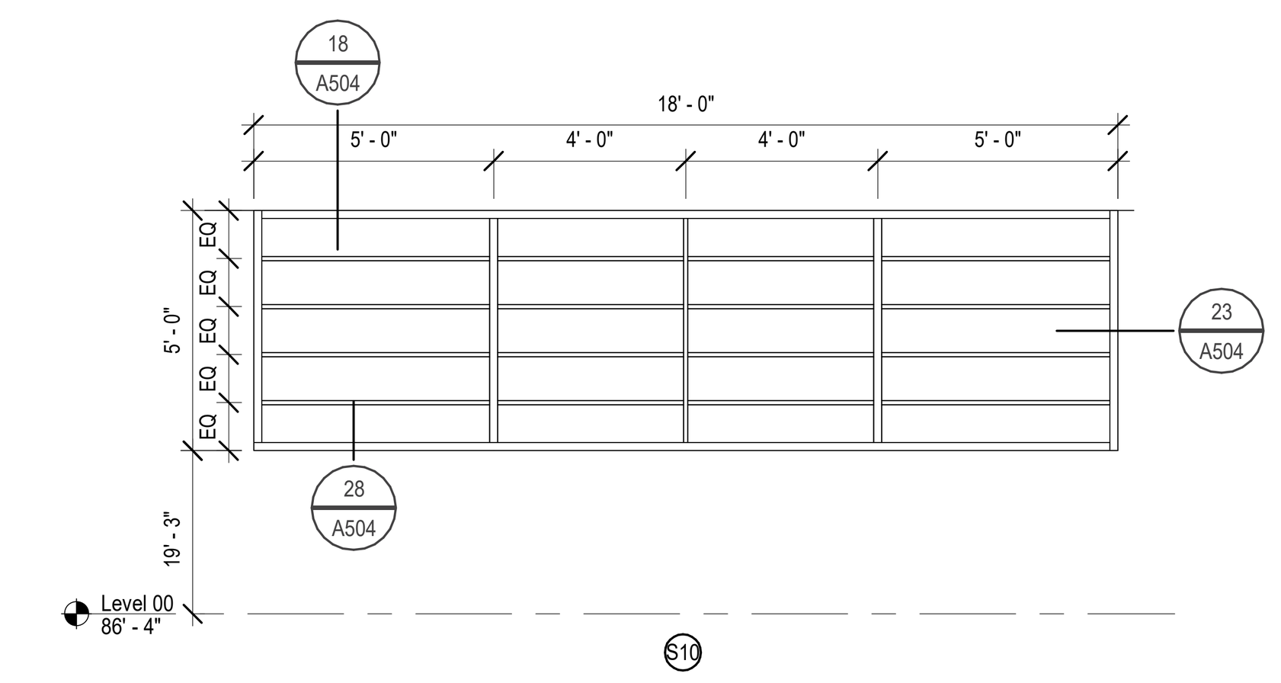
7 A603 **Storefront S7 - GL-1**
1/4" = 1'-0"



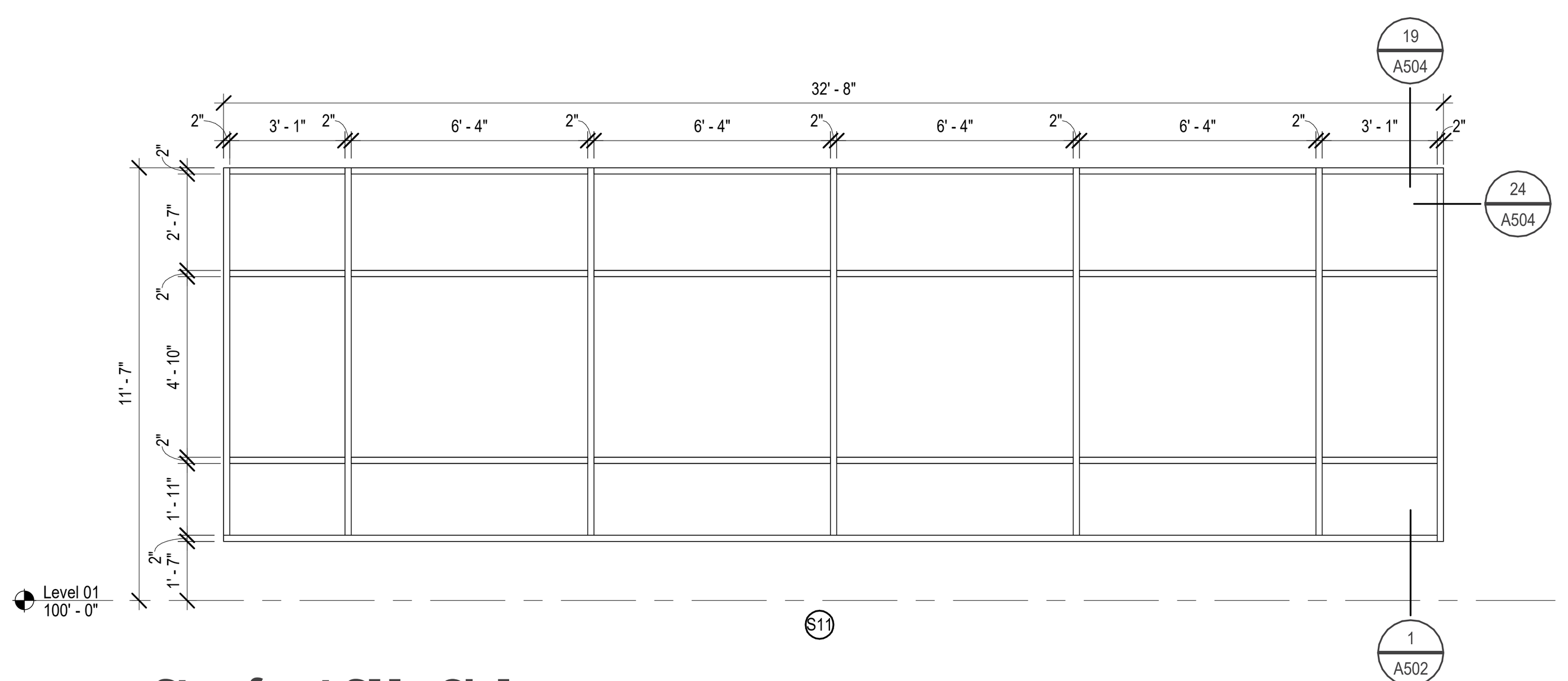
8 A603 **Storefront S8 - GL-1**
1/4" = 1'-0"



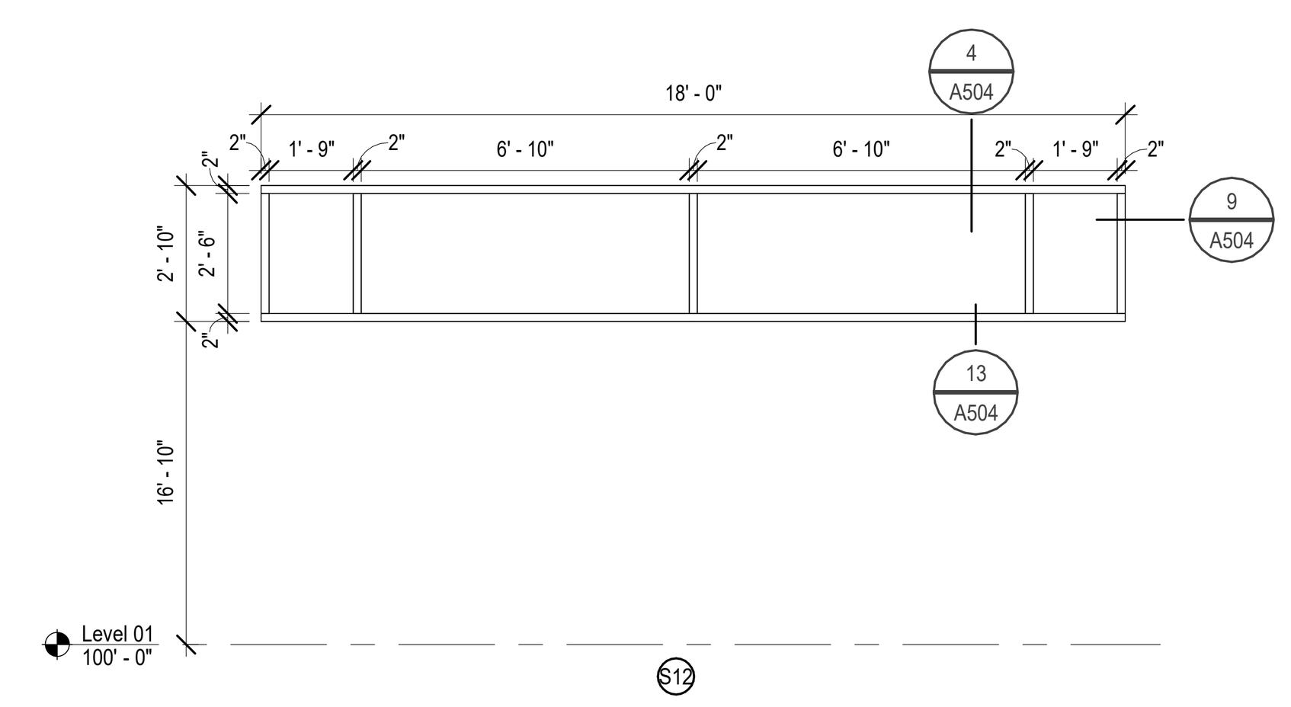
9 A603 **Storefront S9 - GL-1**
1/4" = 1'-0"



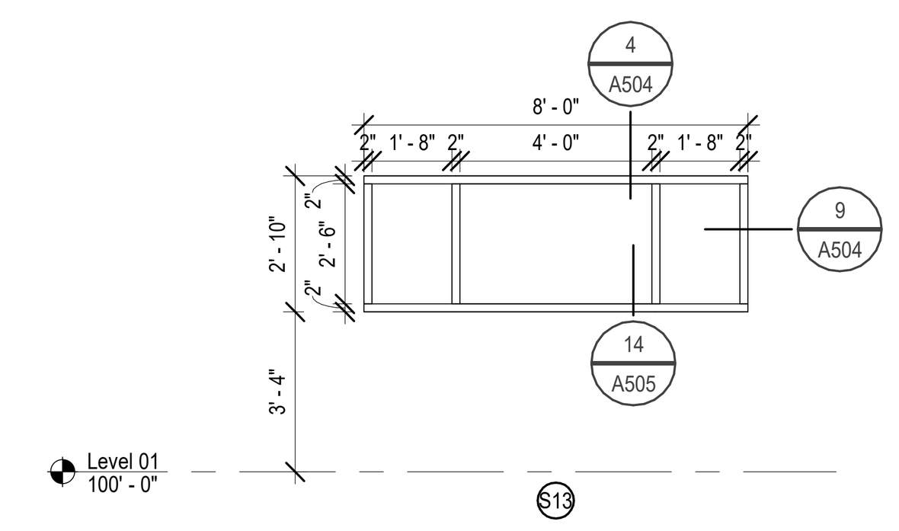
10 A603 **Storefront S10 - GL-4**
1/4" = 1'-0"



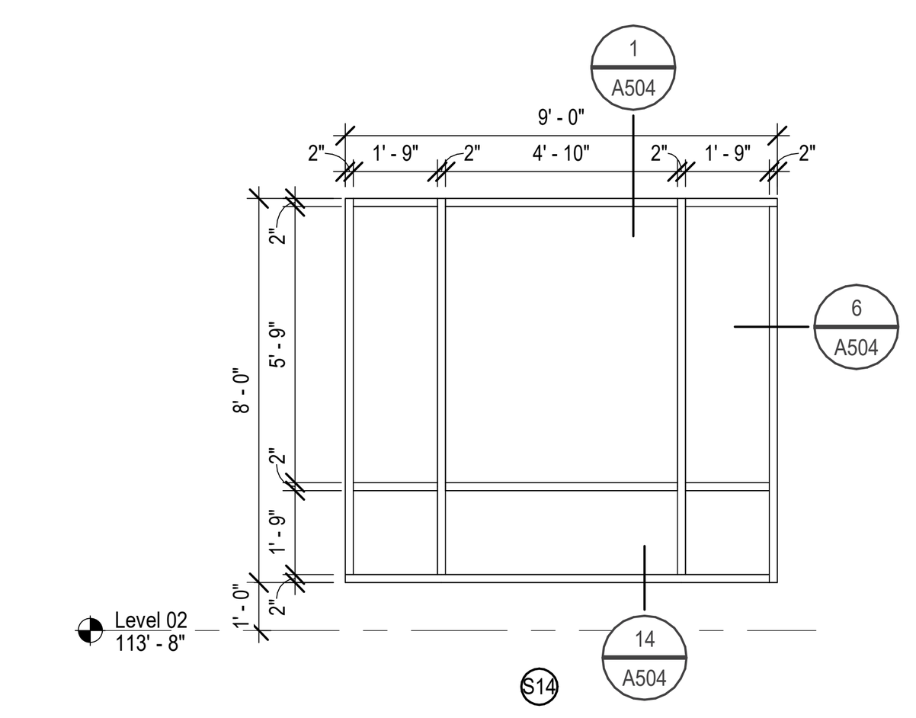
11 A603 **Storefront S11 - GL-1**
1/4" = 1'-0"



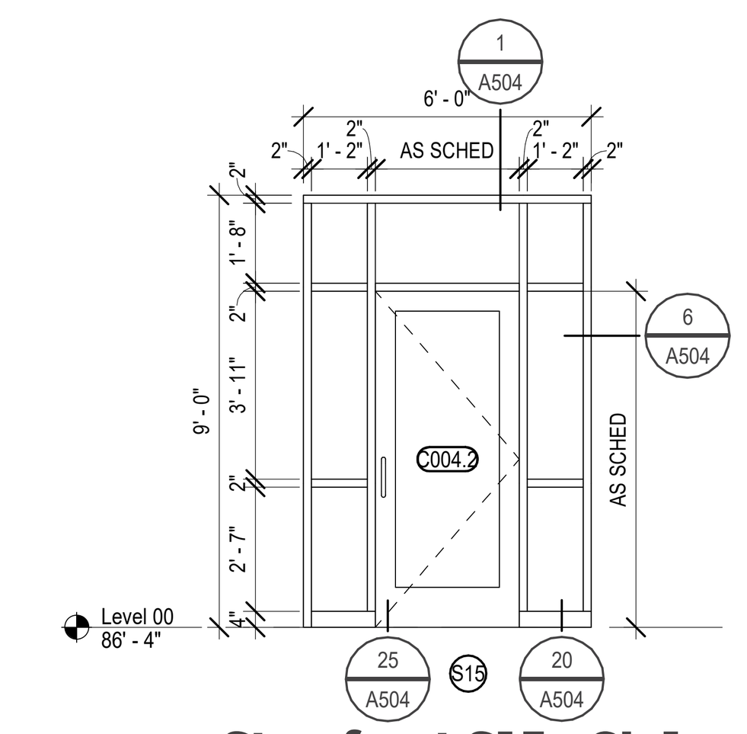
12 A603 **Storefront S12 - GL-1**
1/4" = 1'-0"



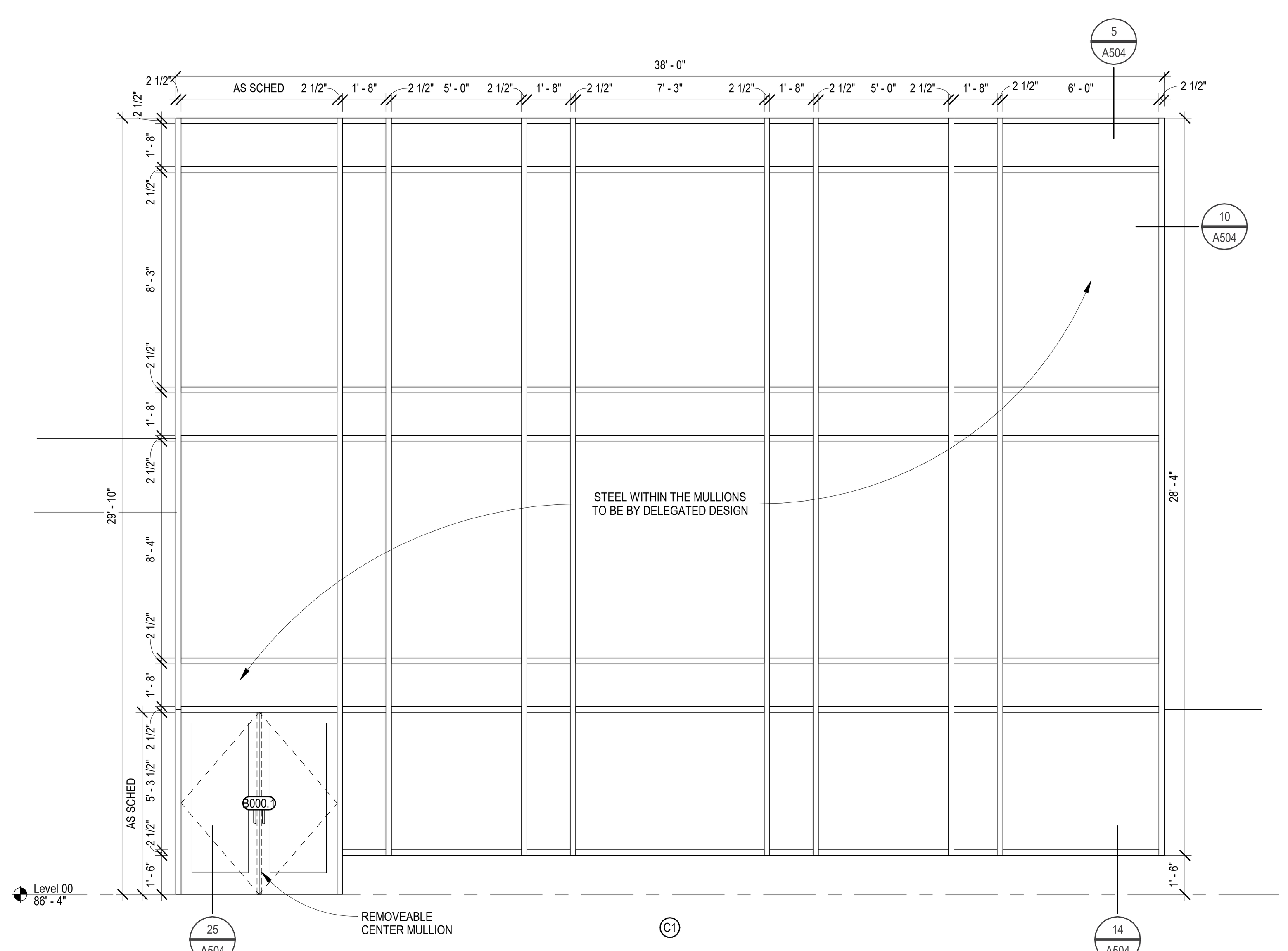
13 A603 **Storefront S13 - GL-1**
1/4" = 1'-0"



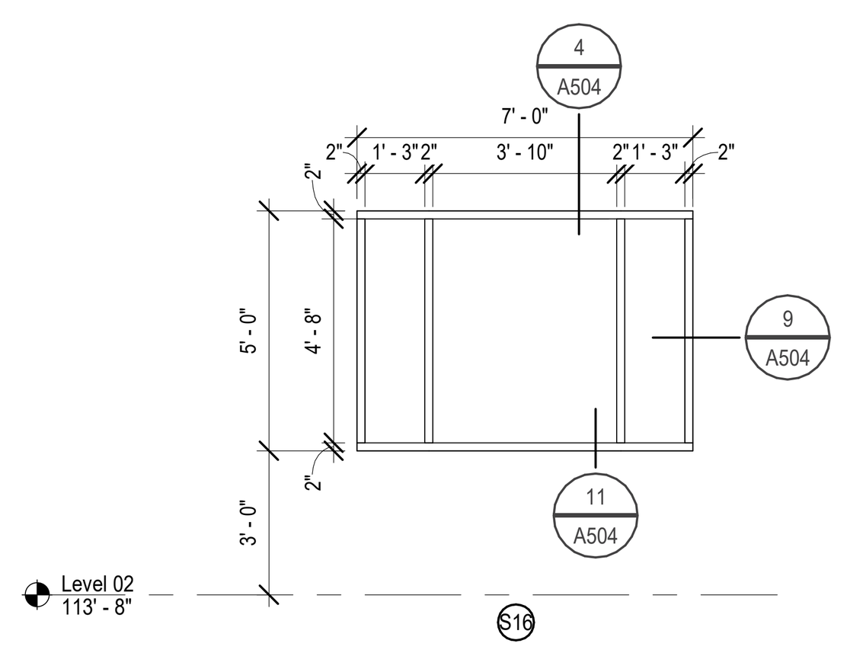
14 A603 **Storefront S14 - GL-1**
1/4" = 1'-0"



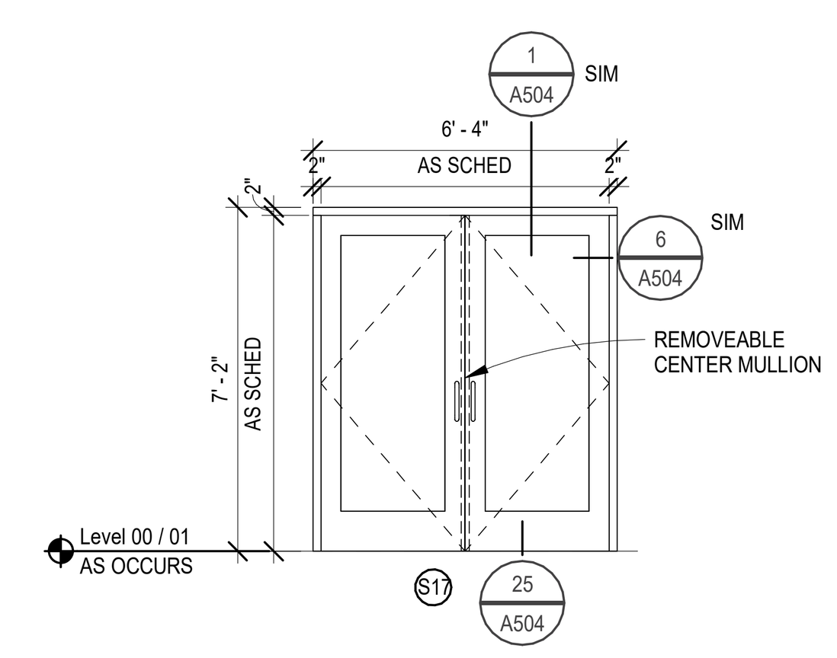
15 A603 **Storefront S15 - GL-1**
1/4" = 1'-0"



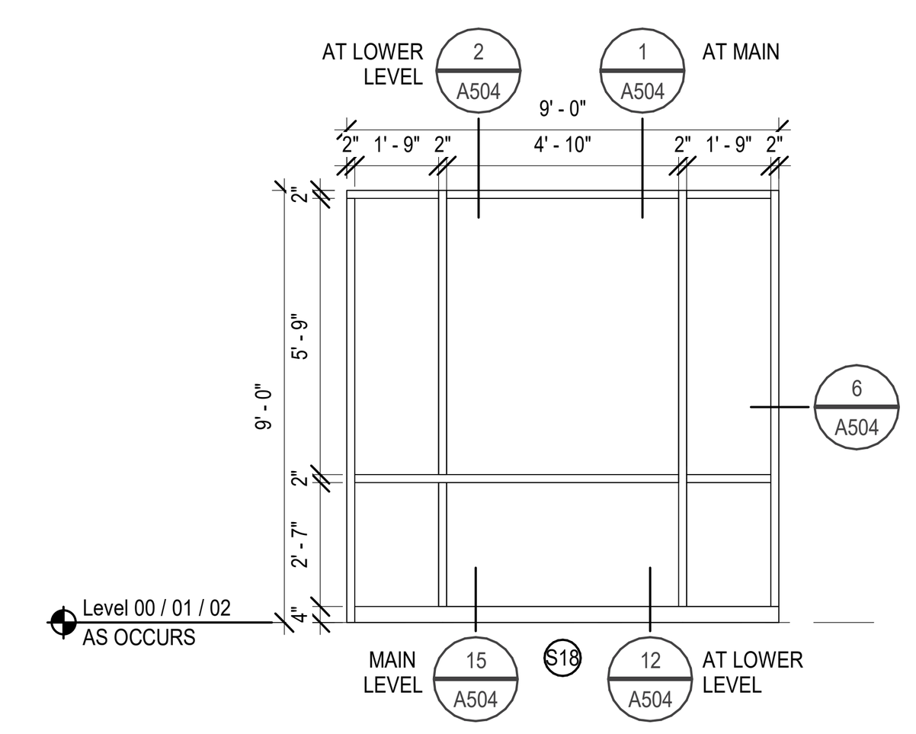
16 A603 **Curtain Wall C1 - GL-1**
1/4" = 1'-0"



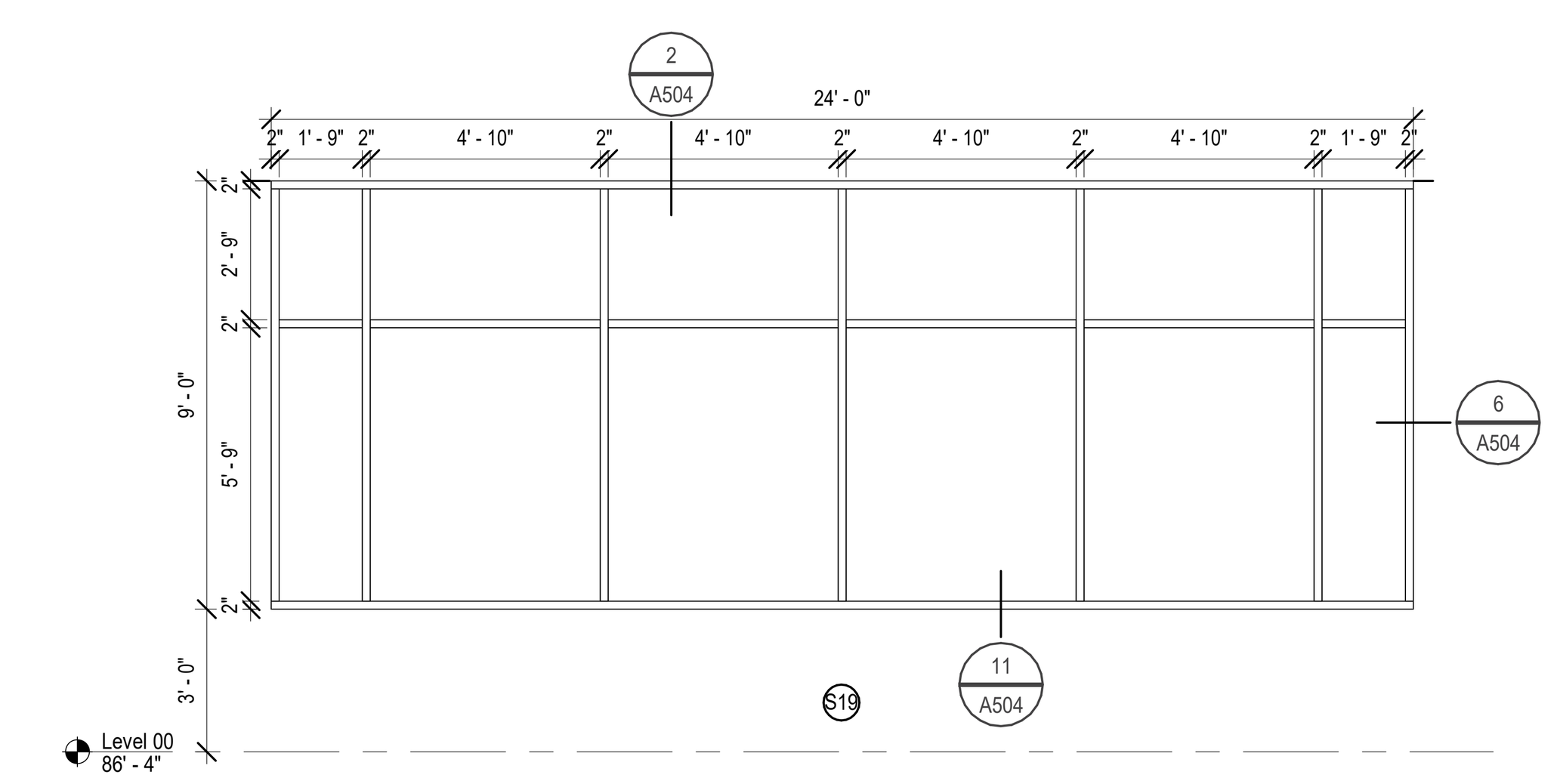
17 A603 **Storefront S16 - GL-1**
1/4" = 1'-0"



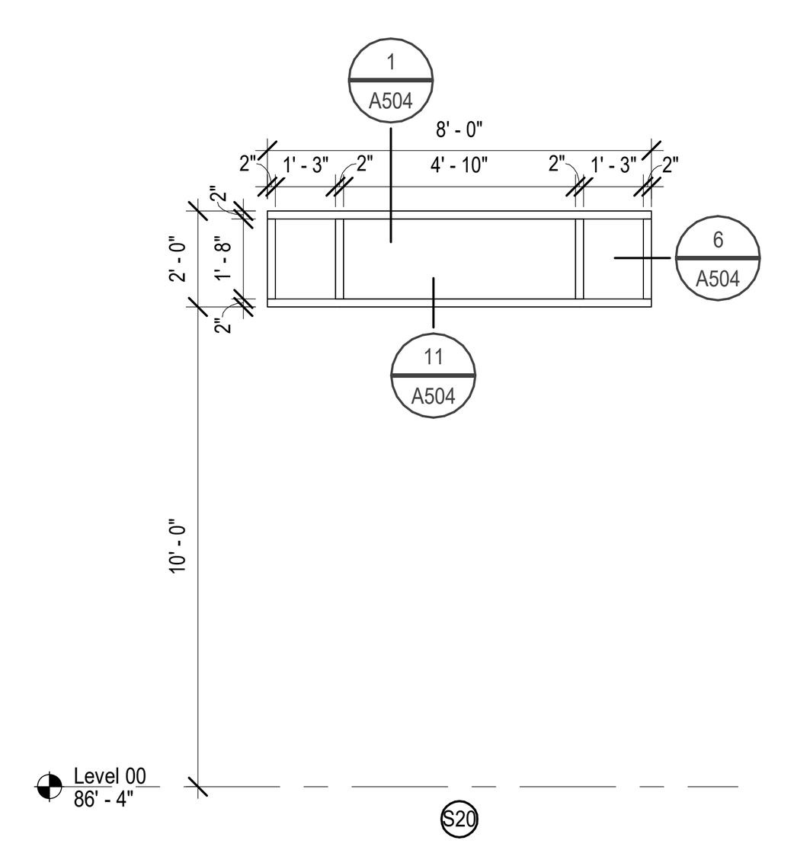
18 A603 **Storefront S17 - GL-1**
1/4" = 1'-0"



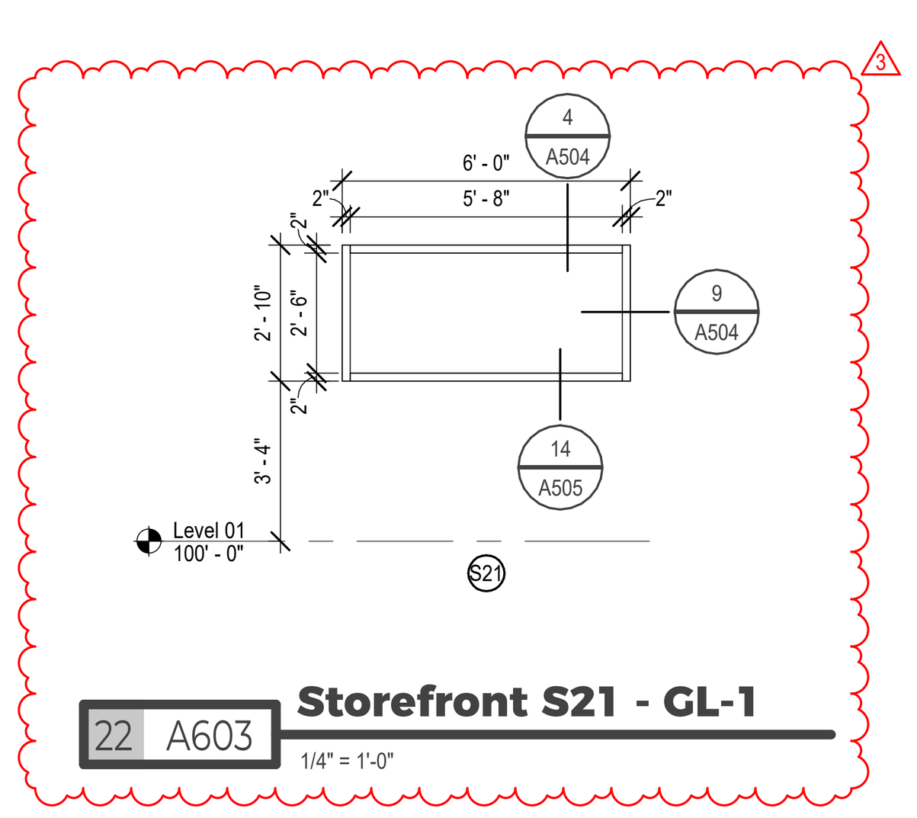
19 A603 **Storefront S18 - GL-1**
1/4" = 1'-0"



20 A603 **Storefront S19 - GL-1 - By Alt #13**
1/4" = 1'-0"



21 A603 **Storefront S20 - GL-1**
1/4" = 1'-0"



22 A603 **Storefront S21 - GL-1**
1/4" = 1'-0"

GLAZING NOTES

1. ALL EXTERIOR GLAZING GL-1 UNLESS OTHERWISE NOTED. ALL INTERIOR GLAZING GL-3 UNLESS OTHERWISE NOTED.

SYSTEM TYPES:
SEE SPEC FOR MORE INFORMATION
CURTAINWALL:
SYSTEM 1: 400T HIGH PERFORMANCE THERMAL CURTAINWALL 2-1/2" X 10 1/4". THERMAL PRESSURE PLATES, STEEL WITHIN MULLIONS TO BE DELEGATED DESIGN. PROVIDE 1/2" SEALANT JOINT AT SILL AND 3/4" SEALANT JOINT AT JAMBS AND HEAD

STOREFRONT:
SYSTEM 1: EXTERIOR APPLICATIONS, TU14000 SERIES STOREFRONT 2" X 4 1/2", CENTER SET GLAZING.
SYSTEM 2: INTERIOR APPLICATIONS, INT14 SERIES STOREFRONT 2" X 4 1/2", CENTER SET GLAZING.

GLAZING SCHEDULE

GL-1 = LOW-E, TINTED, TEMPERED, INSULATING GLASS AT EXTERIOR 1/4" GLAZING, 1/2" AIR GAP, 1/4" GLAZING

GL-2 = TEMPERED FIRE RATED GLAZING

GL-3 = TEMPERED GLASS, NON-FIRE RATED AT INTERIOR 1/4" TYPICAL, 3/8" AT SPANS OVER 6'; 1/2" AT SPANS OVER 8'

GL-4 = TRANSLUCENT INSULATED PANEL

SLG-5 = SECURITY LAMINATED GLAZING

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School
210 12th Street NE
Valley City, ND 58072

STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

LICENSED ARCHITECT HEIDI BRENNA (1859) Date 03/10/26 STATE OF NORTH DAKOTA

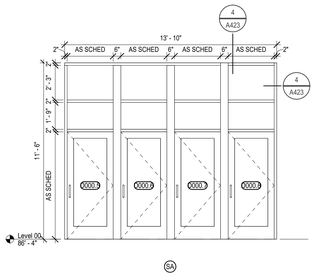
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
2	Addendum #2	03/24/26
3	Addendum #3	03/30/26

DRAWN BY: AS/HO/JT JN: 24-028

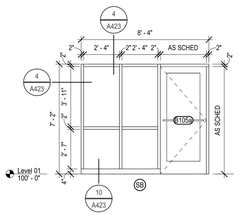
Exterior Storefront and Curtainwall Elevations

SHEET
A603



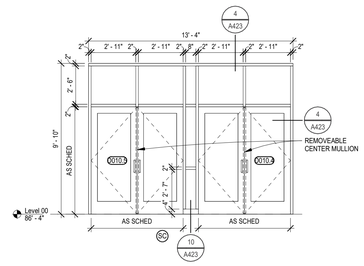
1 A604 **Int. Storefront SA - GL-3**

1/4" = 1'-0"



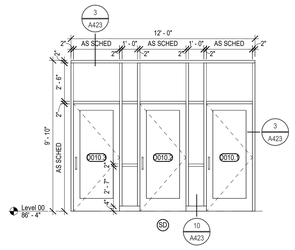
2 A604 **Int. Storefront SB - GL-3**

1/4" = 1'-0"



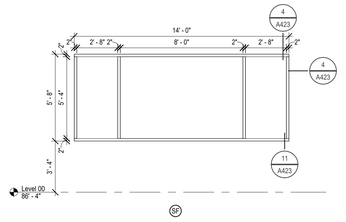
3 A604 **Int. Storefront SC - SLG-5**

1/4" = 1'-0"



4 A604 **Int. Storefront SD - SLG-5**

1/4" = 1'-0"



5 A604 **Int. Storefront SF - GL-3**

1/4" = 1'-0"

GLAZING NOTES

1. ALL EXTERIOR GLAZING GL-1 UNLESS OTHERWISE NOTED. ALL INTERIOR GLAZING GL-3 UNLESS OTHERWISE NOTED.

SYSTEM TYPES:
SEE SPEC FOR MORE INFORMATION
CURTAINWALL:
SYSTEM 1: 400T HIGH PERFORMANCE THERMAL CURTAINWALL 2-1/2" X 10 1/4", THERMAL PRESSURE PLATES, STEEL WITHIN MULLIONS TO BE DELEGATED DESIGN. PROVIDE 1/2" SEALANT JOINT AT SILL AND 3/4" SEALANT JOINT AT JAMBS AND HEAD

STOREFRONT:
SYSTEM 1: EXTERIOR APPLICATIONS, TU14000 SERIES STOREFRONT 2" X 4 1/2", CENTER SET GLAZING.
SYSTEM 2: INTERIOR APPLICATIONS, INT14 SERIES STOREFRONT 2" X 4 1/2", CENTER SET GLAZING.

GLAZING SCHEDULE

GL-1 = LOW-E, TINTED, TEMPERED, INSULATING GLASS AT EXTERIOR 1/4" GLAZING, 1/2" AIR GAP, 1/4" GLAZING

GL-2 = TEMPERED FIRE RATED GLAZING

GL-3 = TEMPERED GLASS, NON-FIRE RATED AT INTERIOR 1/4" TYPICAL, 3/8" AT SPANS OVER 5', 1/2" AT SPANS OVER 8'

GL-4 = TRANSLUCENT INSULATED PANEL

SLG-5 = SECURITY LAMINATED GLAZING

6 A604 **Int. Storefront SG - GL-3**

1/4" = 1'-0"

7 A604 **Int. Storefront SH - GL-3**

1/4" = 1'-0"

8 A604 **Int. Storefront SJ - GL-3**

1/4" = 1'-0"

9 A604 **Int. Storefront SK - GL-3**

1/4" = 1'-0"

10 A604 **Int. Storefront SL - SLG-5**

1/4" = 1'-0"

11 A604 **Int. Storefront SM - SLG-5**

1/4" = 1'-0"

12 A604 **Int. Storefront SN - SLG-5**

1/4" = 1'-0"

13 A604 **Int. Storefront SP - GL-2**

1/4" = 1'-0"

14 A604 **Int. Storefront SQ - GL-3**

1/4" = 1'-0"

15 A604 **Int. Storefront SR - GL-3**

1/4" = 1'-0"

ICON
ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School

210 12th Street NE
Valley City, ND 58072

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

LICENSED ARCHITECT
HEIDI BRENNAN
8550
STATE OF NORTH DAKOTA
Date: 03/10/26

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
2	Addendum #2	03/24/26
3	Addendum #3	03/30/26

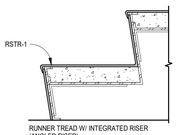
DRAWN BY: AS/HO/JT JN: 24-028

Interior Storefront Elevations

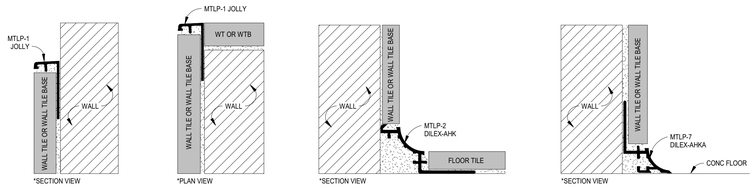
SHEET
A604

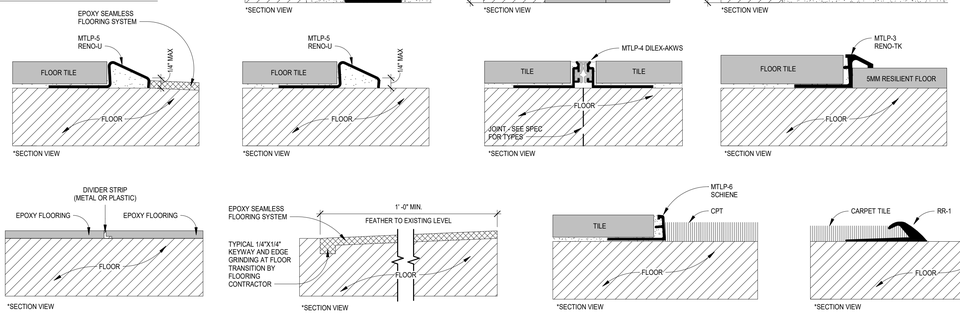
FINISH SCHEDULE

DIVISION	TYPE	MARK	MANUFACTURER	STYLE	COLOR	SIZE	INSTALLATION	GROUT / FINISH	LOCATION	COMMENTS
CONCRETE										
03 35 11	CONC-P	-	-	Polished - See Specifications	-	-	-	-	-	
03 35 11	CONC-S	-	-	Sealed - See Specifications	-	-	-	-	-	
FINISH CARPENTRY										
06 20 00	SLAT	1	Marlite	Slatwall Display	PLAM-1	4'x8' Panels, 3" OC Grooves	Mfr. Standard Trim Pieces	HPL on MDF	School Store	
06 20 00	WD	1	-	Solid Wood Handrails	Custom Stain to PLAM-1	See Spec and Detailing	Handrails	White Oak	Handrails	
06 20 00	WD	2	-	Solid Wood Butcher Block	Custom Stain to PLAM-1	See Plans and Detailing	Stair Treads, Landing, Bench	Maple	Bench & Stairs	
06 20 00	WDT	1	-	Solid Wood Trim	Custom Stain to PLAM-1	See Detailing	Trim	Red Oak	Trim around Lockers	
ARCHITECTURAL WOOD CASEWORK										
06 41 00	PLAM	1	Wilsonart	HPL I VGS	Jubilee Oak 8242	-	-	Fine Velvet - 38	Typical Cabinets	
06 41 00	PLAM	3	Wilsonart	Chemsurf	Jubilee Oak 8242	-	-	Chemical Resistant - 60	Science Room Cabinets	
06 41 00	PLAM	4	Pionite	HPL I HGS	Navy Blue SB007	-	-	Textured / Suede (SD)	Commons, Media Center	
06 41 00	PLAM	5	Nevamar	HPL I HGS	Carmen Red S-1049	-	-	Textured	Media Center	
06 41 00	TAC	2	Claridge	Tack Walls	Slate Grey	See Elevations	Adhesive	Colored Cork	Reception & Media Center Desks	
ARCHITECTURAL WOOD CASEWORK - CABINET HARDWARE										
06 41 00	CP	1	TMI	Contemporary Pull	Brushed Nickel	4" Length	-	-	Typical All Cabinets	
ARCHITECTURAL WOOD CASEWORK - TRIM										
06 41 00	MTLP	8	Fry Reglet	Corner Key	-	Verify Panel Thicknesses	Corners of Desking	Clear Anodized	See Elevations	
06 41 00	MTLP	9	Fry Reglet	Hollow Outside Corner	-	Verify Panel Thicknesses	Corners of Laminate Wainscot	Clear Anodized	See Elevations	
06 41 00	MTLP	10	Fry Reglet	1/4" Post Termination	-	Verify Panel Thicknesses	Exposed Edges of Laminate Wainscot	Clear Anodized	See Elevations	
FIBERGLASS REINFORCED PANELING										
06 68 13	FRP	1	Marlite	Symmetrix	White w/ Gray Grooves	48x96 Sheets I 12x24 Tiles	Mfr. Standard Trim Pieces; Color Matching Caulk	Smooth	Restroom Walls	
06 68 13	FRP	2	Marlite	Symmetrix	White w/ Black Grooves	48x96 Sheets I 3x12 Tiles	Mfr. Standard Trim Pieces; Color Matching Caulk	Smooth	Serving Area Walls	Class A - Indicate Where Needed
06 68 13	FRP	3	Marlite	Standard FRP	Light Gray	48x96 Sheets	Mfr. Standard Trim Pieces	Pebbled	Custodial Rooms	
06 68 13	FRP	4	Marlite	Standard FRP	White	48x96 Sheets	Mfr. Standard Trim Pieces	Pebbled	Kitchen Walls	Class A - Indicate Where Needed
06 68 13	FRP	5	Marlite	Symmetrix	Naval w/ White Grooves	48x96 Sheets I 12x24 Tiles	Mfr. Standard Trim Pieces; Color Matching Caulk	Smooth	Restroom Walls	
WOOD DOORS										
08 14 16	DR	1	See Specifications	See Specifications	PLAM-1	-	See Specifications	See Specifications	Typical PLAM Doors	
TILING										
09 30 00	T	1	Ceramiche Keope (Ceramic Tileworks)	Ubik	Greige	12" x 24"	Monolithic	G-1	Restroom Floors	
09 30 00	T	1a	Ceramiche Keope (Ceramic Tileworks)	Ubik	Greige	Mosaic	Monolithic	G-1	Showers and around drains	
09 30 00	T	1b	Ceramiche Keope (Ceramic Tileworks)	Ubik	Greige	6" x 24"	Wall Base, Cut from T-1	G-1	Restrooms	
09 30 00	T	2	VITL (Virginia Tile)	Baseline	Blue	3" x 6"	Horizontal Running	G-2	Group Sink Walls, Drinking Fountains	See Detail for PAT-1 Install
09 30 00	T	3	Daltile	Color Wheel Classic	Arctic White	3" x 6"	Horizontal Running	G-2	Group Sink Walls, Drinking Fountains	See Detail for PAT-1 Install
09 30 00	T	4	Daltile	Color Wheel Classic	Electric Blue	3" x 6"	Horizontal Running	G-2	Group Sink Walls, Drinking Fountains	See Detail for PAT-1 Install
09 30 00	T	5	Daltile	Color Wheel Classic	Currant	3" x 6"	Horizontal Running	G-2	Group Sink Walls, Drinking Fountains	See Detail for PAT-1 Install
TILING - GROUT										
09 30 00	G	1	Laticrete	See Specifications	Natural Gray	MFR. Recommendations	See Specifications	-	Restroom Floors	
09 30 00	G	2	Laticrete	See Specifications	Sterling Silver	MFR. Recommendations	See Specifications	-	Group Sink Walls, Drinking Fountains	
TILING - METAL PROFILES										
09 30 00	MTLP	1	Schluter	Jolly	-	Verify Tile Thicknesses	Exposed Edges of Tile	AT - Satin Nickel Anodized Alum..	See Finish Plans	
09 30 00	MTLP	2	Schluter	Dilex-AHK	-	Verify Tile Thicknesses	Cove Base - Tile to Tile	AT - Satin Nickel Anodized Alum.	See Finish Plans	
09 30 00	MTLP	3	Schluter	Reno-TK	-	Verify Tile Thicknesses	Floor Tile to LVT Transition	AT - Satin Nickel Anodized Alum.	See Finish Plans	
09 30 00	MTLP	4	Schluter	Dilex-AKWS	-	Verify Tile Thicknesses	Expansion and Control Joints	Classic Grey	See Specifications	
09 30 00	MTLP	5	Schluter	Reno-U	-	Verify Tile Thicknesses	Floor Tile to Concrete Transition	AT - Satin Nickel Anodized Alum.	See Finish Plans	
09 30 00	MTLP	6	Schluter	Schiene	-	Verify Tile Thicknesses	Floor Tile to Carpet Transition	AT - Satin Nickel Anodized Alum.	See Finish Plans	
09 30 00	MTLP	7	Schluter	Dilex-AHKA	-	Verify Tile Thicknesses	Cove Base - Tile to Concrete	AT - Satin Nickel Anodized Alum..	See Finish Plans	
ACOUSTICAL CEILINGS										
09 51 00	ACT	1	USG	Mars	White	24" x 24"	15/16" Grid, White	SLT Edge	Typical	
09 51 00	ACT	2	USG	Mars High NRC	White	24" x 24"	15/16" Grid, White	SLT Edge	Corridors & Stairs	0.90 NRC Requirement
09 51 00	ACT	3	USG	Kitchen Lay-In Panels	White	24" x 24"	15/16" Grid, White	SQ Edge	Kitchen	Aluminum Capped Grid
LINEAR METAL CEILINGS										
09 54 23	WDC	1	USG	Planx Universal	S16N Tan Sawn Oak	4" Modules, 3/4" Reveal	See Specifications	-	See Ceiling Plans	2" Acoustical Backer
WOOD ATHLETIC FLOORING										
09 64 66	WAF	1	Robbins	Bio Cushion 2.0 - Maple	Standard - Clear	See Specifications	See Specifications	-	Gymnasium	Vented Cove Base by Mfr (VCB-1)
RESILIENT FLOORING AND BASE										
09 65 00	LVT	1	Mohawk Group	Lineate C0089	Groove 868	9.38" x 59.38"	Herringbone 1/3rd Offset	-	Corridors	
09 65 00	LVT	2	Mohawk Group	Lineate C0089	Ridged 588	9.38" x 59.38"	Herringbone 1/3rd Offset	-	Corridors	
09 65 00	LVT	3	Patcraft	Linocut 1560V	Block 00750	9" x 36"	Brick	-	Admin, School Store, Music Room	
09 65 00	RB	1	Tarkett	Traditional, Cove	Gateway	4"	-	-	Typical base	
09 65 00	RB	2	Tarkett	Traditional, Cove	Gateway	6"	-	-	Receiving	
09 65 00	RR	1	Tarkett	SLT-XX-L	Gateway	1/4" to Subfloor	Slim Line Transition	-	Carpet to Concrete	
09 65 00	RR	2	Tarkett	CRS-XX-A	Gateway	1/4" to Subfloor	Reducer	-	LVT to Concrete	
09 65 00	RR	3	Tarkett	SLT-XX-C	Gateway	1/4" to 0.080" Material	Slim Line Transition	-	LVT or Carpet to Resilient Sheet Flooring	
09 65 00	RSF	1	Nora (Interface)	Noraplan Environcare	Baby Shower 7039	~49.21' x 48" Roll	Glue Down; Heat Weld	Homogeneous Rubber Sheet, Hammered	Science Rooms	
09 65 00	RSF	2	Nora (Interface)	Noraplan Environcare	Parade 7066	~49.21' x 48" Roll	Glue Down; Heat Weld	Homogeneous Rubber Sheet, Hammered	Science Room Accent	
09 65 00	RSF	3	Mannington Commercial	Entwined	Suber Lead White ETW453	9" W Roll	Glue Down	Heterogeneous Sheet	Nurse Rooms	Integral Base (INTB)
09 65 00	RSTR	1	Tarkett	Rubber Stair Tread w/ Integrated Riser	Moon Rock	Field Verify	Manufacturer's Recommendation	Hammered	All Stairs	
09 65 00	RT	1	Tarkett	Rubber Tile	Moon Rock	24" x 24"	Manufacturer's Recommendation	Hammered	Stair Landings	
RESILIENT ATHLETIC FLOORING										
09 65 66	RAF	1	Ecore	Performance Beast Plus	Blue Jays ES103	14.5 mm x 48"	Roll	Vulcanized Composition Rubber	Weight Room	
09 65 66	RR	4	Ecore	TRD-000093-A	Black	5/8" to Subfloor	Straight Line Transition	-	Weight Room	
FLUID APPLIED FLOORING										
09 67 00	FAF	1	Sherwin Williams	Hybri-Flex EC w/ 1/4" Deco Flake	Custom Mix	-	See Specifications	See Specifications	Kitchen	Integral Base (INTB)
09 67 00	FAF	2	Sherwin Williams	Poly-Crete	Custom Mix	-	See Specifications	See Specifications	Walk-In Cooler & Freezer	
09 67 00	FAF	3	Sherwin Williams	Resuflor Deco Flake BC	Custom Mix	-	See Specifications	See Specifications	Locker Rooms	Integral Base (INTB)
TILE CARPETING										
09 68 13	CPT	1	Patcraft	Pointed Twill 10712	Mohair 00575	12" x 48"	Ashlar	-	Admin	
09 68 13	CPT	2	J&J Flooring Group	Analytic Diffuse 7632	Warm Blue 3593	18" x 36"	Monolithic	-	Typical Classrooms	
09 68 13	CPT	3	J&J Flooring Group	Analytic Form 7633	Warm Blue 3593	18" x 36"	Monolithic	-	Typical Classrooms Accent	
09 68 13	CPT	4	Shaw Contract	Expression 5T674	Lapis 73486	9" x 36"	Ashlar	-	Huddle Rooms	
09 68 13	CPT	5	Shaw Contract	Symbolic 5T675	Hematite 73580	18" x 36"	Ashlar	-	Media Center	
09 68 13	WOM	1	J&J Flooring Group	Incognito 7069	Intelligence 1841	24" x 24"	Ashlar	-	Entry | See Finish Plan	
WALL COVERINGS										
09 72 00	TAC	1	Koroseal	Walltalkers Tac Wall	Deep Sea 14	48" Roll	Straight Match	Matte	Media Center	Paint Wall Prior to Install
09 72 00	VWC	1	Wolf Gordon	Broadcloth BDC 4023	Blue Crest	52"W	MFR. Recommendations	-	See Finish Plans	
09 72 00	VWG	1	3M	U-180Cv3	Artwork Provided by Owner	See Elevations	MFR. Recommendations	5820 Matte	See Finish Plans	
09 72 00	VWG	2	Designtex	Digital Studio	Artwork Provided by Owner	50"W	MFR. Recommendations	DW13 - Suede Textured Vinyl	See Finish Plans	
ACOUSTICAL DECORATIVE PANELS										
09 84 30	SCU	1	Golterman & Sabo	Ceiling Sound Diffusers I Pyramidal	White	48" x 48"	15/16" Grid	Square Edge	Music	Alternate 5 Only
09 84 30	SWU	1	Golterman & Sabo	Acousti Panel	Maharam: Manner 466177 - Schooner 027	2" Thick | See Elevations	Z-Bar to Z-Bar	Fabric Square Edge	Commons, Music	
09 84 30	SWU	2	Golterman & Sabo	Acousti Panel	Maharam: Manner 466177 - Cruise 035	2" Thick | See Elevations	Z-Bar to Z-Bar	Fabric Square Edge	Commons, Music	
09 84 30	SWU	4	Golterman & Sabo	Acousti Panel	Maharam: Manner 466177 - Ember 011	2" Thick | See Elevations	Z-Bar to Z-Bar	Fabric Square Edge	Music	
09 84 30	SWU	5	Golterman & Sabo	Acousti-Impact Panel	Maharam: Manner 466177 - Schooner 027	2" Thick | See Elevations	Z-Bar to Z-Bar	Fabric Square Edge, Impact Resistant	Gymnasium, Practice Rooms	
09 84 30	SWU	6	Golterman & Sabo	Acousti-Impact Panel	Maharam: Manner 466177 - Cruise 035	2" Thick | See Elevations	Z-Bar to Z-Bar	Fabric Square Edge, Impact Resistant	Gymnasium	
INTERIOR PAINTING										
09 91 23	PT	1	Sherwin Williams	-	Pearly White SW 7009	-	-	See Specifications	Typical	
09 91 23	PT	2	Sherwin Williams	-	Pure White SW 7005	-	-	See Specifications	Typical Ceilings & Soffits	
09 91 23	PT	3	Benjamin Moore	-	True Blue 2066-50	-	-	See Specifications	Accent 1 (Light Blue)	Pantone 292C
09 91 23	PT	4	Benjamin Moore	-	Bold Blue 2064-10	-	-	See Specifications	Accent 2 (Navy)	Pantone 282C
09 91 23	PT	5	Benjamin Moore	-	Bonaparte CC-64	-	-	See Specifications	Accent 3 (Red)	Pantone 1807C
09 91 23	PT	6	Sherwin Williams	-	Urbane Bronze SW 7048	-	-	See Specifications	HM Frames and Doors	
09 91 23	PT	7	Sherwin Williams	-	Worldly Gray SW7043	-	-	See Specifications	Admin	
09 91 23	PT	8	Sherwin Williams	-	Custom to match existing	-	-	See Specifications	Jefferson Renovation	
09 91 23	PT-E	1	Sherwin Williams	-	Pearly White SW 7009	-	-	See Specifications	Restrooms, Kitchen, Locker Rooms	
HIGH PERFORMANCE COATINGS										
09 96 00	HPC	1	Sherwin Williams	-	Urbane Bronze SW 7048	-	-	See Specifications	Exterior Metals	
09 96 00	HPC	2	Sherwin Williams	-	Match Adjacent Metal Panel	-	-	See Specifications	Roof Ladder at Metal Panel Wall	
09 96 00	HPC	3	Sherwin Williams	-	Match Adjacent Precast	-	-	See Specifications	Roof Ladder at Precast Wall	
VISUAL DISPLAY UNITS										
10 11 00	MBD	1	Claridge	Series 1 | LCS Markerboard	No. 100 White	Varies	See Specifications	LCS Porcelain | Magnetic	Classrooms & Staff Areas	
10 11 00	TBD	1	Claridge	Edge Wrapped Tackboard	Guilford of Maine: Flannel 1685	4' x 6'	Eyelet Hangers	-	Art Room	
10 11 00	TBD	2	Claridge	Display Rail	Tan Nucork	Varies	See Specifications	Cork	Classrooms	
PLASTIC TOILET PARTITIONS										
10 21 13	TP	1	ASI	Accurate Partitions - Solid Plastic (HDPE)	Blue 9509	-	Overhead Braced	Orangepeel	Restrooms	
WALL AND DOOR PROTECTION										
10 26 00	CG	1	InPro	160 High Impact Corner Guard	White Sand 0103	2" Wing | Full Height 8'-0"	Aluminum Retainer	Rigid Vinyl	Typical Corner Guards	
10 26 00	CG	2	InPro	160 High Impact Corner Guard	Chino 0258	2" Wing | Full Height 8'-0"	Aluminum Retainer	Rigid Vinyl	Admin Corner Guards	
10 26 00	CG	3	InPro	430 Surface Mount Stainless Steel Corner Guard	-	2" Wing | Full Height 8'-0"	Adhesive	Stainless Steel	Accent Corner Guards	
METAL LOCKERS										
10 51 00	LOCK	1	Republic Storage Products	Single Tier Standard Steel Locker	True Navy 85	12x12x72	No Legs, Slope Top	Steel w/ Powder Coat Paint	Elementary Corridors	Single Tier
10 51 00	LOCK	2	Republic Storage Products	Single Tier Standard Steel Locker	Dove Gray 20	12x12x72	No Legs, Flat Top	Steel w/ Powder Coat Paint	High School Corridors	Single Tier
10 51 00	LOCK	3	Republic Storage Products	Double Tier Standard Steel Locker	Dove Gray 20	12x12x72	No Legs, Flat Top	Steel w/ Powder Coat Paint	High School Corridors	Double Tier
10 51 00	LOCK	4	Republic Storage Products	Double Tier Ventilated Locker	Dove Gray 20	12x12x72	No Legs, Slope Top	Steel w/ Powder Coat Paint	Locker Rooms	Double Tier
10 51 00	LOCK	5	Republic Storage Products	Double Tier Standard Steel Locker	Dove Gray 20	12x12x72	No Legs, Slope Top	Steel w/ Powder Coat Paint	Receiving	Double Tier
GYMNASIUM EQUIPMENT										
11 66 23	WP	1a	Porter	DuraSafe Wall Padding	See Specifications	See Elevations	See Specifications	-	Gymnasium	
11 66 23	WP	1b	Porter	DuraSafe Wall Padding	See Specifications	See Elevations	See Specifications	-	Gymnasium	
11 66 23	WP	2	Porter	DuraSafe Wall Padding	See Specifications	See Elevations	See Specifications	-	Calm Rooms	
WINDOW TREATMENTS										
12 24 00	RWS	1	Mecho Shade	Mecho / 5 System	Soho, Light Grey	Field Verify	Manual, Inside Mount	3% Opacity	Typical	
12 24 00	RWS	2	Mecho Shade	ElectroShade Motorized Shade System	Soho, Light Grey	Field Verify	Motorized, Outside Mount	3% Opacity	Music Room, Weight Room	
12 24 00	RWS	3	Mecho Shade	Mecho / 5 System	EcoGlass Blackout, Light Grey	Field Verify	Manual, Inside Mount	Blackout	Art Room	
COUNTERTOPS										
12 36 00	PLAM	2	Wilsonart	HPL	Sierra Cascade 5005	-	Countertops	Fine Velvet - 38	Typical PLAM Countertops	
12 36 00	QTZ	1	Wilsonart	Quartz Select	Clouds Rest Q4049	3cm	Countertops	-	Reception Desk	
12 36 00	SPC	1	Durcon	Solid Phenolic Compact - CR	Carbon Black	1" Thick	Countertops, Backsplashes	Chemical Resistant	Science Room Countertops	
12 36 00	SSF	1	Corian	Solid Surface	Linen	1/2"	Sills	-	Window Sills	
12 36 00	SSF	2	Corian	Solid Surface	Laguna Terrazzo	1/2"	Countertops	-	Restroom Counters	
12 36 00	SSF	3	Corian	Solid Surface	Neutral Concrete	1/2"	Countertops, Backsplashes	-	Countertops, See Plans	



1 A610 **Stair Transition Detail**
1 1/2" = 1'-0"





2 A610 **Transition Details**
12" = 1'-0"

GENERAL NOTES

1. ALL FINISHES TO BE INSTALLED PER MANUFACTURER RECOMMENDATIONS UNO
2. REFER TO FINISH FLOOR PLANS AND INTERIOR ELEVATIONS FOR LOCATIONS OF ALL FINISHES AND FLOORING INSTALLATION PATTERNS.
3. REFER TO REFLECTED CEILING PLANS FOR LOCATIONS OF VARIOUS CEILING TYPES AND THEIR CORRESPONDING FINISHES.

ABBREVIATIONS

ACP:	ACOUSTICAL CEILING PANEL
ACS:	ADULT CHANGING STATION
ACT:	ACOUSTICAL CEILING TILE
AWP:	ACOUSTICAL WALL PANEL
BRK:	BRICK
CG:	CORNER GUARD
CMU:	CONCRETE MASONRY UNIT
CMU-G:	CONCRETE MASONRY UNIT (GLAZED)
CMU-B:	CONCRETE MASONRY UNIT (BURNISHED)
CMU-S:	CONCRETE MASONRY UNIT (STANDARD 8"X8" SCORED)
CONC:	CONCRETE
CONC-E:	EPOXY CONCRETE
CONC-P:	POLISHED CONCRETE
CONC-S:	SEALED CONCRETE
CP:	CABINET PULL
CPT:	CARPET
CS:	CAST STONE
DR:	DOOR
EB:	EDGEBANDING
EXP:	EXPOSED
FAF:	FLUID APPLIED FLOORING
FB:	FABRIC
FRP:	FIBERGLASS REINFORCED PANEL
FRT:	FRY REGLET REVEAL TRIM
G:	GROUT
GB:	GRAB BAR
GL:	GLASS
GWB:	GYPSUM WALL BOARD
INTB:	INTEGRAL BASE
LOCK:	LOCKER
LVT:	LUXURY VINYL TILE
MBD:	MARKERBOARD
MTL:	METAL
MTLP:	METAL PROFILE TRIM
MTLP-SN:	METAL PROFILE STAIR NOSING
N:	NONE
PAT:	TILE PATTERN
PEG:	PEGBOARD
PLAM:	PLASTIC LAMINATE
PLAS:	PLASTER
PT:	PAINT
PT-E:	PAINT - EPOXY
PRF:	PREFINISHED
PWP:	PREFINISHED WALL PANEL
OWP:	OPERABLE WALL PANEL
QT:	QUARRY TILE
QTB:	QUARRY TILE BASE
QTZ:	QUARTZ
RAF:	RESILIENT ATHLETIC FLOORING
RB:	RESILIENT BASE
RN:	RESILIENT NOSING
RR:	RESILIENT REDUCER
RSF:	RESILIENT SHEET FLOORING
RST:	RESILIENT STAIR TREADS
RSTR:	RESILIENT STAIR TREADS - RISERS
RT:	RUBBER TILE
RWS:	ROLLER WINDOW SHADES
SC:	SPECIAL COATING
SCU:	SOUND-ABSORBING CEILING UNIT
SDT:	STATIC DISSIPATIVE TILE
SLAT:	SLAT WALL
SLT:	SLATE
SLT-T:	SLATE TILE
SPC:	SOLID PHENOLIC COMPACT
SS:	STAINLESS STEEL
SSF:	SOLID SURFACE
ST:	STONE
STN:	STAIN
SWU:	SOUND-ABSORBING WALL UNIT
T:	TILE
TAC:	TACKABLE WALL COVERING
TB:	TACKBOARD
TBWP:	TRAFFIC BEARING WATER PROOFING
TP:	TOILET PARTITION
VCB:	VENTED COVE BASE
VCT:	VINYL COMPOSITION TILE
VWC:	VINYL WALL COVERING
VWG:	VINYL WALL GRAPHIC
WAF:	WOOD ATHLETIC FLOORING
WD:	WOOD
WDC:	WOOD CEILING
WDT:	WOOD TRIM
WOM:	WALK-OFF MAT
WP:	WALL PADDING
WT:	WINDOW TREATMENT
WWC:	WOOD WALL COVERING

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools - New School
210 12th Street NE
Valley City, ND 58072

STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
5306 51ST AVENUE SOUTH SUITE A
FARGO, ND 58104
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

LICENSED ARCHITECT HEIDI BRENNAN (18591) Heidi Brennan Date 03/10/26 STATE OF NORTH DAKOTA

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/26
2	Addendum #2	03/24/26
3	Addendum #3	03/30/26

DRAWN BY: AN/JT JN: 24-028

Finish Schedule

SHEET
A610

CMTA
A LEGENCE Company

ADDENDUM – M003

Date	03/30/2026
Project #	2025168
Project Name	Valley City Public Schools New High School
Project Location	Valley City, ND

NOTICE TO BIDDERS: This Addendum is prepared to supplement information presented in the Drawings and Project Manual for the above referenced project. All additions, changes, omissions, and conditions listed herein shall become an integral part of the Contract Documents.

Specifications

ITEM NO. 1 22 4000 – PLUMBING FIXTURES

A. Specification added for the following fixtures: S-7, S-8, S-9, and S-10.

ITEM NO. 2 23 0923 – DIRECT-DIGITAL CONTROL SYSTEM FOR HVAC

A. Alternate #15: Alternate Automatic Temperature Control Contractor added.

Drawings

ITEM NO. 3 P201C – MAIN LEVEL SEGMENT C – PLUMBING

A. Plumbing fixture tags revised in the following rooms: Sci Lab C102, Chem Lab C104, Sci Lab C108.

ITEM NO. 4 M200B – LOWER LEVEL SEGMENT B – MECHANICAL PIPING

A. Fin tube enclosure FTR0-1 extended to the platform edge under the stair.

ITEM NO. 5 M300B – LOWER LEVEL SEGMENT B - HVAC

A. Mechanical Room B005 – Smoke damper has been added to ductwork being served by TF-6.
B. Mechanical Room B005 – Smoke damper has been added to ductwork serving R3 diffusers.
C. Transfer duct added for School Store B012.
D. Fire dampers added for ducts serving School Store B012

ITEM NO. 6 M301D – MAIN LEVEL SEGMENT D - HVAC

A. Ductwork size revised for louver LVR-2

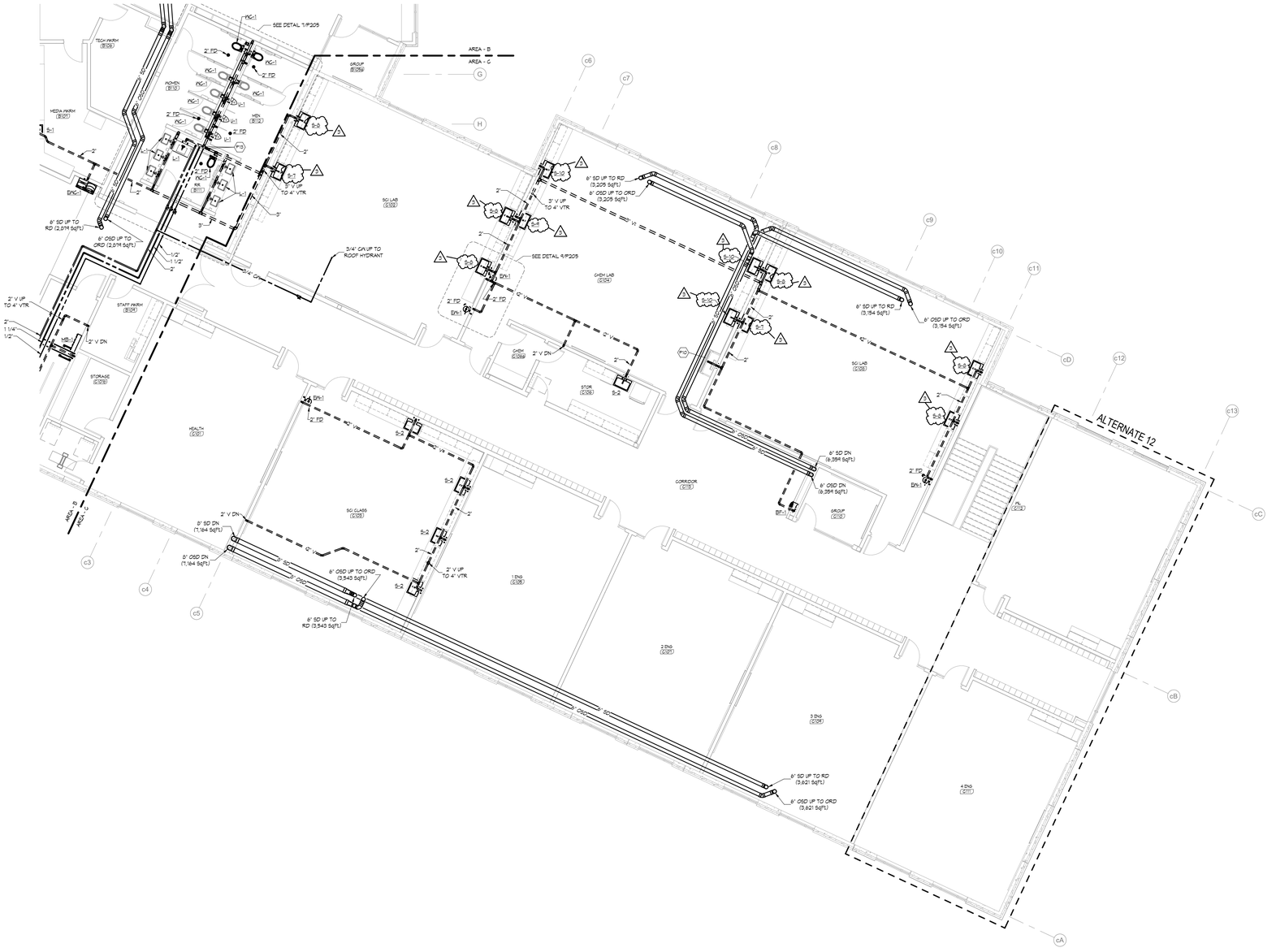
ITEM NO. 7 M700 – MECHANICAL SCHEDULES

A. Length of enclosure revised for fin radiation FTR0-1.
B. Schedule revised for louver LVR-2.

PRIOR APPROVALS

SECTION	DESCRIPTION OF EQUIPMENT	APPROVED MANUFACTURER
23 8126	Small Capacity Split Systems	Lennox

END OF ADDENDUM



1 MAIN LEVEL PLAN SEGMENT - C - PLUMBING

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

NORTH

PLUMBING FIXTURE ROUGH-IN CONNECTION SCHEDULE

FIXTURE	WASTE	VENT	CW	HW
WALL HYDRANT	-	-	3/4"	-
CLEANOUT	4"	-	-	-
FLOOR DRAIN	2"	2"	-	-
FLOOR SINK	2"	2"	-	-
LAVATORY	2"	2"	1/2"	1/2"
WATER CLOSET (FV)	4"	2"	1"	-
URINAL	2"	2"	3/4"	-
SHOWER	2"	2"	3/4"	3/4"
EMERG. EYE WASH/SHOWER	2"	2"	1"	1"
SINK	2"	2"	1/2"	1/2"
DNG	2"	2"	1/2"	-
MIXING VALVE	-	-	3/4"	3/4"
MOP BASIN	3"	2"	3/4"	3/4"
HOSE BIBB	-	-	3/4"	-
WASH MACHINE TRIM	2"	2"	3/4"	3/4"

NOTES:
1. SIZE SHALL BE AS SCHEDULED UNLESS OTHERWISE NOTED

SHEET NOTES

P10 PROVIDE 2" WASTE, 1/2" CW AND 1/2" S-HW CONNECTION TO LAB FUME HOOD.
P13 2" CW, 1-1/2" S-HW, 1 1/2" RHW DN

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: BJL JN: 2025168

MAIN LEVEL SEGMENT C - PLUMBING

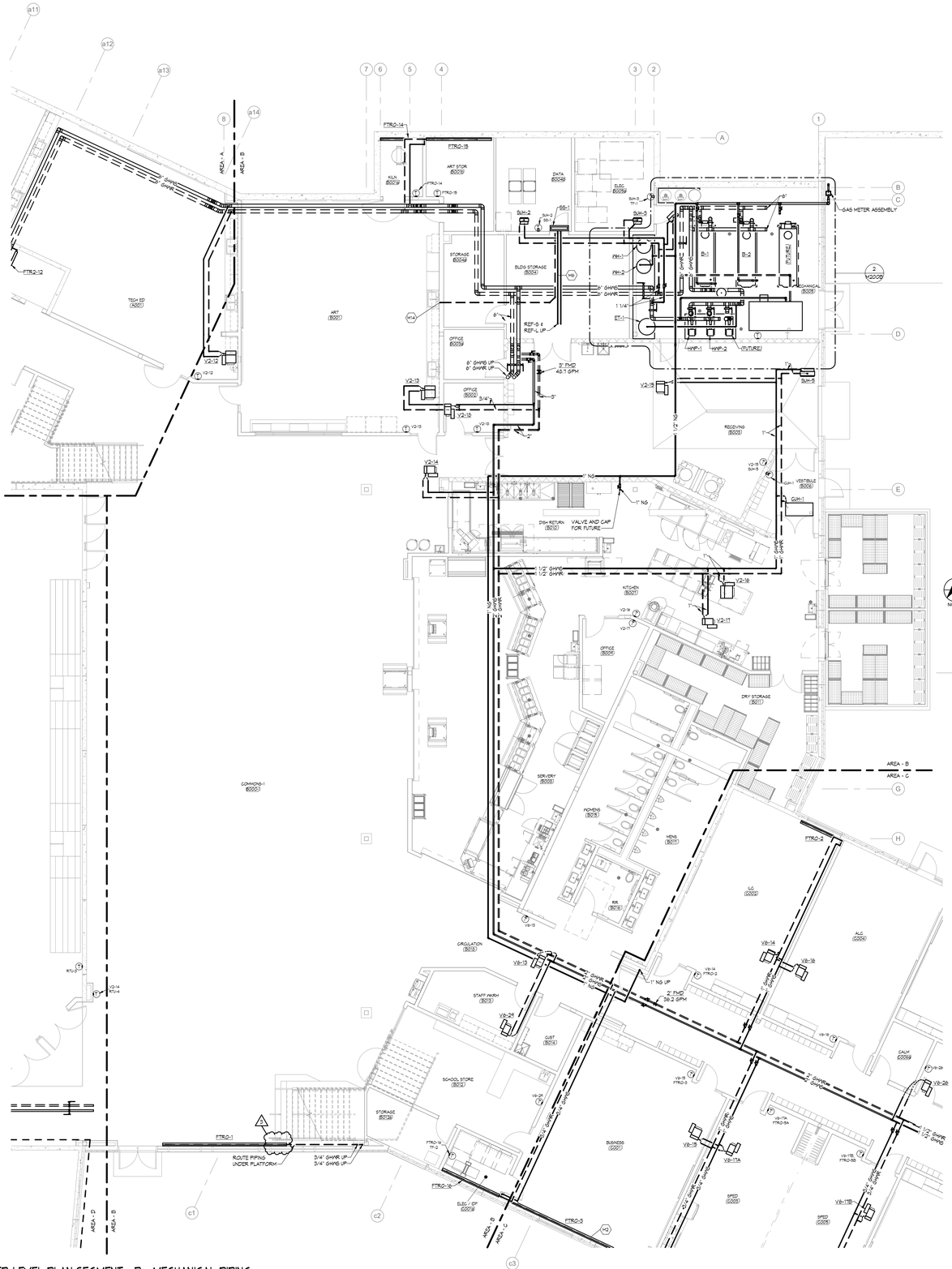
SHEET
P201C

GENERAL NOTES

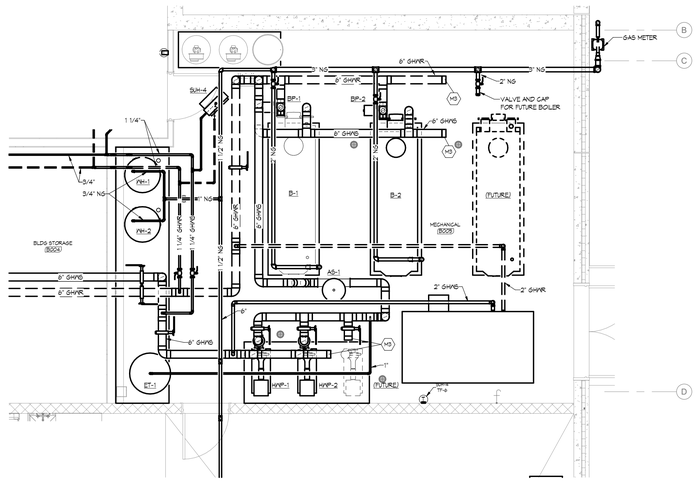
A. ALL HEATING PIPING RUN-OUTS SHALL BE 3/4" UNLESS OTHERWISE NOTED.

SHEET NOTES

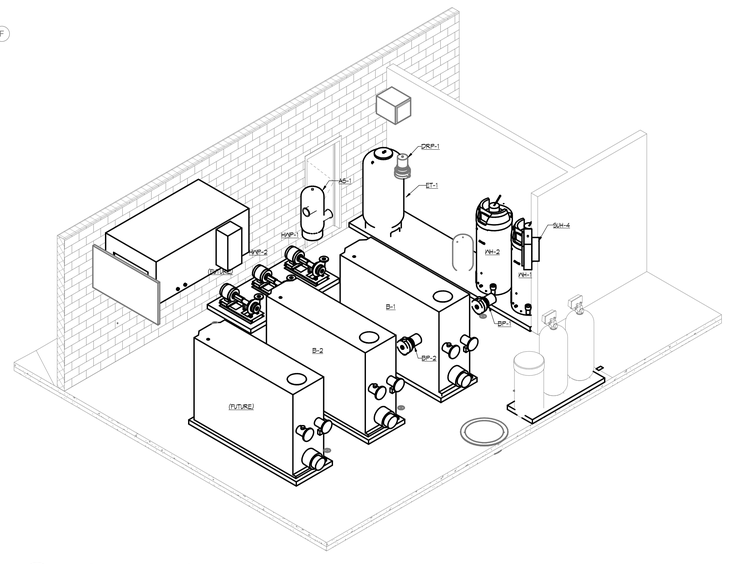
M2 PROVIDE 2 - 4' 6" SECTIONS OF ACTIVE FIN TUBE ELEMENT CENTERED BELOW WINDOWS. PROVIDE WALL TO WALL ELEMENT COVER.
M3 VALVE AND CAP FOR FUTURE CONNECTION.
M6 REFRIGERANT PIPING, SIZE PER MANUFACTURER'S RECOMMENDATIONS.
M14 ROUTE 3/4" CONDENSATE PIPING DOWN INTO SINK TAL PIECE.



1 LOWER LEVEL PLAN SEGMENT - B - MECHANICAL PIPING
SCALE: 1/8" = 1'-0"



2 LOWER LEVEL PLAN - MECHANICAL ROOM ENLARGED VIEW
SCALE: 1/4" = 1'-0"



3 BOILER ROOM 3D VIEW
SCALE: NTS

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

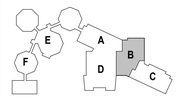
STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



REGISTERED PROFESSIONAL ENGINEER
STEVE J. HOEHNER
PE - 8407
DATE 3/30/2026
NORTH DAKOTA

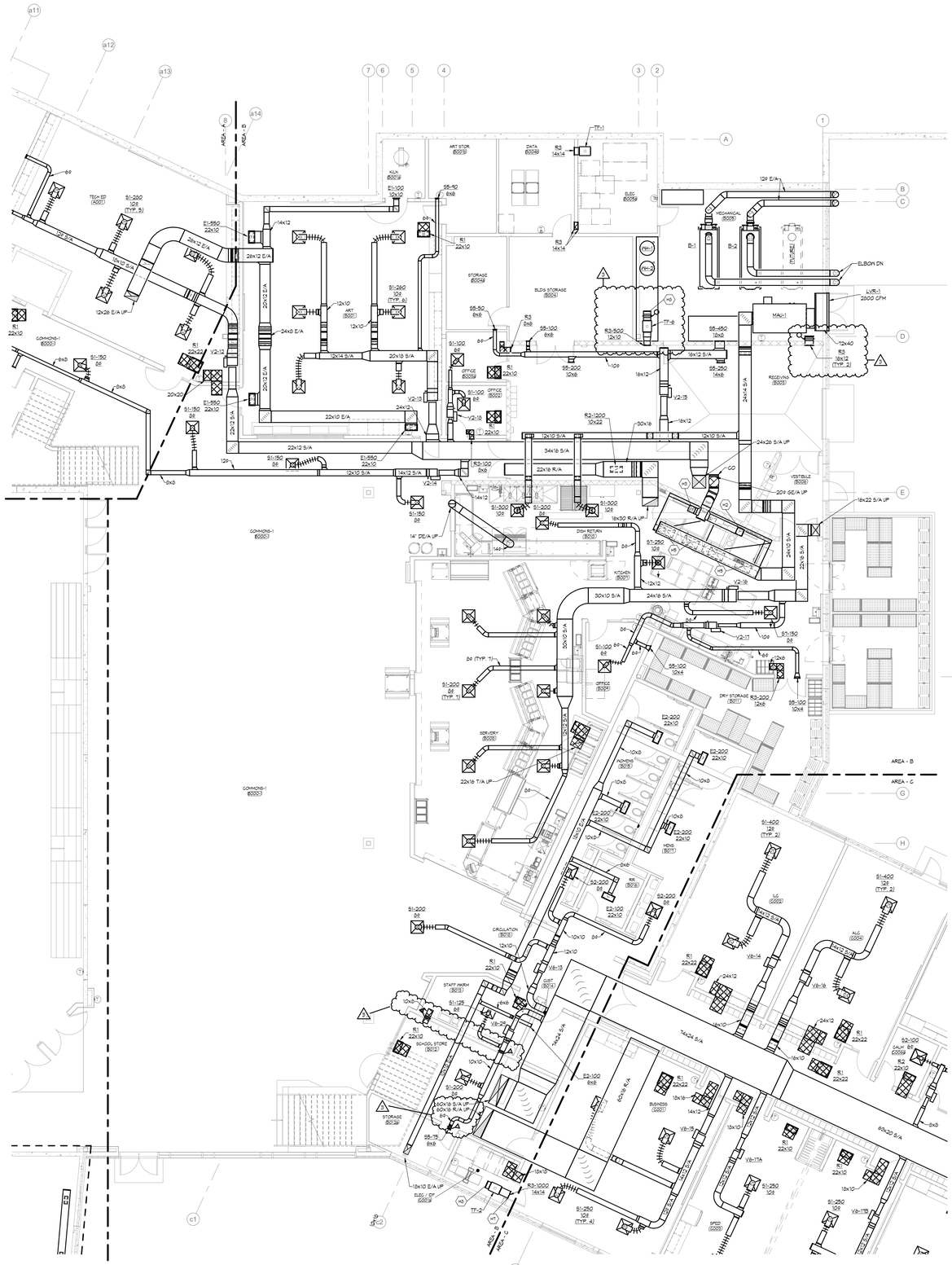
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: MAB JN: 2025168

LOWER LEVEL SEGMENT B - MECHANICAL PIPING

SHEET
M200B



1 LOWER LEVEL PLAN SEGMENT - B - HVAC

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

NORTH

SHEET NOTES

H2	14x12 SE/A DN TO KITCHEN HOOD
H3	12x12 SE/A DN TO KITCHEN HOOD
H5	30x18 SA DN TO GREASE HOOD
H7	AIR TERMINAL TO BE LOCATED ABOVE CEILING.
H9	WIRE MESH TO COVER DUCT OPENING

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

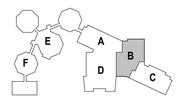
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



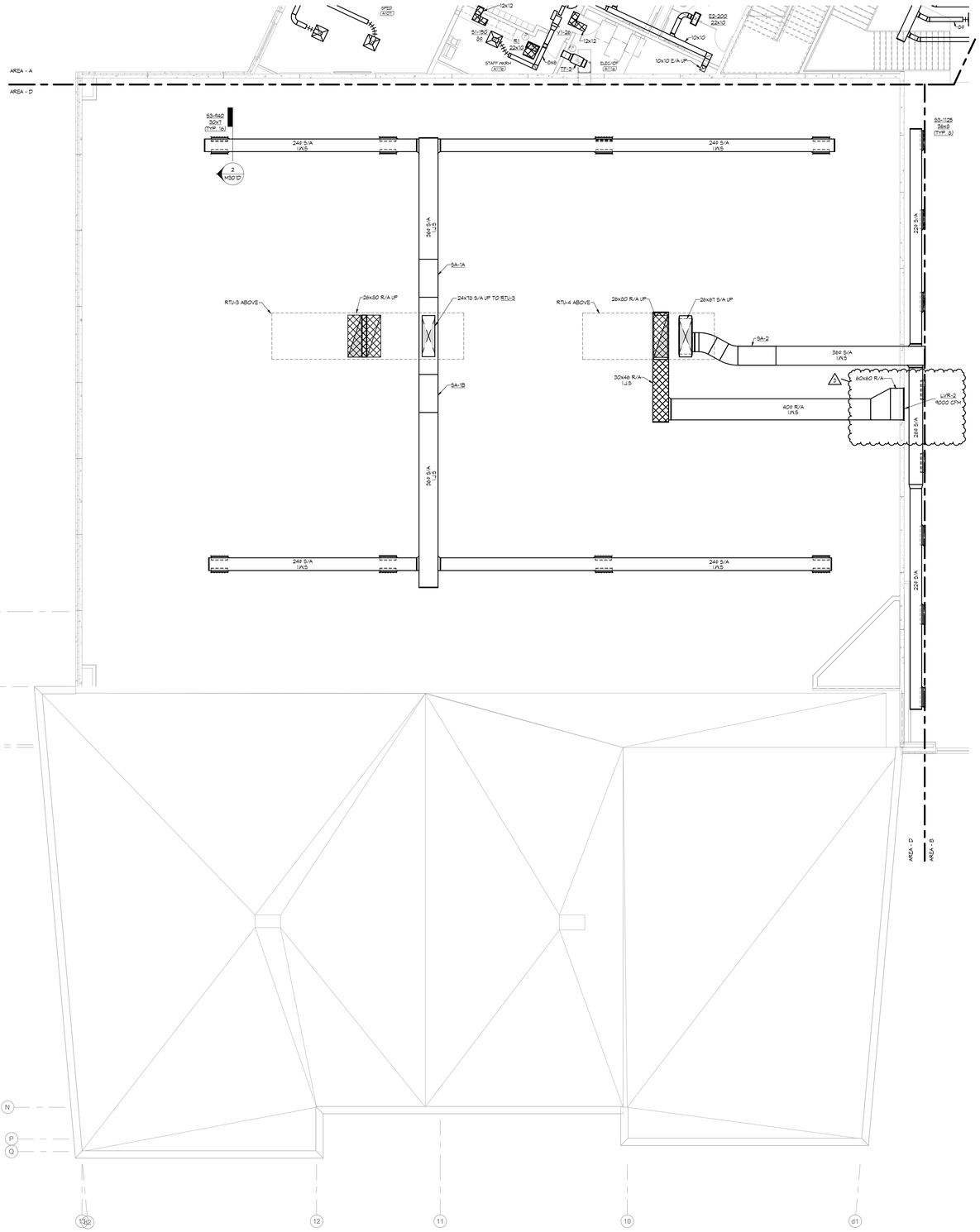
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
3	ADDENDUM #3	03/30/2026

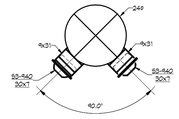
DRAWN BY: MAB JN: 2025168

LOWER LEVEL SEGMENT B - HVAC

SHEET
M300B



1 MAIN LEVEL PLAN SEGMENT - D - HVAC
SCALE: 1/8" = 1'-0"



2 GYM AIR TERMINAL SECTION (TYP)
SCALE: NTS

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

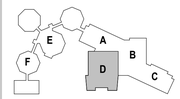
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: MAB JN: 2025168

MAIN LEVEL SEGMENT D - HVAC

SHEET
M301D

AIR HANDLING UNIT SOUND POWER SCHEDULE

UNIT NO.		OCTAVE BAND 63 1	125 2	250 3	500 4	1000 5	2000 6	4000 7	8000 8	NOTES
RTU-1	RADIATED	89	86	89	90	88	87	84	76	-
	UNIT DISCHARGE	89	89	98	96	90	86	84	81	-
	UNIT RETURN	80	82	94	88	80	79	76	70	-
RTU-2	RADIATED	86	83	85	87	84	84	82	74	-
	UNIT DISCHARGE	85	87	92	90	84	80	78	74	-
	UNIT RETURN	77	81	87	82	76	75	72	65	-
RTU-3	RADIATED	87	84	88	87	84	84	82	74	-
	UNIT DISCHARGE	86	86	98	96	91	88	84	76	-
	UNIT RETURN	81	85	94	88	81	79	75	67	-
RTU-4	RADIATED	80	75	83	79	81	82	81	71	-
	UNIT DISCHARGE	82	84	91	89	84	80	78	74	-
	UNIT RETURN	82	82	93	88	80	79	77	69	-
RTU-5	RADIATED	80	75	78	78	79	75	74	66	-
	UNIT DISCHARGE	84	84	89	92	86	83	79	76	-
	UNIT RETURN	74	80	88	79	74	72	66	59	-
RTU-6	RADIATED	90	86	91	91	90	92	86	77	-
	UNIT DISCHARGE	89	89	99	100	94	91	87	81	-
	UNIT RETURN	82	82	98	93	84	83	81	75	-
RTU-7	RADIATED	48	45	48	48	51	49	43	36	-
	UNIT DISCHARGE	78	80	83	81	78	75	73	69	-
	UNIT RETURN	81	82	83	80	73	74	74	68	-

LOUVER SCHEDULE

UNIT NO.	MANUFACTURER & MODEL NO.	WIDTH	HEIGHT	FRAME TYPE	DEPTH	CFM	FREE AREA	PD	NOTES
LVR-1	GREENHECK ESD-635	72"	40"	CH	6"	2,800	11.6	0.01	ALL
LVR-2	GREENHECK ESD-635	60"	60"	CH	6"	9,000	15	0.05	ALL

PD	PRESSURE DROP, IN.W.C.
CH	CHANNEL
F	FLANGE

NOTES:

1. COLOR SELECTED BY ARCHITECT.

UNIT HEATER SCHEDULE

UNIT NO.	MANUFACTURER & MODEL NO.	TYPE	FLUID	CFM	EAT	LAT	OUTPUT MBH	MOTOR HP	MOTOR VOLT	MOTOR PH	DISC BY	EWT	LWT	GPM	NOTES
CUH-1	RITTLING RFRC-420	CM/R	35 %EG	450	65	93.5	14.0	1/15	120	1	MC	140	120	1.5	1
CUH-2	RITTLING RFRWI-350	WH/R/I	35% EG	450	65	93.5	14.0	1/15	120	1	MC	140	120	1.5	1
CUH-3	RITTLING RFRWI-350	WH/R/I	35% EG	1180	65	82.3	22.3	2X(1/15)	120	1	MC	140	120	2.5	1
CUH-4	RITTLING RRC-440	CM/SR	35% EG	1180	65	82.3	22.3	2X(1/15)	120	1	MC	140	120	2.5	1
CUH-5	RITTLING RRC-440	CM/SR	35% EG	1180	65	82.3	22.3	2X(1/15)	120	1	MC	140	120	2.5	1
CUH-6	RITTLING RFRWI-350	WH/R/I	35 %EG	450	65	93.5	14.0	1/15	120	1	MC	140	120	1.5	1
CUH-7	RITTLING RFRC-420	CM/R	35% EG	620	65	89.7	16.7	1/15	120	1	MC	140	120	1.8	1
CUH-8	RITTLING RFRC-420	CM/R	35% EG	620	65	89.7	16.7	1/15	120	1	MC	140	120	1.8	1
CUH-9	RITTLING RFRWI-350	WH/R/I	35% EG	450	65	93.5	14.0	1/15	120	1	MC	140	120	1.5	1
SUH-1	RITTLING RH-63	H	35 %EG	870	65	85.5	19.6	1/10	120	1	MC	140	120	2	-
SUH-2	RITTLING RH-33	H	35% EG	490	65	84.2	10.3	1/15	120	1	MC	140	120	1	-
SUH-3	RITTLING RH-33	H	35% EG	490	65	84.2	10.3	1/15	120	1	MC	140	120	1	-
SUH-4	RITTLING RH-121	H	35% EG	1415	65	89.4	37.8	1/8	120	1	MC	140	120	3.8	-
SUH-5	RITTLING RH-193	H	35% EG	2310	65	90.9	65.6	1/4	120	1	MC	140	120	6.6	-
SUH-6	RITTLING RH-63	H	35% EG	870	65	85.5	19.6	1/10	120	1	MC	140	120	2	-

EG	ETHYLENE GLYCOL
H	HORIZONTAL
I	INVERTED
R	RECESSED
SR	SEMI RECESSED
CM	CEILING MOUNTED
WH	WALL HUNG
DISC	DISCONNECT
MC	MECHANICAL CONTRACTOR

NOTES:

1. PROVIDE WITH STANDARD COLOR SELECTION.

FIN RADIATION SCHEDULE

UNIT NO.	MANUFACTURER & MODEL NO.	FLUID	COVER TYPE	COVER HEIGHT (IN)	COVER DEPTH (IN)	COVER LENGTH (FT)	ROWS	TUBE SIZE (IN)	FINS PER FT	FIN LENGTH (FT)	BTU PER FT	EAT	EWT	TOTAL MBH	GPM	NOTES
FTRO-1	RITTLING FS3	35% EG	ST	14"	5-3/8"	19'-11"	1	3/4"	48	18.0	742	65	140	13.4	3.0	1
FTRO-2	RITTLING FS3	35% EG	ST	14"	5-3/8"	7'	1	3/4"	48	5.0	742	65	140	3.7	0.9	1
FTRO-3	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTRO-4	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTRO-5A	RITTLING FS3	35% EG	ST	14"	5-3/8"	12'	1	3/4"	48	4.5	742	65	140	3.3	0.8	1
FTRO-5B	RITTLING FS3	35% EG	ST	14"	5-3/8"	12'	1	3/4"	48	4.5	742	65	140	3.3	0.8	1
FTRO-6	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTRO-7	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTRO-8	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTRO-9	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTRO-10	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1,3
FTRO-11	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTRO-12	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	12.0	742	65	140	8.9	2.0	1,3
FTRO-13	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	30.0	742	65	140	22.3	5.0	1
FTRO-14	RITTLING FSOS5	35% EG	DS	18"	5-3/8"	W-W	1	3/4"	48	5.0	742	65	140	3.7	0.9	2
FTRO-15	RITTLING FSOS5	35% EG	DS	18"	5-3/8"	W-W	1	3/4"	48	8.0	742	65	140	5.9	1.3	2
FTRO-16	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	4.0	742	65	140	3.0	0.7	1
FTR1-1	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	16.0	742	65	140	11.9	2.7	1
FTR1-2	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	12.0	742	65	140	8.9	2.0	1
FTR1-3	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTR1-4	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTR1-5	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTR1-6	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTR1-7	RITTLING FS3	35% EG	ST	14"	5-3/8"	23'	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTR1-8	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTR1-9	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTR1-10	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	12.0	742	65	140	8.9	2.0	1
FTR1-11	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTR1-12	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	12.0	742	65	140	8.9	2.0	1,3
FTR1-13	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTR1-14	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTR1-15	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTR1-16	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	16.0	742	65	140	11.9	2.7	1,3
FTR1-17	RITTLING FS3	35% EG	ST	14"	5-3/8"	6'	1	3/4"	48	4.0	742	65	140	3.0	0.7	1
FTR2-1	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	12.0	742	65	140	8.9	2.0	1
FTR2-2	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	16.0	742	65	140	11.9	2.7	1
FTR2-3	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTR2-4	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTR2-5	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	12.0	742	65	140	8.9	2.0	1
FTR2-6	RITTLING FS3	35% EG	ST	14"	5-3/8"	28'	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTR2-7	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	18.0	742	65	140	13.4	3.0	1
FTR2-8	RITTLING FS3	35% EG	ST	14"	5-3/8"	24' 6"	1	3/4"	48	9.0	742	65	140	6.7	1.5	1
FTR2-9	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	3.0	742	65	140	2.2	0.5	1
FTR2-10	RITTLING FS3	35% EG	ST	14"	5-3/8"	W-W	1	3/4"	48	8.0	742	65	140	5.9	1.3	1
FTR2-11	RITTLING FS3	35% EG	ST	14"	5-3/8"	6'	1	3/4"	48	5.0	742	65	140	3.7	0.9	1
FTR2-12	RITTLING	35% EG	BE	-	-	-	1	3/4"	48	4.5	742	65	140	3.3	0.8	1

EG	ETHYLENE GLYCOL
DS	DOUBLE SLOPE TOP
ST	SLOPE TOP
BE	BARE ELEMENT
W-W	WALL TO WALL

NOTES:

1. BOTTOM OF COVER 4" ABOVE FLOOR
2. BOTTOM OF COVER 7' ABOVE FLOOR
3. PROVIDE FIN TUBE RADIATION UNDER BASE BID.

SOUND ATTENUATING UNIT SCHEDULE

UNIT NO.	MANUFACTURER & MODEL NO.	SYSTEM	TYPE	UNIT SIZE DIA	UNIT SIZE L	CFM	MAX. S.P.	DYNAMIC INSERTION LOSS DB OCTAVE BAND & MID-FREQUENCY (CPS) 63 1	125 2	250 3	500 4	1000 5	2000 6	4000 7	8000 8	NOTES
SA-1A	PRICE CS36	RTU-3	ST	36	72	7,500	0.1	9	15	22	31	40	38	21	12	-
SA-1B	PRICE CS36	RTU-3	ST	36	72	7,500	0.1	9	15	22	31	40	38	21	12	-
SA-2	PRICE CS36	RTU-4	ST	36	72	9,000	0.1	9	15	22	31	40	38	21	12	-

ST	STRAIGHT

VARIABLE AIR VOLUME UNIT SCHEDULE

UNIT NO.	MANUFACTURER & MODEL NO.	UNIT SIZE	W" x L" x H"	INLET SIZE	OUTLET SIZE	CFM MAX	CFM MIN	CFM HEAT	EAT	LAT	TOTAL MBH	EWT	FLUID	GPM	MAX WPD	NOTES
V1-1	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	500	55.0	92.0	20.1	140	35% EG	2.1	3.0	-
V1-2	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	700	55.0	91.7	27.9	140	35% EG	2.7	3.0	-
V1-3	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	500	55.0	92.0	20.1	140	35% EG	2.1	3.0	3
V1-4	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	500	55.0	92.0	20.1	140	35% EG	2.1	3.0	-
V1-5	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1050	320	500	55.0	90.1	19.1	140	35% EG	1.7	3.0	-
V1-6	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	500	55.0	92.0	20.1	140	35% EG	2.1	3.0	-
V1-7	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1150	350	800	55.0	91.2	31.4	140	35% EG	3.3	3.0	-
V1-8	PRICE SDV	10	14"x16"x13"	10"	14"x13"	750	230	400	55.0	92.9	16.5	140	35% EG	1.5	3.0	-
V1-9	PRICE SDV	06	12"x16"x8"	6"	12"x8"	250	80	150	55.0	86.4	5.2	140	35% EG	2.4	3.0	-
V1-10	PRICE SDV	10	14"x16"x13"	10"	14"x13"	850	260	550	55.0	95.8	24.4	140	35% EG	2.5	3.0	-
V1-11	PRICE SDV	06	12"x16"x8"	6"	12"x8"	150	50	150	55.0	91.8	6.1	140	35% EG	0.6	3.0	-
V1-12	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	500	55.0	92.0	20.1	140	35% EG	2.1	3.0	-
V1-13	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	500	55.0	92.0	20.1	140	35% EG	2.1	3.0	-
V1-14	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	500	55.0	92.0	20.1	140	35% EG	2.1	3.0	-
V1-15	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	500	55.0	92.0	20.1	140	35% EG	2.1	3.0	-
V1-16	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	500	55.0	92.0	20.1	140	35% EG	2.1	3.0	-
V1-17	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	500	55.0	92.0	20.1	140	35% EG	2.1	3.0	-
V1-18	PRICE SDV	12	16"x16"x15"	12"	16"x15"	900	270	450	55.0	92.4	18.3	140	35% EG	2.6	3.0	-
V1-19	PRICE SDV	10	14"x16"x13"	10"	14"x13"	600	180	300	55.0	92.2	12.2	140	35% EG	1.2	3.0	-
V1-20	PRICE SDV	12	16"x16"x15"	12"	16"x15"	900	270	450	55.0	92.4	18.3	140	35% EG	2.6	3.0	-
V1-21	PRICE SDV	06	12"x16"x8"	6"	12"x8"	325	100	325	55.0	106.8	18.3	140	35% EG	2.4	3.0	-
V1-22	PRICE SDV	08	12"x16"x10"	8"	12"x10"	400	120	400	55.0	92.9	16.5	140	35% EG	2.2	3.0	-
V1-23	PRICE SDV	10	14"x16"x13"	10"	14"x13"	750	230	400	55.0	92.9	16.5	140	35% EG	1.5	3.0	-
V1-24	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1100	330	650	55.0	94.5	27.9	140	35% EG	2.6	3.0	-
V1-25	PRICE SDV	06	12"x16"x8"	6"	12"x8"	200	60	100	55.0	86.4	3.5	140	35% EG	2.1	3.0	-
V1-26	PRICE SDV	06	12"x16"x8"	6"	12"x8"	150	50	150	55.0	91.8	6.1	140	35% EG	0.6	3.0	-
V1-27	PRICE SDV	10	14"x16"x13"	10"	14"x13"	650	200	400	55.0	83.5	12.5	140	35% EG	0.8	3.0	-
V1-28	PRICE SDV	06	12"x16"x8"	6"	12"x8"	100	45	100	55.0	102.2	5.2	140	35% EG	0.9	3.0	-
V2-1	PRICE SDV	08	12"x16"x10"	8"	12"x10"	500	150	450	55.0	94.2	19.2	140	35% EG	3.9	3.0	-
V2-2	PRICE SDV	06	12"x16"x8"	6"	12"x8"	150	50	150	55.0	91.8	6.1	140	35% EG	0.6	3.0	-
V2-3	PRICE SDV	06	12"x16"x8"	6"	12"x8"	175	60	175	55.0	95.7	7.8	140	35% EG	1.3	3.0	-
V2-4	PRICE SDV	08	12"x16"x10"	8"	12"x10"	550	170	550	55.0	91.4	21.8	140	35% EG	2.3	3.0	-
V2-5	PRICE SDV	06	12"x16"x8"	6"	12"x8"	200	60	100	55.0	86.4	3.5	140	35% EG	2.1	3.0	-
V2-6	PRICE SDV	10	14"x16"x13"	10"	14"x13"	800	240	240	55.0	98.1	11.3	140	35% EG	1.4	3.0	-
V2-7	PRICE SDV	06	12"x16"x8"	6"	12"x8"	300	90	300	55.0	92.3	12.2	140	35% EG	4.2	3.0	-
V2-8	PRICE SDV	24x16	38"x19"x18"	24"x16"	38"x18"	2250	680	1200	55.0	91.8	47.9	140	35% EG	4.2	3.0	3
V2-9	PRICE SDV	06	12"x16"x8"	6"	12"x8"	250	80	150	55.0	86.4	5.2	140	35% EG	2.4	3.0	-
V2-10	PRICE SDV	10	14"x16"x13"	10"	14"x13"	700	210	600	55.0	95.2	26.2	140	35% EG	2.8	3.0	-
V2-11	PRICE SDV	06	12"x16"x8"	6"	12"x8"	150	50	150	55.0	91.8	6.1	140	35% EG	0.6	3.0	-
V2-12	PRICE SDV	14	20"x16"x18"	14"	20"x18"	1600	480	480	55.0	78.3	12.2	140	35% EG	1.6	3.0	-
V2-13	PRICE SDV	14	20"x16"x18"	14"	20"x18"	1650	500	500	55.0	77.3	12.2	140	35% EG	1.5	3.0	-
V2-14	PRICE SDV	10	14"x16"x13"	10"	14"x13"	800	240	240	55.0	98.1	11.3	140	35% EG	1.4	3.0	-
V2-15	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1050	320	950	55.0	96.4	42.7	140	35% EG	4.5	3.0	-
V2-16	PRICE SDV	16	24"x16"x18"	16"	24"x18"	2000	600	1400	55.0	96.9	63.6	140	35% EG	5.1	3.0	-
V2-17	PRICE SDV	06	12"x16"x8"	6"	12"x8"	300	90	150	55.0	91.8	6.1	140	35% EG	0.6	3.0	-
V2-18	PRICE SDV	06	12"x16"x8"	6"	12"x8"	200	60	100	55.0	86.4	3.5	140	35% EG	2.1	3.0	-
V2-19	PRICE SDV	06	12"x16"x8"	6"	12"x8"	200	60	100	55.0	86.4	3.5	140	35% EG	2.1	3.0	-
V5-1	PRICE SDV	16	24"x16"x18"	16"	24"x18"	2000	600	1400	55.0	96.9	63.6	140	35% EG	5.1	3.0	3
V5-2	PRICE SDV	14	20"x16"x18"	14"	20"x18"	1300	390	700	55.0	92.8	28.7	140	35% EG	3.0	3.0	-
V5-3	PRICE SDV	06	12"x16"x8"	6"	12"x8"	200	60	100	55.0	86.4	3.5	140	35% EG	2.1	3.0	-
V5-4	PRICE SDV	06	12"x16"x8"	6"	12"x8"	200	60	100	55.0	86.4	3.5	140	35% EG	2.1	3.0	-
V5-5	PRICE SDV	06	12"x16"x8"	6"	12"x8"	300	90	150	55.0	91.8	6.1	140	35% EG	0.6	3.0	-
V5-6	PRICE SDV	08	12"x16"x10"	8"	12"x10"	400	120	350	55.0	93.8	14.8	140	35% EG	3.5	3.0	-
V5-7	PRICE SDV	06	12"x16"x8"	6"	12"x8"	100	30	100	55.0	102.2	5.2	140	35% EG	0.9	3.0	-
V6-1	PRICE SDV	14	20"x16"x18"	14"	20"x18"	1350	410	600	55.0	93.7	25.2	140	35% EG	2.1	3.0	3
V6-2	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1050	320	500	55.0	90.1	19.1	140	35% EG	1.7	3.0	3
V6-3	PRICE SDV	14	20"x16"x18"	14"	20"x18"	1450	440	725	55.0	86.7	25.0	140	35% EG	1.3	3.0	-
V6-4	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1050	320	500	55.0	90.1	19.1	140	35% EG	1.7	3.0	-
V6-5	PRICE SDV	14	20"x16"x18"	14"	20"x18"	1350	410	600	55.0	93.7	25.2	140	35% EG	2.1	3.0	-
V6-6	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	500	55.0	92.0	20.1	140	35% EG	2.1	3.0	-
V6-7	PRICE SDV	06	12"x16"x8"	6"	12"x8"	125	40	60	55.0	79.0	1.7	140	35% EG	0.5	3.0	-
V6-8	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	500	55.0	92.0	20.1	140	35% EG	2.1	3.0	-
V6-9	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	500	55.0	92.0	20.1	140	35% EG	2.1	3.0	1
V6-10	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	500	55.0	92.0	20.1	140	35% EG	2.1	3.0	-
V6-11	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	700	55.0	91.7	27.9	140	35% EG	2.7	3.0	1
V6-11	PRICE SDV	10	14"x16"x13"	10"	14"x13"	800	240	240	55.0	98.1	11.3	140	35% EG	1.4	3.0	2
V6-12	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	500	55.0	92.0	20.1	140	35% EG	2.1	3.0	1
V6-13	PRICE SDV	10	14"x16"x13"	10"	14"x13"	600	180	300	55.0	92.2	12.2	140	35% EG	1.2	3.0	-
V6-14	PRICE SDV	10	14"x16"x13"	10"	14"x13"	800	240	240	55.0	98.1	11.3	140	35% EG	1.4	3.0	-
V6-15	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	500	55.0	92.0	20.1	140	35% EG	2.1	3.0	-
V6-16	PRICE SDV	10	14"x16"x13"	10"	14"x13"	800	240	240	55.0	98.1	11.3	140	35% EG	1.4	3.0	-
V6-17A	PRICE SDV	08	12"x16"x10"	8"	12"x10"	500	150	350	55.0	91.7	14.0	140	35% EG	1.4	3.0	-
V6-17B	PRICE SDV	08	12"x16"x10"	8"	12"x10"	500	150	350	55.0	91.7	14.0	140	35% EG	1.4	3.0	-
V6-18	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	300	55.0	95.1	20.1	140	35% EG	0.9	3.0	-
V6-19	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	300	55.0	95.1	20.1	140	35% EG	0.9	3.0	-
V6-20	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	300	55.0	95.1	20.1	140	35% EG	0.9	3.0	-
V6-21	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	300	55.0	95.1	20.1	140	35% EG	0.9	3.0	-
V6-22	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	300	55.0	95.1	20.1	140	35% EG	0.9	3.0	-
V6-23	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	300	55.0	95.1	20.1	140	35% EG	0.9	3.0	-
V6-24	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	500	55.0	92.0	20.1	140	35% EG	2.1	3.0	1
V6-25	PRICE SDV	12	16"x16"x15"	12"	16"x15"	1000	300	500	55.0	92.0	20.1	140	35% EG	2.1	3.0	1
V6-26	PRICE SDV	06	12"x16"x8"	6"	12"x8"	225	70	70	55.0	87.9	2.6	140	35% EG	0.5	3.0	-
V6-27	PRICE SDV	10	14"x16"x13"	10"	14"x13"	750	230	400	55.0	91.0	16.5	140	35% EG	1.5	3.0	1
V6-27	PRICE SDV	08	12"x16"x10"	8"	12"x10"	500	150	450	55.0	94.2	19.2	140	35% EG	3.9	3.0	2
V6-28	PRICE SDV	06	12"x16"x8"	6"	12"x8"	125	40	60	55.0	79.0	1.7	140	35% EG	0.5	3.0	-
V6-29	PRICE SDV	08	12"x16"x10"	8"	12"x10"	400	120	350	55.0	93.8	14.8	140	35% EG	3.5	3.0	-

EG	ETHYLENE GLYCOL

NOTES:

1. PROVIDE VAV UNDER BASE BID.
2. PROVIDE VAV UNDER ALTERNATE 12.
3. PROVIDE VAV WITH SOUND ATTENUATOR.

ICON
ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

STEVE J. HOEPFNER
PE-8407
DATE 3/30/2026

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
1	ADDENDUM #1	03/17/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: MAB
JN: 2025168

MECHANICAL SCHEDULES

SHEET
M700

3/30/2026 3:50:24 PM
Autodesk Docs://24-028 Valley City Public Schools High School/2025168_Valley City Public Schools New High School_MEP26.rvt

ADDENDUM - 3

Date	March 30, 2026
Project #	2025168
Project Name	Valley City Public Schools New High School
Project Location	Valley City, ND

NOTICE TO BIDDERS: This Addendum is prepared to supplement information presented in the Drawings and Project Manual for the above referenced project. All additions, changes, omissions, and conditions listed herein shall become an integral part of the Contract Documents.

Specifications

ITEM NO. 1 SECTION 281301 – Electronic Access Control System

A. Entire section added.

Drawings

ITEM NO. 2 E002 – SITE PLAN – ELECTRICAL

A. Added fiber optic conduit location.

ITEM NO. 3 E101E – MAIN LEVEL SEGMENT E – ELECTRICAL DEMOLITION

A. Now showing existing Jefferson Elementary utility transformer.

ITEM NO. 4 E202A – UPPER LEVEL SEGMENT A – LIGHTING

A. Added sheet note L5.

ITEM NO. 5 E300A – LOWER LEVEL SEGMENT A – POWER

A. Added Gym AV panel.
B. Added receptacle location.
C. Corrected sheet note W16.
D. Added sheet note W20.

ITEM NO. 6 E300B – LOWER LEVEL SEGMENT B – POWER

A. Updated circuiting.
B. Added missing mechanical equipment FA devices.

ITEM NO. 7 E300D – LOWER LEVEL SEGMENT D – POWER

A. Updated circuiting.
B. Corrected sheet notes.

ITEM NO. 8 E301A – MAIN LEVEL SEGMENT A – POWER

A. Updated circuiting.

ITEM NO. 9 E301B – MAIN LEVEL SEGMENT B – POWER

A. Updated circuiting.

ITEM NO. 10 E302A – UPPER LEVEL SEGMENT A – POWER

A. Removed unused Sheet Notes.
B. Updated circuiting.

ITEM NO. 11 E400A – LOWER LEVEL SEGMENT A – TELECOMMUNICATIONS
- A. Located Gym AV equipment rack.
- B. Added data location.
- C. Added sheet note T7.

ITEM NO. 12 E401B – MAIN LEVEL SEGMENT B – TELECOMMUNICATIONS
- A. Added control connection.

ITEM NO. 13 E401E – MAIN LEVEL SEGMENT E – TELECOMMUNICATIONS
- A. Updated General Note A.

ITEM NO. 14 E401F – MAIN LEVEL SEGMENT F – TELECOMMUNICATIONS
- A. Updated General Note A.

ITEM NO. 15 E500B – LOWER LEVEL SEGMENT B – ELECTRONIC SAFETY & SECURITY
- A. Added General Note A.
- B. Added fire/smoke damper devices.

ITEM NO. 16 E501C – MAIN LEVEL SEGMENT C – ELECTRONIC SAFETY & SECURITY
- A. Removed unused Sheet Notes.
- B. Added General Note A.
- C. Added fire/smoke damper devices.

ITEM NO. 17 E730 –POWER DETAILS
- A. Updated Riser Diagram.
- B. Updated Transformer schedule.

ITEM NO. 18 E740 – SYSTEMS DETAILS
- A. Updated Telecomm riser.
- B. Added Fire/Smoke damper detail.
- C. Updated door rough-in details.
- D. Updated typical Comm. Outlet detail.

ITEM NO. 19 E741 – SYSTEMS DETAILS
- A. Updated Commons AV riser diagram.

ITEM NO. 20 E820 – LIGHTING SCHEDULES
- A. Update light fixture schedule.

ITEM NO. 21 E830 –POWER SCHEDULES
- A. Updates to all schedules.

ITEM NO. 22 E831 –POWER SCHEDULES
- A. Updates to all panel schedules.

ITEM NO. 23 E832 –POWER SCHEDULES
- A. Updates to all panel schedules.

ITEM NO. 24 E900 – ALTERNATE 2 – ELECTRICAL

A. Clarified alternate scope.
B. Corrected sheet note.

PRIOR APPROVALS

SECTION	DESCRIPTION OF EQUIPMENT	APPROVED MANUFACTURER
26 51 00	Light Fixture Type EM1R	Lithonia:ERE
	Light Fixture Type G9	Lithonia:JHBL
	Light Fixture Type G9E	Lithonia:JHBL
	Light Fixture Type L22	Mark:Slot 2
		NeoRay:Define
	Light Fixture Type L33	Lumenwerx:VIA Splash
		Axis:Extend 4
	Light Fixture Type L34	Lumenwerx:VIA Splash
		Axis:Extend 4
	Light Fixture Type L44	Mark:Slot 1
	Light Fixture Type L98	Mark:Slot 2
		NeoRay:Define
	Light Fixture Type L99	Mark:Slot 2
		NeoRay:Define
	Light Fixture Type V2	Lithonia:FEM LED
		Metalux:Vaportite
	Light Fixture Type AK11	Failsafe:FLR2
	Light Fixture Type D99	Spectrum:RDF04
	Light Fixture Type N7	Axis:Beam 3
	Light Fixture Type Q11	Beamever:Linio Neaon 1617
	Light Fixture Type S3	AFX:Tonya

END OF ADDENDUM

GENERAL NOTES

A. REFER TO ELECTRICAL RISER DIAGRAM FOR ALL INFORMATION CONCERNING THE ELECTRICAL SERVICE.

SHEET NOTES

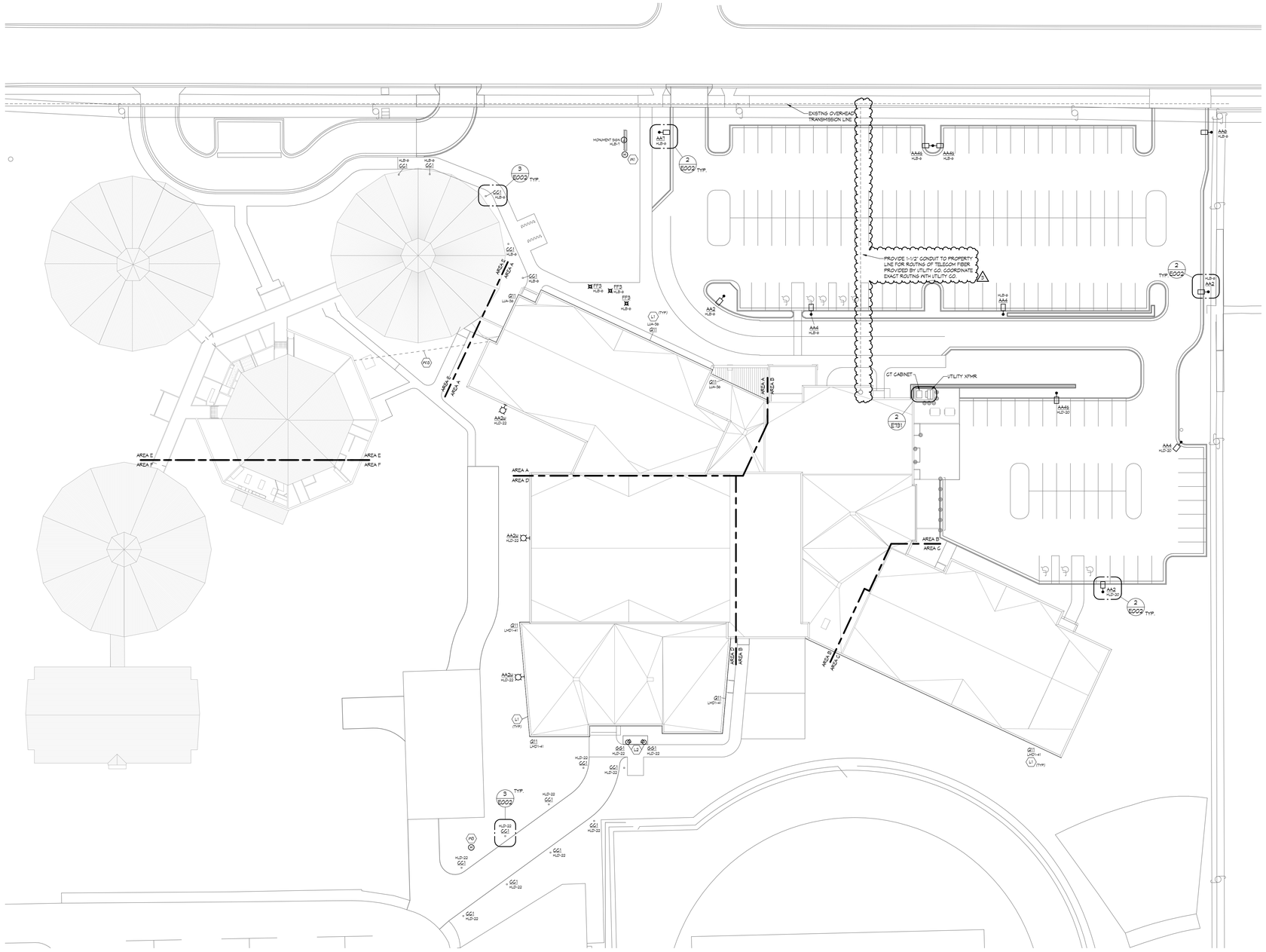
L1 PROVIDE UNDER ALTERNATE 1. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.

L2 PROVIDE UNDER ALTERNATE 2. FIXTURES ARE TO BE MOUNTED TO BASE OF MONUMENT SIGN. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION. E.G. TO ADJUST FIXTURE AIMPOINT AS DIRECTED BY ARCHITECT.

M1 PROVIDE 277V POWER TO MONUMENT SIGN LIGHTING IN 1-1/2" CONDUIT. PROVIDE (2) ADDITIONAL 1-1/2" CONDUITS FOR FUTURE USE AND ROUTE BACK TO ELECTRICAL ROOM BOOTS6.

M2 PROVIDE (2) 1-1/2" CONDUIT TO THIS LOCATION FOR FUTURE MONUMENT SIGN.

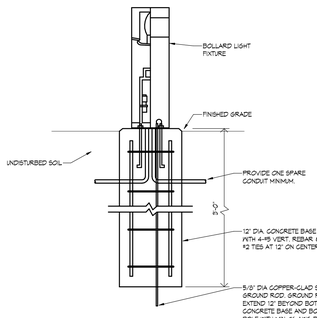
M13 UNDERGROUND ROUTING OF JEFFERSON ELEMENTARY ELECTRICAL SERVICE BACKFEED FROM NEW SERVICE ENTRANCE SWITCHBOARD. REFER TO ELECTRICAL RISER DIAGRAM FOR ADDITIONAL INFORMATION.



1 SITE PLAN - ELECTRICAL
SCALE: 1" = 30'-0"

LIGHT POLE BASE DETAIL NOTES:

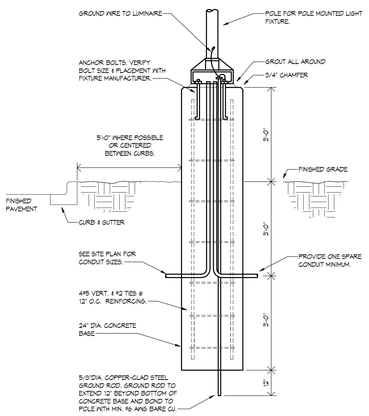
A. SEE SITE PLAN FOR LOCATIONS AND QUANTITY.
B. PROVIDE SPARE 1-1/2" PVC FROM EACH BOLLARD BASE.
C. CONCRETE BASE PROVIDED BY E.C.
D. SEE LUMINARES, GROUNDING AND BONDING SPECIFICATION SECTIONS.



3 FLUSH GRADE BOLLARD BASE DETAIL
SCALE: NTS

LIGHT POLE BASE DETAIL NOTES:

A. SEE SITE PLAN FOR LOCATIONS AND QUANTITY.
B. PROVIDE 6'-0" OF COILED WIRE AT TOP OF EACH BASE.
C. PROVIDE SPARE 1-1/2" PVC FROM EACH BASE.
D. CONCRETE BASE PROVIDED BY E.C.
E. SEE LUMINARES, GROUNDING AND BONDING SPECIFICATION SECTIONS.
F. PROVIDE VIBRATION DAMPENERS FOR ALL POLES/POSTS.
G. ALL POLE/POSTS SHALL HAVE HANDHOLES NEAR BASE.



2 LIGHT POLE BASE DETAIL - 3'-0" BASE
SCALE: NTS

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

REGISTERED PROFESSIONAL ENGINEER
TRAVOR D. FREDRICKSON
PE - 27743
DATE 03/10/2026
NORTH DAKOTA

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
1	ADDENDUM #1	03/17/2026
2	ADDENDUM #2	03/24/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author JN: 2025168

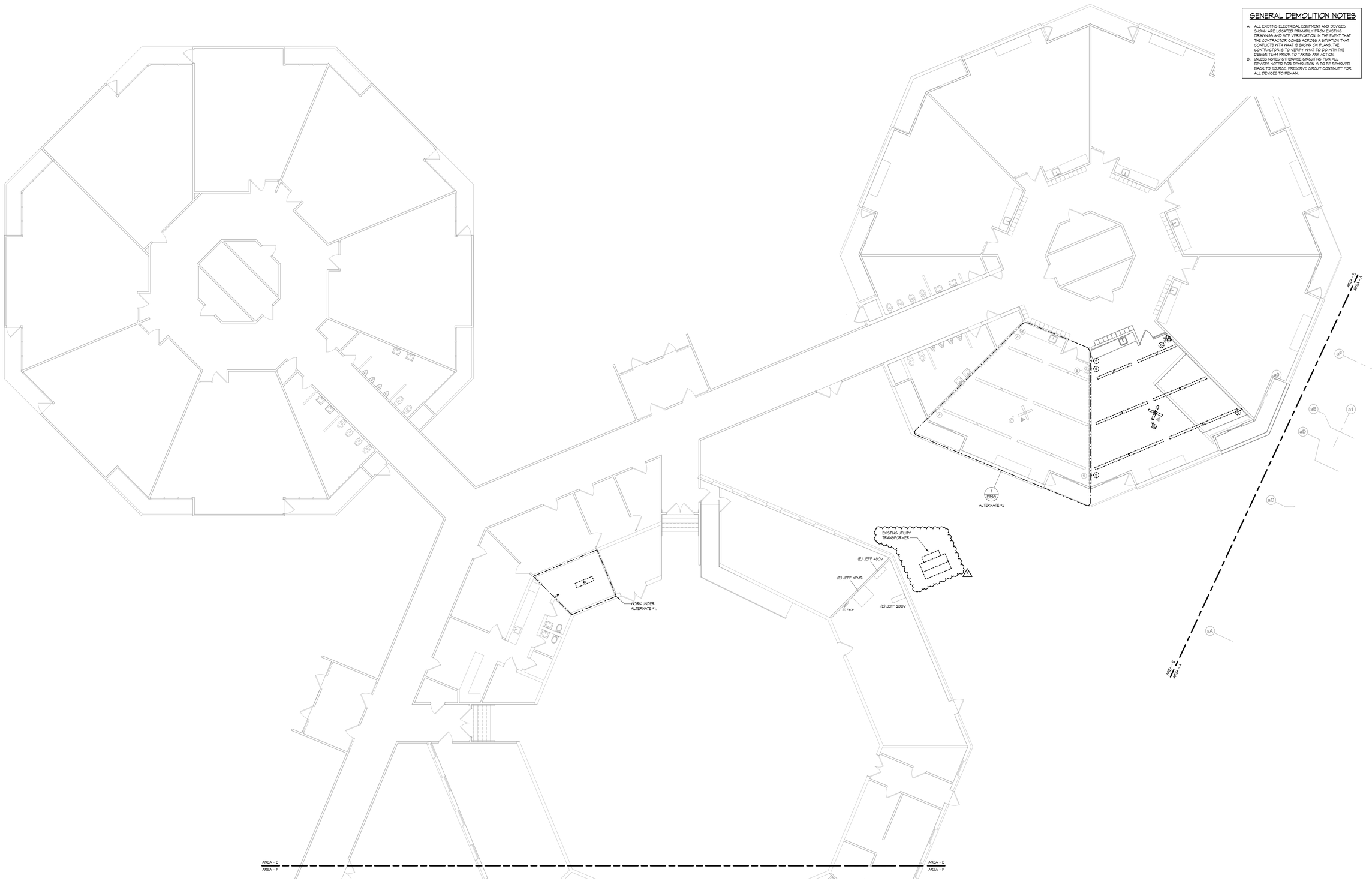
SITE PLAN - ELECTRICAL

SHEET
E002

GENERAL DEMOLITION NOTES

A. ALL EXISTING ELECTRICAL EQUIPMENT AND DEVICES SHOWN ARE LOCATED PRIMARILY FROM EXISTING DRAWINGS AND SITE VERIFICATION. IN THE EVENT THAT THE CONTRACTOR COMES ACROSS A SITUATION THAT CONFLICTS WITH WHAT IS SHOWN ON PLANS, THE CONTRACTOR IS TO VERIFY WHAT TO DO WITH THE DESIGN TEAM PRIOR TO TAKING ANY ACTION.

B. UNLESS NOTED OTHERWISE CAP/TAG FOR ALL DEVICES NOTED FOR DEMOLITION IS TO BE REMOVED BACK TO SOURCE. PRESERVE CIRCUIT CONTINUITY FOR ALL DEVICES TO REMAIN.



1 MAIN LEVEL DEMOLITION PLAN - AREA E - ELECTRICAL
SCALE: 1/8" = 1'-0"

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

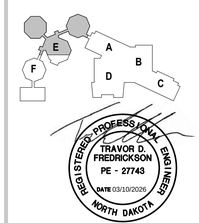
STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



REGISTERED PROFESSIONAL ENGINEER
TRAVOR D. FREDRICKSON
PE - 27743
DATE 03/10/2026
NORTH DAKOTA

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
1	ADDENDUM #1	03/17/2026
2	ADDENDUM #2	03/24/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author JN: 2025168

MAIN LEVEL SEGMENT E - ELECTRICAL DEMOLITION

SHEET
E101E

1 UPPER LEVEL PLAN SEGMENT - A - LIGHTING
SCALE: 1/8" = 1'-0"

SHEET NOTES

L5 COORDINATE LOCATIONS OF LIGHT FIXTURES IN ELEVATOR SHAFT WITH ELEVATOR INSTALLER.

LIGHTING CONTROL NOTES:

GENERAL NOTES:
- AUTOMATIC LIGHTING CONTROL REQUIRED TO COMMUNICATE WIRELESSLY UNLESS NOTED OTHERWISE IN LIGHTING CONTROL NOTES. ALL SWITCHES AND SENSORS ALL REQUIRE A 120V CONNECTION.

GENERAL NOTES:
A. WINDOW DAYLIGHTING ZONE DEPTH IS 15'-0" DEEP FROM WINDOW AND WIDTH IS 2'-0" WIDER FROM EACH EDGE OF WINDOW. SKYLIGHTING DAYLIGHT ZONE DEPTH IS THE AVERAGE CEILING HEIGHT FROM THE EDGE OF THE SKYLIGHT INTO THE ROOM.
B. LUMINARES INDICATED WITH 'NL' SHALL BE CIRCUITED AS NIGHT LIGHTS AND SHALL REMAIN ON 24/7.
C. PROVIDE POWER PACKS AND ACCESSORIES AS REQUIRED FOR A FULLY FUNCTIONING SYSTEM.
D. OCCUPANCY SENSOR AND PHOTOCELL FUNCTION MAY BE COMBINED INTO ONE DEVICE.
E. COORDINATE CONFIGURATION OF LIGHTING CONTROL ZONES WITH LOCATION OF TEACHING / TEACHING WALL OF ALL CLASSROOMS.

LG1 MANUAL WALL SWITCH / DIMMER CONTROL.
LG2 WALL MOUNTED PIR SENSOR.
LG4 WALL MOUNTED DUAL TECHNOLOGY SENSOR.
LG7 WALL MOUNTED DUAL TECHNOLOGY SENSOR WITH INTEGRAL 0-10V DIMMER.
LG9 CEILING MOUNTED PIR SENSOR. MANUAL CONTROLS AS INDICATED ON FLOOR PLAN.
LG10 CEILING MOUNTED DUAL TECHNOLOGY SENSOR. MANUAL CONTROLS AS INDICATED ON FLOOR PLAN.
LG11 VACANCY SENSOR(S) WITHIN ROOM TO BE INTEGRAL TO LIGHT FIXTURE(S). PROVIDE AS MANY INTEGRAL SENSORS AS IS NECESSARY FOR COVERAGE OF ENTIRE ROOM. ALL OTHER LIGHT FIXTURES ARE TO COMMUNICATE WITH FIXTURES WITH INTEGRAL SENSORS FOR AUTOMATIC OFF OPERATION. 120V CONTROL AT ENTRANCE(S) WITH WIRELESS CONTROL AT LOCATION COORDINATED WITH OWNER. FRONT OF ROOM TO BE CONTROLLED SEPARATE FROM BACK OF ROOM.
LG12 VACANCY SENSOR(S) WITHIN SPACE TO BE INTEGRAL TO LIGHT FIXTURE(S). PROVIDE AS MANY INTEGRAL SENSORS AS IS NECESSARY FOR COVERAGE OF ENTIRE SPACE. ALL OTHER LIGHT FIXTURES ARE TO COMMUNICATE WITH FIXTURES WITH INTEGRAL SENSORS FOR AUTOMATIC OFF OPERATION. AUTO OFF OPERATION IS TO BE PLACED ON DIGITAL TIME-SCHEDULE THAT SHALL BE COORDINATED WITH OWNER. LIGHTING WITHIN STAIRWELLS TO STAY ON 24/7 AND DIM TO 50% WHEN AREA IS UNOCCUPIED FOR 30 MINUTES.
LG14 CEILING-MOUNTED DUAL TECHNOLOGY SENSOR. NO MANUAL CONTROLS.
LG16 WIRELESS OCCUPANCY SENSOR INTEGRATED WITHIN LIGHT FIXTURES. REFER TO LIGHT FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.
LG17 VACANCY SENSOR(S) WITHIN ROOM TO BE INTEGRAL TO LIGHT FIXTURE(S). PROVIDE AS MANY INTEGRAL SENSORS AS IS NECESSARY FOR COVERAGE OF ENTIRE ROOM. ALL OTHER LIGHT FIXTURES ARE TO COMMUNICATE WITH FIXTURES WITH INTEGRAL SENSORS FOR AUTOMATIC OFF OPERATION. 120V CONTROL AT ENTRANCE(S) WITH WIRELESS CONTROL AT LOCATION COORDINATED WITH OWNER.
LG18 CEILING MOUNTED VACANCY SENSORS RATED FOR HIGH HUMIDITY. AUTO OFF OPERATION IS TO BE PLACED ON DIGITAL TIME-SCHEDULE THAT SHALL BE COORDINATED WITH OWNER.

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

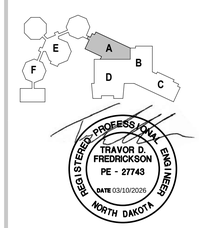
STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



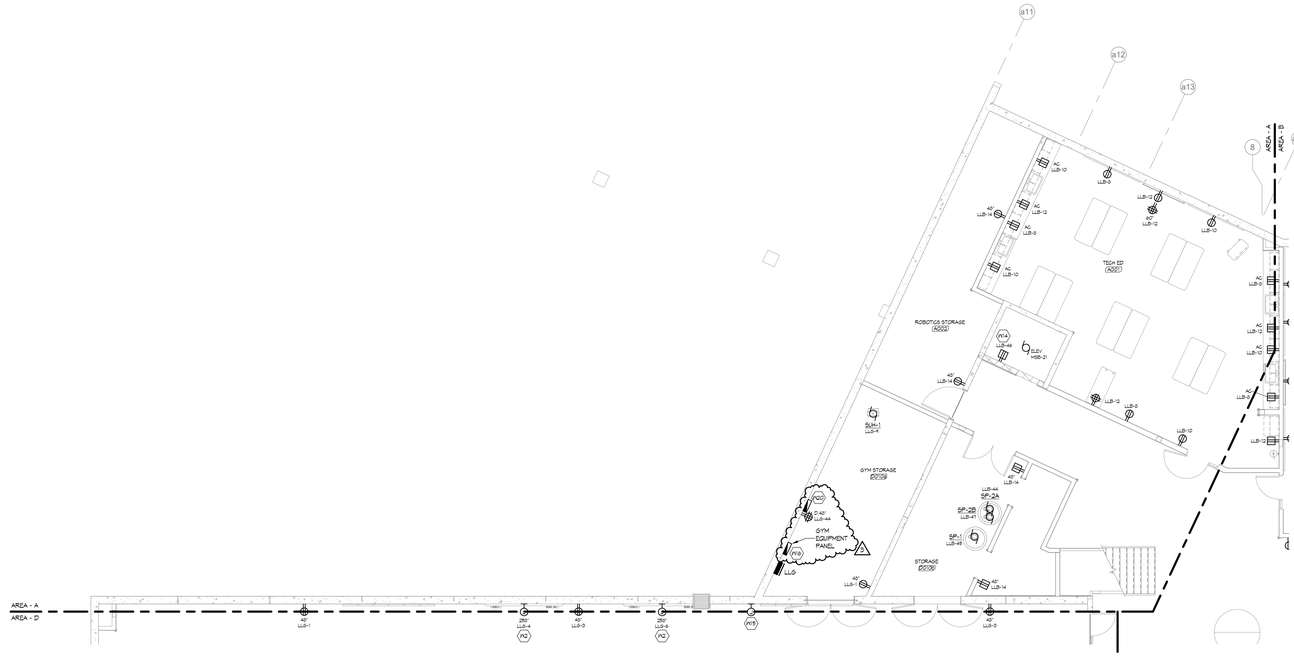
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
2	ADDENDUM #2	03/24/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author JN: 2025168

UPPER LEVEL SEGMENT A - LIGHTING

SHEET
E202A



1 LOWER LEVEL PLAN SEGMENT - A - POWER

NORTH

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

GENERAL NOTES

A. ALL RECEPTACLES ARE TO BE TAMPER RESISTANT.

SHEET NOTES

KI2	PROVIDE 120V POWER TO OWNER FURNISHED SCOREBOARD. COORDINATE EXACT LOCATION AND POWER REQUIREMENTS WITH OWNER/ARCHITECT PRIOR TO ROUGH-IN.
KI4	COORDINATE LOCATIONS OF RECEPTACLES IN ELEVATOR SHAFT WITH ELEVATOR INSTALLER.
KI5	GYMNASIUM EQUIPMENT CONTROL KEYED SWITCHES FOR MOTORIZED GYMNASIUM EQUIPMENT. ROUTE CONTROL WIRING IN 3/4"C. TO GYMNASIUM CONTROL CENTER.
KI8	PROVIDE RECESSED LOCKABLE BOX FOR GYM CONTROL CENTER/RELAY PANEL. VERIFY EXACT LOCATIONS PRIOR TO ROUGH-IN. GYMNASIUM CONTROL CENTER PROVIDED BY DIV. 11. DIVISION 26 SHALL SET, WIRE, AND CONNECT. ROUTE 3/4"C. TO KEYED SWITCHES. PULL #18 SHIELDED CABLE. REFER TO MANUFACTURER'S INSTALLATION / WIRING DIAGRAMS FOR ADDITIONAL INFORMATION PRIOR TO ROUGH-IN. PROVIDE (2) 20A, 120V CONNECTIONS TO EACH REAR PANEL.
A2C	GYM AUDIO/VISUAL EQUIPMENT RACK. E.C.T. TO VERIFY LOCATION OF NEARBY 4-PLEX RECEPTACLE WITH EQUIPMENT INSTALLER PRIOR TO ROUGH-IN.

ICON
ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

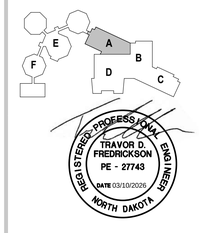
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



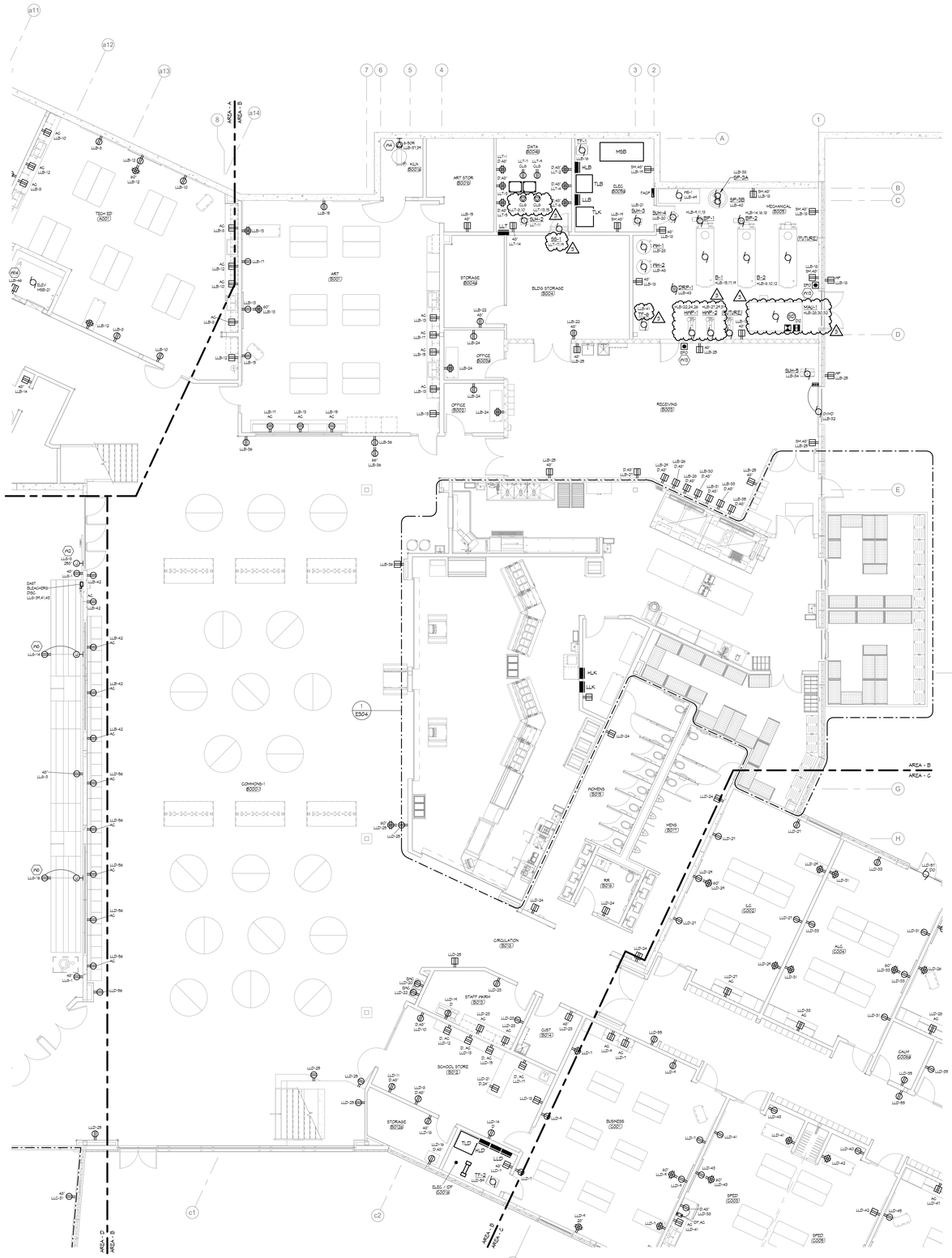
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author JN: 2025168

LOWER LEVEL SEGMENT A - POWER

SHEET
E300A



1 LOWER LEVEL PLAN SEGMENT - B - POWER

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

NORTH

GENERAL NOTES

A. ALL RECEPTACLES ARE TO BE TAMPER RESISTANT.

SHEET NOTES

- XI2 PROVIDE 120V POWER TO OWNER FURNISHED SCOREBOARD. COORDINATE EXACT LOCATION AND POWER REQUIREMENTS WITH OWNER/ARCHITECT PRIOR TO ROUGH-IN.
- XI4 VERIFY EXACT POWER REQUIREMENTS PRIOR TO ROUGH-IN.
- XI6 PROVIDE OUTLET AT FRONT OF BLEACHERS. PROVIDE #12 SO CORD, SUPPORTED FROM BLEACHERS WITH STRAIN RELIEF.
- XI13 PROVIDE EMERGENCY STOP BUTTON OF BOILERS AND WATER HEATERS. PUSH BOTTON SHALL SHUT DOWN BOILERS AND WATER HEATER ON ACTIVATION. PROVIDE WITH PROTECTIVE COVER. VERIFY EXACT LOCATION WITH AHJ.
- XI14 COORDINATE LOCATIONS OF RECEPTACLES IN ELEVATOR SHAFT WITH ELEVATOR INSTALLER.

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

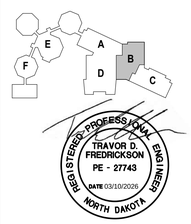
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
1	ADDENDUM #1	03/17/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author JN: 2025168

LOWER LEVEL SEGMENT B - POWER

SHEET

E300B

1 LOWER LEVEL PLAN SEGMENT - D - POWER
SCALE: 1/8" = 1'-0"

GENERAL NOTES

A. ALL RECEPTACLES ARE TO BE TAMPER RESISTANT.

SHEET NOTES

- K2 PROVIDE 120V POWER TO OWNER FURNISHED SCOREBOARD. COORDINATE EXACT LOCATION AND POWER REQUIREMENTS WITH OWNER/ARCHITECT PRIOR TO ROUGH-IN.
- K5 E.C. TO PROVIDE 4" SQUARE BOX WITH 1/2" DEEP COVER PLATE. J-BOX TO BE LOCATED WITHIN 3'-0" OF BASKETBALL GOAL PANCH(ES). RECEPTACLE 4-POLE TWIST-LOCK TYPE AS RECOMMENDED BY MANUFACTURER (VERIFY TYPE). CONNECT TO RELAY AT GYM CONTROL CENTER.
- K6 E.C. TO PROVIDE 4" SQUARE BOX WITH 1/2" DEEP COVER. J-BOX TO BE LOCATED WITH IN 3'-0" OF DIVIDER CURTAIN PANCH. RECEPTACLE 4-POLE TWIST-LOCK TYPE AS RECOMMENDED BY MANUFACTURER (VERIFY TYPE). CIRCUIT ROUTED THROUGH RELAY AT GYMNASIUM CONTROL PANEL. COORDINATE FINAL LOCATION WITH EQUIPMENT SUPPLIER.
- K7 RECEPTACLE AT BACKBOARD FOR SHOT CLOCK. COORDINATE LOCATION WITH GYM EQUIPMENT SUPPLIER.
- K8 PROVIDE OUTLET AT FRONT OF BLEACHERS. PROVIDE #12 SO CORD, SUPPORTED FROM BLEACHERS WITH STRAIN RELIEF.
- K12 E.C. TO PROVIDE 4" SQUARE BOX WITH 1/2" DEEP COVER PLATE. J-BOX TO BE LOCATE WITHIN 3'-0" OF MAT HOIST PANCH. VERIFY CONNECTION TYPE WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH-N. CIRCUIT ROUTED THROUGH RELAY AT GYMNASIUM CONTROL.
- K13 GYMNASIUM EQUIPMENT CONTROL KEYED SWITCHES FOR MOTORIZED GYMNASIUM EQUIPMENT. ROUTE CONTROL WIRING IN 3/4"C. TO GYMNASIUM CONTROL CENTER.
- K16 PROVIDE RECESSED LOCKABLE BOX FOR GYM CONTROL CENTER/RELAY PANEL. VERIFY EXACT LOCATIONS PRIOR TO ROUGH-IN. GYMNASIUM CONTROL CENTER PROVIDED BY DIV. 11. DIVISION 28 SHALL SET, WIRE, AND CONNECT. ROUTE 3/4"C. TO KEYED SWITCHES. PULL #10 SHIELDED CABLE. REFER TO MANUFACTURER'S INSTALLATION / WIRING DIAGRAMS FOR ADDITIONAL INFORMATION PRIOR TO ROUGH-IN. PROVIDE (2) 20A, 120V CONNECTIONS TO EACH RELAY PANEL.

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

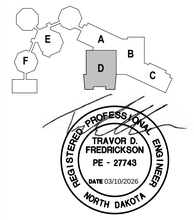
STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author JN: 20251168

LOWER LEVEL SEGMENT D - POWER

SHEET
E300D

NORTH

1 MAIN LEVEL PLAN SEGMENT - A - POWER

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

GENERAL NOTES

A. ALL RECEPTACLES ARE TO BE TAMPER RESISTANT.

SHEET NOTES

XV4 PROVIDE 120V CONNECTION TO MOTORIZED CHANGING STATION. COORDINATE EXACT REQUIREMENTS WITH ARCHITECT. COORDINATE EXACT LOCATION OF REMOTELY MOUNTED CONTROLS AND EMERGENCY STOP WITH ARCHITECT AND OWNER.

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

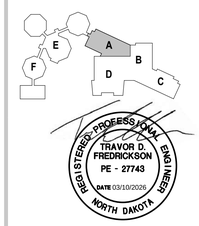
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



DRAWING HISTORY

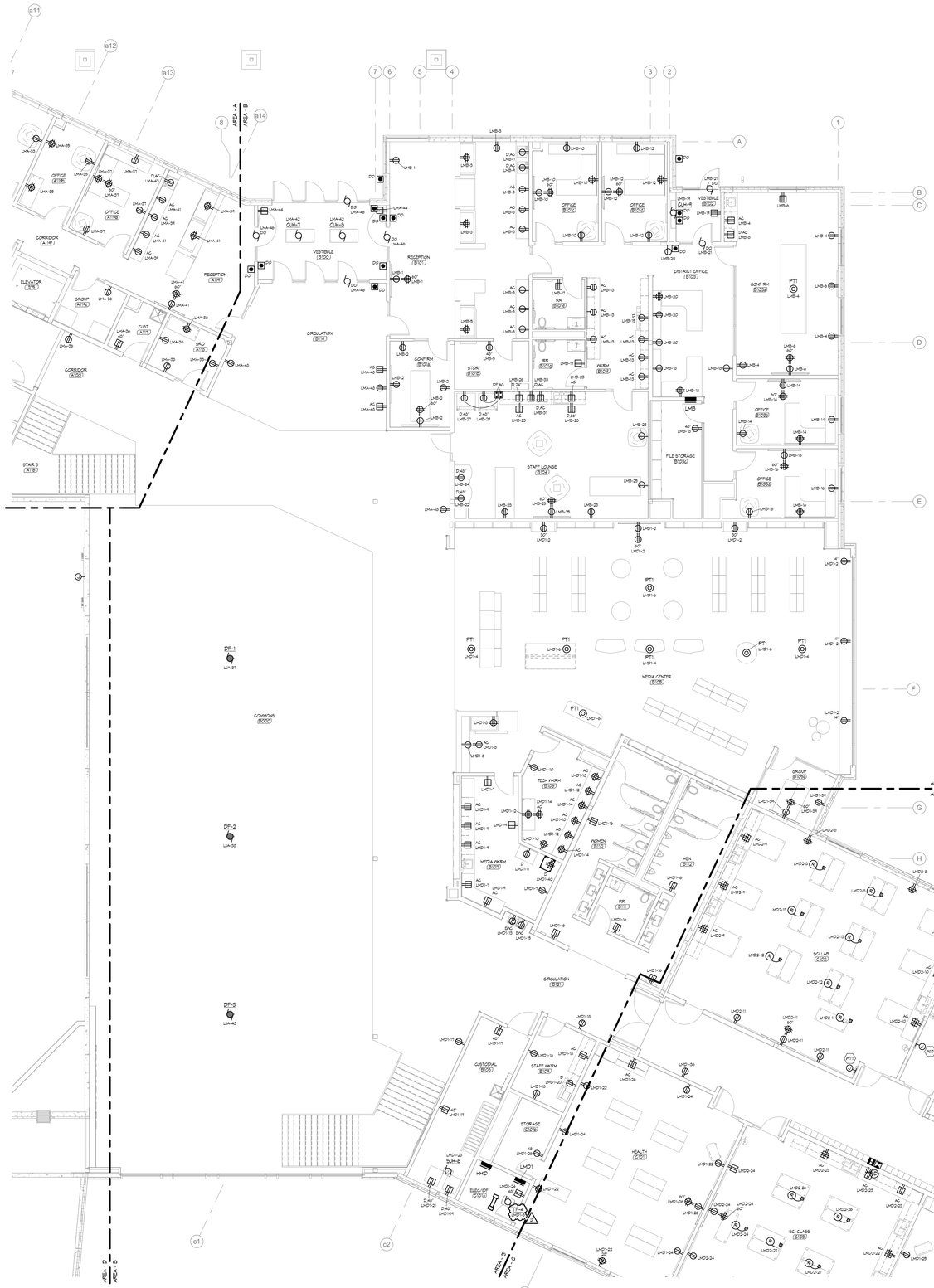
NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
2	ADDENDUM #2	03/24/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author JN: 20251168

MAIN LEVEL SEGMENT A - POWER

SHEET

E301A



GENERAL NOTES

A. ALL RECEPTACLES ARE TO BE TAMPER RESISTANT.

SHEET NOTES

#1T PROVIDE 120 POWER TO GAS SHUT-OFF. COORDINATE EXACT LOCATION WITH ARCHITECT/M.C. PRIOR TO ROUGH-IN.

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

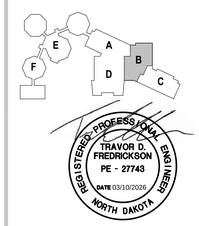
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author JN: 20251168

MAIN LEVEL SEGMENT B - POWER

SHEET
E301B

GENERAL NOTES

A. ALL RECEPTACLES ARE TO BE TAMPER RESISTANT.

1 UPPER LEVEL PLAN SEGMENT - A - POWER

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

NORTH

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

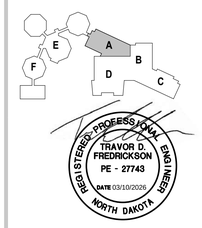
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



DRAWING HISTORY

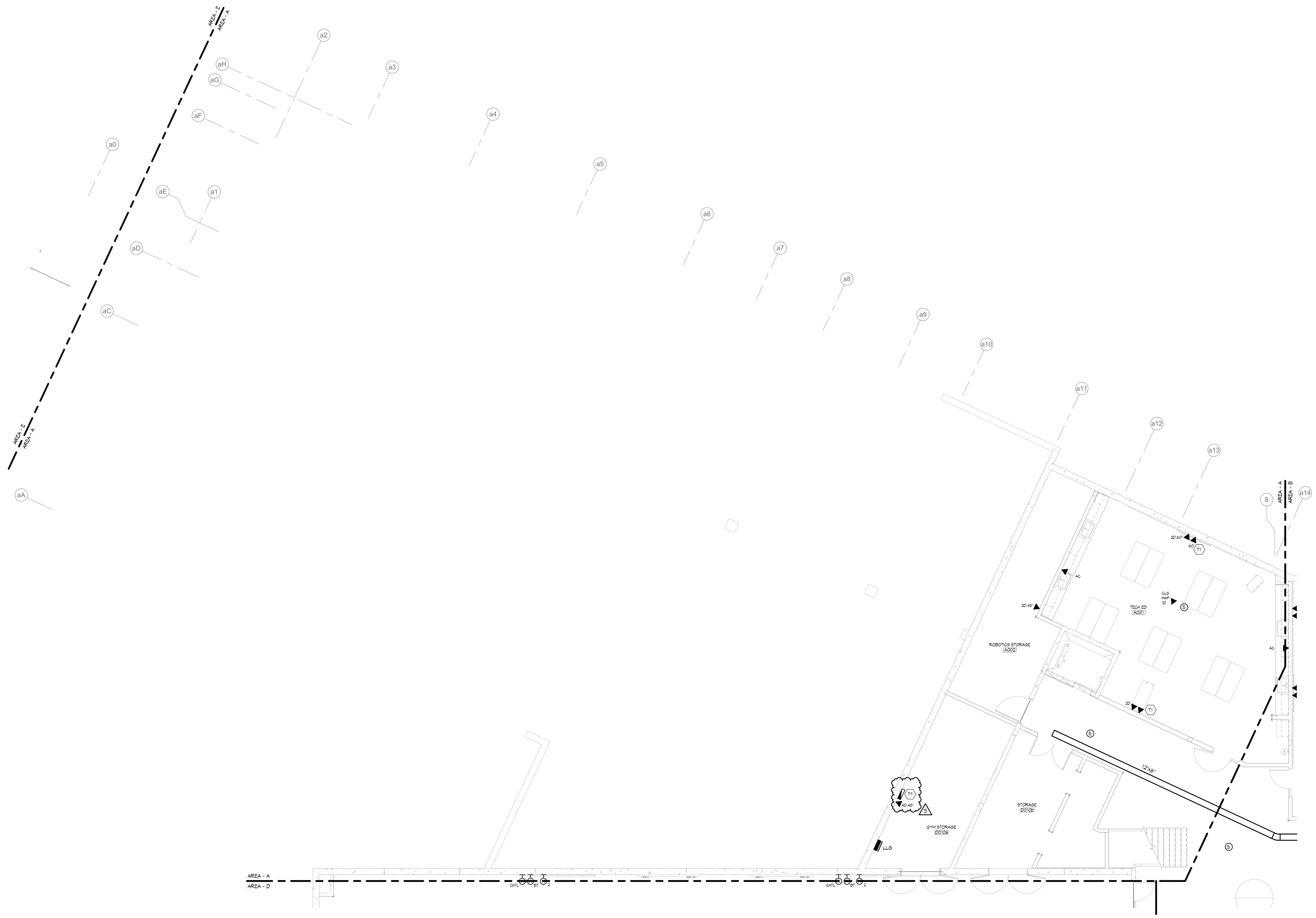
NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author JN: 2025168

UPPER LEVEL SEGMENT A - POWER

SHEET

E302A



1 LOWER LEVEL PLAN SEGMENT - A - TELECOMMUNICATIONS
SCALE: 1/8" = 1'-0"

GENERAL NOTES

A. REFER TO GYM AV SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION ON GYM SOUND SYSTEM.

SHEET NOTES

T1 PROVIDE BOX EQUAL TO RACO 260 EXTRA DEEP JUNCTION BOX W/ (2) 1-1/4" CONDUITS TO ACCESSIBLE CEILING. PROVIDE WITH BRUSH PLATE.

T7 GYM AUDIO/VISUAL EQUIPMENT RACK. E.C TO VERIFY LOCATION OF NEARBY DATA WITH EQUIPMENT INSTALLER PRIOR TO ROUGH-IN.

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

REGISTERED PROFESSIONAL ENGINEER
TRAVOR D. FREDRICKSON
PE - 27743
DATE 03/10/2026
NORTH DAKOTA

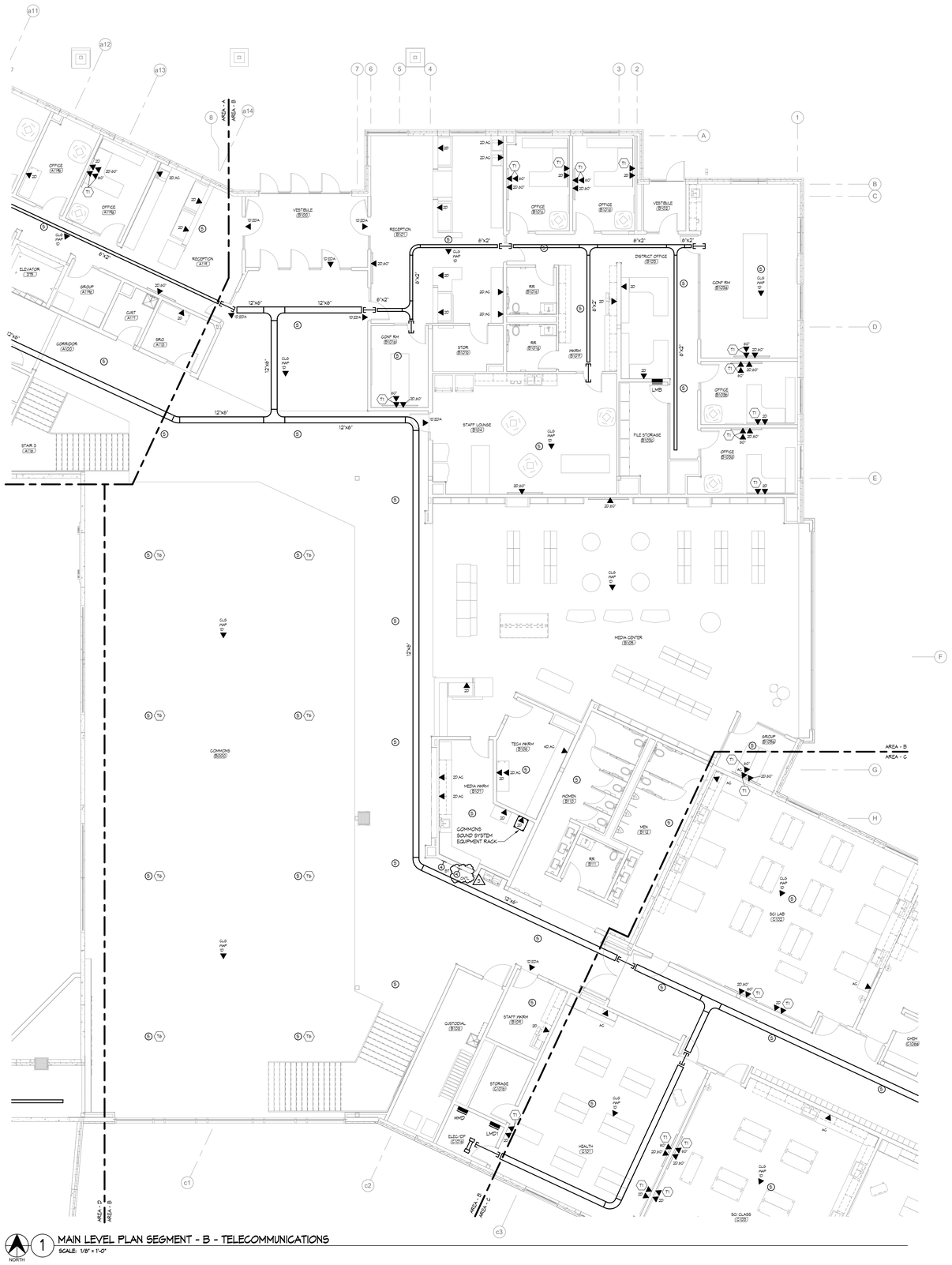
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author JN: 2025168

LOWER LEVEL SEGMENT A - TELECOMMUNICATIONS

SHEET
E400A



1 MAIN LEVEL PLAN SEGMENT - B - TELECOMMUNICATIONS

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

NORTH

GENERAL NOTES

A. REFER TO GYM AV SYSTEM RISER DIAGRAM FOR ADDITIONAL INFORMATION ON GYM SOUND SYSTEM.

SHEET NOTES

T1 PROVIDE BOX EQUAL TO RACO 280 EXTRA DEEP JUNCTION BOX W/ (2) 1-1/4" CONDUITS TO ACCESSIBLE CEILING. PROVIDE WITH BRUSH PLATE.

T6 SPEAKER FOR COMMONS AREA DEDICATED SOUND SYSTEM. REFER TO SOUND SYSTEM WIRING DIAGRAM FOR ADDITIONAL INFORMATION.

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

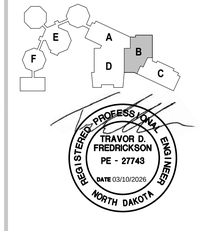
STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



REGISTERED PROFESSIONAL ENGINEER
TRAVOR D. FREDRICKSON
PE - 27743
DATE 03/10/2026
NORTH DAKOTA

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author JN: 2025168

MAIN LEVEL SEGMENT B - TELECOMMUNICATIONS

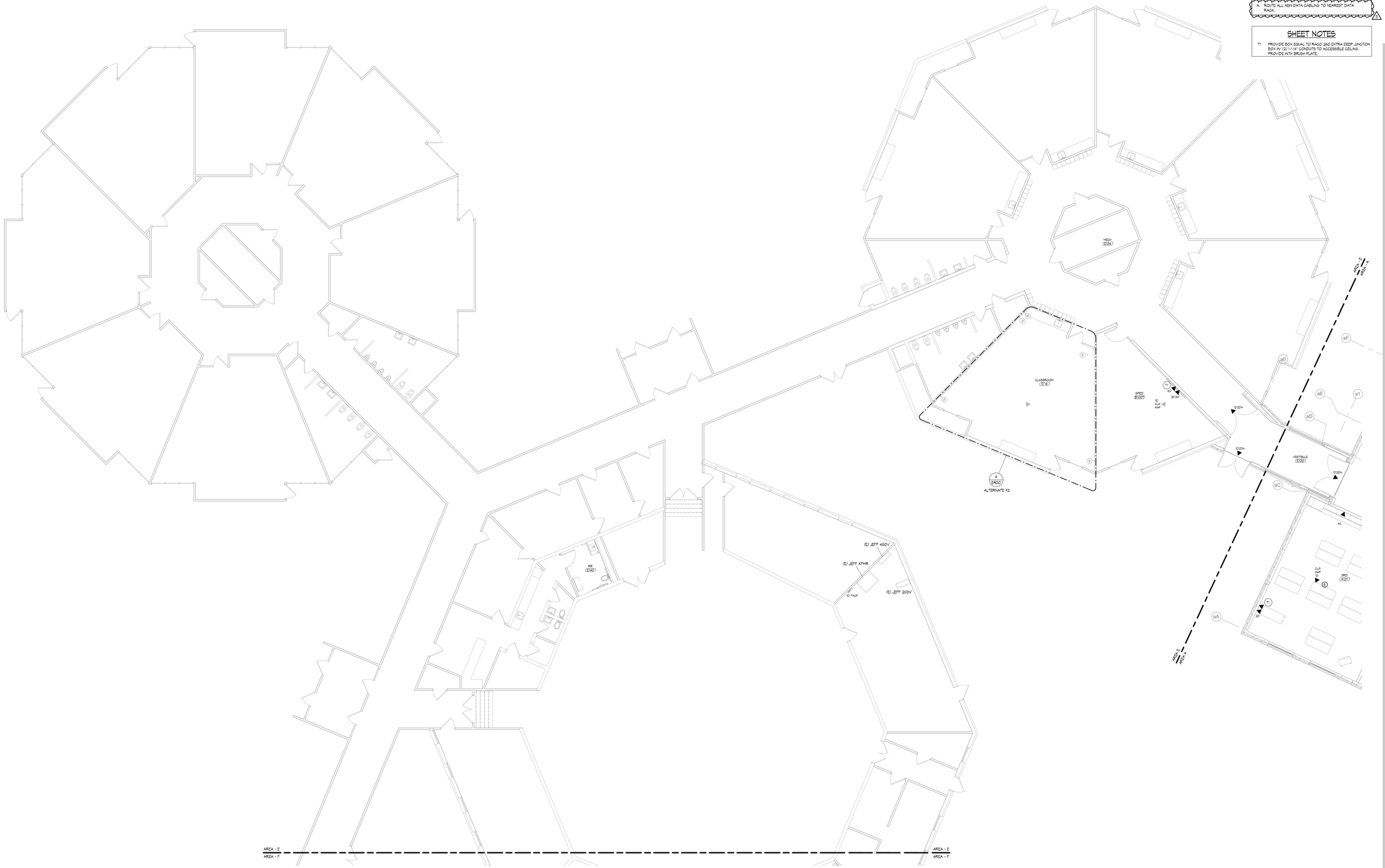
SHEET
E401B

GENERAL NOTES

A. ROUTE ALL NEW DATA CABLING TO NEAREST DATA RACK.

SHEET NOTES

T1. PROVIDE BOX EQUAL TO RACO 280 EXTRA DEEP JUNCTION BOX W/ (2) 1-1/4" CONDUITS TO ACCESSIBLE CEILING. PROVIDE FITH BRUSH PLATE.



1 MAIN LEVEL PLAN SEGMENT - E - TELECOMMUNICATIONS

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

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

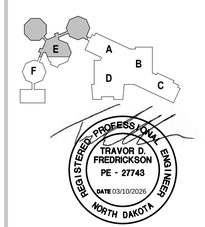
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



REGISTERED PROFESSIONAL ENGINEER
TRAVOR D. FREDRICKSON
PE - 27743
DATE 03/10/2026
NORTH DAKOTA

DRAWING HISTORY

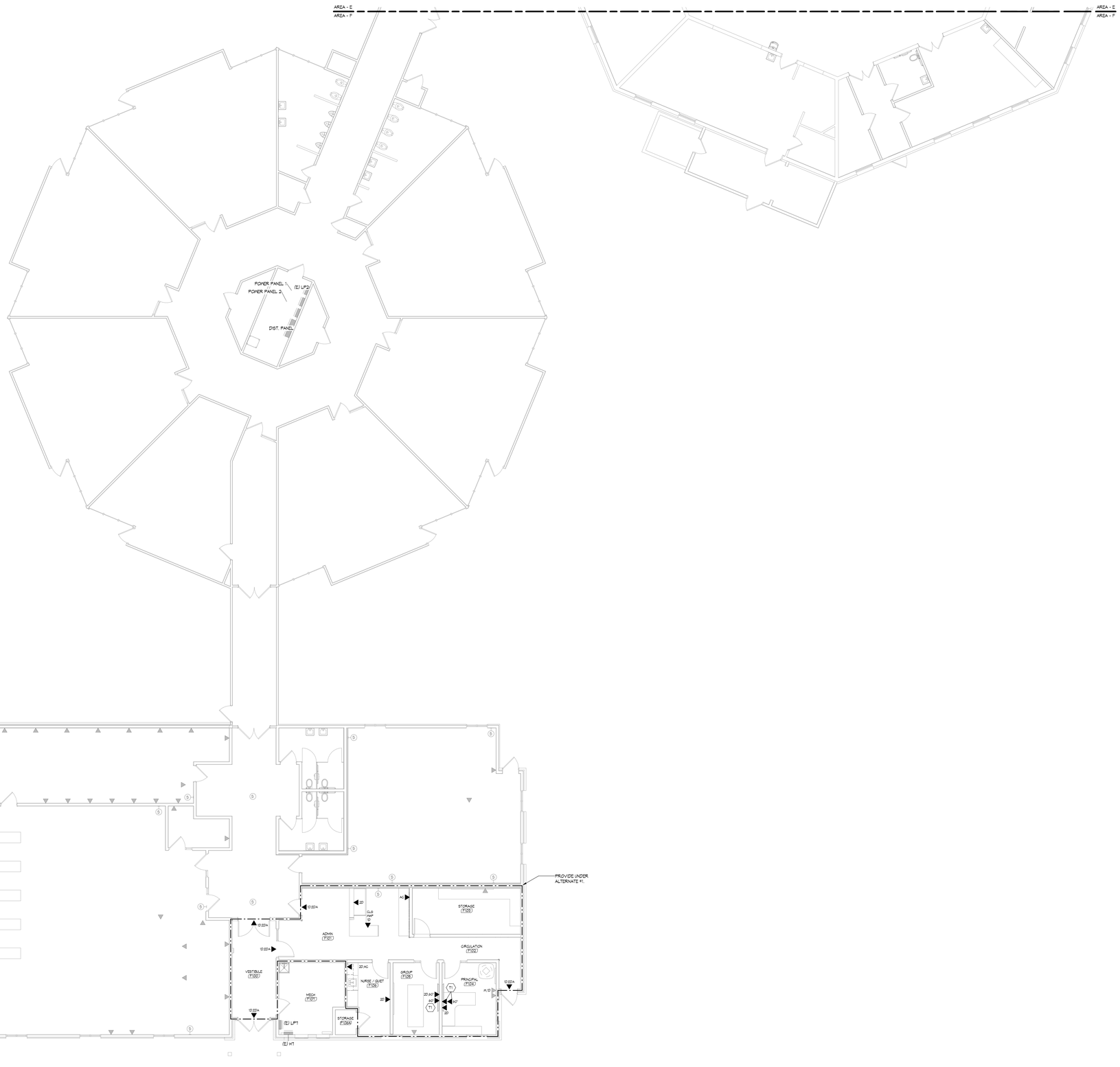
NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
1.	ADDENDUM #1	03/17/2026
3.	ADDENDUM #3	03/30/2026

DRAWN BY: Author JN: 2025168

MAIN LEVEL SEGMENT E - TELECOM

SHEET

E401E



1 MAIN LEVEL PLAN SEGMENT - F - TELECOMMUNICATIONS

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

NORTH

GENERAL NOTES

A ROUTE ALL NEW DATA CABLING TO NEAREST DATA RACK.

SHEET NOTES

T1 PROVIDE BOX EQUAL TO RACO 260 EXTRA DEEP JUNCTION BOX W/ (2) 1-1/4" CONDUITS TO ACCESSIBLE CEILING. PROVIDE WITH BRUSH PLATE.

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

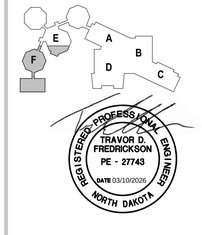
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



DRAWING HISTORY

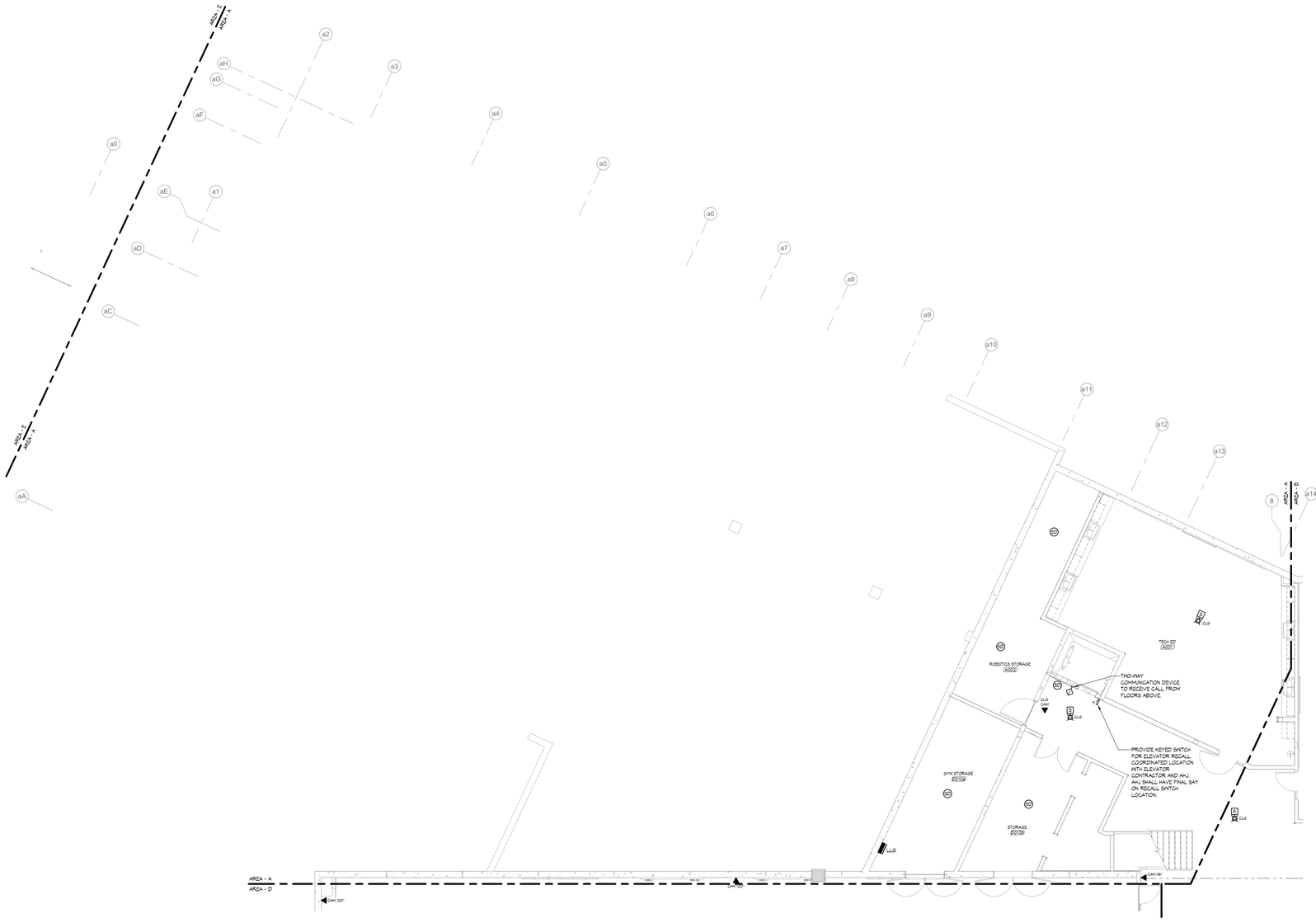
NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author JN: 2025168

MAIN LEVEL SEGMENT F - TELECOM

SHEET

E401F



NORTH

1 LOWER LEVEL PLAN SEGMENT - A - ELEC SAFETY & SECURITY

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

GENERAL NOTES

A. ALL SECURITY CAMERAS ARE TO BE PROVIDED AND INSTALLED BY OWNER.

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

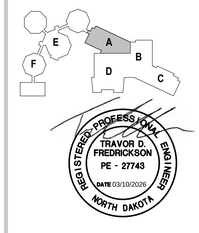
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



DRAWING HISTORY

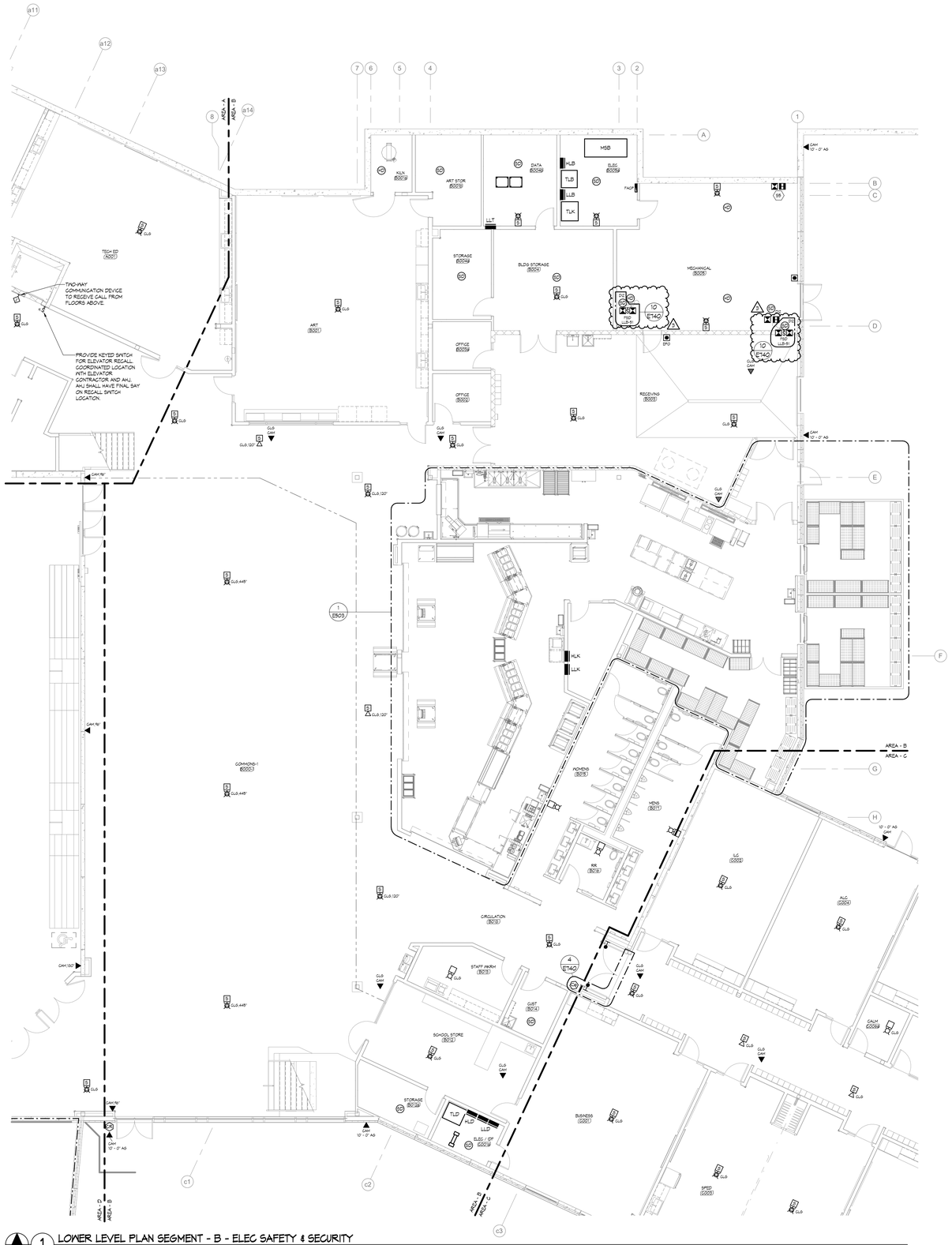
NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
2	ADDENDUM #2	03/24/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author JN: 2025168

LOWER LEVEL SEGMENT A - ELECTRONIC SAFETY & SECURITY

SHEET

E500A



1 LOWER LEVEL PLAN SEGMENT - B - ELEC SAFETY & SECURITY

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

NORTH

GENERAL NOTES

A. ALL SECURITY CAMERAS ARE TO BE PROVIDED AND INSTALLED BY OWNER.

SHEET NOTES

55 PROVIDE FIRE ALARM (FA) ADDRESSABLE CONTROL MODULE AND FA ADDRESSABLE MONITOR MODULE, ONE EACH FOR EACH FIRE SPRINKLER RISER TAMPER SWITCH AND EACH FIRE SPRINKLER RISER FLOW SWITCH. SEE FIRE PROTECTION DRAWINGS AND FIRE SPRINKLER RISER FOR TAMPER AND FLOW SWITCH QUANTITIES. COORDINATE ALL WORK WITH FIRE SPRINKLER CONTRACTOR.

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

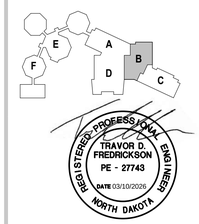
STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author JN: 2025168

LOWER LEVEL SEGMENT B - ELECTRONIC SAFETY & SECURITY

SHEET

E500B

1 MAIN LEVEL PLAN - ELEC SAFETY & SECURITY-AREA C

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

NORTH

GENERAL NOTES

A. ALL SECURITY CAMERAS ARE TO BE PROVIDED AND INSTALLED BY OWNER.

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

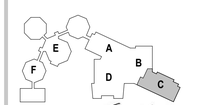
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



REGISTERED PROFESSIONAL ENGINEER
TRAVOR D. FREDRICKSON
PE - 27743
DATE 03/10/2026
NORTH DAKOTA

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author JN: 2025168

MAIN LEVEL SEGMENT C - ELECTRONIC SAFETY & SECURITY

SHEET

E501C

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

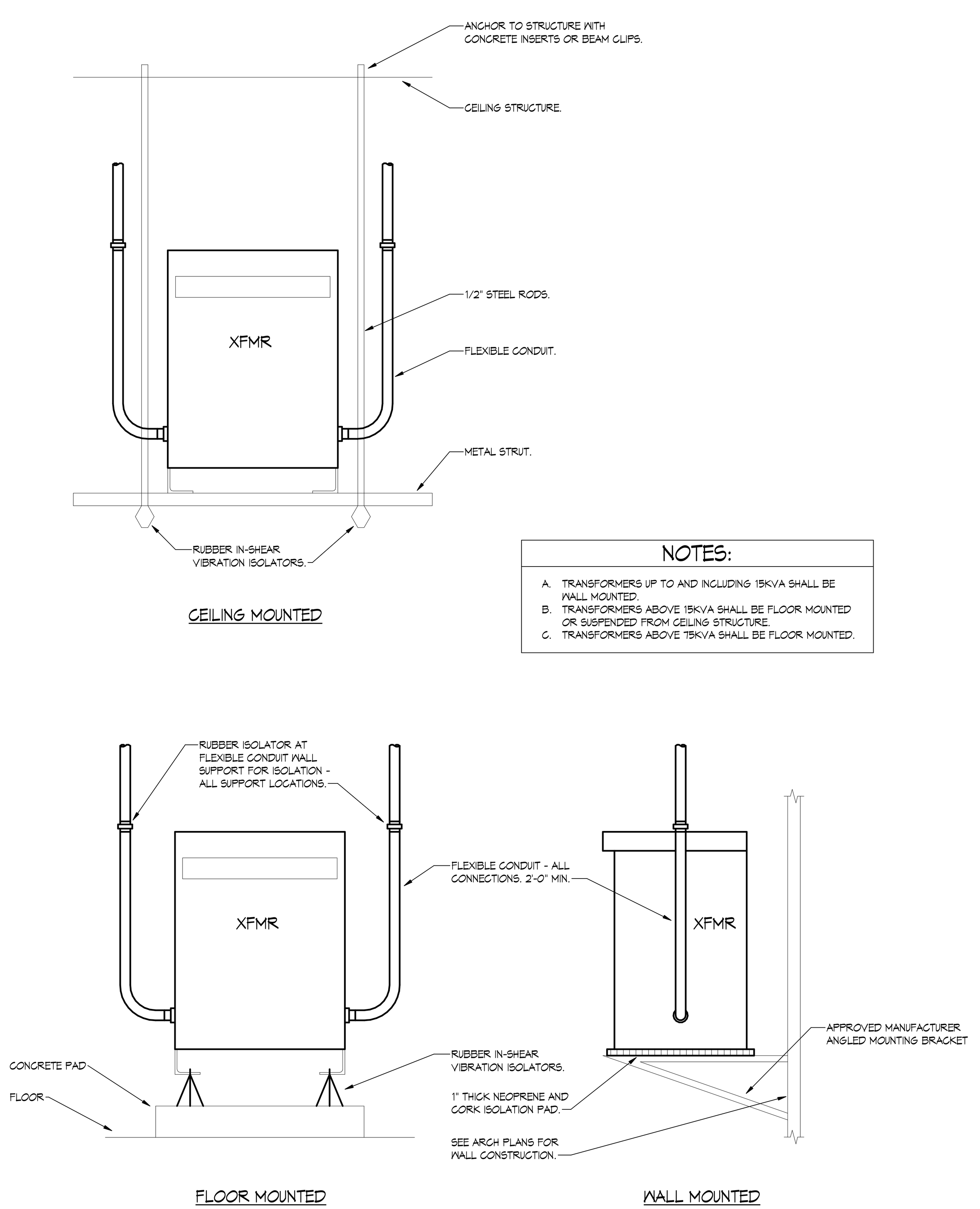
STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

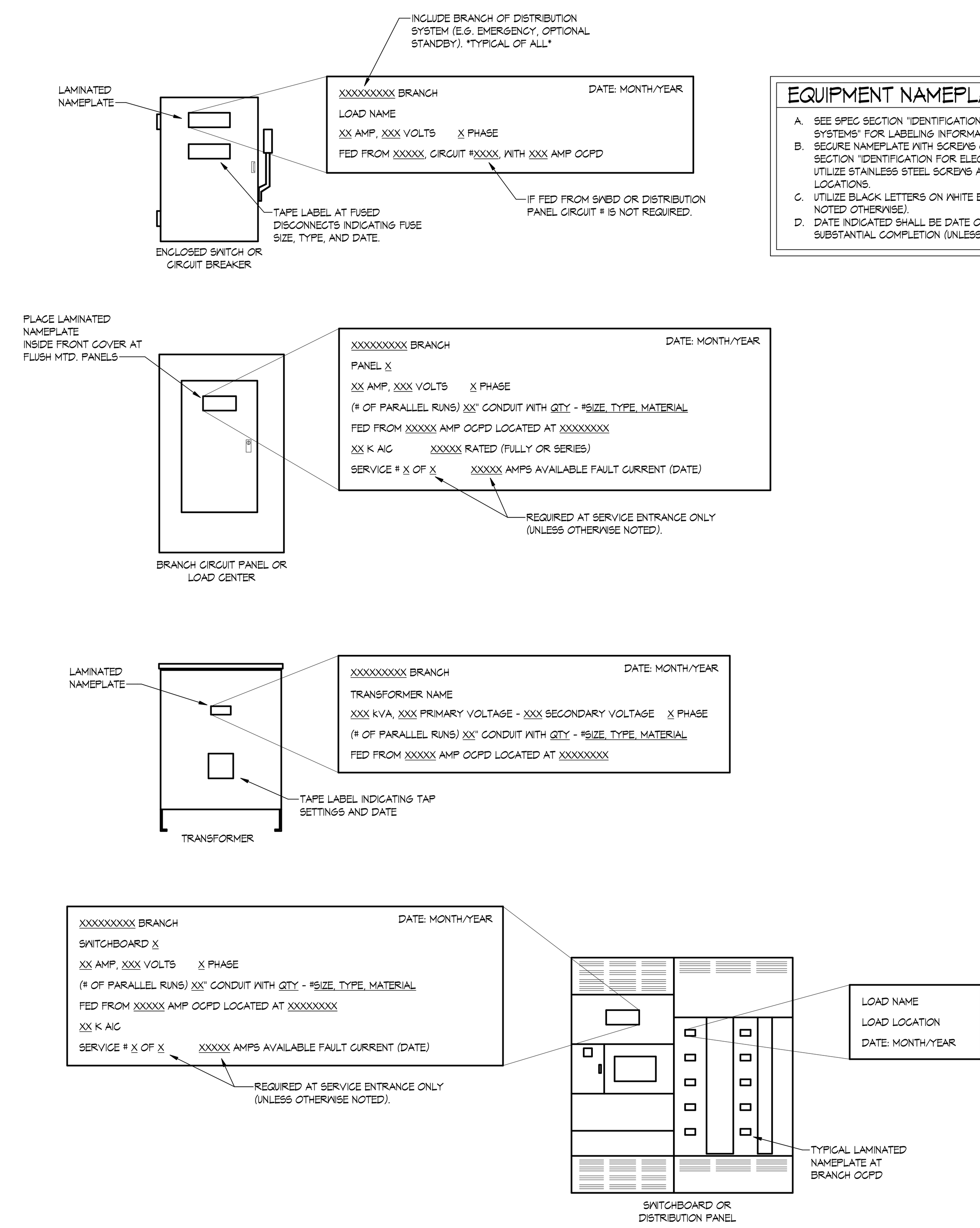


NOTES:

A. TRANSFORMERS UP TO AND INCLUDING 15KVA SHALL BE WALL MOUNTED.
B. TRANSFORMERS ABOVE 15KVA SHALL BE FLOOR MOUNTED OR SUSPENDED FROM CEILING STRUCTURE.
C. TRANSFORMERS ABOVE 75KVA SHALL BE FLOOR MOUNTED.

4 TYPICAL DRY-TYPE TRANSFORMER MOUNTING AND CONNECTION DETAIL

SCALE: NTS



EQUIPMENT NAMEPLATE NOTES:

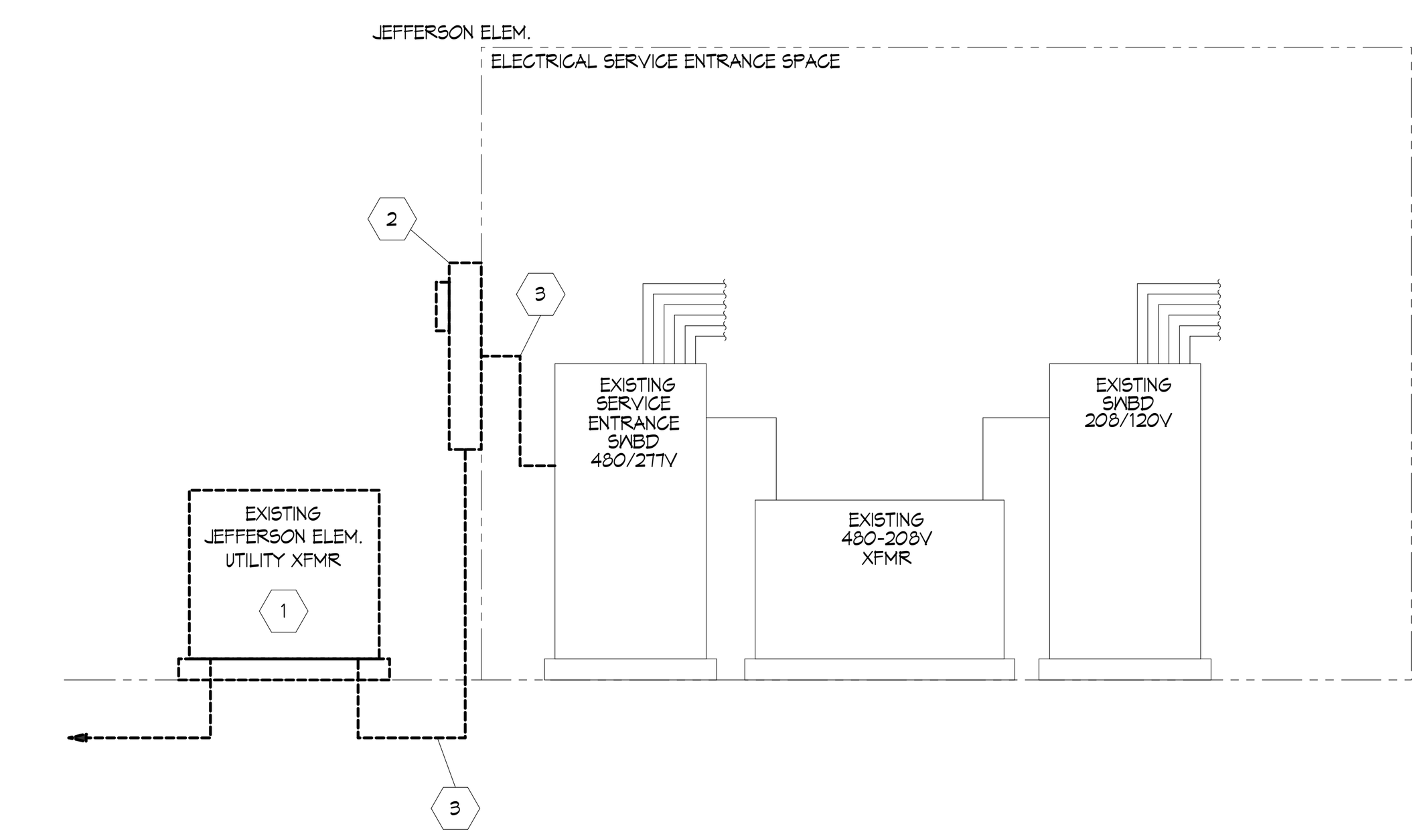
A. SEE SPEC SECTION "IDENTIFICATION FOR ELECTRICAL SYSTEMS" FOR LABELING INFORMATION.
B. SECURE NAMEPLATE WITH SCREWS OR RIVETS PER SPEC SECTION "IDENTIFICATION FOR ELECTRICAL SYSTEMS". UTILIZE STAINLESS STEEL SCREWS AT EXTERIOR LOCATIONS.
C. UTILIZE BLACK LETTERS ON WHITE BACKGROUND (UNLESS NOTED OTHERWISE).
D. DATE INDICATED SHALL BE DATE OF INSTALL/ OR SUBSTANTIAL COMPLETION (UNLESS NOTED OTHERWISE).

3 EQUIPMENT NAMEPLATE DETAIL

SCALE: NTS

SHEET NOTES:

1. COORDINATE REMOVAL OF EXISTING UTILITY TRANSFORMER WITH VALLEY CITY PUBLIC WORKS (VCPW). TEMPORARY OVERHEAD SERVICE IS TO BE SUPPLIED BY VCPW DURING THE CONSTRUCTION OF THE NEW SCHOOL.
2. DEMOLISH EXISTING CT CABINET AND METER BASE. TURN METER OVER TO UTILITY COMPANY.
3. DEMOLISH EXISTING CONDUIT/CONDUCTOR FROM TRANSFORMER TO SERVICE ENTRANCE SWITCHBOARD. WALL PENETRATIONS SHALL BE REUSED FOR NEW CONDUIT.



2 EXISTING JEFFERSON RISER DIAGRAM

SCALE: NTS

ELEC RISER LEGEND

- EQUIPMENT AND CONDUIT TO BE DEMOLISHED
- EXISTING EQUIPMENT AND CONDUIT TO REMAIN
- NEW EQUIPMENT AND CONDUIT

SHEET NOTES:

1. CONDUIT/CONDUCTOR ROUTED UNDERGROUND FROM NEW BUILDING TO JEFFERSON ELEMENTARY SERVICE ENTRANCE. COORDINATE FINAL ROUTING WITH CONSTRUCTION TEAM. REFER TO ELECTRICAL SITE PLAN FOR ADDITIONAL INFORMATION.

COPPER FEEDER SCHEDULE

FEEDER NUMBER	CONDUIT NO.	CONDUIT SIZE	PHASE NO.	PHASE SIZE	NEUTRAL	GROUND	NOTES
100NG	1	1-1/2"	3	#3	#3	#8	
110G	1	1-1/2"	3	#2	--	#6	
175G	1	2"	3	#2/0	--	#6	
200NG	1	2-1/2"	3	#3/0	#3/0	#6	
225G	1	2-1/2"	3	#4/0	--	#4	
300NG	1	3-1/2"	3	#350	#350	#4	
350G	1	3"	3	#400	--	#3	
400NG	1	4"	3	#600	#600	#3	
600NG	2	3-1/2"	3	#350	#350	#1	
1200NG	4	3-1/2"	3	#350	#350	#3/0	
3000N	8	3-1/2"	3	#500	#500	--	

(CONDUCTORS PER CONDUIT: PHASE, NEUTRAL, GROUND)

GENERAL NOTES:

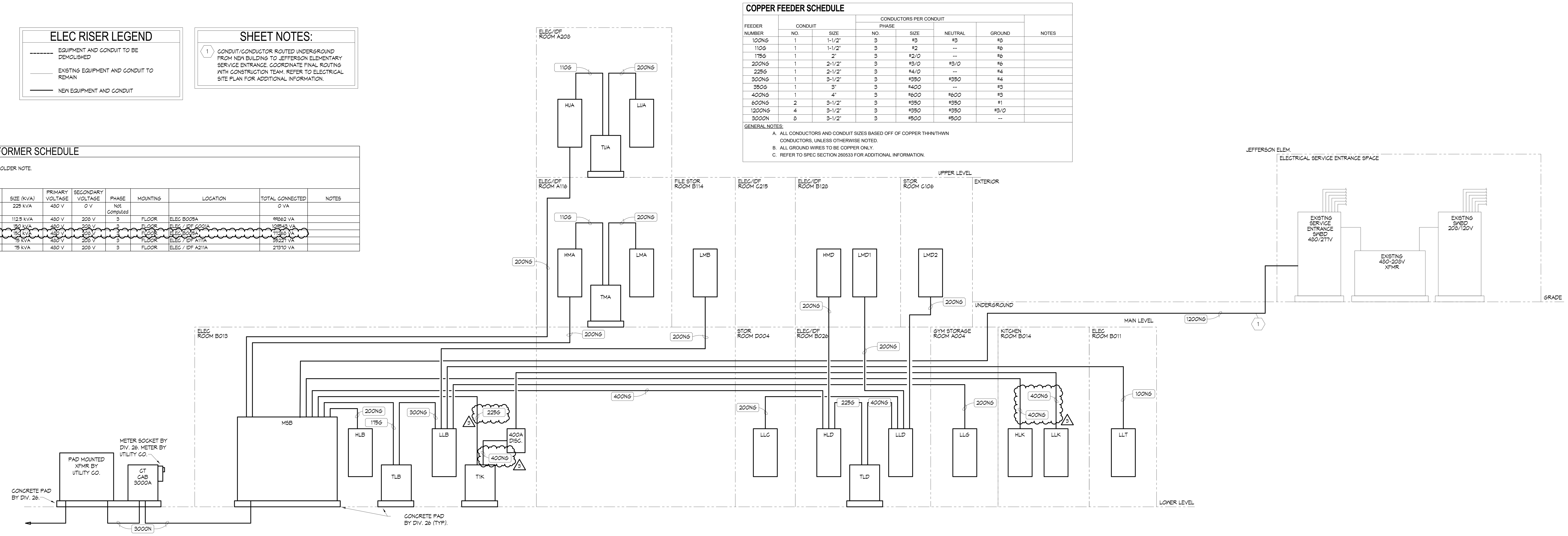
A. ALL CONDUCTORS AND CONDUIT SIZES BASED OFF OF COPPER THHN/THWN CONDUCTORS, UNLESS OTHERWISE NOTED.
B. ALL GROUND WIRES TO BE COPPER ONLY.
C. REFER TO SPEC SECTION 260533 FOR ADDITIONAL INFORMATION.

TRANSFORMER SCHEDULE

NOTES:

1. PLACEHOLDER NOTE.

NAME	SIZE (KVA)	PRIMARY VOLTAGE	SECONDARY VOLTAGE	PHASE	MOUNTING	LOCATION	TOTAL CONNECTED	NOTES
JEFF XFMR	225 kVA	480 V	0 V	Not Computed			0 VA	
TLB	112.5 kVA	480 V	208 V	3	FLOOR	ELEC B005A	99862 VA	
TLD	150 kVA	480 V	208 V	3	FLOOR	ELEC / IDF C001A	109543 VA	
TLK	150 kVA	480 V	208 V	3	FLOOR	ELEC B005A	77268 VA	
TMA	75 kVA	480 V	208 V	3	FLOOR	ELEC / IDF A111A	35227 VA	
TUA	75 kVA	480 V	208 V	3	FLOOR	ELEC / IDF A211A	27370 VA	



1 NEW RISER DIAGRAM

SCALE: NTS

TRAVOR D. FREDRICKSON
PE - 27743
DATE 03/10/2026
REGISTERED PROFESSIONAL ENGINEER
NORTH DAKOTA

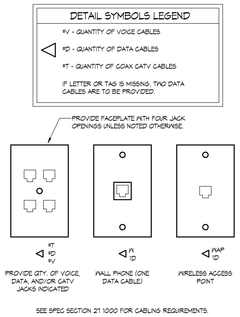
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
1	ADDENDUM #1	03/17/2026
2	ADDENDUM #2	03/24/2026
3	ADDENDUM #3	03/30/2026

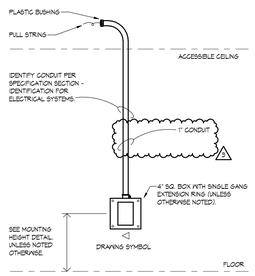
DRAWN BY: Author
JN: 2025168

POWER DETAILS

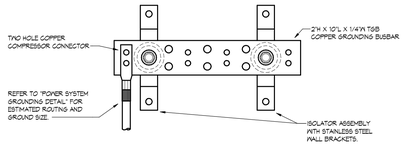
SHEET
E730



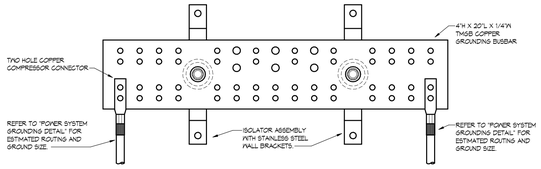
9 TYPICAL COMMUNICATIONS OUTLET DETAIL
SCALE: NTS



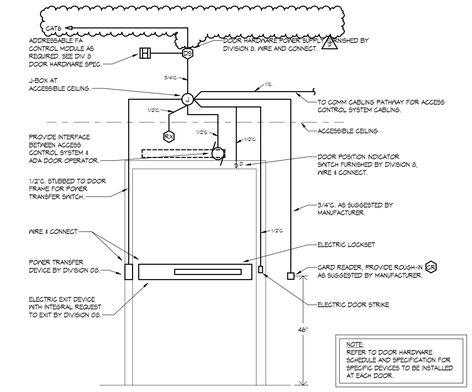
8 TYPICAL COMMUNICATIONS OUTLET ROUGH-IN DETAIL
SCALE: NTS



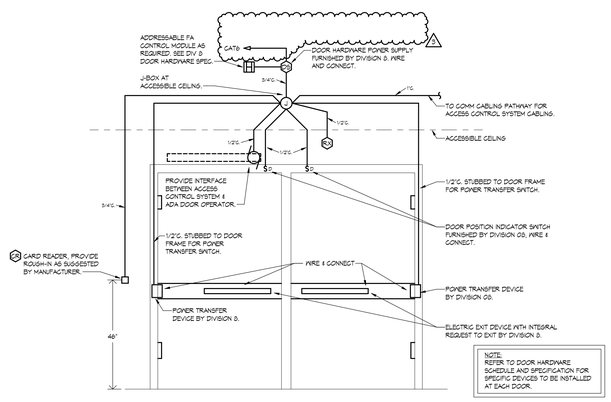
7 GROUND PLATE DETAIL (TGB)
SCALE: NTS



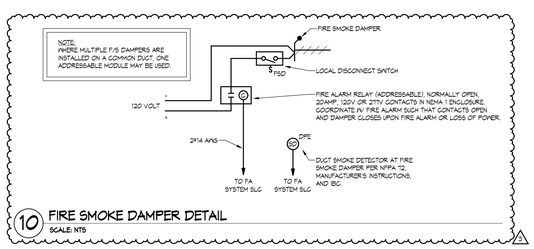
6 GROUND PLATE DETAIL (TMGB)
SCALE: NTS



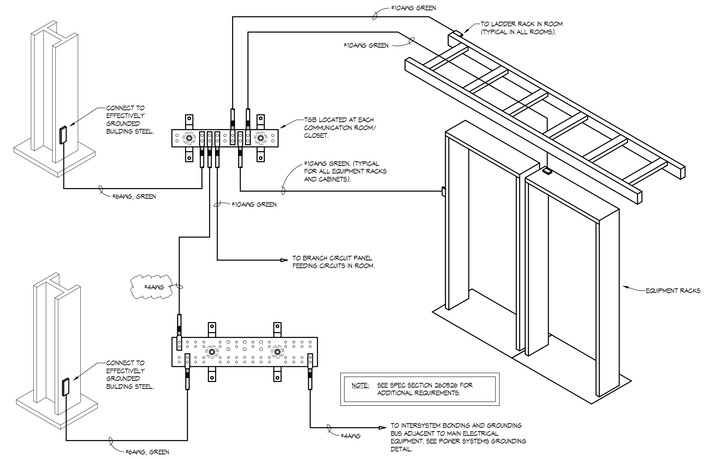
5 DOOR ROUGH-IN DETAIL (SINGLE)
SCALE: NTS



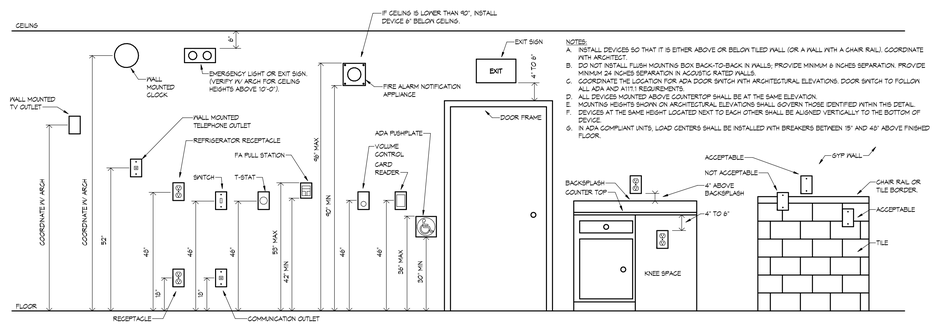
4 DOOR ROUGH-IN DETAIL (DOUBLE)
SCALE: NTS



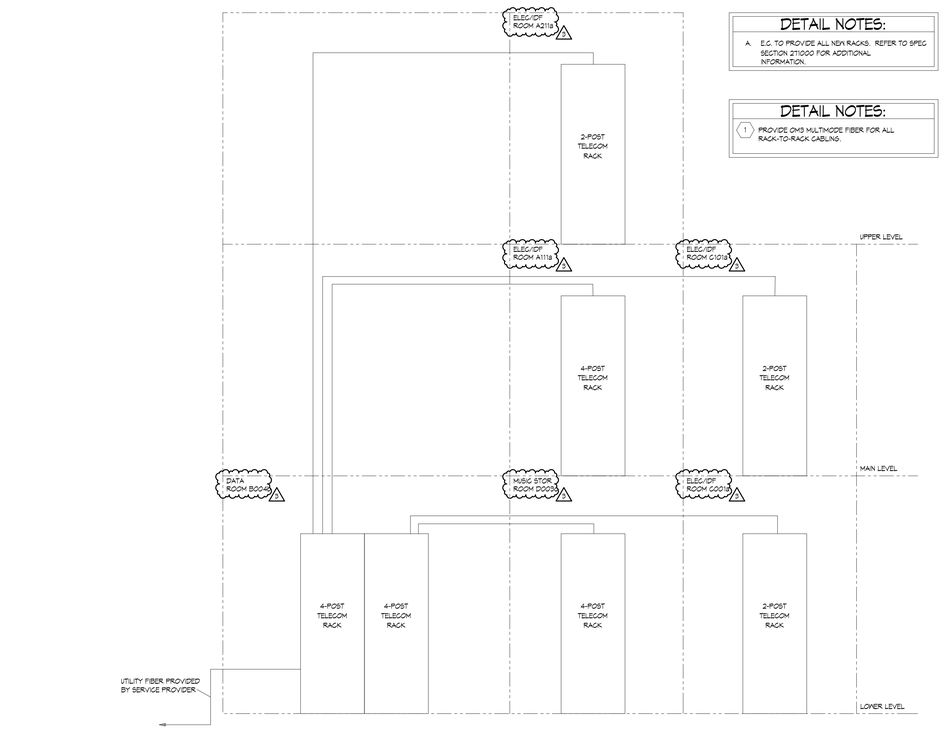
10 FIRE SMOKE DAMPER DETAIL
SCALE: NTS



3 COMMUNICATIONS SYSTEMS BONDING/GROUNDING DETAIL
SCALE: NTS



2 DEVICE MOUNTING ELEVATIONS
SCALE: NTS



1 E_TD_TELECOMM RISER DIAGRAM
SCALE: NTS

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

REGISTERED PROFESSIONAL ENGINEER
TRAVOR D. FREDRICKSON
PE - 27743
DATE 03/10/2026
NORTH DAKOTA

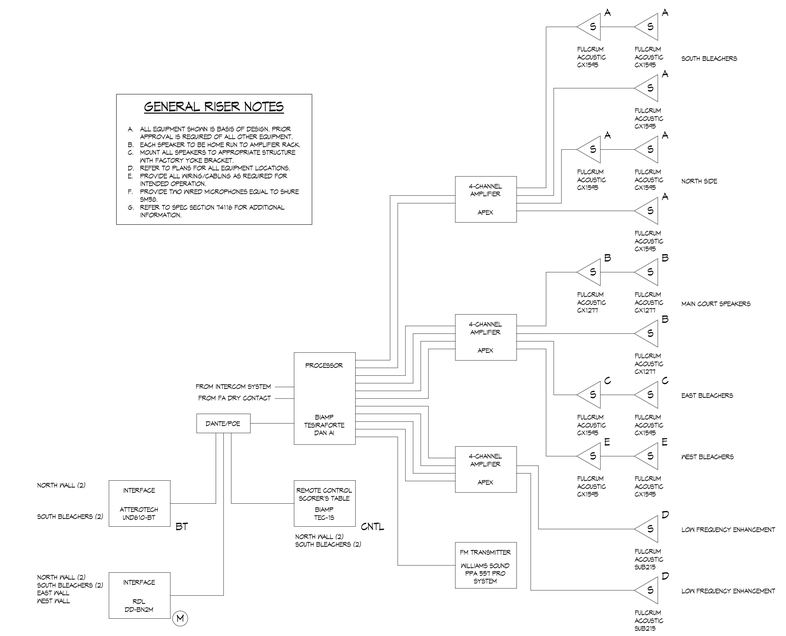
DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author
JN: 2025168

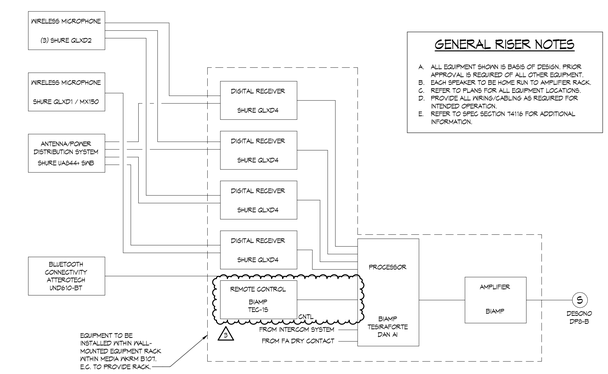
SYSTEMS DETAILS

SHEET
E740



2 AV SYSTEM RISER DIAGRAM - GYM

SCALE: NTS



1 AV SYSTEM RISER DIAGRAM - COMMONS

SCALE: NTS

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

REGISTERED PROFESSIONAL ENGINEER
TRAVOR D. FREDRICKSON
PE - 27743
DATE 03/10/2026
NORTH DAKOTA

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author JN: 2025168

SYSTEMS DETAILS

SHEET
E741

LIGHT FIXTURE SCHEDULE

GENERAL NOTES:

A. SEE SPEC SECTION 26 0000 AND 26 5100 FOR ADDITIONAL REQUIREMENTS AS REQUIRED.
B. EQUAL TO AND OR EQUAL: WHERE MATERIALS ARE SPECIFICALLY IDENTIFIED WITH EQUAL TO / OR EQUAL, SUBSTITUTE MANUFACTURERS COMPLYING WITH THE REQUIREMENTS OF THESE SPECIFICATIONS BUT NOT LISTED MAY BE INCORPORATED IN THE WORK. SUCH MATERIAL EQUAL TO OR SUPERIOR, IN ENGINEER'S OPINION, TO THAT SPECIFIED IN CONSTRUCTION, EFFICIENCY, APPEARANCE, AND UTILITY.
C. ALL DIMENSIONS ARE NOMINAL UNLESS NOTED OTHERWISE.
D. RATED LIFE OF LED LUMINAIRES SHALL BE 50,000 HOURS UNLESS OTHERWISE NOTED.
E. EMERGENCY LUMINAIRES SHALL BE EQUIPPED WITH SELF-DIAGNOSTIC BATTERIES UNLESS OTHERWISE NOTED.
F. COLOR TEMPERATURE OF LED LUMINAIRES IS NOMINAL UNLESS OTHERWISE NOTED.
G. SYSTEM WATTAGE SCHEDULED IS NOMINAL UNLESS NOTED OTHERWISE.
H. 0-10V LED DRIVERS TO BE FURNISHED WITH ISOLATED GROUNDS. COMMON WIRE SHALL BE ISOLATED FROM THE POWER SYSTEM GROUND WIRE OF THE POWER SUPPLY.
J. DIMMING COMPONENTS SHALL BE COMPATIBLE WITH SPECIFIED LIGHTING CONTROL SYSTEMS.
K. LINEAR LUMINAIRE LENGTHS GREATER THAN 8'-0": LENS & REFLECTOR SHALL BE CONTINUOUS FROM END TO END (WITHOUT VISIBLE JOINTS) FOR THE TOTAL RUN LENGTH.
L. REFER TO ARCHITECTURAL, LANDSCAPING, AND CIVIL PLANS FOR COORDINATION AND ADDITIONAL INFORMATION, DETAILS, MOUNTING, AND LOCATION OF EQUIPMENT.
M. FOR SITE POLE LIGHTING, PROVIDE ROUND, TAPERED, STEEL POLE, WITH HANDHOLE, ANCHOR BOLTS, BOLT TEMPLATE, VIBRATION DAMPER, AND BASE COVER. SHALL BE FACTORY FINISHED TO MATCH LUMINAIRE. REFER TO POLE BASE DETAILS FOR ADDITIONAL INFORMATION.
N. PROVIDE T-GRID MOUNTING HARDWARE WHERE REQUIRED. REFER TO ARCHITECTURAL RCP PLANS FOR MORE INFORMATION.

NOTES:

1. PROVIDE FIXTURE MOUNTED BI-LEVEL MOTION SENSOR. POWER SUPPLY TO BE 0-10V DIMMING TO DIM WATTAGE DOWN IN 1% INCREMENTS TO REDUCE LIGHT LEVEL WHEN AREA IS UNOCCUPIED.

TYPE	MANUFACTURER	SERIES	VOLT	LIGHT SOURCE			POWER SUPPLY/DIMMING		DIMENSIONS	MOUNTING	FINISH	DESCRIPTION
				CCT	CRI	LUMENS	SYSTEM WATTAGE	DIMMING				
A21	EQUAL TO: SIGNIFY COLUMBIA METALUX LITHONIA	2FPZ CBT22 22FPX CPX2X2	MVOLT	4000K	(MIN) 80	3200	30 W	10% 0-10V DIM	2.25" DEPTH 2' X 2'	RECESSED (T-GRID OR GYP)	WHITE	BACK LIT FLAT PANEL. RIGID HOUSING DIE-FORMED STEEL FRAME CONSTRUCTION. SATIN WHITE LENS, NO VISIBLE LED DIODES. SUITABLE FOR DAMP LOCATION.
A41	EQUAL TO: SIGNIFY COLUMBIA METALUX LITHONIA	2FPZ CBT24 24FPX CPX2X4	MVOLT	4000K	(MIN) 80	4000	37 W	10% 0-10V DIM	2.25" DEPTH 2' X 4'	RECESSED (T-GRID OR GYP)	WHITE	BACK LIT FLAT PANEL. RIGID HOUSING DIE-FORMED STEEL FRAME CONSTRUCTION. SATIN WHITE LENS, NO VISIBLE LED DIODES. SUITABLE FOR DAMP LOCATION. REFER TO LIGHTING CONTROL NOTES FOR INTEGRAL SENSOR REQUIREMENTS.
AK11	APPROVED EQUAL TO: LITHONIA	CPXIP	MVOLT	4000K	80	5421	40 W	10% 0-10V DIM	2-5/8" H 2' X 4'	RECESSED T-GRID	WHITE	IP65 RATED FLAT PANEL WITH SATIN ACRYLIC LENS.
D6	EQUAL TO: ATLANTIC PORTFOLIO	SYL LED6 LDS6B	MVOLT	4000K	90	1200	23 W	10% 0-10V DIM	7" H 6" DIA.	RECESSED (T-GRID OR GYP)	SPECULAR REFLECTOR SMOOTH WHITE TRIM RING	RECESSED DOWNLIGHT SELF-FLANGED SPUN ALUMINUM LOWER REFLECTOR, STAINLESS STEEL TRIM RING WITH STAINLESS STEEL COUNTERSUNK SCREWS. CAN BE SERVICED FROM ABOVE OR BELOW CEILING. DAMP LOCATION RATED.
D66	EQUAL TO: ATLANTIC PORTFOLIO	SYL LED6 LDS6B	MVOLT	4000K	90	1200	23 W	10% 0-10V DIM	7" H 6" DIA.	RECESSED (T-GRID OR GYP)	BLACK	SAME AS TYPE D6, EXCEPT IP66 RATED.
D99	APPROVED EQUAL TO: GOTHAM	EVO-4	MVOLT	RGBW	90	1250	31 W	DMX	6-5/8"H 4-5/16"DIA APERTURE	RECESSED GYP	WHITE	SELF FLANGED 4" DOWNLIGHT WITH CLEAR MATTE FINISH AND MEDIUM DISTRIBUTION. TUNABLE RGBW.
E1	EQUAL TO: CHLORIDE DUAL-LITE EVENLITE SURE-LITE	55 SERIES SE CCDS CX	MVOLT	MS	MS	MS	2.5 W	--	STANDARD	WALL	WHITE	SINGLE FACE DIE-CAST ALUMINUM EXIT SIGN, STENCIL FACE WITH RED OPTICAL DIFFUSER. INTEGRAL NI-CAD BATTERY EQUIPPED WITH SELF DIAGNOSTICS.
E2	EQUAL TO: CHLORIDE DUAL-LITE EVENLITE SURE-LITE	55 SERIES SE CCDS CX	MVOLT	MS	MS	MS	2.5 W	--	STANDARD	CEILING	WHITE	SINGLE FACE DIE-CAST ALUMINUM EXIT SIGN, STENCIL FACE WITH RED OPTICAL DIFFUSER. INTEGRAL NI-CAD BATTERY EQUIPPED WITH SELF DIAGNOSTICS.
E3	EQUAL TO: CHLORIDE DUAL-LITE EVENLITE SURE-LITES	VE EVE TLX LPX	MVOLT	MS	MS	MS	2.5 W	--	STANDARD	WALL	WHITE	SINGLE FACE THERMOPLASTIC / POLYCARBONATE EXIT SIGN, STENCIL FACE WITH RED OPTICAL DIFFUSER. INTEGRAL NI-CAD BATTERY EQUIPPED WITH SELF-DIAGNOSTICS.
E4	EQUAL TO: CHLORIDE DUAL-LITE EVENLITE SURE-LITES	VE EVE TLX LPX	MVOLT	MS	MS	MS	2.5 W	--	STANDARD	CEILING	WHITE	SINGLE FACE THERMOPLASTIC / POLYCARBONATE EXIT SIGN, STENCIL FACE WITH RED OPTICAL DIFFUSER. INTEGRAL NI-CAD BATTERY EQUIPPED WITH SELF-DIAGNOSTICS.
E5	EQUAL TO: CHLORIDE EVENLITE SURE-LITES	VE TLX APXH7RG	MVOLT	MS	MS	MS	2.5 W	--	STANDARD	WALL	WHITE	SINGLE FACE THERMOPLASTIC / POLYCARBONATE EXIT SIGN, STENCIL FACE WITH RED OPTICAL DIFFUSER. INTEGRAL NI-CAD BATTERY EQUIPPED WITH SELF-DIAGNOSTICS. BATTERY CAPACITY SHALL BE SIZED FOR (1) TYPE "XXX" FIXTURE RATED FOR 90 MINUTES.
E6	EQUAL TO: CHLORIDE EVENLITE SURE-LITES	VE TLX APXH7RG	MVOLT	MS	MS	MS	2.5 W	--	STANDARD	CEILING	WHITE	SINGLE FACE THERMOPLASTIC / POLYCARBONATE EXIT SIGN, STENCIL FACE WITH RED OPTICAL DIFFUSER. INTEGRAL NI-CAD BATTERY EQUIPPED WITH SELF-DIAGNOSTICS. BATTERY CAPACITY SHALL BE SIZED FOR (1) TYPE "XXX" FIXTURE RATED FOR 90 MINUTES.
E12	EQUAL TO: SURE-LITES DUAL-LITE EVENLITE ISOLITE	EUX LE SOV ELTMR	MVOLT	MS	MS	MS	1.5 W	--	STANDARD	END MOUNT	BRUSHED ALUMINUM	ARCHITECTURAL END MOUNTED EDGE LIT EXIT SIGN, RED LETTERS ON [WHITE] [CLEAR] [MIRRORED] BACKGROUND. SEE FLOORPLANS FOR CHEVRONS. INTEGRAL NI-CAD BATTERY EQUIPPED WITH SELF-DIAGNOSTICS.
EM1	EQUAL TO: LITHONIA DUAL-LITE ISOLITE SURE-LITES	ELM2L EV BUG APELH2	MVOLT	MS	MS	MS	1.5 W	--	4-1/2"H 9"W 2-15/16"D	WALL	WHITE	SELF-CONTAINED EMERGENCY LIGHTING UNIT, 2-FULLY ADJUSTABLE HEADS, (REMOTE CAPACITY NOTE RATED FOR 90 MINUTES) MAINTENANCE FREE NICKEL CADMIUM BATTERY. 5-YEAR WARRANTY.
EM1R	APPROVED EQUAL TO: SURE-LITES	APWR2	3.6 V	MS	MS	MS	3 W	--	MS	WALL	WHITE	DUAL REMOTE BATTERY HEAD. (2) ADJUSTABLE REMOTE HEADS, UNIVERSAL MOUNTING PLATE, THERMOPLASTIC HOUSING. FIXTURE SHALL BE OPERATIONAL FOR 90 MINUTES MINIMUM, FED THROUGH FIXTURE TYPE 'XXX'. WET LOCATION RATED.
EM2	EQUAL TO: LITHONIA ISOLITE SURE-LITES	EU2L BUG APEL	MVOLT	MS	MS	MS	1 W	--	4-1/2"H 9"W 2-15/16"D	CEILING	WHITE	SELF-CONTAINED EMERGENCY LIGHTING UNIT, 2-FULLY ADJUSTABLE HEADS, (REMOTE CAPACITY NOTE RATED FOR 90 MINUTES) MAINTENANCE FREE NICKEL CADMIUM BATTERY. 5-YEAR WARRANTY.
EM3	EQUAL TO: LITHONIA DUAL-LITE ISOLITE SURE-LITES	ELM4L EVHC BUG SEL60	MVOLT	MS	MS	MS	4 W	--	4-3/4"H 3-1/8"D 14"L	WALL	WHITE	SELF-CONTAINED EMERGENCY LIGHTING UNIT, 2-FULLY ADJUSTABLE HEADS, MAINTENANCE FREE NICKEL CADMIUM BATTERY EQUIPPED WITH SELF-DIAGNOSTICS. HIGH IMPACT THERMOPLASTIC CONSTRUCTION. 60'-0" SPACING. 5-YEAR WARRANTY.
EM4	EQUAL TO: ISOLITE SURE-LITES	BUG SEL60	MVOLT	MS	MS	MS	4 W	--	4-3/4"H 3-1/8"D 14"L	CEILING	WHITE	SELF-CONTAINED EMERGENCY LIGHTING UNIT, 2-FULLY ADJUSTBLE HEADS, MAINTENANCE FREE NICKEL CADMIUM BATTERY EQUIPPED WITH SELF-DIAGNOSTICS. HIGH IMPACT THERMOPLASTIC CONSTRUCTION. 5-YEAR WARRANTY.
EM5	EQUAL TO: SURE-LITES	SELW25	MVOLT	MS	MS	MS	1.5 W	--	7-15/16" H 2-3/16" D 7-7/8" W	WALL	WHITE	LOW PROFILE EMERGENCY LUMINIARE. HIGH IMPACT THERMOPLASTIC HOUSING, 4.8V BATTERY BACKUP, WET LOCATION RATED. 25'-0" SPACING.
G9	APPROVED EQUAL TO: METALUX	SS LED	MVOLT	4000K	90	12855	85 W	--	17-1/2" H 17-3/4" DIA	ROD SUSPENDED	WHITE	HIGHBAY WITH WIDE BEAM ANGLE AND INTEGRAL OCCUPANCY AND DAYLIGHT SENSORS.
G9E	APPROVED EQUAL TO: METALUX	SS LED	MVOLT	4000K	90	12855	85 W	--	17-1/2" H 17-3/4" DIA	ROD SUSPENDED	WHITE	HIGHBAY WITH WIDE BEAM ANGLE AND INTEGRAL OCCUPANCY AND DAYLIGHT SENSORS.
G10	APPROVED EQUAL TO: METALUX	SS LED	MVOLT	4000K	90	6427	64 W	--	17-1/2" H 17-3/4" DIA	ROD SUSPENDED	WHITE	SAME AS TYPE G9, EXCEPT LUMEN OUTPUT.
H1	EQUAL TO: ELITE LIGHTING COLUMBIA LITHONIA METALUX	4-OEC-LED MPS ZL1D SNLED	MVOLT	4000K	80	5000	50 W	--	4"H 3"W 4'-0"L	CHAIN SUSPENDED	WHITE	INDUSTRIAL LED STRIPLIGHT, DIE FORMED COLD ROLLED STEEL CHANNEL, RUST RESISTANT FINISH. NO DIMMING. EXTRUDED CURVED FROSTED LENS. WIDE BEAM DISTRIBUTION.
L12	APPROVED EQUAL TO: METALUX COLUMBIA LITHONIA	RBG NRL LSIX	MVOLT	4000K	80	2000	20 W	10% 0-10V DIM	6" W 2 3/8" H 2'-0" L	RECESSED (T-GRID)	WHITE	EDGE LIT LAY-IN LINEAR FIXTURE WITH 4" APERTURE AND 6" WIDTH. DAMP LISTED. REFER TO LIGHTING CONTROL NOTES FOR INTEGRAL SENSOR REQUIREMENTS.
L14	APPROVED EQUAL TO: METALUX COLUMBIA LITHONIA	RBG NRL LSIX	MVOLT	4000K	80	4000	39 W	10% 0-10V DIM	6" W 2 3/8" H 4'-0" L	RECESSED (T-GRID)	WHITE	EDGE LIT LAY-IN LINEAR FIXTURE WITH 4" APERTURE AND 6" WIDTH. DAMP LISTED. REFER TO LIGHTING CONTROL NOTES FOR INTEGRAL SENSOR REQUIREMENTS.
L18	APPROVED EQUAL TO: METALUX COLUMBIA LITHONIA	RBG NRL LSIX	MVOLT	4000K	80	8000	80 W	10% 0-10V DIM	6" W 2 3/8" H 8'-0" L	RECESSED (T-GRID)	WHITE	EDGE LIT LAY-IN LINEAR FIXTURE WITH 4" APERTURE AND 6" WIDTH. DAMP LISTED. REFER TO LIGHTING CONTROL NOTES FOR INTEGRAL SENSOR REQUIREMENTS.
L22	APPROVED EQUAL TO: ALW LIGHTING EXTANT LIGHTING	SP2.5S HTGDU-3P	MVOLT	4000K	90	150 LM/FT UP 500 LM/FT DN	100 W/FT	10% 0-10V DIM	SEE DWGS FOR LENGTH	FULLY ADJUSTABLE AIR-CRAFT CABLE	WHITE	BI-DIRECTIONAL LINEAR. EXTRUDED ALUMINIUM HOUSING & PRECISION MACHINED ALUM. ENDCAPS. DIFFUSING DOWN DISTRIBUTION & BATWING UP DISTRIBUTION. INTEGRAL DRIVER. REFER TO LIGHTING CONTROL NOTES FOR INTEGRAL SENSOR REQUIREMENTS.

3

LIGHT FIXTURE SCHEDULE

GENERAL NOTES:

A. SEE SPEC SECTION 26 0000 AND 26 5100 FOR ADDITIONAL REQUIREMENTS AS REQUIRED.
B. EQUAL TO AND OR EQUAL: WHERE MATERIALS ARE SPECIFICALLY IDENTIFIED WITH EQUAL TO / OR EQUAL, SUBSTITUTE MANUFACTURERS COMPLYING WITH THE REQUIREMENTS OF THESE SPECIFICATIONS BUT NOT LISTED MAY BE INCORPORATED IN THE WORK. SUCH MATERIAL EQUAL TO OR SUPERIOR, IN ENGINEER'S OPINION, TO THAT SPECIFIED IN CONSTRUCTION, EFFICIENCY, APPEARANCE, AND UTILITY.
C. ALL DIMENSIONS ARE NOMINAL UNLESS NOTED OTHERWISE.
D. RATED LIFE OF LED LUMINAIRES SHALL BE 50,000 HOURS UNLESS OTHERWISE NOTED.
E. EMERGENCY LUMINAIRES SHALL BE EQUIPPED WITH SELF-DIAGNOSTIC BATTERIES UNLESS OTHERWISE NOTED.
F. COLOR TEMPERATURE OF LED LUMINAIRES IS NOMINAL UNLESS OTHERWISE NOTED.
G. SYSTEM WATTAGE SCHEDULED IS NOMINAL UNLESS NOTED OTHERWISE.
H. 0-10V LED DRIVERS TO BE FURNISHED WITH ISOLATED GROUNDS. COMMON WIRE SHALL BE ISOLATED FROM THE POWER SYSTEM GROUND WIRE OF THE POWER SUPPLY.
J. DIMMING COMPONENTS SHALL BE COMPATIBLE WITH SPECIFIED LIGHTING CONTROL SYSTEMS.
K. LINEAR LUMINAIRE LENGTHS GREATER THAN 8'-0": LENS & REFLECTOR SHALL BE CONTINUOUS FROM END TO END (WITHOUT VISIBLE JOINTS) FOR THE TOTAL RUN LENGTH.
L. REFER TO ARCHITECTURAL, LANDSCAPING, AND CIVIL PLANS FOR COORDINATION AND ADDITIONAL INFORMATION, DETAILS, MOUNTING, AND LOCATION OF EQUIPMENT.
M. FOR SITE POLE LIGHTING, PROVIDE ROUND, TAPERED, STEEL POLE, WITH HANDHOLE, ANCHOR BOLTS, BOLT TEMPLATE, VIBRATION DAMPER, AND BASE COVER. SHALL BE FACTORY FINISHED TO MATCH LUMINAIRE. REFER TO POLE BASE DETAILS FOR ADDITIONAL INFORMATION.
N. PROVIDE T-GRID MOUNTING HARDWARE WHERE REQUIRED. REFER TO ARCHITECTURAL RCP PLANS FOR MORE INFORMATION.

NOTES:

1. PROVIDE FIXTURE MOUNTED BI-LEVEL MOTION SENSOR. POWER SUPPLY TO BE 0-10V DIMMING TO DIM WATTAGE DOWN IN 1% INCREMENTS TO REDUCE LIGHT LEVEL WHEN AREA IS UNOCCUPIED.

TYPE	MANUFACTURER	SERIES	VOLT	LIGHT SOURCE			POWER SUPPLY/DIMMING		DIMENSIONS	MOUNTING	FINISH	DESCRIPTION
				CCT	CRI	LUMENS	SYSTEM WATTAGE	DIMMING				
L33	APPROVED EQUAL TO: AXIS	WET BEAM	MVOLT	4000K	90	1600 LM UP 4000 LM DOWN	64 W	1% 0-10V DIM	5-1/8" H 3-7/16" W 4'-0" L	SUSPENDED (AIRCRAFT CABLE)	BLACK	BI-DIRECTIONAL LINEAR SUSPENDED FROM STRUCTURAL DECK. IP64 RATED.REFER TO LIGHTING CONTROL NOTES FOR INTEGRAL SENSOR REQUIREMENTS.
L34	APPROVED EQUAL TO: AXIS	WET BEAM	MVOLT	4000K	90	1600 LM UP 4000 LM DOWN	128 W	1% 0-10V DIM	5-1/8" H 3-7/16" W 8'-0" L	SUSPENDED (AIRCRAFT CABLE)	BLACK	BI-DIRECTIONAL LINEAR SUSPENDED FROM STRUCTURAL DECK. IP64 RATED.REFER TO LIGHTING CONTROL NOTES FOR INTEGRAL SENSOR REQUIREMENTS.
L44	APPROVED EQUAL TO: ALCON	SLIM 2	MVOLT	4000K	90	325 LM/FT	8 W/FT	10% 0-10V DIM	2" W 5" H SEE DWGS FOR LENGTH	RECESSED	WHITE	LINEAR FIXTURE WITH EXTRUDED ALUMINUM CHASIS. OPAL POLYCARBONATE LENS. COMPLATABLE WITH 2" WOOD SLOT CEILING.REFER TO LIGHTING CONTROL NOTES FOR INTEGRAL SENSOR REQUIREMENTS.
L98	APPROVED EQUAL TO: ALW LIGHTING EXTANT LIGHTING	SP2.5S HTGDU-3P	MVOLT	4000K	90	150 LM/FT UP 500 LM/FT DN	85 W	10% 0-10V DIM	2-1/8" H 3-1/3" W SEE DWGS FOR LENGTH	FULLY ADJUSTABLE AIR-CRAFT CABLE	WHITE	ONE CONTINUOUS SUSPENDED FIXTURE WITH 'V' SHAPE. UP/DOWN DISTRIBUTION FLUSH SATIN LENS FOR DOWN DISTRIBUTION AND A FLUSH CLEAR DUST COVER FOR UP DISTRIBUTION. BOTTOM LENS SHALL BE CONTINUOUS COORDINATE MOUNTING HEIGHT WITH ARCHITECT.
L99	APPROVED EQUAL TO: ALW LIGHTING EXTANT LIGHTING	SP2.5S HTGDU-3P	MVOLT	4000K	90	150 LM/FT UP 1000 LM/FT DN	<varies> W	10% 0-10V DIM	2-1/8" H 3-1/3" W SEE DWGS FOR LENGTH	FULLY ADJUSTABLE AIR-CRAFT CABLE	WHITE	ONE CONTINUOUS SUSPENDED FIXTURE WITH RECTANGULAR SHAPE. UP/DOWN DISTRIBUTION FLUSH SATIN LENS FOR DOWN DISTRIBUTION AND A FLUSH CLEAR DUST COVER FOR UP DISTRIBUTION.
N7	APPROVED EQUAL TO: PINNACLE LEDALITE LUMENWERX	EDGE TRUGROOVE VIA 3 PERIMETER	MVOLT	4000K	90	750 LM/FT	6 W/FT	1% 0-10V DIM	6-1/2" H 4" W 8'-0" L	VERIFY CLG INSTALLATION	WHITE	RECESSED PERIMETER LINEAR LED WITH ASYMETRIC OPTIC. EXTRUDED ALUMINUM HOUSING. REGRESSED SNAP-IN LENS.
N8	APPROVED EQUAL TO: AXIS LIGHTING ALW PINNACLE LUMENWERX	GPRLED HYLYTR EDGE EV2DPM VIA 2 PERIMETER	MVOLT	4000K	90	875 LM/FT	5.6 W/FT	1% 0-10V DIM	4" H 2" W	RECESSED (T-GRID)	WHITE	THIN PROFILE LINEAR PERIMETER WALL GRAZER. CONTINUOUS SNAP IN LENS, MEDIUM WALL GRAZE OPTICS, EXTRUDED ALUMINUM HOUSING.
Q11	APPROVED EQUAL TO: NOVA FLEX	NEON DIGITAL	MVOLT	RGB	--	MAX 52 L/FT	3 W/FT	DIGITAL	1-1/4" H 3/4" W SEE DWGS FOR LENGTH	CHANNEL	MS	EXTERIOR IP68 RATED TAPE LIGHT. DIGITAL RGB DRIVER ALLOWING FOR ADVANCED PROGRAMMING.
S3	APPROVED EQUAL TO: MODERN FORMS WAC LIGHTING	MINI VOGUE BRINK	MVOLT	4000K	90	1225	15.5 W	5% ELV DIM	2" SQ. 18" L	WALL ABOVE MIRROR	BRUSHED ALUMINUM	ABOVE MIRROR VANITY LUMINAIRE. SQUARE EXTRUDED DIFFUSE ACRYLIC LENS WITH BRUSHED ALUMINUM ADJUSTABLE BACKPLATE AND ENDCAPS. MOUNTS TO 4" J-BOX. DAMP LOCATION LISTED.
V2	APPROVED EQUAL TO: NULITE LITHONIA	INT VAP	MVOLT	MS	80	8000	67 W	10% 0-10V DIM	10" H 7-1/2" W 4'-0" L	WALL SURFACE	M.S.	WALL MOUNTED VAPOR TIGHT POLYCARBONATE HOUSING, CONTINUOUS CLOSED CELL GASKET, WIDE DISTRIBUTION WITH FROSTED POLYCARBONATE LENS.
Z6	EQUAL TO: PERFORMANCE IN LIGHTING LITHONIA LUMARK	SHEILD+ WPX1 LED P2 XTOR2B	MVOLT	4000K	80	2100	18 W	--	6-3/4" H 5-3/4" W 3-5/8" D	EXTERIOR WALL	TO BE SELECTED BY ARCH.	SLIM, LOW PROFILE EXTERIOR WALL MOUNT. WET LOCATION LISTED.
Z11	EQUAL TO: SISTEMALUX	LIFT	MVOLT	4000K	80	404	18.2 W	0-10V DIM	7" H 7" W 8" D	WALL	TO BE SELECTED BY ARCH.	SQUARE WALL MOUNTED LED LUMINAIRE, ALUMINIUM HOUSING, WITH CLEAR GLASS DIFFUSER. UP AND DOWN DISTRIBUTION WITH 60° BEAM. PROVIDE CUSTOM MOUNTING PLATE AS REQUIRED TO ALIGN WITH WALL OFFSETS.
AA2	APPROVED EQUAL TO: BEACON LITHONIA NLS LIGHTING MCGRAW EDISON	VIPER SERIES D-SERIES NV SERIES GLEON	MVOLT	4000K	85	24,327	207 W	10% 0-10V DIM	HEAD PER MANUFACTURER 7" ARM	30'-0" POLE	DARK BRONZE	POLE MOUNTED SITE FIXTURE. LOW-PROFILE WEDGE DESIGN HEAD W/ CURVED TOP. EXTRUDED ALUMINUM DRIVER & HEAVY-WALL DIE CAST ALUMINUM END CAPS ENCLOSED HOUSING. 7" ARM. WET LOCATION LISTED. SINGLE HEAD WITH T2 DISTRIBUTION, INTEGRAL MOTION SENSOR FOR DIMMING OPERATION & PHOTOCELL.
AA2w	APPROVED EQUAL TO: BEACON LITHONIA NLS LIGHTING MCGRAW EDISON	VIPER SERIES D-SERIES NV SERIES GLEON	MVOLT	4000K	85	24,327	207 W	10% 0-10V DIM	HEAD PER MANUFACTURER 7" ARM	EXTERIOR WALL	DARK BRONZE	SAME AS TYPE AA2 EXCEPT BUILDING MOUNTED.
AA4	APPROVED EQUAL TO: BEACON LITHONIA NLS LIGHTING MCGRAW EDISON	VIPER SERIES D-SERIES NV SERIES GLEON	MVOLT	4000K	85	24,327	207 W	10% 0-10V DIM	HEAD PER MANUFACTURER 7" ARM	30'-0" POLE	DARK BRONZE	SAME AS TYPE AA2 EXCEPT T4 DISTRIBUTION.
AA4s	APPROVED EQUAL TO: BEACON LITHONIA NLS LIGHTING MCGRAW EDISON	VIPER SERIES D-SERIES NV SERIES GLEON	MVOLT	4000K	85	24,327	207 W	10% 0-10V DIM	HEAD PER MANUFACTURER 7" ARM	30'-0" POLE	DARK BRONZE	SAME AS TYPE AA4, EXCEPT, PROVIDE HOUSE SIDE SHIELD
AA6	APPROVED EQUAL TO: BEACON LITHONIA NLS LIGHTING MCGRAW EDISON	VIPER SERIES D-SERIES NV SERIES GLEON	MVOLT	4000K	85	24,327	207 W	10% 0-10V DIM	HEAD PER MANUFACTURER 7" ARM	30'-0" POLE	DARK BRONZE	SAME AS TYPE AA2 EXCEPT SLL DISTRIBUTION.
AA7	APPROVED EQUAL TO: BEACON LITHONIA NLS LIGHTING MCGRAW EDISON	VIPER SERIES D-SERIES NV SERIES GLEON	MVOLT	4000K	85	24,327	207 W	10% 0-10V DIM	HEAD PER MANUFACTURER 7" ARM	30'-0" POLE	DARK BRONZE	SAME AS TYPE AA2 EXCEPT SLR DISTRIBUTION.
CC1	EQUAL TO: LIGMAN	ARIZONA 2 20974	MVOLT	4000K	80	3300	35 W	0-10V DIM.	8.75" DIA 144.75" H	SEE DWG	TO BE SELECTED BY ARCH.	EXTRUDED ALUMINUM LINEAR CYLINDRICAL POST WITH DIE-CAST LED HOUSING. WET LOCATION LISTED. T4 DISTRIBUTION. CONTROL TO BE TIED TO SAME PHOTOCELL AS POLE MOUNTED FIXTURES.
FF3	APPROVED EQUAL TO: POLELED	EXTENDED	24 V	5000K	--	3250	38 W	REMOTE STD	10" H 8-1/2" DIA.	FLAG POLE MTD	M.S.	ON POLE LED FLAG LIGHT, ALUMINUM HOUSING, 11 DEGREE AND 20 DEGREE BEAM ANGLE. FIXTURE SLIPS OVER 4" TO 5" DIAMETER POLE, VERIFY FLAG POLE DIAMETER. REMOTE DRIVER SHALL BE INSTALLED WITHIN FLAG POLE. COORDINATE WORK WITH FLAG POLE INSTALLER PRIOR TO FLAG POLE INSTALLATION. IP65 RATED.
GG1	APPROVED EQUAL TO: VISTA LIGHTING LUMINIS	MODEL 2212 SC350	MVOLT	4000K	80	924	13 W	10% 0-10V DIM	9.1" H 3" DIA. 9.6" L	ON GRADE STEM	DARK BRONZE	ON-GRADE SPOT LIGHT, 20 DEGREE BEAM ANGLE. EXTRUDED ALUMINUM CONSTRUCTION, 185 DEGREE TILT ADJUSTMENTS AND 359 DEGREE ROTATION, LOCKABLE, IP65 RATED. PROVIDE WITH LOW VOLTAGE TRANSFORMER.

3

ICON
ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

REGISTERED PROFESSIONAL ENGINEER
TRAVOR D. FREDRICKSON
PE - 27743
DATE 03/10/2026
NORTH DAKOTA

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
2	ADDENDUM #2	03/24/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author JN: 2025168

LIGHTING SCHEDULES

SHEET
E820

Switchboard: MSB

LOCATION: ELEC B005a
SUPPLY FROM: CT CABINET
MOUNTING: FLOOR
ENCLOSURE: NEMA 1

VOLTS: 480/277 Wye
PHASES: 3
WIRES: 4

A.I.C. RATING: 65K
MAINS TYPE: MCB
MAINS RATING: 3000 A
BUSSING: 3000 A

CKT	CIRCUIT DESCRIPTION	CONDUIT & WIRE	# OF POLES	TRIP RATING	Load	REMARKS
1	HLB	(1) 2-1/2"C.,3-#3/0, #3/0, #6G	3	200 A	64598	
2	TLB	(1) 2"C.,3-#2/0, #2/0, --G	3	175 A	99862	
3	TLK	(1) 2-1/2"C.,3-#4/0, #4/0, --G	3	225 A	77268	
4	HLK	(1) 4"C.,3-#600, #600, #3G	3	400 A	240999	
5	HLD	(1) 4"C.,3-#600, #600, #3G	3	400 A	163575	
6	HMA	(1) 2-1/2"C.,3-#3/0, #3/0, #6G	3	200 A	49367	
7	RTU-1	(1) 3"C.,3-#250, #250, #4G	3	250 A	192050	
8	RTU-2	(1) 2"C.,3-#1/0, #1/0, #6G	3	150 A	103092	
9	RTU-3	(1) 2"C.,3-#1/0, #1/0, #6G	3	150 A	114731	
10	RTU-4	(1) 2"C.,3-#2, #2, #6G	3	110 A	74825	
11	RTU-5	(1) 1-1/4"C.,3-#6, #6, #10G	3	60 A	38244	
12	RTU-6	(1) 3-1/2"C.,3-#350, #350, #4G	3	300 A	233619	
13	RTU-7	(1) 3/4"C.,3-#10, #10, #10G	3	30 A	19953	NOTE 1
14						
15						
16						
17	HUA	(1) 2-1/2"C.,3-#3/0, #3/0, #6G	3	200 A	33416	
18	SPACE		3	--	--	NOTE 2
19	SPACE		1	--	--	NOTE 2
20	JEFFERSON ELEMENTARY	(4 sets) 3-1/2"C.,3-#350, #350, #3/0G	3	1200 A	467000	
21	ELEVATOR	(1) 1-1/4"C.,3-#4, #4, #8G	3	70 A	28268	
22						
23						
24						
25						
26						
27						
28						
29						
30	SURGE PROTECTIVE DEVICE		3	100 A	0	
					2000830 VA	
					2407 A	

NOTES:

1. REMOVE UNDER ALTERNATE #13.
2. SPACE FOR FUTRE EQUIPMENT.

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Motor/HVAC/Mech	899519 VA	100%	899519 VA		
Other	240 VA	100%	240 VA	TOTAL CONN. LOAD:	2000830 VA
Receptacle, Convenience	195580 VA	52.56%	102790 VA	TOTAL EST. DEMAND:	1822553 VA
Spare	467000 VA	100%	467000 VA	TOTAL CONN.:	2407 A
Kitchen Equipment	304573 VA	65%	197973 VA	TOTAL EST. DEMAND:	2192 A
Lighting	84569 VA	125%	105711 VA		
Receptacle,Non-Convenience/Power	22440 VA	100%	22440 VA		
Power	20043 VA	100%	20043 VA		
Receptacle,Non-Convenience	6989 VA	100%	6989 VA		

MOTOR & EQUIPMENT SCHEDULE

GENERAL NOTES:

A. REFER TO PANELBOARD SCHEDULES FOR CONDUIT AND WIRE SIZES.
B. REFER TO SPEC SECTION 26 0519 FOR WIRING BETWEEN VFDS AND MOTORS.
C. IF LOCATION AND/OR FED FROM ARE BLANK, SEE DRAWINGS FOR LOCATION.

NOTES:

1. ELECTRICAL CONTRACTOR SHALL FURNISH, SET, AND WIRE & CONNECT.
2. ELECTRICAL CONTRACTOR SHALL SET, AND WIRE & CONNECT.
3. ELECTRICAL CONTRACTOR SHALL WIRE & CONNECT.
4. ELECTRICAL CONTRACTOR SHALL PROVIDE SINGLE POINT CONNECTION.
5. CONTROL WIRING BY MECHANICAL CONTRACTOR.
6. ELECTRICAL CONTRACTOR SHALL PROVIDE DSD IN SUPPLY AND RETURN AIR DUCT WORK AND PROVIDE ADDRESSABLE CONTROL MODULE. FIRE ALARM SYSTEM SHALL SHUT UNIT DOWN UPON AN ALARM.
7. PROVIDE ADDRESSABLE FIRE ALARM CONTROL MODULE FOR ELEVATOR PRIMARY AND SECONDARY LEVEL RECALL AND FOR SHUNT TRIP OPERATION. PROVIDE ADDRESSABLE MONITOR MODULE TO MONITOR SHUNT TRIP.
8. PROVIDE 120V POWER VIA NEARBY RECEPTACLE CIRCUIT.
9. CORD, PLUG, AND CONTROL PANEL WIRING BY M.C. E.C. SHALL PROVIDE MATCHING RECEPTACLE.
10. REMOVE UNDER ALTERNATE #13.
11. PROVIDE UNDER ALTERNATE #1.

			LOCATION								LOCAL DISCONNECT				CONTROLLER				AUX. CONTROL				
ID	QTY	DESCRIPTION	NAME	#	HP	kW	(MCA) FLA	(MFS) MOCP	VOLTAGE/ PHASE	FED FROM (PANEL-CIRCUIT)	FURNISH BY	SIZE	FUSE SIZE	REMARKS	FURNISH BY	TYPE	SIZE	REMARKS	INTERLOCK	FIRE ALARM	ATC	OTHER	NOTES
(FUTURE 1)	1	HOT WATER PUMP	MECHANICAL	B005	--	--	--	--	480/3		--	--	--	--	--	--	--	--	--	--	--	--	
(FUTURE)	1	BOILER	MECHANICAL	B005	--	--	--	--	480/3		--	--	--	--	--	--	--	--	--	--	--	--	
B-1	1	BOILER	MECHANICAL	B005	--	--	(15)	20	480/3	HLB-15,17,19	EC	30A	NF	NOTE 1	MC	--	--	NOTE 5	--	--	--	--	
B-2	1	BOILER	MECHANICAL	B005	--	--	(15)	20	480/3	HLB-8,10,12	EC	30A	NF	NOTE 1	MC	--	--	NOTE 5	--	--	--	--	
BP-1	1	BOILER PUMP	MECHANICAL	B005	3	--	4.8	15	480/3	HLB-9,11,13	MC	--	--	NOTE 2	MC	VFD	--	NOTE 5	--	--	--	--	
BP-2	1	BOILER PUMP	MECHANICAL	B005	3	--	4.8	15	480/3	HLB-14,16,18	MC	--	--	NOTE 2	MC	VFD	--	NOTE 5	--	--	--	--	
CU-SS-1	1	SPLIT SYSTEM	ROOF	--	--	--	(18.3)	30	120/1	LMB-11	EC	30A	NF	NOTE 1	MC	--	--	NOTE 5	--	--	--	--	
CUH-1	1	CABINET UNIT HEATER	VESTIBULE	B006	FHP	--	--	--	120/1	LLK-72	MC	--	--	NOTE 4	MC	ECM	--	NOTE 5	--	--	--	--	8
CUH-2	1	CABINET UNIT HEATER	VESTIBULE	C000	FHP	--	--	--	120/1	LLD-54	MC	--	--	NOTE 4	MC	ECM	--	NOTE 5	--	--	--	--	8
CUH-3	1	CABINET UNIT HEATER	VESTIBULE	D000	FHP	--	--	--	120/1	LLC-9	MC	--	--	NOTE 4	MC	ECM	--	NOTE 5	--	--	--	--	8
CUH-4	1	CABINET UNIT HEATER	VESTIBULE	D000	FHP	--	--	--	120/1	LLC-9	MC	--	--	NOTE 4	MC	ECM	--	NOTE 5	--	--	--	--	8
CUH-5	1	CABINET UNIT HEATER	VESTIBULE	E100	FHP	--	--	--	120/1	LMA-45	MC	--	--	NOTE 4	MC	ECM	--	NOTE 5	--	--	--	--	8
CUH-6	1	CABINET UNIT HEATER	VESTIBULE	D000	FHP	--	--	--	120/1	LMA-40	MC	--	--	NOTE 4	MC	ECM	--	NOTE 5	--	--	--	--	8
CUH-7	1	CABINET UNIT HEATER	VESTIBULE	B100	FHP	--	--	--	120/1	LMA-42	MC	--	--	NOTE 4	MC	ECM	--	NOTE 5	--	--	--	--	8
CUH-8	1	CABINET UNIT HEATER	VESTIBULE	B100	FHP	--	--	--	120/1	LMA-42	MC	--	--	NOTE 4	MC	ECM	--	NOTE 5	--	--	--	--	8
CUH-9	1	CABINET UNIT HEATER	VESTIBULE	B102	FHP	--	--	--	120/1	LMB-19	MC	--	--	NOTE 4	MC	ECM	--	NOTE 5	--	--	--	--	8
DEF-1	1	FAN	ROOF	--	1/2	--	2.5	15	208/1	LMB-34,36	MC	--	--	NOTE 4	MC	ECM	--	NOTE 5	--	--	--	--	
DF-1	1	DESRAT FAN	CIRCULATION	B113	--	--	1.3	15	120/1	LUA-37	MC	--	--	NOTE 4	MC	ECM	--	NOTE 2	--	--	--	--	
DF-2	1	DESRAT FAN	CIRCULATION	B113	--	--	1.3	15	120/1	LUA-38	MC	--	--	NOTE 4	MC	ECM	--	NOTE 2	--	--	--	--	
DF-3	1	DESRAT FAN	CIRCULATION	B113	--	--	1.3	15	120/1	LUA-40	MC	--	--	NOTE 4	MC	ECM	--	NOTE 2	--	--	--	--	
DRP-1	1	RECIRC PUMP	MECHANICAL	B005	1/2	--	9.8	20	120/1	LLB-43	EC	SPST	--	NOTE 1	MC	--	--	NOTE 5	--	--	--	--	
EF-1	1	EXHAUST FAN	ROOF	--	1/6	--	3	15	208/1	LMB-30,32	MC	--	--	NOTE 4	MC	ECM	--	NOTE 5	--	--	--	--	
EF-2	1	EXHAUST FAN	ROOF	--	1/4	--	2.9	15	208/1	LMD1-43,45	MC	--	--	NOTE 4	MC	ECM	--	NOTE 5	--	--	--	--	
ELEV	1	ELEVATOR	ELEVATOR	375	--	--	34	70	480/3	MSB-21	ES	--	--	NOTE 4	ES	SC	--	NOTE 4	--	NOTE 7	--	--	
GEF-1	1	FAN	ROOF	--	3	--	4.8	20	480/3	HLB-21,23,25	MC	--	--	NOTE 4	MC	ECM	--	NOTE 5	--	--	--	--	
HWP-1	1	HOT WATER PUMP	MECHANICAL	B005	7.5	--	11	20	480/3	HLB-22,24,26	MC	--	--	NOTE 2	MC	VFD	--	NOTE 5	--	--	--	--	
HWP-2	1	HOT WATER PUMP	MECHANICAL	B005	7.5	--	11	20	480/3	HLB-27,29,31	MC	--	--	NOTE 2	MC	VFD	--	NOTE 5	--	--	--	--	
MAU-1	1	MAKE UP AIR UNIT	MECHANICAL	B005	2	--	(4)	15	480/3	HLB-28,30,32	MC	--	--	NOTE 4	MC	VFD	--	NOTE 5	--	NOTE 6	--	--	
RTU-1	1	ROOF TOP UNIT	ROOF	--	--	--	231	250	480/3	MSB-7	MC	--	--	NOTE 2	MC	VFD	--	NOTE 5	--	NOTE 6	--	--	
RTU-2	1	ROOF TOP UNIT	ROOF	--	--	--	124	150	480/3	MSB-8	MC	--	--	NOTE 2	MC	VFD	--	NOTE 5	--	NOTE 6	--	--	
RTU-3	1	ROOF TOP UNIT	ROOF	--	--	--	138	150	480/3	MSB-9	MC	--	--	NOTE 2	MC	VFD	--	NOTE 5	--	NOTE 6	--	--	
RTU-4	1	ROOF TOP UNIT	ROOF	--	--	--	90	110	480/3	MSB-10	MC	--	--	NOTE 2	MC	VFD	--	NOTE 5	--	NOTE 6	--	--	
RTU-5	1	ROOF TOP UNIT	ROOF	--	--	--	46	60	480/3	MSB-11	MC	--	--	NOTE 2	MC	VFD	--	NOTE 5	--	NOTE 6	--	--	
RTU-6	1	ROOF TOP UNIT	ROOF	--	--	--	281	300	480/3	MSB-12	MC	--	--	NOTE 2	MC	VFD	--	NOTE 5	--	NOTE 6	--	--	
RTU-7	1	ROOF TOP UNIT	ROOF	--	--	--	24	30	480/3	MSB-13	MC	--	--	NOTE 2	MC	VFD	--	NOTE 5	--	NOTE 6	--	--	10
SP-1	1	SUMP PUMP	STORAGE	D010b	3/4	--	13.8	25	120/1	LLB-45	EC	--	--	NOTE 9	ES	CP	--	NOTE 2	--	NOTE 5	--	--	SIMPLEX CP
SP-2A	1	SUMP PUMP	STORAGE	D010b	3/4	--	13.8	25	120/1	LLB-44	EC	--	--	NOTE 9	ES	CP	--	NOTE 2	--	NOTE 5	--	--	DUPLEX CP
SP-2B	1	SUMP PUMP	STORAGE	D010b	3/4	--	13.8	25	120/1	LLB-47	EC	--	--	NOTE 9	ES	CP	--	NOTE 2	--	NOTE 5	--	--	DUPLEX CP
SP-3A	1	SUMP PUMP	MECH	B005	3/4	--	13.8	25	120/1	LLB-38	EC	--	--	NOTE 9	ES	CP	--	NOTE 2	--	NOTE 5	--	--	DUPLEX CP
SP-3B	1	SUMP PUMP	MECH	B005	3/4	--	13.8	25	120/1	LLB-40	EC	--	--	NOTE 9	ES	CP	--	NOTE 2	--	NOTE 5	--	--	DUPLEX CP
SP-4A	1	SUMP PUMP	MUSIC STOR	D003C	3/4	--	13.8	25	120/1	LLC-35	EC	--	--	NOTE 9	ES	CP	--	NOTE 2	--	NOTE 5	--	--	DUPLEX CP
SP-4B	1	SUMP PUMP	MUSIC STOR	D003C	3/4	--	13.8	25	120/1	LLC-32	EC	--	--	NOTE 9	ES	CP	--	NOTE 2	--	NOTE 5	--	--	DUPLEX CP
SS-1	1	SPLIT SYSTEM	DATA	B004b	3/4	--	--	--	208/1	LLT-17,19	EC	30A	--	NOTE 1	MC	--	--	NOTE 5	--	--	--	--	
SUH-1	1	SUSPENDED UNIT HEATER	GYM STORAGE	D010a	FHP	--	--	--	120/1	LLG-9	MC	--	--	NOTE 4	MC	--	--	NOTE 5	--	--	--	--	8
SUH-2	1	SUSPENDED UNIT HEATER	DATA	B004b	FHP	--	--	--	120/1	LLT-11	MC	--	--	NOTE 4	MC	--	--	NOTE 5	--	--	--	--	8
SUH-3	1	SUSPENDED UNIT HEATER	ELEC	B005a	FHP	--	--	--	120/1	LLB-21	MC	--	--	NOTE 4	MC	--	--	NOTE 5	--	--	--	--	8
SUH-4	1	SUSPENDED UNIT HEATER	MECHANICAL	B005	FHP	--	--	--	120/1	LLB-20	MC	--	--	NOTE 4	MC	--	--	NOTE 5	--	--	--	--	8
SUH-5	1	SUSPENDED UNIT HEATER	RECEIVING	B003	FHP	--	--	--	120/1	LLB-34	MC	--	--	NOTE 4	MC	--	--	NOTE 5	--	--	--	--	8
SUH-6	1	SUSPENDED UNIT HEATER	CUSTODIAL	B108	FHP	--	--	--	120/1	LMD1-23	MC	--	--	NOTE 4	MC	--	--	NOTE 5	--	--	--	--	8
TF-1	1	TRANSFER FAN	ELEC	B005a	1/4	--	5.8	15	120/1	LLB-16	MC	--	--	NOTE 2	MC	STAT	--	NOTE 5	--	--	--	--	
TF-2	1	TRANSFER FAN	ELEC / IDF	C001A	1/4	--	5.8	15	120/1	LLD-59	MC	--	--	NOTE 2	MC	STAT	--	NOTE 5	--	--	--	--	
TF-3	1	TRANSFER FAN	ELEC/IDF	A111a	1/4	--	5.8	15	120/1	LMA-3	MC	--	--	NOTE 2	MC	STAT	--	NOTE 5	--	--	--	--	
TF-4	1	TRANSFER FAN	ELEC / IDF	C101A	1/4	--	5.8	15	120/1	LMD1-3	MC	--	--	NOTE 2	MC	STAT	--	NOTE 5	--	--	--	--	
TF-5	1	TRANSFER FAN	ELEC/IDF	A211a	1/4	--	5.8	15	120/1	LUA-41	MC	--	--	NOTE 2	MC	STAT	--	NOTE 5	--	--	--	--	
TF-6	1	TRANSFER FAN	MECHANICAL	B005	1/4	--	5.8	15	120/1	LLB-41	MC	--	--	NOTE 2	MC	STAT	--	NOTE 5	--	--	--	--	
WH-1	1	WATER HEATER	MECHANICAL	B005	--	--	6.2	15	120/1	LLB-23	EC	SPST	--	NOTE 1	MC	--	--	NOTE 5	--	--	--	--	
WH-2	1	WATER HEATER	MECHANICAL	B005	--	--	6.2	15	120/1	LLB-48	EC	SPST	--	NOTE 1	MC	--	--	NOTE 5	--	--	--	--	
WS-1	1	WATER SOFTENER	MECHANICAL	B005	--	--	3.5	15	120/1	LLB-49	EC	SPST	--	NOTE 1	MC	--	--	NOTE 5	--	--	--	--	GFCI RECEPTACLE

PANELBOARD: HLB

LOCATION: ELEC B005a
SUPPLY FROM: MSB
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTS: 480/277 Wye
PHASES: 3
WIRES: 4
OPTIONS:

A.I.C. RATING: 22K
MAINS TYPE: MLO
MAINS RATING: 200 A
BUSSING: 200 A

Notes:

CKT	CIRCUIT DESCRIPTION	CONDUIT & WIRE	TRIP	POLE	A (VA)		B (VA)		C (VA)		POLE	TRIP	CONDUIT & WIRE	CIRCUIT DESCRIPTION	CKT
1	LIGHTING, RM A001, A002, D010A, D010B	(1) 3/4"C.,1-#12, #12, #12G	20 A	1	1678	54					1	20 A	(1) 3/4"C.,1-#12, #12, #12G	EMERGENCY LIGHTING	2
3	LIGHTING, RM B003-B005	(1) 3/4"C.,1-#12, #12, #12G	20 A	1			1635	36			1	20 A	(1) 3/4"C.,1-#12, #12, #12G	EXTERIOR LIGHTING	4
5	LIGHTING, COMMONS B000	(1) 3/4"C.,1-#12, #12, #12G	20 A	1					686	1937	1	20 A	(1) 3/4"C.,1-#12, #12, #12G	NORTH SITE LIGHTING	6
7	MONUMENT SIGN	(1) 3/4"C.,1-#10, #10, #10G	20 A	1	0	4157					3	20 A	(1) 3/4"C.,3-#12, #12, #12G	B-2, MECH B005	8
9	BP-1, MECH B005	(1) 3/4"C.,3-#12, #12, #12G	20 A	3			1330	4157							10
11									1330	4157					12
13					1330	1330					3	20 A	(1) 3/4"C.,3-#12, #12, #12G	BP-2, MECH B005	14
15	B-1, MECH B005	(1) 3/4"C.,3-#12, #12, #12G	20 A	3			4157	1330							16
17									4157	1330					18
19					4157	134					1	20 A	(1) 3/4"C.,1-#12, #12, #12G	ELEVATOR LIGHTING	20
21	GEF-1	(1) 3/4"C.,3-#12, #12, #12G	20 A	3			1330	3049			3	20 A	(1) 3/4"C.,3-#12, #12, #12G	HWP-1, MECH B005	22
23									1330	3049					24
25					1330	3049									26
27	HWP-2, MECH B005	(1) 3/4"C.,3-#12, #12, #12G	20 A	3			3049	1109			3	15 A	(1) 3/4"C.,3-#12, #12, #12G	MAU-1, MECH B005	28
29									3049	1109					30
31					3049	1109									32
33															34
35															36
37															38
39															40
41															42

TOTAL LOAD (VA): 21357 VA | 21110 VA | 22133 VA
TOTAL AMPS: 77 A | 76 A | 80 A

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Motor/HVAC/Mech	58533 VA	100%	58533 VA		
Lighting	6115 VA	125%	7644 VA	TOTAL CONN. LOAD (VA):	64598 VA
Power	0 VA	0%	0 VA	TOTAL EST. DEMAND (VA):	66116 VA
				TOTAL CONNECTED:	78 A
				TOTAL EST. DEMAND:	80 A

PANELBOARD: HLD

LOCATION: ELEC / IDF C001a
SUPPLY FROM: MSB
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTS: 480/277 Wye
PHASES: 3
WIRES: 4
OPTIONS:

A.I.C. RATING: 22K
MAINS TYPE: MLO
MAINS RATING: 400 A
BUSSING: 400 A

Notes:

CKT	CIRCUIT DESCRIPTION	CONDUIT & WIRE	TRIP	POLE	A (VA)		B (VA)		C (VA)		POLE	TRIP	CONDUIT & WIRE	CIRCUIT DESCRIPTION	CKT
1	TLD	(1) 2-1/2"C.,3-#4/0, #4/0, --G	225 A	3	38744	5651					3	200 A	(1) 2-1/2"C.,3-#3/0, #3/0, #6G	HMD	2
3							37229	5565							4
5									33570	6605					6
7	LIGHTING, RM B000, B018	(1) 3/4"C.,1-#12, #12, #12G	20 A	1	2196	1015					1	20 A	(1) 3/4"C.,1-#12, #12, #12G	LIGHTING, CORRIDOR D000, D011, D012	8
9	LIGHTING, RM B012-B014, C001-C013	(1) 3/4"C.,1-#12, #12, #12G	20 A	1			2835	2233			1	20 A	(1) 3/4"C.,1-#12, #12, #12G	LIGHTING, GYMNASIUM D010	10
11	LIGHTING, RM B015-B017, C002-C014	(1) 3/4"C.,1-#12, #12, #12G	20 A	1					2962	2233	1	20 A	(1) 3/4"C.,1-#12, #12, #12G	LIGHTING, GYMNASIUM D010	12
13	LIGHTING, RM D001, D003, D005, D006	(1) 3/4"C.,1-#12, #12, #12G	20 A	1	2078	3200					1	20 A	(1) 3/4"C.,1-#12, #12, #12G	LIGHTING, WEIGHTS D009	14
15	LIGHTING, WEIGHTS D009	(1) 3/4"C.,1-#12, #12, #12G	20 A	1			3600	3000			1	20 A	(1) 3/4"C.,1-#12, #12, #12G	LIGHTING, WEIGHTS D009	16
17	LIGHTING, WEIGHTS D009	(1) 3/4"C.,1-#12, #12, #12G	20 A	1					3400	1572	1	20 A	(1) 3/4"C.,1-#12, #12, #12G	LIGHTING, RM D002, D004, D007, D008	18
19	LIGHTING, WEIGHTS D009	(1) 3/4"C.,1-#12, #12, #12G	20 A	1	2800	694					1	20 A	(1) 3/4"C.,1-#12, #12, #12G	EAST SITE LIGHTING	20
21	EXTERIOR LIGHTING	(1) 3/4"C.,1-#12, #12, #12G	20 A	1			382	951			1	20 A	(1) 3/4"C.,1-#12, #12, #12G	SOUTH SITE LIGHTING	22
23	EGRESS LIGHTING	(1) 3/4"C.,1-#12, #12, #12G	20 A	1					1339						24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42

TOTAL LOAD (VA): 56325 VA | 55626 VA | 51627 VA
TOTAL AMPS: 206 A | 203 A | 186.4 A

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Motor/HVAC/Mech	8950 VA	100%	8950 VA		
Other	120 VA	100%	120 VA	TOTAL CONN. LOAD (VA):	163575 VA
Receptacle, Convenience	98560 VA	55.07%	54280 VA	TOTAL EST. DEMAND (VA):	133306 VA
Lighting	56015 VA	125%	70019 VA	TOTAL CONNECTED:	197 A
Power	0 VA	0%	0 VA	TOTAL EST. DEMAND:	160 A

PANELBOARD: HLK

LOCATION: OFFICE B009
SUPPLY FROM: MSB
MOUNTING: FLUSH
ENCLOSURE: NEMA 1

VOLTS: 480/277 Wye
PHASES: 3
WIRES: 4
OPTIONS:

A.I.C. RATING: 22K
MAINS TYPE: MLO
MAINS RATING: 400 A
BUSSING: 400 A

Notes:

CKT	CIRCUIT DESCRIPTION	CONDUIT & WIRE	TRIP	POLE	A (VA)		B (VA)		C (VA)		POLE	TRIP	CONDUIT & WIRE	CIRCUIT DESCRIPTION	CKT
1	DISHMACHINE, DISH RETURN B010	(1) 1-1/4"C.,3-#4, #4, #8G	70 A	3	15159	22642					3	110 A	(1) 2"C.,3-#2, #2, #6G	COMBI OVEN, KITCHEN B007	2
3							15159	22642							4
5									15159	22642					6
7	COMBI OVEN, KITCHEN B007	(1) 1"C.,3-#8, #8, #10G	40 A	3	8314	8214					3	45 A	(1) 1-1/4"C.,3-#8, #8, #10G	COMBI OVEN TOP, KITCHEN B007	8
9							8314	8214							10
11									8314	8214					12
13	MIXER, KITCHEN B007	(1) 3/4"C.,3-#12, #12, #12G	20 A	3	1802	1591					1	20 A	(1) 3/4"C.,1-#12, #12, #12G	LIGHTING, B006-B011	14
15							1802	15			1	20 A	(1) 3/4"C.,1-#12, #12, #12G	EMERGENCY LIGHTING	16
17									1802	1608	3	20 A	(1) 3/4"C.,3-#12, #12, #12G	KITCHEN EQUIPMENT DISH RETURN B010	18
19	KITCHEN EQUIPMENT KITCHEN B007	(1) 1-1/4"C.,3-#4, #4, #8G	70 A	3	14688	1608									20
21							14688	1608							22
23									14688	2661	3	20 A	(1) 3/4"C.,3-#12, #12, #12G	KITCHEN EQUIPMENT	24
25	KITCHEN EQUIPMENT	(1) 3/4"C.,3-#10, #10, #10G	25 A	3	4711	2661									26
27							4711	2661							28
29									4711						30
31															32
33															34
35															36
37															38
39															40
41															42

TOTAL LOAD (VA): 81388 VA | 79813 VA | 79798 VA
TOTAL AMPS: 294 A | 288 A | 288.1 A

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Kitchen Equipment	239394 VA	65%	155606 VA		
Lighting	1607 VA	125%	2008 VA	TOTAL CONN. LOAD (VA):	240999 VA
				TOTAL EST. DEMAND (VA):	157613 VA
				TOTAL CONNECTED:	290 A
				TOTAL EST. DEMAND:	190 A

PANELBOARD: HMA

LOCATION: ELEC/IDF A111a
SUPPLY FROM: MSB
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTS: 480/277 Wye
PHASES: 3
WIRES: 4
OPTIONS:

A.I.C. RATING: 22K
MAINS TYPE: MLO
MAINS RATING: 200 A
BUSSING: 200 A

Notes:

CKT	CIRCUIT DESCRIPTION	CONDUIT & WIRE	TRIP	POLE	A (VA)		B (VA)		C (VA)		POLE	TRIP	CONDUIT & WIRE	CIRCUIT DESCRIPTION	CKT
1	TMA	(1) 1-1/2"C.,3-#2, #2, --G	110 A	3	11920										2
3							13767								4
5									9540						6
7	LIGHTING, RM A101-A113	(1) 3/4"C.,1-#12, #12, #12G	20 A	1	2688	1745					1	20 A	(1) 3/4"C.,1-#12, #12, #12G	LIGHTING, CORRIDOR A100	8
9	LIGHTING, CORRIDOR A100, A114	(1) 3/4"C.,1-#12, #12, #12G	20 A	1			1130	835			1	20 A	(1) 3/4"C.,1-#12, #12, #12G	LIGHTING, RM A118, A119	10
11	LIGHTING, RM A102-A110	(1) 3/4"C.,1-#12, #12, #12G	20 A	1					1665	2871	1	20 A	(1) 3/4"C.,1-#12, #12, #12G	LIGHTING, RM B101-B104	12
13	LIGHTING, CONF RM B103A	(1) 3/4"C.,1-#12, #12, #12G	20 A	1	2600										14
15	EMERGENCY LIGHTING	(1) 3/4"C.,1-#12, #12, #12G	20 A	1			98								16
17	EXTERIOR LIGHTING	(1) 3/4"C.,1-#12, #12, #12G	20 A	1					523						18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42

TOTAL LOAD (VA): 18941 VA | 15828 VA | 14599 VA
TOTAL AMPS: 69 A | 58 A | 52.7 A

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Motor/HVAC/Mech	3327 VA	100%	3327 VA		
Receptacle, Convenience	31500 VA	65.87%	20750 VA	TOTAL CONN. LOAD (VA):	49367 VA
Lighting	14142 VA	125%	17678 VA	TOTAL EST. DEMAND (VA):	42153 VA
Power	400 VA	100%	400 VA	TOTAL CONNECTED:	59 A
				TOTAL EST. DEMAND:	51 A

PANELBOARD: HMD

LOCATION: ELEC/IDF C101a
SUPPLY FROM: HLD
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTS: 480/277 Wye
PHASES: 3
WIRES: 4
OPTIONS:

A.I.C. RATING: 22K
MAINS TYPE: MLO
MAINS RATING: 200 A
BUSSING: 200 A

Notes:

CKT	CIRCUIT DESCRIPTION	CONDUIT & WIRE	TRIP	POLE	A (VA)		B (VA)		C (VA)		POLE	TRIP	CONDUIT & WIRE	CIRCUIT DESCRIPTION	CKT
1	LIGHTING, CIRCULATION B113, B121	(1) 3/4"C.,1-#12, #12, #12G	20 A	1	877	2280					1	20 A	(1) 3/4"C.,1-#12, #12, #12G	LIGHTING, CIRCULATION B121	2
3	LIGHTING, CIRCULATION B113	(1) 3/4"C.,1-#12, #12, #12G	20 A	1			2280	2280			1	20 A	(1) 3/4"C.,1-#12, #12, #12G	LIGHTING, CIRCULATION B121	4
5	LIGHTING, CIRCULATION B113	(1) 3/4"C.,1-#12, #12, #12G	20 A	1					2280	1406	1	20 A	(1) 3/4"C.,1-#12, #12, #12G	LIGHTING, MEDIA CENTER B105-B107	6
7	LIGHTING, RM B108, B109, C101-C111	(1) 3/4"C.,1-#12, #12, #12G	20 A	1	2452	101					1	20 A	(1) 3/4"C.,1-#12, #12, #12G	EMERGENCY LIGHTING	8
9	LIGHTING, CORRIDOR C113	(1) 3/4"C.,1-#12, #12, #12G	20 A	1			1048								10
11	LIGHTING, RM B110-B112, C102-C112	(1) 3/4"C.,1-#12, #12, #12G	20 A	1					2994						12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42

TOTAL LOAD (VA): 5651 VA | 5565 VA | 6605 VA
TOTAL AMPS: 20 A | 20 A | 23.9 A

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Lighting	17785 VA	125%	22231 VA		
				TOTAL CONN. LOAD (VA):	17785 VA
				TOTAL EST. DEMAND (VA):	22231 VA
				TOTAL CONNECTED:	21 A
				TOTAL EST. DEMAND:	27 A

PANELBOARD: HUA

LOCATION: ELEC/IDF A211a
SUPPLY FROM: MSB
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTS: 480/277 Wye
PHASES: 3
WIRES: 4
OPTIONS:

A.I.C. RATING: 22K
MAINS TYPE: MLO
MAINS RATING: 200 A
BUSSING: 200 A

Notes:

CKT	CIRCUIT DESCRIPTION	CONDUIT & WIRE	TRIP	POLE	A (VA)		B (VA)		C (VA)		POLE	TRIP	CONDUIT & WIRE	CIRCUIT DESCRIPTION	CKT
1	LIGHTING, RM A201-A213	(1) 3/4"C.,1-#12, #12, #12G	20 A	1	2727	51					1	20 A	(1) 3/4"C.,1-#12, #12, #12G	EMERGENCY LIGHTING	2
3	LIGHTING, RM A214, A200S	(1) 3/4"C.,1-#12, #12, #12G	20 A	1			1386	8948			3	110 A	(1) 1-1/2"C.,3-#2, #2, --G	TUA	4
5	LIGHTING, RM A202-A208	(1) 3/4"C.,1-#12, #12, #12G	20 A	1					1884	8794					6
7						9628									8
9															10
11															12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42

TOTAL LOAD (VA): 12404 VA | 10334 VA | 10678 VA
TOTAL AMPS: 45 A | 37 A | 38.7 A

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Motor/HVAC/Mech	1669 VA	100%	1669 VA		
Receptacle, Convenience	25020 VA	69.98%	17510 VA	TOTAL CONN. LOAD (VA):	33416 VA
Lighting	6727 VA	125%	8409 VA	TOTAL EST. DEMAND (VA):	27587 VA
				TOTAL CONNECTED:	40 A
				TOTAL EST. DEMAND:	33 A

ICON
ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

TRAVOR D. FREDRICKSON
PE - 27743
DATE 03/10/2026

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
1	ADDENDUM #1	03/17/2026
2	ADDENDUM #2	03/24/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author
JN: 2025168

POWER SCHEDULES

SHEET
E830

Autodesk Docs://24-028 Valley City Public Schools High School/2025168_Valley City Public Schools New High School_MEP26.rvt
3/30/2026 17:44:31

PANELBOARD: LLB

LOCATION: ELEC B005a
SUPPLY FROM: TLB
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
VOLTS: 208/120 Wye
PHASES: 3
WIRES: 4
OPTIONS:
A.I.C. RATING: 22K
MAINS TYPE: MCB
MAINS RATING: 300 A
BUSSING: 300 A

Notes:
1. PROVIDE 20/1 SPARES FOR ALL BLANK SPACES.

CKT	CIRCUIT DESCRIPTION		CONDUIT & WIRE	TRIP	POLE	A (VA)		B (VA)		C (VA)		POLE	TRIP	CONDUIT & WIRE		CIRCUIT DESCRIPTION	CKT
1	SPARE			100 A	3	0	13194					3	200 A	(1) 2-1/2"C.,3-#3/0, #3/0, #6G		LLG	2
3								0	10674								4
5										0	12574						6
7	LMB		(1) 2-1/2"C.,3-#3/0, #3/0, #6G	200 A	3	6429	900					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, TECH ED A001	8
9								6660	900			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, TECH ED A001	10
11										9596	1440	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, TECH ED A001	12
13	RECEPT, ART B001		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	1440	720					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, RM A002, D010b	14
15	RECEPT, ART B001		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			900	1207			1	15 A	(1) 3/4"C.,1-#12, #12, #12G		TF-1, ELEC B005A	16
17	RECEPT, ART B001		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					720	1260	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, MECH B005	18
19	RECEPT, ELEC B005A		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	360	120					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		SUH-4, MECH B005	20
21	SUH-2, ELEC B005A		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			120	360			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, BLDG STOR B004, B004a	22
23	WH-1, MECHANICAL B005		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					772	1080	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, OFFICE B003A, B002	24
25	RECEPT, RECEIVING B003		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	1080	180					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, RECEIVING B003	26
27	RECEPT, RECEIVING B003		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			180	180			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, RECEIVING B003	28
29	RECEPT, RECEIVING B003		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					180	180	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, RECEIVING B003	30
31	RECEPT, RECEIVING B003		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	180	500					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		OVERHEAD DOOR, RECEIVING B003	32
33	RECEPT, RECEIVING B003		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			180	120			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		SUH-5, RECEIVING B003	34
35	RECEPT, RECEIVING B003		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					180	720	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, COMMONS B000	36
37	RECEPTACLE,NON-CONVENIENCE/POWER KILN B001A		(1) 3/4"C.,1-#12, #12, #12G	70 A	2	5760	1656					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		SP-3A, MECH B005	38
39								5760	1656			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		SP-3B, MECH B005	40
41	TF-6, MECHANICAL B005		(1) 3/4"C.,1-#12, #12, #12G	15 A	1					1207	900	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPTACLE, CONVENIENCE COMMONS B000	42
43	DRP-1, MECH B005		(1) 3/4"C.,1-#10, #10, #10G	20 A	1	1176	1656					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		SP-2A, STORAGE D010b	44
45	SP-1, STORAGE D010b		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			1656	180			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEP, ELEVATOR SHAFT	46
47	SP-2B, STORAGE D010b		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					1656	772	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		WH-1, MECHANICAL B005	48
49	WS-1, MECHANICAL B005		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	420											50
51	FSD, ROOM B005, B003			20 A	1			120									52
53																	54
55																	56
57																	58
59																	60
					TOTAL LOAD (VA):	35771 VA		30853 VA		33237 VA							
					TOTAL AMPS:	301 A		257 A		280 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Motor/HVAC/Mech	20759 VA	100%	20759 VA		
Other	120 VA	100%	120 VA	TOTAL CONN. LOAD (VA):	99862 VA
Receptacle, Convenience	36900 VA	63.55%	23450 VA	TOTAL EST. DEMAND (VA):	86412 VA
Receptacle,Non-Convenience/Power	22440 VA	100%	22440 VA	TOTAL CONNECTED:	277 A
Power	19643 VA	100%	19643 VA	TOTAL EST. DEMAND:	240 A

PANELBOARD: LLC

LOCATION: CUST D005
SUPPLY FROM: LLD
MOUNTING: FLUSH
ENCLOSURE: NEMA 1
VOLTS: 208/120 Wye
PHASES: 3
WIRES: 4
OPTIONS:
A.I.C. RATING: 22K
MAINS TYPE: MLO
MAINS RATING: 200 A
BUSSING: 200 A

Notes:
1. PROVIDE 20/1 SPARES FOR ALL BLANK SPACES.

CKT	CIRCUIT DESCRIPTION		CONDUIT & WIRE	TRIP	POLE	A (VA)		B (VA)		C (VA)		POLE	TRIP	CONDUIT & WIRE		CIRCUIT DESCRIPTION	CKT
1	RECEPT, MUSIC D003		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	720	720					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, RM D005, D006, D012	2
3	RECEPT, MUSIC D003, D003c		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			900	900			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, OFFICE D003A	4
5	RECEPT, MUSIC D003, D003b		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					1080	360	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, PRACTICE D001	6
7	DOOR OPENERS, VESTIBULE D000		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	1000	500					1	20 A	(1) 3/4"C.,1-#12, #12, #12G	GFCI	ELECTRIC WATER COOLER, CORRIDOR D011	8
9	CUH-1/CUH-4, VESTIBULE D000		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			0	500			1	20 A	(1) 3/4"C.,1-#12, #12, #12G	GFCI	ELECTRIC WATER COOLER, CORRIDOR D011	10
11	RECEPT, CONCESSIONS D007		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					180	500	1	20 A	(1) 3/4"C.,1-#12, #12, #12G	GFCI	ELECTRIC WATER COOLER, CORRIDOR D011	12
13	RECEPT, CONCESSIONS D007		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	180	500					1	20 A	(1) 3/4"C.,1-#12, #12, #12G	GFCI	ELECTRIC WATER COOLER, CORRIDOR D011	14
15	RECEPT, CONCESSIONS D007		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			180	500			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		OVERHEAD DOOR, CONCESSIONS D007	16
17	RECEPT, CONCESSIONS D007		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					180	900	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, TRAINING D008	18
19	REFRIGERATOR, CONCESSIONS D007		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	180	900					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, MENS LOCKER ROOM D004, D004b	20
21	RECEPT, OFFICE D004A		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			1080	900			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, WOMENS LOCKER ROOM D002, D002b	22
23	RECEPT, OFFICE D002A		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					1260	360	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, WEIGHTS D009	24
25	RECEPT, CORRIDOR D011		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	540	360					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, WEIGHTS D009	26
27	DATA RACK, MUSIC STOR D003C		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			360	360			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, WEIGHTS D009	28
29	RECEPT, WEIGHTS D009		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					360	360	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, WEIGHTS D009	30
31	RECEPT, WEIGHTS D009		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	360	1656					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		SP-4B, MUSIC STOR D003C	32
33	RECEPT, WEIGHTS D009		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			360	360			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, ROOF	34
35	SP-4A, MUSIC STOR D003C		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					1656							36
37																	38
39																	40
41																	42
43																	44
45																	46
47																	48
49																	50
51																	52
53																	54
55																	56
57																	58
59																	60
					TOTAL LOAD (VA):	7616 VA		6400 VA		7196 VA							
					TOTAL AMPS:	64 A		53 A		61 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Motor/HVAC/Mech	4812 VA	100%	4812 VA		
Receptacle, Convenience	16400 VA	80.49%	13200 VA	TOTAL CONN. LOAD (VA):	21212 VA
				TOTAL EST. DEMAND (VA):	18012 VA
				TOTAL CONNECTED:	59 A
				TOTAL EST. DEMAND:	50 A

PANELBOARD: LLD

LOCATION: ELEC / IDF C001a
SUPPLY FROM: TLD
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
VOLTS: 208/120 Wye
PHASES: 3
WIRES: 4
OPTIONS:
A.I.C. RATING: 22K
MAINS TYPE: MCB
MAINS RATING: 400 A
BUSSING: 400 A

Notes:
1. PROVIDE 20/1 SPARES FOR ALL BLANK SPACES.

CKT	CIRCUIT DESCRIPTION		CONDUIT & WIRE	TRIP	POLE	A (VA)		B (VA)		C (VA)		POLE	TRIP	CONDUIT & WIRE		CIRCUIT DESCRIPTION	CKT
1	LLC		(1) 2-1/2"C.,3-#3/0, #3/0, #6G	200 A	3	7616	9748					3	200 A	(1) 2-1/2"C.,3-#3/0, #3/0, #6G		LMD1	2
3								6400	11049								4
5										7196	9507						6
7	RECEPT, BUSINESS C001, C001a		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	1080	180					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, SCHOOL STORE B012	8
9	RECEPT, BUSINESS C001		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			1260	180			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, SCHOOL STORE B012	10
11	RECEPT, SCHOOL STORE B012		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					180	180	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, SCHOOL STORE B012	12
13	RECEPT, SCHOOL STORE B012		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	180	180					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, SCHOOL STORE B012	14
15	RECEPT, SCHOOL STORE B012		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			180	180			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		HEAT PRESS, STORAGE B012A	16
17	RECEPT, SCHOOL STORE B012		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					180	360	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, SCHOOL STORE B012	18
19	COPIER, STAFF WKRM B013		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	180	500					1	20 A	(1) 3/4"C.,1-#12, #12, #12G	GFCI	ELECTRIC WATER COOLER, COMMONS B000	20
21	MICROWAVE, SCHOOL STORE B012		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			1500	500			1	20 A	(1) 3/4"C.,1-#12, #12, #12G	GFCI	ELECTRIC WATER COOLER, COMMONS B000	22
23	RECEPT, RM B013, B014		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					900	900	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, RM B015, B016, B017	24
25	RECEPT, COMMONS B000		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	1440	900					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, 1 MATH C008	26
27	RECEPT, ILC C002		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			900	1080			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, 1 MATH C008	28
29	RECEPT, ILC C002		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					900	900	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, 2 MATH C010	30
31	RECEPT, ALC C004		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	900	1080					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, 2 MATH C010	32
33	RECEPT, ALC C004		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			1080	1080			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, 3 MATH C012	34
35	RECEPT, RM C006A, C006B		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					1080	900	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, 3 MATH C012	36
37	RECEPT, 4 MATH C014		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	1080	180					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		REFRIGERATOR, SPED C003	38
39	RECEPT, 4 MATH C014		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			1260	900			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, SPED C005	40
41	RECEPT, SPED C003		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					720	540	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, SPED C005	42
43	RECEPT, SPED C003		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	900	900					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, 3 SS C011	44
45	RECEPT, 1 SS C007		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			900	1080			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, 3 SS C011	46
47	RECEPT, 1 SS C007		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					1080	900	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, 4 SS C013	48
49	RECEPT, 2 SS C009		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	900	1080					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, 4 SS C013	50
51	RECEPT, 2 SS C009		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			1080	1180			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT & DOOR OPENERS, VESTIBULE C000	52
53	RECEPT, GROUP C015		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					900	0	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		CUH-2, VESTIBULE C000	54
55	RECEPT, CORRIDOR C016, C000s		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	1080	1080					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPTACLE, CONVENIENCE COMMONS B000	56
57	DOOR OPENER, ALC C004		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			0	5440			3	200 A	(1) 2-1/2"C.,3-#3/0, #3/0, #6G		LMD2	58
59	TF-2, ELEC / IDF C001A		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					1207	5040						60
61							7560										62
63																	64
65																	66
67																	68
69																	70
71																	72
73																	74
75																	76
77																	78
79																	80
81																	82
83																	84
					TOTAL LOAD (VA):	38744 VA		37229 VA		33570 VA							
					TOTAL AMPS:	328 A		315 A		279.7 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Motor/HVAC/Mech	8950 VA	100%	8950 VA		
Other	120 VA	100%	120 VA	TOTAL CONN. LOAD (VA):	109543 VA
Receptacle, Convenience	98560 VA	55.07%	54280 VA	TOTAL EST. DEMAND (VA):	65741 VA
Lighting	1913 VA	125%	2391 VA	TOTAL CONNECTED:	304 A
Power	0 VA	0%	0 VA	TOTAL EST. DEMAND:	182 A

PANELBOARD: LLG

LOCATION: GYM STORAGE D010a
SUPPLY FROM: LLB
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
VOLTS: 208/120 Wye
PHASES: 3
WIRES: 4
OPTIONS:
A.I.C. RATING: 22K
MAINS TYPE: MLO
MAINS RATING: 200 A
BUSSING: 200 A

Notes:
1. PROVIDE 20/1 SPARES FOR ALL BLANK SPACES.

CKT	CIRCUIT DESCRIPTION		CONDUIT & WIRE	TRIP	POLE	A (VA)		B (VA)		C (VA)		POLE	TRIP	CONDUIT & WIRE		CIRCUIT DESCRIPTION	CKT
1	RECEPT, GYMNASIUM D010		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	1080	1920					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		SCOREBOARD, GYMNASIUM D010	2
3	RECEPT, GYMNASIUM D010		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			1080	1920			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		SCOREBOARD, GYMNASIUM D010	4
5	BLEACHERS, GYMNASIUM D010		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					1180	1920	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		SCOREBOARD, GYMNASIUM D010	6
7	BLEACHERS, GYMNASIUM D010		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	1180	1920					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		SCOREBOARD, GYMNASIUM D010	8
9	SUH-1, STORAGE D010A		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			120	1180			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, GYMNASIUM D010	10
11	RECEPT, GYMNASIUM D010		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					1180	180	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, GYMNASIUM D010	12
13	RECEPT, GYMNASIUM D010		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	180	180					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, GYMNASIUM D010	14
15	RECEPT, GYMNASIUM D010		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			180	180			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, GYMNASIUM D010	16
17	RECEPT, GYMNASIUM D010		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					180	1500	1	20 A	(1) 3/4"C.,1-#10, #10, #10G		HOOP, GYMNASIUM D010	18
19	HOOP, GYMNASIUM D010		(1) 3/4"C.,1-#10, #10, #10G	20 A	1	1500	1500					1	20 A	(1) 3/4"C.,1-#10, #10, #10G		HOOP, GYMNASIUM D010	20
21	HOOP, GYMNASIUM D010		(1) 3/4"C.,1-#10, #10, #10G	20 A	1			1500	1500			1	20 A	(1) 3/4"C.,1-#10, #10, #10G		HOOP, GYMNASIUM D010	22
23	HOOP, GYMNASIUM D010		(1) 3/4"C.,1-#10, #10, #10G	20 A	1					1500	180	1	20 A	(1) 3/4"C.,1-#10, #10, #10G		SHOT CLOCK, GYMNASIUM D010	24
25	SHOT CLOCK, GYMNASIUM D010		(1) 3/4"C.,1-#10, #10, #10G	20 A	1	180	180					1	20 A	(1) 3/4"C.,1-#10, #10, #10G		SHOT CLOCK, GYMNASIUM D010	26
27	SHOT CLOCK, GYMNASIUM D010		(1) 3/4"C.,1-#10, #10, #10G	20 A	1			180	180			1	20 A	(1) 3/4"C.,1-#10, #10, #10G		SHOT CLOCK, GYMNASIUM D010	28
29	SHOT CLOCK, GYMNASIUM D010		(1) 3/4"C.,1-#10, #10, #10G	20 A	1					180	1920	1	20 A	(1) 3/4"C.,1-#10, #10, #10G		DIVIDER CURTAIN, GYMNASIUM D010	30
31	RECEPT, ROOF		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	360	333					3	20 A	(1) 3/4"C.,3-#12, #12, #12G		WEST BLEACHERS DISCONNECT, GYMNASIUM D010	32
33	MAT HOIST, GYMNASIUM D010		(1) 3/4"C.,3-#12, #12, #12G	20 A	3			1321	333								34
35										1321	333						36
37						1321	333					3	20 A	(1) 3/4"C.,3-#12, #12, #12G		SOUTHWEST BLEACHERS DISCONNECT, GYMNASIUM D010	38
39	EAST BLEACHERS DISCONNECT, GYMNASIUM D010		(1) 3/4"C.,3-#12, #12, #12G	20 A	3			333	333								40
41										333	333						42
43						333	360					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPTACLE, CONVENIENCE GYM STORAGE D010A	44
45	SOUTHEAST BLEACHERS DISCONNECT, GYMNASIUM D010		(1) 3/4"C.,3-#12, #12, #12G	20 A	3			333									46
47										333							48
49						333											50
51																	52
53																	54
55																	56
57																	58
59																	60
					TOTAL LOAD (VA):	13194 VA		10674 VA		12574 VA							
					TOTAL AMPS:	112 A		89 A		107.2 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Motor/HVAC/Mech	120 VA	100%	120 VA		
Receptacle, Convenience	5760 VA	100%	5760 VA	TOTAL CONN. LOAD (VA):	36443 VA
Receptacle,Non-Convenience/Power	10920 VA	100%	10920 VA	TOTAL EST. DEMAND (VA):	36443 VA
Power	19643 VA	100%	19643 VA	TOTAL CONNECTED:	101 A
				TOTAL EST. DEMAND:	101 A

PANELBOARD: LLK

LOCATION: OFFICE B009
SUPPLY FROM: TLK
MOUNTING: FLUSH
ENCLOSURE: NEMA 1
VOLTS: 208/120 Wye
PHASES: 3
WIRES: 4
OPTIONS:
A.I.C. RATING: 22K
MAINS TYPE: MLO
MAINS RATING: 400 A
BUSSING: 400 A

Notes:

CKT	CIRCUIT DESCRIPTION		CONDUIT & WIRE	TRIP	POLE	A (VA)		B (VA)		C (VA)		POLE	TRIP	CONDUIT & WIRE		CIRCUIT DESCRIPTION	CKT
1	REFRIGERATED DISPLAY CASE, SERVERY B008		(1) 3/4"C.,2-#10, --, #10G	30 A	2	2496	360					1	20 A	(1) 3/4"C.,1-#12, #12, #12G	GFCI	RECEPTACLE, CONVENIENCE SERVERY B008	2
3								2496									4
5	REFRIGERATED DISPLAY CASE, SERVERY B008		(1) 3/4"C.,2-#10, #10, --G	30 A	2					2496							6
7						2496	1920					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		CONDENSATE HOOD, DISH RETURN B010	8
9	HEATED COUNTERTOP DISPLAY, SERVERY B008		(1) 1"C.,2-#8, #8, #10G	40 A	1			3828	999			2	20 A	(1) 3/4"C.,2-#12, --, #12G		SERVING COUNTER, SERVERY B008	10
11	CASH REGISTER STANDS, SERVERY B008		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					360	999						12
13	HOT HOLDING CABINET, SERVERY B008		(1) 3/4"C.,2-#12, --, #12G	20 A	2	656	999					2	20 A	(1) 3/4"C.,2-#12, #12, --G		SERVING COUNTER, SERVERY B008	14
15								656	999								16
17	COLD HOLDING CABINET, SERVERY B008		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					1020	1920	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		MICROWAVE, SERVERY B008	18
19	BLENDER, SERVERY B008		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	1620	240					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		REFRIGERATOR, SERVERY B008	20
21	BLENDER, SERVERY B008		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			1620	1680			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		COFFEE/TEA BREWER, SERVERY B008	22
23	ICE MACHINE, SERVERY B008		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					1536	1320	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		COFFEE GRINDER, SERVERY B008	24
25	OVERHEAD DOOR. SERVERY B008		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	1500	360					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		POS SYSTEM, SERVERY B008	26
27	HEATED CABINET, KITCHEN B007		(1) 3/4"C.,2-#12, --, #12G	20 A	2			3	2078			3	25 A	(1) 3/4"C.,2-#10, --, #10G		CONVECTION OVEN, KITCHEN B007	28
29										3	2078						30
31	HOT PLATE, KITCHEN B007		(1) 3/4"C.,3-#10, #10, #10G	25 A	3	2078	2078										32
33								2078	4203			3	45 A	(1) 1"C.,2-#8, --, #10G		CONVECTION OVEN, KITCHEN B007	34
35										2078	4203						36
37							4203										38
39									1800			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		FIRE SUPPRESSION CABINET, KITCHEN B007	40
41											1800	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		EXHAUST HOOD, KITCHEN B007	42
43							1800					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		HOOD CONTROLS, KITCHEN B007	44
45									1800			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		ISLAND PREP TABLE, KITCHEN B007	46
47											996	1	20 A	(1) 3/4"C.,2-#12, --, #12G		WALK-IN COOLER, KITCHEN B007	48
49	COOLER EVAPORATOR COIL, KITCHEN B007		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	324	996					1	20 A	(1) 3/4"C.,2-#12, --, #12G		WALK-IN FREEZER, KITCHEN B007	50
51									156			2	20 A	(1) 3/4"C.,2-#12, --, #12G		FREEZER EVAPORATOR COIL, KITCHEN B007	52
53											156						54
55							1644					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		DEFROST PLUG, KITCHEN B007	56
57	WATER METER, KITCHEN B007		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			24	1259			2	30 A	(1) 3/4"C.,2-#10, #10, #10G		DISPOSER, KITCHEN B007	58
59	ELECTRIC CAN OPENER, KITCHEN B007		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					180	1259						60
61	RECEPT, SERVERY B008		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	180	180					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, KITCHEN B007	62
63	RECEPT, SERVERY B008		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			0	180			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, KITCHEN B007	64
65	RECEPT, SERVERY B008		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					360	180	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, KITCHEN B007	66
67	RECEPT, SERVERY B008		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	180	180					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, KITCHEN B007	68
69	RECEPT, OFFICE B009		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			1440	360			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, DRY STORAGE B011	70
71	CUH-4, VESTIBULE B006		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					180	0	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		CUH-1, VESTIBULE B006	72
73																	74
75																	76
77																	78
79																	80
81																	82
83																	84
					TOTAL LOAD (VA):	26489 VA		27657 VA		23123 VA							
					TOTAL AMPS:	225 A		235 A		192.7 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Motor/HVAC/Mech	1500 VA	100%	1500 VA		
Receptacle, Convenience	3600 VA	100%	3600 VA	TOTAL CONN. LOAD (VA):	77268 VA
Kitchen Equipment	65179 VA	65%	42367 VA	TOTAL EST. DEMAND (VA):	54456 VA
Receptacle,Non-Convenience	6989 VA	100%	6989 VA	TOTAL CONNECTED:	214 A
				TOTAL EST. DEMAND:	151 A

PANELBOARD: LLT

LOCATION: DATA B004b
SUPPLY FROM:
MOUNTING: FLUSH
ENCLOSURE: NEMA 1
VOLTS: 208/120 Wye
PHASES: 3
WIRES: 4
OPTIONS:
A.I.C. RATING: 22K
MAINS TYPE: MLO
MAINS RATING: 100 A
BUSSING: 100 A

Notes:
1. PROVIDE 20/1 SPARES FOR ALL BLANK SPACES.

CKT	CIRCUIT DESCRIPTION		CONDUIT & WIRE	TRIP	POLE	A (VA)		B (VA)		C (VA)		POLE	TRIP	CONDUIT & WIRE		CIRCUIT DESCRIPTION	CKT
1	RECEPT, DATA B004B		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	180	180					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, DATA B004B	2
3	RECEPT, DATA B004B		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			180	180			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, DATA B004B	4
5	RECEPT, DATA B004B		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					180	180	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, DATA B004B	6
7	RECEPT, DATA B004B		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	180	0					2	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPTACLE,NON-CONVENIENCE/POWER DATA B004B	8
9	RECEPT, DATA B004B		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			180	0								10
11	SUH-3, DATA B004B		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					120							12
13	RECEPTACLE,NON-CONVENIENCE/POWER DATA B004B		(1) 3/4"C.,1-#12, #12, #12G	20 A	2	0	180					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, DATA B004B	14
15								0									16
17	SS-1, DATA B004B		(1) 3/4"C.,2-#12, #12, --G	20 A	2					0							18
19						0											20
21																	22
23																	24
25																	26
27																	28
29																	30
31																	32
33																	34
35																	36
37																	38
39																	40
41																	42
					TOTAL LOAD (VA):	720 VA		540 VA		480 VA							
					TOTAL AMPS:	6 A		5 A		4 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Motor/HVAC/Mech	120 VA	100%	120 VA		
Receptacle, Convenience	1620 VA	100%	1620 VA	TOTAL CONN. LOAD (VA):	1740 VA
Receptacle,Non-Convenience/Power	0 VA	0%	0 VA	TOTAL EST. DEMAND (VA):	1740 VA
				TOTAL CONNECTED:	5 A
				TOTAL EST. DEMAND:	5 A

PANELBOARD: LMA

LOCATION: ELEC/IDF A111a
SUPPLY FROM: TMA
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
VOLTS: 208/120 Wye
PHASES: 3
WIRES: 4
OPTIONS:
A.I.C. RATING: 22K
MAINS TYPE: MCB
MAINS RATING: 200 A
BUSSING: 200 A

Notes:
1. PROVIDE 20/1 SPARES FOR ALL BLANK SPACES.

CKT	CIRCUIT DESCRIPTION		CONDUIT & WIRE	TRIP	POLE	A (VA)		B (VA)		C (VA)		POLE	TRIP	CONDUIT & WIRE		CIRCUIT DESCRIPTION	CKT
1	CHANGING STATION, RR A109C	GFCI	(1) 3/4"C.,1-#12, #12, #12G	20 A	1	400	1080					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, 3RD A101	2
3	TF-3, ELEC/IDF A111a		(1) 3/4"C.,1-#12, #12, #12G	15 A	1			1207	1260			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, 3RD A101	4
5											1260	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, 3RD A103	6
7	RECEPT, 4TH A105		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	900	1260					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, 3RD A103	8
9	RECEPT, 4TH A105		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			1260	1260			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, 3RD A102	10
11	RECEPT, 4TH A104		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					900	900	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, 3RD A102	12
13	RECEPT, 4TH A104		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	1080	900					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, FLEX/SPED A108	14
15	RECEPT, 4TH A106		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			900	1080			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, FLEX/SPED A108	16
17	RECEPT, 4TH A106		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					1080	720	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, FLEX/SPED A110	18
19	RECEPT, RM A109A, A109C		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	900	1080					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, FLEX/SPED A110	20
21	RECEPT, STAFF WKRM A111B		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			900	900			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, SPED A107	22
23	COPIER, STAFF WKRM A111B		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					180	900	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, SPED A107	24
25	RECEPT, CORRIDOR A114		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	900	360					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, ELEC/IDF A111A	26
27	ELECTRIC WATER COOLER, CORRIDOR A100	GFCI	(1) 3/4"C.,1-#12, #12, #12G	20 A	1			180	180			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, ELEC/IDF A111A	28
29	ELECTRIC WATER COOLER, CORRIDOR A100	GFCI	(1) 3/4"C.,1-#12, #12, #12G	20 A	1					180	180	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, ELEC/IDF A111A	30
31	RECEPT, RM A112, A113		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	360	180					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, NURSE A119D	32
33	RECEPT, OFFICE A119C		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			900	540			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, NURSE A119D	34
35	RECEPT,OFFICE A119B		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					540	540	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, RM A100, A117, A119E	36
37	RECEPT, OFFICE A119A		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	1080	900					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, SRO A118	38
39	RECEPT, RCP-2, RECEPTION A119		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			720	180			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, CUH-5, VESTIBULE A100	40
41	RECEPT, RECEPTION A119		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					1260	0	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		CUH-6, CUH-7, VESTIBULE B100	42
43	PRINTER, RECEPTION A119		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	180	360					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, VESTIBULE B100	44
45	RECEPT, CUH-4, VESTIBULE E100		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			300	2000			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		DOOR OPENERS, VESTIBULE B100	46
47											900	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, CIRCULATION B114	48
49																	50
51																	52
53																	54
55																	56
57																	58
59																	60
					TOTAL LOAD (VA):	11920 VA		13767 VA		9540 VA							
					TOTAL AMPS:	102 A		118 A		79.5 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Motor/HVAC/Mech	3327 VA	100%	3327 VA		
Receptacle, Convenience	31500 VA	65.87%	20750 VA	TOTAL CONN. LOAD (VA):	35227 VA
Power	400 VA	100%	400 VA	TOTAL EST. DEMAND (VA):	24477 VA
				TOTAL CONNECTED:	98 A
				TOTAL EST. DEMAND:	68 A

PANELBOARD: LMB

LOCATION: FILE STORAGE B103c
SUPPLY FROM: LLB
MOUNTING: FLUSH
ENCLOSURE: NEMA 1
VOLTS: 208/120 Wye
PHASES: 3
WIRES: 4
OPTIONS:
A.I.C. RATING: 22K
MAINS TYPE: MLO
MAINS RATING: 200 A
BUSSING: 200 A

Notes:
1. PROVIDE 20/1 SPARES FOR ALL BLANK SPACES.

CKT	CIRCUIT DESCRIPTION		CONDUIT & WIRE	TRIP	POLE	A (VA)		B (VA)		C (VA)		POLE	TRIP	CONDUIT & WIRE		CIRCUIT DESCRIPTION	CKT
1	RECEPT, RECEPTION B101		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	720	1080					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, CONF RM B101A	2
3	RECEPT, RECEPTION B101		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			1080	720			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, CONF RM B103A	4
5	RECEPT, RECEPTION B101		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					900	900	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, CONF RM B103A	6
7	RECEPT, RECEPTION B101		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	180	180					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		COFFEE POT, CONF RM B103A	8
9	RECEPT, RECEPTION B101		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			180	1080			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, OFFICE B101C	10
11	CU-SS-1, ROOF		(1) 3/4"C.,2-#12, #12, --G	20 A	1					3807	1080	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, OFFICE B101D	12
13	RECEPT, WKRM B101F		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	1080	1080					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, OFFICE B103B	14
15	COPIER, WKRM B101F		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			180	1080			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, OFFICE B103D	16
17	RECEPT, RR B101E, B101G		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					360	720	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, DISTRICT OFFICE B103	18
19	RECEPT, CUH-9, VESTIBULE B102		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	180	720					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		RECEPT, DISTRICT OFFICE B103	20
21	DOOR OPENERS, VESTIBULE B102		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			1000	180			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		VENDING MACHINE, STAFF LOUNGE B104	22
23	RECEPT, STAFF LOUNGE B104		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					900	180	1	20 A	(1) 3/4"C.,1-#12, #12, #12G		VENDING MACHINE, STAFF LOUNGE B104	24
25	RECEPT, STAFF LOUNGE B104		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	540	180					1	20 A	(1) 3/4"C.,1-#12, #12, #12G		MICROWAVE, STAFF LOUNGE B104	26
27	REFRIGERATOR, STAFF LOUNGE B104		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			180	180			1	20 A	(1) 3/4"C.,1-#12, #12, #12G		MICROWAVE, STAFF LOUNGE B104	28
29	REFRIGERATOR, STAFF LOUNGE B104		(1) 3/4"C.,1-#12, #12, #12G	20 A	1					180	309	2	20 A	(1) 3/4"C.,2-#12, #12, #12G		EF-1, ROOF	30
31	COFFEE POT, STAFF LOUNGE B104		(1) 3/4"C.,1-#12, #12, #12G	20 A	1	180	309										32
33	COFFEE POT, STAFF LOUNGE B104		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			180	260			2	20 A	(1) 3/4"C.,2-#12, #12, #12G		DEF-1, ROOF	34
35											260						36
37																	38
39	RECEPT, ROOF		(1) 3/4"C.,1-#12, #12, #12G	20 A	1			360									40
41																	42
43																	44
45																	46
47																	48
49																	50
51																	52
53																	54
55																	56
57																	58
59																	60
					TOTAL LOAD (VA):	6429 VA		6660 VA		9596 VA							
					TOTAL AMPS:	54 A		56 A		80.3 A							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Motor/HVAC/Mech	5945 VA	100%	5945 VA		
Receptacle, Convenience	16740 VA	79.87%	13370 VA	TOTAL CONN. LOAD (VA):	22685 VA
				TOTAL EST. DEMAND (VA):	19315 VA
				TOTAL CONNECTED:	63 A
				TOTAL EST. DEMAND:	54 A

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL

ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL

CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL

LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE

FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

TRAVOR D. FREDRICKSON
PE - 27743
DATE 03/10/2026

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
1	ADDENDUM #1	03/17/2026
2	ADDENDUM #2	03/24/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author
JN: 2025168

POWER SCHEDULES

SHEET
E831

Autodesk Docs://24-028 Valley City Public Schools High School/2025168_Valley City Public Schools New High School_MEP26.rvt
3/30/2026 17:44:39

PANELBOARD: LMD1

LOCATION: ELEC/IDF G101a
SUPPLY FROM: LLD
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTS: 208/120 Wye
PHASES: 3
WIRES: 4
OPTIONS:

A.I.C. RATING: 22K
MAINS TYPE: MLO
MAINS RATING: 200 A
BUSSING: 200 A

Notes:
1. PROVIDE UNDER ALTERNATE #7.
2. PROVIDE 20/1 SPARES FOR ALL BLANK SPACES.

CKT	CIRCUIT DESCRIPTION		CONDUIT & WIRE	TRIP	POLE	A (VA)	B (VA)	C (VA)	POLE	TRIP	CONDUIT & WIRE	CIRCUIT DESCRIPTION	CKT
1	EXTERIOR TAPE LIGHT, COMMONS B200 ALT #7		(1) 3/4"C.-1-#12, #12, #12G	20 A	1	266	1260		1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, MEDIA CENTER B109	2
3	TP-4, ELEC/IDF G101A		(1) 3/4"C.-1-#12, #12, #12G	15 A	1			1207	0		(1) 3/4"C.-1-#12, #12, #12G	FLOOR BOX, MEDIA CENTER B109	4
5										0	(1) 3/4"C.-1-#12, #12, #12G	FLOOR BOX, MEDIA CENTER B109	6
7	RECEPT, MEDIA PANEL B107		(1) 3/4"C.-1-#12, #12, #12G	20 A	1	720	720			1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, MEDIA CENTER B109	8
9	RECEPT, MEDIA PANEL B107		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			720	1260		(1) 3/4"C.-1-#12, #12, #12G	RECEPT, TECH PANEL B106	10
11	LAMINATOR, MEDIA PANEL B107		(1) 3/4"C.-1-#12, #12, #12G	20 A	1					1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, TECH PANEL B106	12
13	ELECTRIC WATER COOLER, CIRCULATION B121	GFCI	(1) 3/4"C.-1-#12, #12, #12G	20 A	1	1260	1260			1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, TECH PANEL B106	14
15	ELECTRIC WATER COOLER, CIRCULATION B121	GFCI	(1) 3/4"C.-1-#12, #12, #12G	20 A	1		180	900		1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, RM B110, B111, B112	16
17	RECEPT, CUSTODIAL B105		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			540	720	1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, STAFF PANEL B104	18
19	WASHER, CUSTODIAL B105		(1) 3/4"C.-1-#12, #12, #12G	20 A	1	180	180			1	20 A	(1) 3/4"C.-1-#12, #12, #12G	COPIER, STAFF PANEL B104	20
21	DRYER, CUSTODIAL B105		(1) 3/4"C.-1-#12, #12, #12G	20 A	1		180	1080		1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, HEALTH C101	22
23	SINK, CUSTODIAL B105		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			720	720	1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, HEALTH C101	24
25	RECEPT, 1 ENG C105		(1) 3/4"C.-1-#12, #12, #12G	20 A	1	900	900			1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, HEALTH C101	26
27	RECEPT, 1 ENG C109		(1) 3/4"C.-1-#12, #12, #12G	20 A	1		1080	1080		1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, 3 ENG C104	28
29	RECEPT, 2 ENG C107		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			1080	1260	1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, 3 ENG C104	30
31	RECEPT, 2 ENG C107		(1) 3/4"C.-1-#12, #12, #12G	20 A	1	1080	1080			1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, PL C112	32
33	RECEPT, 4 ENG C111		(1) 3/4"C.-1-#12, #12, #12G	20 A	1		900	1080		1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, PL C112	34
35	RECEPT, 4 ENG C111		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			1080	720	1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, CORRIDOR C113	36
37	RECEPT, GROUP C110		(1) 3/4"C.-1-#12, #12, #12G	20 A	1	720	180			1	20 A	(1) 3/4"C.-1-#12, #12, #12G	BOTTLE FILLER, CORRIDOR C113	38
39	RECEPT, GROUP B105A		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			720	360		(1) 3/4"C.-1-#10, #10, #10G	SOUND SYSTEM RACK, MEDIA PANEL B107	40
41	(NOTE 1) SOUTH PARAPET LIGHTING		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			1641	0	1	20 A	(1) 3/4"C.-1-#12, #12, #12G	SAB PANEL, SG LAB C102	42
43	EF-2, ROOF		(1) 3/4"C.-2-#12, #12, #12G	20 A	2	302							44
45							302						46
47	RECEPT, ROOF		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			360					48
49													50
51													52
53													54
55													56
57													58
59													60
			TOTAL LOAD (VA):			9748 VA	11049 VA	9507 VA					
			TOTAL AMPS:			82 A	93 A	79.2 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
Motor/HVAC/Mech	1931 VA	100%	1931 VA	
Receptacle, Convenience	28460 VA	66.9%	18230 VA	TOTAL CONN. LOAD (VA): 50304 VA
Lighting	1913 VA	125%	2391 VA	TOTAL EST. DEMAND (VA): 22952 VA
Power	0 VA	0%	0 VA	TOTAL CONNECTED: 84 A
				TOTAL EST. DEMAND: 69 A

PANELBOARD: LMD2

LOCATION: STOR C106
SUPPLY FROM: LLD
MOUNTING: FLUSH
ENCLOSURE: NEMA 1

VOLTS: 208/120 Wye
PHASES: 3
WIRES: 4
OPTIONS:

A.I.C. RATING: 22K
MAINS TYPE: MLO
MAINS RATING: 200 A
BUSSING: 200 A

Notes:
1. PROVIDE 20/1 SPARES FOR ALL BLANK SPACES.

CKT	CIRCUIT DESCRIPTION		CONDUIT & WIRE	TRIP	POLE	A (VA)	B (VA)	C (VA)	POLE	TRIP	CONDUIT & WIRE	CIRCUIT DESCRIPTION	CKT
1	RECEPT, SG LAB C109		(1) 3/4"C.-1-#12, #12, #12G	20 A	1	540	360		1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, SG LAB C109	2
3	RECEPT, SG LAB C109		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			540	360	1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, SG LAB C109	4
5	RECEPT, SG LAB C109		(1) 3/4"C.-1-#12, #12, #12G	20 A	1					900	720	1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, SG LAB C109	6
7	RECEPTACLE, CONVENIENCE STOR C106		(1) 3/4"C.-1-#12, #12, #12G	20 A	1	1000	900			1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, SG LAB C102	8
9	RECEPT, SG LAB C102		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			540	540			1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, SG LAB C102	10
11	RECEPT, SG LAB C102		(1) 3/4"C.-1-#12, #12, #12G	20 A	1					900	360	1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, SG LAB C102	12
13	RECEPT, SG LAB C102		(1) 3/4"C.-1-#12, #12, #12G	20 A	1	360	120					1	20 A		FSD, ROOM C103, C104	14
15	RECEPT, GHDH LAB C104		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			1080	1080			1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, GHDH LAB C104	16
17	RECEPT, GHDH LAB C104		(1) 3/4"C.-1-#12, #12, #12G	20 A	1					540	1260	1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, GHDH LAB C104	18
19	RECEPT, GHDH LAB C104		(1) 3/4"C.-1-#12, #12, #12G	20 A	1	360	360					1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, GHDH LAB C104	20
21								540				1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, GHDH LAB C103	22
23	RECEPT, SG CLASS C103		(1) 3/4"C.-1-#12, #12, #12G	20 A	1					540	1080	1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, SG CLASS C103	24
25	RECEPT, SG CLASS C103		(1) 3/4"C.-1-#12, #12, #12G	20 A	1	720	360					1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, SG CLASS C103	26
27	RECEPT, SG CLASS C103		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			360								28
29	RECEPT, STOR C106		(1) 3/4"C.-1-#12, #12, #12G	20 A	1					720	540	1	20 A	(1) 3/4"C.-1-#12, #12, #12G	DISHWASHER, STOR C106	30
31	RECEPT, STOR C106		(1) 3/4"C.-1-#12, #12, #12G	20 A	1	180	180					1	20 A	(1) 3/4"C.-1-#12, #12, #12G	REFRIGERATOR, STOR C106	32
33	FUME HOOD, GHDH LAB C104		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			0								34
35																36
37																38
39																40
41																42
43																44
45																46
47																48
49																50
51																52
53																54
55																56
57																58
59																60
			TOTAL LOAD (VA):			5440 VA	5040 VA	7560 VA					
			TOTAL AMPS:			46 A	42 A	63.5 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
Other	120 VA	100%	120 VA	
Receptacle, Convenience	17920 VA	77.9%	13960 VA	TOTAL CONN. LOAD (VA): 18040 VA
Power	0 VA	0%	0 VA	TOTAL EST. DEMAND (VA): 14080 VA
				TOTAL CONNECTED: 50 A
				TOTAL EST. DEMAND: 39.4 A

PANELBOARD: LUA

LOCATION: ELEC/IDF A211a
SUPPLY FROM: TUA
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTS: 208/120 Wye
PHASES: 3
WIRES: 4
OPTIONS:

A.I.C. RATING: 22K
MAINS TYPE: MCB
MAINS RATING: 200 A
BUSSING: 200 A

Notes:
1. PROVIDE UNDER ALTERNATE #7.
2. PROVIDE 20/1 SPARES FOR ALL BLANK SPACES.

CKT	CIRCUIT DESCRIPTION		CONDUIT & WIRE	TRIP	POLE	A (VA)	B (VA)	C (VA)	POLE	TRIP	CONDUIT & WIRE	CIRCUIT DESCRIPTION	CKT
1	RECEPT, 5TH A201		(1) 3/4"C.-1-#12, #12, #12G	20 A	1	1080	900			1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, 6TH A202	2
3	RECEPT, 5TH A201		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			1080	900			1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, 6TH A202	4
5	RECEPT, 5TH A203		(1) 3/4"C.-1-#12, #12, #12G	20 A	1					1080	900	1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, 6TH A204	6
7	RECEPT, 5TH A203		(1) 3/4"C.-1-#12, #12, #12G	20 A	1	1080	1260					1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, 6TH A204	8
9	RECEPT, 5TH SCIENCE A206		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			720	1080			1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, 6TH SCIENCE A205	10
11	RECEPT, 5TH SCIENCE A206		(1) 3/4"C.-1-#12, #12, #12G	20 A	1					360	720	1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, 6TH SCIENCE A205	12
13	RECEPT, 5TH SCIENCE A209		(1) 3/4"C.-1-#12, #12, #12G	20 A	1	720	720					1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, 6TH SCIENCE A205	14
15	RECEPT, 5TH SCIENCE A209		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			540	360			1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, 6TH SCIENCE A205	16
17	RECEPT, 5TH SCIENCE A306		(1) 3/4"C.-1-#12, #12, #12G	20 A	1					1080	360	1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, 6TH SCIENCE A305	18
19	RECEPT, 5TH SCIENCE A306		(1) 3/4"C.-1-#12, #12, #12G	20 A	1	360	360					1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, 6TH SCIENCE A305	20
21	RECEPT, SPED A207		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			1080	720			1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, FLEX / SPED A209	22
23	RECEPT, SPED A207		(1) 3/4"C.-1-#12, #12, #12G	20 A	1					1440	1260	1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, FLEX / SPED A209	24
25	RECEPT, GROUP A204		(1) 3/4"C.-1-#12, #12, #12G	20 A	1	720	900					1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, CORRIDOR A214	26
27	RECEPT, STAFF PANEL A211B		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			900	540			1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, CORRIDOR A214	28
29	COPIER, STAFF PANEL A211B		(1) 3/4"C.-1-#12, #12, #12G	20 A	1					180	180	1	20 A	(1) 3/4"C.-1-#12, #12, #12G	ELECTRIC WATER COOLER, CORRIDOR A214	GFCI 30
31	RECEPT, RM A212, A213		(1) 3/4"C.-1-#12, #12, #12G	20 A	1	360	180					1	20 A	(1) 3/4"C.-1-#12, #12, #12G	ELECTRIC WATER COOLER, CORRIDOR A214	GFCI 32
33	RECEPT, ELEC/IDF A211A		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			360	180			1	20 A	(1) 3/4"C.-1-#12, #12, #12G	RECEPT, ELEC/IDF A211A	34
35	RECEPT, ELEC/IDF A211A		(1) 3/4"C.-1-#12, #12, #12G	20 A	1					180	601	1	20 A	(1) 3/4"C.-1-#12, #12, #12G	(NOTE 1) NORTH PARAPET LIGHTING	36
37	DP-1, COMMONS B000		(1) 3/4"C.-1-#10, #10, #10G	20 A	1	154	154					1	20 A	(1) 3/4"C.-1-#10, #10, #10G	DP-2, COMMONS B000	38
39	RECEPT, ROOF		(1) 3/4"C.-1-#12, #12, #12G	20 A	1			180	154			1	20 A	(1) 3/4"C.-1-#10, #10, #10G	DP-3, COMMONS B000	40
41	TP-5, ELEC/IDF A211A		(1) 3/4"C.-1-#12, #12, #12G	15 A	1					1207						42
43																44
45																46
47																48
49																50
51																52
53																54
55																56
57																58
59																60
			TOTAL LOAD (VA):			8948 VA	8794 VA	9628 VA					
			TOTAL AMPS:			75 A	73 A	80.4 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
Motor/HVAC/Mech	1669 VA	100%	1669 VA	
Receptacle, Convenience	25020 VA	69.93%	17510 VA	TOTAL CONN. LOAD (VA): 27810 VA
Lighting	601 VA	125%	752 VA	TOTAL EST. DEMAND (VA): 20091 VA
				TOTAL CONNECTED: 116 A
				TOTAL EST. DEMAND: 84 A

ICON ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE

REGISTERED PROFESSIONAL ENGINEER
TRAVOR D. FREDRICKSON
PE - 27743
DATE 03/10/2026
NORTH DAKOTA

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author
JN: 2025168

POWER SCHEDULES

SHEET
E832

SHEET NOTES

ED1	PRESERVE LIGHT FIXTURE CIRCUITING FOR CONNECTION TO NEW FIXTURE.
L3	LIGHTING CONTROLS FOR THIS SPACE REQUIRED TO BE STAND ALONE. DO NOT TIE INTO NEW HEAD END.
L4	CONNECT LIGHT FIXTURES TO CIRCUITING PRESERVED
P10	PROVIDE 120V POWER VIA NEW 20/1 BREAKER IN EXISTING PANEL LP2. EXISTING PANEL IS SQUARE D 3Ø 120/208 A.I.C.

LIGHTING CONTROL NOTES:

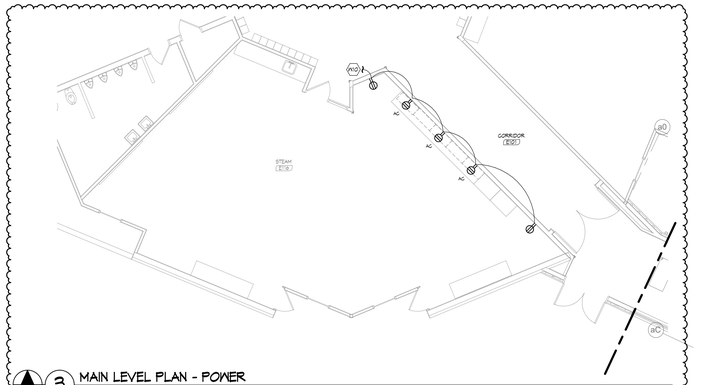
GENERAL NOTES:

- AUTOMATIC LIGHTING CONTROL REQUIRED TO COMMUNICATE WIRELESSLY, UNLESS NOTED OTHERWISE IN LIGHTING CONTROL NOTES. ALL SWITCHES AND SENSORS WILL REQUIRE A 120V CONNECTION.

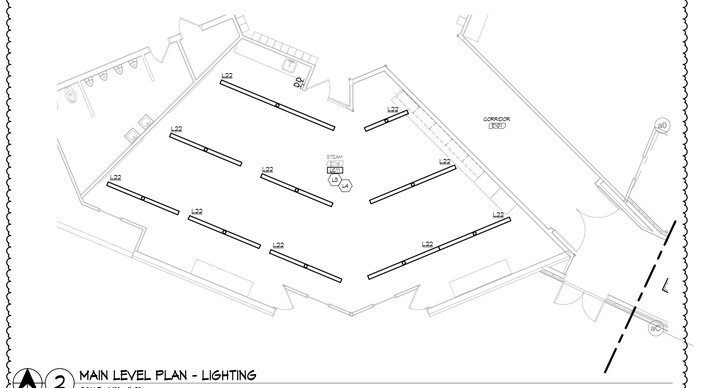
GENERAL NOTES:

A. WINDOW DAYLIGHTING ZONE DEPTH IS 15'-0" DEEP FROM WINDOW AND WIDTH IS 2'-0" WIDER FROM EACH EDGE OF WINDOW. SKYLIGHTING DAYLIGHT ZONE DEPTH IS THE AVERAGE CEILING HEIGHT FROM THE EDGE OF THE SKYLIGHT INTO THE ROOM.
B. LUMINARES INDICATED WITH "NL" SHALL BE CIRCUITED AS NIGHT LIGHTS AND SHALL REMAIN ON 24/7.
C. PROVIDE POWER PACKS AND ACCESSORIES AS REQUIRED FOR A FULLY FUNCTIONING SYSTEM.
D. OCCUPANCY SENSOR AND PHOTOCELL FUNCTION MAY BE COMBINED INTO ONE DEVICE.
E. COORDINATE CONFIGURATION OF LIGHTING CONTROL ZONES WITH LOCATION OF TEACHING / TEACHING WALL OF ALL CLASSROOMS.

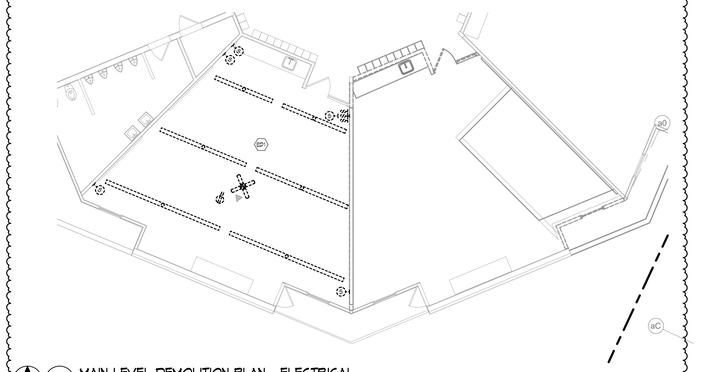
LC1	MANUAL WALL SWITCH / DIMMER CONTROL.
LC2	WALL MOUNTED PIR SENSOR.
LC4	WALL MOUNTED DUAL TECHNOLOGY SENSOR.
LC7	WALL MOUNTED DUAL TECHNOLOGY SENSOR WITH INTEGRAL 0-10V DIMMER.
LC8	CEILING MOUNTED PIR SENSOR. MANUAL CONTROLS AS INDICATED ON FLOOR PLAN.
LC10	CEILING MOUNTED DUAL TECHNOLOGY SENSOR. MANUAL CONTROLS AS INDICATED ON FLOOR PLAN.
LC11	VACANCY SENSOR(S) WITHIN ROOM TO BE INTEGRAL TO LIGHT FIXTURE(S). PROVIDE AS MANY INTEGRAL SENSORS AS IS NECESSARY FOR COVERAGE OF ENTIRE ROOM. ALL OTHER LIGHT FIXTURES ARE TO COMMUNICATE WITH FIXTURES WITH INTEGRAL SENSORS FOR AUTOMATIC OFF OPERATION. 120V CONTROL AT ENTRANCE(S) WITH WIRELESS CONTROL AT LOCATION COORDINATED WITH OWNER. FRONT OF ROOM TO BE CONTROLLED SEPARATE FROM BACK OF ROOM.
LC12	VACANCY SENSOR(S) WITHIN SPACE TO BE INTEGRAL TO LIGHT FIXTURE(S). PROVIDE AS MANY INTEGRAL SENSORS AS IS NECESSARY FOR COVERAGE OF ENTIRE SPACE. ALL OTHER LIGHT FIXTURES ARE TO COMMUNICATE WITH FIXTURES WITH INTEGRAL SENSORS FOR AUTOMATIC OFF OPERATION. AUTO OFF OPERATION IS TO BE PLACED ON DIGITAL TIME-SCHEDULE THAT SHALL BE COORDINATED WITH OWNER. LIGHTING WITHIN STAIRWELLS TO STAY ON 24/7 AND DIM TO 50% WHEN AREA IS UNOCCUPIED FOR 30 MINUTES.
LC14	CEILING-MOUNTED DUAL TECHNOLOGY SENSOR. NO MANUAL CONTROLS.
LC18	WIRELESS OCCUPANCY SENSOR INTEGRATED WITHIN LIGHT FIXTURES. REFER TO LIGHT FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.
LC17	VACANCY SENSOR(S) WITHIN ROOM TO BE INTEGRAL TO LIGHT FIXTURE(S). PROVIDE AS MANY INTEGRAL SENSORS AS IS NECESSARY FOR COVERAGE OF ENTIRE ROOM. ALL OTHER LIGHT FIXTURES ARE TO COMMUNICATE WITH FIXTURES WITH INTEGRAL SENSORS FOR AUTOMATIC OFF OPERATION. 120V CONTROL AT ENTRANCE(S) WITH WIRELESS CONTROL AT LOCATION COORDINATED WITH OWNER.
LC18	CEILING MOUNTED VACANCY SENSORS RATED FOR HIGH HUMIDITY. AUTO OFF OPERATION IS TO BE PLACED ON DIGITAL TIME-SCHEDULE THAT SHALL BE COORDINATED WITH OWNER.



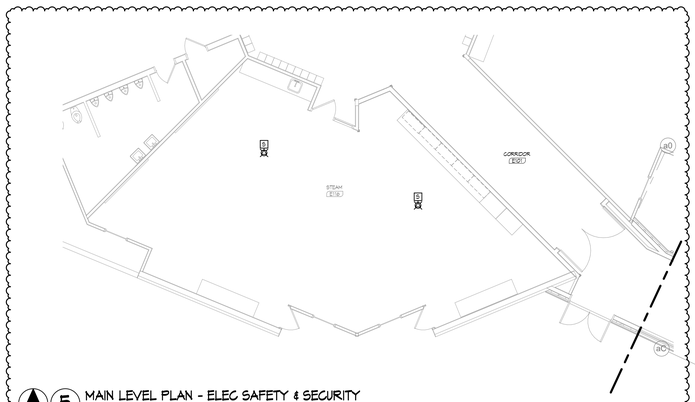
3 MAIN LEVEL PLAN - POWER
SCALE: 1/8" = 1'-0"



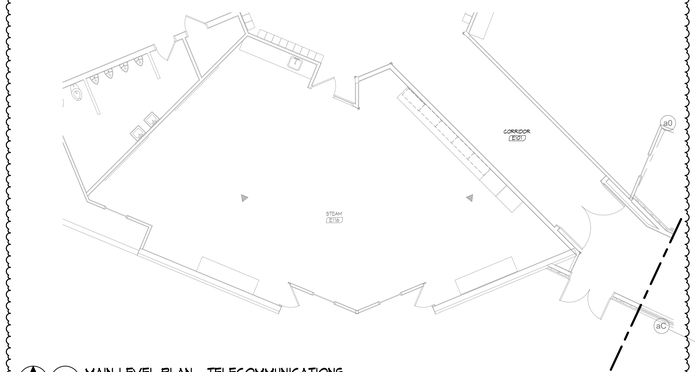
2 MAIN LEVEL PLAN - LIGHTING
SCALE: 1/8" = 1'-0"



1 MAIN LEVEL DEMOLITION PLAN - ELECTRICAL
SCALE: 1/8" = 1'-0"



5 MAIN LEVEL PLAN - ELEC SAFETY & SECURITY
SCALE: 1/8" = 1'-0"



4 MAIN LEVEL PLAN - TELECOMMUNICATIONS
SCALE: 1/8" = 1'-0"

ICON
ARCHITECTURAL GROUP
214 N 4TH STREET, SUITE 208
GRAND FORKS, ND 58203
(701) 772.4266 OFFICE
WWW.ICONARCHITECTS.COM

Valley City Public Schools New High School

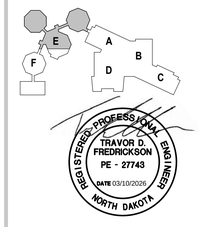
STRUCTURAL
ICON ARCHITECTURAL GROUP
222 EAST MAIN STREET, SUITE B
MANDAN, ND 58554
(701) 751.0430 OFFICE

MECHANICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58108
(701) 280.0500 OFFICE

ELECTRICAL
CMTA
2201 12TH STREET NORTH, SUITE E
FARGO, NORTH DAKOTA 58102
(701) 280.0500 OFFICE

CIVIL
LOWRY ENGINEERING
1111 WESTRAC DR. STE. 108
FARGO, ND 58103
(701) 235.0199 OFFICE

FOODSERVICE
FOODSERVICE CONCEPT DESIGN
7900 INTERNATIONAL DRIVE
SUITE 300 -7043
BLOOMINGTON, MN 55425
(612) 325.1494 OFFICE



REGISTERED PROFESSIONAL ENGINEER
TRAVOR D FREDRICKSON
PE - 27743
DATE 03/10/2026
NORTH DAKOTA

DRAWING HISTORY

NO.	DESCRIPTION	DATE
	CONSTRUCTION DOCUMENTS	03/10/2026
3	ADDENDUM #3	03/30/2026

DRAWN BY: Author JN: 2025168

ALTERNATE 2 - ELECTRICAL

SHEET
E900