DOCUMENT 00 90 00
ADDENDUM

ADDENDUM No.: 1
DATE: May 4, 2023
RE: LAC DU FLAMBEAU CHILD DAYCARE CENTER
ADJACENT TO 13708 YOUTH CTR LN (TO THE SOUTH)
LAC DU FLAMBEAU, WISCONSIN 54538
PROJECT NO. 22066

FROM: HSR Associates, Inc
100 Milwaukee Street
La Crosse, WI 54603
(608) 784-1830

TO: Prospective Bidders

This addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated April 2023. Acknowledge receipt of this Addendum in the space provided on the bid form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of: 4 pages, 5 documents, 8 sections, and 16 sheets.

DOCUMENT:

1. Document: Prebid Meeting Sign In Sheet

CHANGES TO INTRODUCTORY INFORMATION AND BIDDING REQUIREMENTS:

2. Document 00 30 00 Information Available to Bidders
    a. See the revised document included in this addendum. Disregard the previous version.
    b. Added item #2 to the document describing the Owner's options for communicating tax exemptions and communicating Owner's practices regarding Tribal taxes and permit fee.
3. Document 00 41 00 Bid Form
    a. See the revised document included in this addendum. Disregard the previous version.
    b. Revised the bid form to include alternates.

CHANGES TO CONTRACTING REQUIREMENTS:

4. Document 00 60 00 Project Forms
    a. See the revised document included in this addendum. Disregard the previous version.
    b. Removed paragraph 1.03 Owner Forms referencing document 00 64 00 Sales and Use Tax Form. The Owner does not intend to use this form. See revised document 00 30 00 for information on the Owner's options for tax exemption.
5. Document 00 64 00 Sales and Use Tax Exemption Certificate
    a. Disregard the document. The document is hereby removed from the bidding documents.
    b. See 00 30 00 for information on the Owner's options for tax exemption.

6. Document 00 73 00 Supplementary Conditions
    a. See the revised document included in this addendum. Disregard the previous version.
    b. Removed paragraph 3.6. The Owner does not intend to use Wisconsin form S-211. See 00 30 00 for information on the Owner's options for tax exemption.

CHANGES TO GENERAL REQUIREMENTS:

7. Section 01 10 00 Summary
    a. See the revised section included in this addendum. Disregard the previous version.
    b. Paragraph 1.08: Added start date of July 5, 2023 and substantial completion date of July 2, 2024.
8. Section 01 23 00 Alternates
    a. See the new section included in this addendum.
9. Section 01 70 00 Execution and Closeout Requirements
    a. See the revised section included in this addendum. Disregard the previous version.
    b. Paragraph 1.06: Added new paragraph (E.) providing requirements for preservation, transport and storage of existing materials such as trees and soil.

CHANGES TO SPECIFICATIONS:

10. Section 03 30 00 Cast-in-Place Concrete
    a. See the revised section included in this addendum. Disregard the previous version.
    b. Removed paragraph 1.02 D from the section. The referenced section, 07 13 00 Sheet Waterproofing, is not included in the project manual.
11. Section 05 40 00 Cold Formed Metal Framing
    a. See the revised section included in this addendum. Disregard the previous version.
    b. Paragraph 1.02: Added Section 07 24 00 Exterior Insulation and Finish System as a related requirement
    c. Paragraph 2.05 A.: Added requirement for coordinating gypsum sheathing thickness based on EIFS manufacturer requirements.
    d. Paragraph 2.05 A.1.: Added new paragraph identifying an additional sheathing product: Continental Building Products; Weather Defense Platinum; www.continental-bp.com.
    e. Paragraph 2.05 A.1.g.: Added new paragraph with an additional requirement for substitutions: "Provide EIFS manufacturer documentation indicating approval of any substitute sheathing products."
12. Section 07 21 00 Thermal Insulation
    a. See the revised section included in this addendum. Disregard the previous version.
    b. Paragraph 1.01 A.: Removed the reference to wall insulation. This topic is now addressed in section 07 24 00.
    c. Paragraph 1.02: Added Section 07 24 00 Exterior Insulation and Finish Systems as a related requirement.
    d. Paragraph 2.01 B.: Removed references to wall insulation. Paragraph provided requirements for insulation over metal stud framed walls which are now addressed in section 07 24 00.
    e. Paragraph 2.02 A.: Removed the references to continuous insulation at framed walls.
13. Section 07 24 00 Exterior Insulation and Finish Systems
    a. See the new section included in this addendum.

14. Section 07 27 00 Air Barriers
    a. See the revised section included in this addendum. Disregard the previous version.
    b. Paragraph 1.02: Added Section 07 24 00 Exterior Insulation and Finish Systems as a related requirement. Section 07 24 00 includes an air barrier as part of the work of that section.
    c. Paragraph 2.01: Removed the reference to Air Barrier Sheet Mechanically Fastened and referred to the requirements of sections in the Related Requirements paragraph.
    d. Paragraph 3.03: Removed paragraph 3.03 D to remove requirements for installing mechanically fastened sheets.
15. Section 07 46 33 Plastic Siding
    a. Disregard the section. The section is hereby removed from the bidding documents.

CHANGES TO DRAWINGS

16. Sheet A200 ELEVATIONS 30"x42"
    a. See the revised sheet included in this addendum. Disregard the previous version.
    b. See clouded changes showing EIFS in lieu of vinyl siding.
17. Sheet A300 SECTIONS 30"x42"
    a. See the revised sheet included in this addendum. Disregard the previous version.
    b. See clouded changes showing EIFS in lieu of vinyl siding.
    c. Revised section 3A300 showing an additional location of spray foam insulation as an air barrier over the entrance soffit.
18. Sheet A500 DETAILS 30"x42"
    a. See the revised sheet included in this addendum. Disregard the previous version.
    b. See clouded changes showing EIFS in lieu of vinyl siding.
19. Sheet A501 DETAILS 30"x42"
    a. See the revised sheet included in this addendum. Disregard the previous version.
    b. See clouded changes showing EIFS in lieu of vinyl siding.
20. Sheet A600 DOOR SCHEDULE, WALL TYPES 30"x42"
    a. See the revised sheet included in this addendum. Disregard the previous version.
    b. See clouded changes showing EIFs in lieu of vinyl siding.
21. Sheet S100 PLAN VIEWS 30"x42"
    a. See the revised sheet included in this addendum. Disregard the previous version.
    b. Revised Foundation Plan Note 2 for 1 /S100 to provide slab reinforcing requirements.
    c. Added Key Note 1 to 2/S100 for loos
22. Sheet S800 FOUNATION DETAILS 30"x42"
    a. See the revised sheet included in this addendum. Disregard the previous version.
    b. Revised ledge at top of foundation wall in Detail 9/S800.
23. Sheet S810 FRAMING DETAILS 30"x42"
    a. See the revised sheet included in this addendum. Disregard the previous version.
    b. Revised Detail 8/S810 to show double angle loose lintel.
24. Sheet CF0.1 GENERAL NOTES AND ROOF PLAN 30"x42"
    a. See the new sheet included in this addendum.
25. Sheet CF1.1 ROOF FRAMING PLAN 30"x42"
    a. See the new sheet included in this addendum.
26. Sheet CF2.1 SECTIONS 30"x42"
    a. See the new sheet included in this addendum.

27. Sheet CF2.2 SECTIONS 30"x42"
    a. See the new sheet included in this addendum.
28. Sheet CF2.3 SHEAR WALL ELEVATION 30"x42"
    a. See the new sheet included in this addendum.
29. Sheet CF3.1 DETAILS 30"x42"
    a. See the new sheet included in this addendum.
30. Sheet CF3.2 DETAILS 30"x42"
    a. See the new sheet included in this addendum.
31. Sheet M100 FIRST FLOOR PLAN – MECHANICAL 30"x42"
    a. See the revised sheet included in this addendum. Disregard the previous version.
    b. See clouded area and note describing Alternate Bid H1. Provide MAU, kitchen hood, exhaust fan and associated ductwork, grilles and accessories.

END OF DOCUMENT 00 90 00

"SIGN-IN" SHEET

PROJECT: Lac du Flambeau Child Daycare Center

HSR NO.: 22066 DATE: April 27, 2023 – Meet via MS Teams

ARCHITECTURE
ENGINEERING
INTERIOR DESIGN
HSR Associates
Celebrating 65 Years of Innovative Design
100 Milwaukee Street
La Crosse, WI 54603
608.784.1830
www.hsrassociates.com

PLEASE PRINT ALL INFORMATION CLEARLY

NAME	COMPANY	E-MAIL ADDRESS	TELEPHONE
Lee Qu	HSR Associates	lqu@hsrassociates.com	608-785-4707
David Hannu	HSR Associates	dhannu@hsrassociates.com	608-785-4732
Tobin Faucheux	HSR Associates	tfaucheux@hsrassociates.com	608-785-4717
Fred Thayer	The Boson Company	Not collected	Not collected
Kevin Behrens	Comfort Systems	Not collected	Not collected
Gary Lavasseur	A to Z Plumbing & Heating	Not collected	Not collected
Scott Lonsway	NASI Construction, LLC	Not collected	Not collected

Page Intentionally Left Blank

DOCUMENT 00 30 00

INFORMATION AVAILABLE TO BIDDERS

The following documents contain information about existing conditions which are pertinent to the Work of this Project and are available for the general information of all Bidders. The availability of such information shall not relieve any Bidder from responsibility to visit the Project Site, to become familiar with the local conditions under which the Work is to be performed and to correlate the Bidder's observations with the requirements of the Bidding Documents.

1. SOIL INVESTIGATION REPORT

The Soil Investigation Report No. (1G-2301019) as prepared by (Giles Engineering Associates, Inc.) is for reference purposes only and shall not be considered a part of the Contract Documents. The Architect/Engineer does not certify its completeness or accuracy. The Contractor may do additional testing and evaluation to verify subsurface conditions. A copy of the soil investigation report is bound herein following as a part of this Section 00 30 00.

2. Wisconsin Department of Revenue - Native American Tribes - Sales and Use Tax Fact Sheet 2103-1

See the referenced document included in this project manual to see options for communicating tax exemptions for the work of this project. Further, the Tribe does not charge any tax or permit fee for tribal projects.

END OF DOCUMENT 00 30 00

Page Intentionally Left Blank

NATIVE AMERICAN TRIBES
Sales and Use Tax
Fact Sheet 2103-1

revenue.wi.gov

This fact sheet explains the sales tax exemption for sales made to Native American tribes and the sales tax treatment of certain reservation and casino activities.

For information relating to sales to tribal members, see Fact Sheet 2103-2.

Sales Tax Exemption

Purchases by a federally recognized Native American tribe or band in Wisconsin are exempt from Wisconsin sales and use taxes.

This exemption became effective on August 1, 2009.

Which Native American tribes or bands qualify for this exemption?

The Bad River Band of Lake Superior Chippewa
Forest County Potawatomi Community
Ho-Chunk Nation
Lac Courte Oreilles Band of Lake Superior Chippewa
Lac du Flambeau Band of Lake Superior Chippewa
Menominee Nation
Oneida Nation of Wisconsin
Red Cliff Band of Lake Superior Chippewa
St. Croix Chippewa Community
Sokaogon Chippewa Community
Stockbridge-Munsee Community

Definitions:

"Native Americans" mean all persons of Native American descent who are enrolled members of any federally recognized tribe.

"Reservation" means all land within the boundaries of the Bad River, Forest County Potawatomi, Lac Courte Oreilles, Lac du Flambeau, Menominee, Mole Lake, Oneida, Red Cliff, St. Croix, and Stockbridge-Munsee reservations as well as any Ho-Chunk Nation lands.

"Tribe" means a federally recognized tribe or band of Native Americans and includes tribal entities and tribal authorities.

"Tribal reservation" means the reservation of the tribe of which a Native American is an enrolled member (e.g., the tribal reservation for an enrolled member of the Oneida Tribe is the Oneida reservation). Unless noted otherwise, whenever reservation is used in this fact sheet, it includes trust land.

"Trust land" means land the title to which is held in trust by the United States for the benefit of a tribe or an enrolled member of that tribe.

Note: The Ho-Chunk Nation does not have a consolidated reservation, but has trust lands in 14 counties.

How should a retailer document an exempt sale to a Native American tribe or band?

By one of the following:

- Obtaining a purchase order or similar written document from the tribe or band identifying the tribe or band as the purchaser.
- Obtaining a fully completed exemption certificate from the tribe or band (for example, Form S-211).
- Recording the tribe or band's Certificate of Exempt Status (CES) number on the invoice.

For information on how to document an exempt sale to a tribal member, see Fact Sheet 2103-2.

Reservation Gambling and Casino Operations

The sales tax treatment of sales made through reservation and casino operations may vary depending on who the customer is.

Nontaxable sales include:

Sales to Native Americans who (1) live on the tribal reservation of the tribe operating the casino or bingo hall **and** (2) are tribal members of the tribe operating the casino or bingo hall.

For example: Meals, beverages and lodging sold to a Native American who lives on the tribal reservation of the tribe operating the casino and is also a tribal member of the tribe operating the casino, are not subject to sales and use tax.

The casino's gross receipts from wagers (for example, gross receipts from blackjack, slot machines and video poker).

Taxable sales include:

Sales of taxable products or services made to:

- Non-Native Americans
- Native Americans who live off their tribal reservations
- Members of a tribe other than the tribe who operates the casino

For example: A hotel located on the reservation sells lodging to non-Native Americans and Native Americans. Sales to non-Native Americans and Native Americans who live off their tribal reservation and Native Americans who are not members of the tribe operating the casino are taxable.

Construction Activities

Sales to Native American contractor on a reservation:

Sales of construction materials to a Native American contractor are exempt from Wisconsin sales tax if:

1. Delivery of the materials to the Native American contractor occurs on the Native American contractor's tribal reservation, **and**

2. The construction materials will be used on the Native American contractor's tribal reservation.

However, if the materials are later used off the Native American contractor's tribal reservation, the contractor will be subject to Wisconsin use tax.

Publication 207, *Sales and Use Tax Information for Contractors*, provides additional information regarding the tax treatment of construction activities.

Sales to a Native American contractor off a reservation:

Sales to a Native American contractor, who takes delivery of construction materials off its tribal reservation is subject to Wisconsin sales and use tax unless federal preemption applies.

Federal preemption applies if:

1. The construction activity is performed for the tribe,
2. The construction occurs on the tribal reservation, and
3. The construction project will benefit the tribe.

Examples of construction projects that benefit a tribe include schools, administration buildings, casinos, hotels, wastewater treatment plants, convenience stores, and other projects that increase the tribal revenue or allow the tribe to perform functions it would otherwise hire others to perform.

Sales to a non-Native American contractor on or off a reservation:

The sale and delivery of construction materials to a non-Native American contractor on or off a reservation, which the contractor uses in a construction project on the reservation, for the tribe, are subject to Wisconsin sales and use tax unless federal preemption applies.

Any questions? Visit our website at revenue.wi.gov or contact us:

DORSalesandUse@revenue.wi.gov
Wisconsin Department of Revenue
PO Box 8949, Mail Stop 5-77
Madison WI 53708-8949
(608) 266-2776
(608) 267-1030 Fax

Last updated July 12, 2016

DOCUMENT 00 41 00

BID FORM

BIDDER:_____

BID FOR SINGLE PRIME CONTRACT

PROJECT: **LAC DU FLAMBEAU CHILD DAYCARE CENTER**
ADJACENT TO 13708 YOUTH CTR LN (TO THE SOUTH)
LAC DU FLAMBEAU, WISCONSIN 54538
PROJECT NO. 22066

TO: **LAC DU FLAMBEAU BAND OF LAKE SUPERIOR CHIPPEWA INDIANS**
418 LITTLE PINES RD
P.O. BOX 67
LAC DU FLAMBEAU, WISONSIN 54538

BASE BID

The undersigned, having examined the site where the Work is to be executed and become familiar with local conditions affecting the cost of the Work and carefully examined the Project Manual, the Project Drawings, all other Bidding Documents and Addenda thereto prepared by the AE, HSR Associates, Inc., hereby agrees to provide all labor, materials, equipment and services necessary for the complete and satisfactory execution of the ENTIRE WORK, in the time frame stipulated in these contract documents, for the Base Bid stipulated sum of:

_____

_____Dollars ($_____.00)

ALTERNATE BIDS

The undersigned further agrees to perform the alternative portions of the Work as described in the Project Manual, Section 01 23 00 Alternates, for the following deductions from the Base Bid sum stipulated above:

Alternate No. 1 (Natural Play Area)

Deduct _____ Dollars ($_____.00)

Alternate No. 2 (Alternate Kitchen Equipment)

Deduct _____ Dollars ($_____.00)

Page Intentionally Left Blank

UNIT PRICES

The undersigned agrees to add or deduct portions of the Work from the Contract as described in the Project Manual, Section 01 22 00 Unit Prices, for the following Unit Price amounts:

Item	Reference Section	Unit Price	Quantity included in Lump Sum Base Bid
UP-1 Over Excavation of Unsuitable Soils	31 20 00	$_____ / cu yd	0 cu yd
UP-2 Granular Fill	31 20 00	$_____ / cu yd	0 cu yd
UP-3 Breaker Run	31 20 00	$_____ / cu yd	0 cu yd
UP-4 Alternate Flooring Adhesive	09 05 61	$_____ / cu yd	0 sq ft
UP-5 Remedial Floor Coating	09 05 61	$_____ / cu yd	0 sq ft

BIDDER'S CHOICE SUBSTITUTIONS

The following Bidder's Choice Substitution is proposed for your consideration subject to the requirements set forth in Document 00 22 13 Supplementary Instructions to Bidders, Subparagraph 3.3.4:

Substitution No. S1:

For substituting_____

_____

Type, Brand, Catalog No._____

Manufacturer_____

Deduct from BASE BID _____ Dollars ($_____.00)

Page Intentionally Left Blank

In submitting this Bid, the undersigned agrees to:

1. Hold this Bid open for **30** days.
2. Accept the provisions of Instructions to Bidders regarding disposition of Bid Security.
3. Enter into and execute an Agreement, if awarded on the basis of this Bid, and to furnish Performance and Labor and Material Payment Bonds according to the Supplementary Conditions.
4. Accomplish work according to the Contract Documents.
5. Complete the work by the time stated in Section 01 10 00 Summary of the Work.

Receipt of the following Addenda and inclusion of their provisions in this Bid is hereby acknowledged:

Addendum No._____ Dated_____

Addendum No._____ Dated_____

Addendum No._____ Dated_____

Addendum No._____ Dated_____

Attached hereto are the required:

a. ( ) Bid Security

b. ( ) Certificate of Organization and Authority

c. ( ) Non-Collusive Affidavit: An affidavit in proof that the undersigned has not entered into any collusion with any person in respect to this Bid or any other bid or the submitting of bids for the contract for which this bid is submitted.

FIRM NAME: _____

(Affix seal if Corporation)

By: _____

Title: _____

By: _____

Title: _____

Date: _____

Official Address: _____

_____

Telephone: _____

END OF DOCUMENT 00 41 00

Page Intentionally Left Blank

DOCUMENT 00 60 00

PROJECT FORMS

The following is a partial list of forms used during the project.

1.01 BOND FORMS REQUIRED OF THE CONTRACTOR

A. Document 00 61 13.13 Performance Bond Form
B. Document 00 61 13.16 Payment Bond Form

1.02 CLARIFICATION AND MODIFICATION FORMS

A. Document 00 63 25 Substitution Request Form – During Construction

1.04 CLOSEOUT FORMS

A. Document 00 65 19.19 Consent of Surety to Final Payment

END OF DOCUMENT 00 60 00

Page Intentionally Left Blank

SECTION 00 73 00
SUPPLEMENTARY CONDITIONS

GENERAL

APPLICATION

The following amendments modify, delete and add to AIA document A201-2017 General Conditions. Where any article, paragraph or subparagraph of the general conditions is not supplemented, amended, voided or superseded by any of the following paragraphs, the provisions of such article, paragraph or subparagraph not so amended, voided or superseded shall remain in effect.

DOCUMENTS INCLUDED IN THE SUPPLEMENTARY CONDITIONS:

Document 00 73 16 Insurance Requirements

Document 00 73 17 Bond Requirements

PAGE 1

PROJECT PROMPT

After the prompt "for the following PROJECT: (Name and location or address)" insert the following:

Lac Du Flambeau Child Daycare Center
Adjacent to 13708 Youth Ctr Ln (to the south)
Lac du Flambeau, Wisconsin 54538

OWNER PROMPT

After the prompt "THE OWNER: (Name, legal status and address)" insert the following:

Lac du Flambeau Band of Lake Superior Chippewa Indians
418 Little Pines Rd
P.O. Box 67
Lac du Flambeau, Wisconsin 54538

ARCHITECT PROMPT

After the prompt "THE ARCHITECT: (Name, legal status and address) insert the following:

HSR Associates, Inc.
100 Milwaukee Street
La Crosse, WI 54603

ARTICLE 1

1.1.3

Add the following sentence to the end of the existing sub-article:
"The word 'provide' shall also be understood to require 'furnish and install'."

1.1.4

Add the following sentence to the end of the existing sub-article:
"A detailed description of the Project can be found in Document 00 11 13."

1.2.3

After 1.2.3, insert the following new sub-articles:

"1.2.4 Where a number is listed in the Project Manual (as for gauges, weights, temperatures, amount of time, etc.) the number shall be interpreted as that or better."

"1.2.5 Whenever the words ‘approved’, ‘satisfactory’, ‘directed’, ‘submitted’, ‘inspected’, or similar words or phrases are used in the product specification sections, it shall be assumed that the words ‘Architect/Engineer or Architect/Engineer's representative’ follows the verb as the object of the clause, such as ‘approved by the Architect/Engineer or Architect/Engineer's representative’."

ARTICLE 2

2.1.2

After 2.1.2, insert the following new sub-article:

"2.1.3 Refer to Document 00 22 13 for a detailed description of the Owner."

ARTICLE 3

3.3.3

After 3.3.3, insert the following new sub-article:

"3.3.4 Refer to Section 01 40 00 for detailed quality control requirements."

3.5.1

Add the following sentence to the end of the existing sub-article:

"Refer to Article 12 to see the time frame for correcting defective Work."

After 3.5.1, insert the following new sub-article:

"3.5.1.1 Where the Contract Documents require Work better than that required by statute, the Contract Documents shall govern."

3.7.1

Add the following sentence to the end of the existing sub-article:

"Contractor shall provide permits for driveway/curb-cuts, and cost for relocation of light poles and tree."

3.7.4

In 3.7.4, change "~~14 days after first observance~~" to "10 days after first observance"

3.8.3

After 3.8.3, insert the following new sub-article:

"3.8.4 Refer to Section 01 21 00 for detailed description of allowances."

3.12.6

After 3.12.6, insert the following new sub-articles:

".1 Contractor shall use a verification stamp with signature and date to signify Contractor's approval of Shop Drawings."

".2 Refer to Sections 01 30 00, 01 40 00 and 01 60 00 for detailed submittal information."

3.14.2

After 3.14.2, insert the following new sub-article:

"3.14.3 Refer to Section 01 70 00 for detailed cutting and patching requirements."

ARTICLE 4

4.1.1

Add the following sentence to the end of the existing sub-article:

"Wherever the term 'Architect' appears, it shall be changed to 'Architect/Engineer (AE)'."

After 4.1.1, insert the following new sub-article:

".1 Refer to Document 00 21 13 for a detailed description of the AE and any applicable consultants."

ARTICLE 5

5.2.1

Delete the first sentence of the existing sub-article:

"~~Unless otherwise stated in Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design.~~"

Replace with:

"The successful bidder, within 10 calendar days from notification of selection for award of contract, shall furnish in writing to the Owner through the Architect a listing of major subcontractors and suppliers, their addresses, phone numbers, and the portions of the work which they will perform."

ARTICLE 7

7.2.1

After sub-article 7.2.1, insert the following new sub-article:

"7.2.2 Refer to Section 01 20 00 and 7.3.4 below for detailed change order procedures."

7.3.3.2

Delete the text of existing sub-article:

"~~Unit prices stated in the Contract Documents or subsequently agreed upon;~~"

Replace with:

"Unit prices stated in the Contract Documents including Section 01 22 00 or subsequently agreed upon;"

7.3.4

In the first sentence of sub-article 7.3.4, change "~~a reasonable amount.~~" to "an allowance for overhead and profit in accordance with percentage fee stated in Subparagraph 7.3.11 below."

7.3.10

After 7.3.10, insert the following new sub-article:

"7.3.11 In Subparagraphs 7.3.3 and 7.3.4 the percentage fee allowance for the combined overhead and profit included in the total cost to the Owner shall be based on the following schedule:

.1 for the Contractor, for Work performed by the Contractor's own forces, 10 percent of the cost.

.2 for the Contractor, for Work performed by the Contractor's Subcontractor, 7 percent of the amount due the Subcontractor.

.3 for each Subcontractor or Sub-subcontractor involved, for Work performed by that Subcontractor's or Sub-subcontractor's own forces, 7 percent of the cost.

.4 for each Subcontractor, for Work performed by the Subcontractor's Sub-subcontractor, 5 percent of the amount due the Sub-subcontractor.

.5 In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, materials and Subcontracts. Labor and materials shall be itemized in manner prescribed above. Where major cost items are subcontracts, they shall be itemized also. In no case will a change involving over $500.00 be approved without such itemization."

7.4

After 7.4, insert the following new sub-article:

"7.5 Bulletins

A Bulletin is a written document prepared by the Architect/Engineer as a statement of changes in the scope of Work which may or may not change the Contract Amount or Time. The Contractor shall return the executed Bulletin to the Architect/Engineer on or before the date stated in the Bulletin stating Contractor's agreement to change the Scope of Work and any proposed adjustment to the Contract Amount and the Contract Time. All Bulletin items shall subsequently be recorded on a Change Order."

ARTICLE 8

8.3.1

Delete the words "~~mediation and binding~~" from the existing sub-article. See Article 15 of the Supplementary Conditions for related changes.

ARTICLE 9

9.2

After 9.2, insert the following new sub-article:

"9.2.1 Refer to Section 01 20 00 for detailed schedule of values requirements."

9.3.1

Delete the first sentence of the existing sub-article:

"~~At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work.~~"

Replace with:

Submission of Applications for Payment shall follow sub-article 9.6 of the Supplementary Conditions.

9.6.8

After 9.6.8, insert the following new sub-article:

"9.6.9 Based upon Applications for Payment submitted to the Architect by the Contractor, the Owner shall make progress payment on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

.1 The period covered by each Application for Payment shall be on the 25th day of the month.

.2 Provided an Application for Payment is received by the Architect not later than the 25th day of a month, the Owner shall make payment to the Contractor not later than the 25th day of the following month. If an Application for Payment is received by the Architect after the application date fixed above, payment shall be made by the Owner not later than 60 days after the Architect receives the Application for Payment.

.3 Each Application for Payment shall be based upon the Schedule of Values submitted by the Contractor in accordance with the Contract Documents. The Schedule of Values shall allocate the entire Contract Sum among the various portions of the Work and be prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

.4 Applications for Payment shall indicate the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

.5 Subject to the provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

The retainage shall be an amount equal to not more than 5% of the estimate until 50% of the work has been completed. At 50% completion, no additional amounts shall be retained except that at 50% completion or any time thereafter when the progress of the work is not satisfactory, additional amounts may be retained, but in no event shall the total retainage be more than 10% of the value of the work completed.

.6 The progress payment amount determined in accordance with Paragraph 9.6.9.5 shall be further modified per Paragraph 9.6.9.6.1 of the Supplementary Conditions.

.6.1 Upon Substantial Completion of the Work, retainage to remain at 5% of Contract Sum until the Contract is closed out. This amount MAY be reduced to a lower percentage or lump sum if agreed to by Owner, Contractor and A/E.

.7 Reduction or limitation of retainage, if any, shall be per Paragraph 9.6 of the Supplementary Conditions."

9.7

In 9.7 change “~~binding dispute resolution~~” to “dispute resolution”.

9.8.5

After 9.8.5, insert the following new sub-article:

"9.8.6 Failure to reach final completion within 60 days from total Substantial Completion of the Project shall be cause to terminate the Contract and the Contractor's surety shall be notified accordingly."

9.10.1

After 9.10.1, insert the following new sub-articles:

".1 Upon completion of the Final Inspection if the Work is not acceptable and the Contract not fully performed, the AE will notify the Contractor, in writing, of all unfinished Work and fix the time within which the Contractor shall complete the items listed. Upon notification by the Contractor that the list of uncompleted items is complete, the AE will make a follow-up inspection trip."

".2 Time spent by the AE to follow-up on such unfinished Work to determine that the Contractor has fully performed the Contract shall be paid for by the Contractor on the basis of the AE's regular hourly rate schedule for supplementary services and reimbursable expenses as stated in the AE’s agreement for services with the Owner."

".3 Payment for all such additional services required of the AE will be deducted from the balance due the Contractor, duly noted on the final Certificate for Payment and paid by the Owner directly to the AE.”

9.10.5

After 9.10.5, insert the following new sub-article:

"9.10.6 Refer to Section 01 78 00 for detailed Contract closeout procedures."

ARTICLE 11

11.1.1

After 11.1.1, insert the following new sub-article:

".1 Refer to Supplementary Conditions for requirements and coverages for bonds and insurance."

11.2.1

After 11.2.1, insert the following new sub-article:

".1 The Contractor shall provide and maintain Property Insurance to cover the deductible of the Owner’s property insurance in the amount of $1,000 of loss on any claim, or provide evidence satisfactory to the Owner that the Contractor shall pay for all such losses not covered by the Owner against the same peril as described for the Owner’s Property Insurance."

ARTICLE 13

13.1

Delete the second sentence of the sub article:

“~~If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.~~”

ARTICLE 15

15.1.2

In 15.1.2 change “~~binding dispute resolution~~” to “dispute resolution”.

15.2.1

Delete the wording presented in strikethrough font in the following paragraph and insert the underlined wording:

"15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to ~~mediation~~ dispute resolution of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand ~~mediation and binding~~ dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the contractor and persons or entities other than the Owner.

15.2.5

Delete the wording presented in strikethrough font in the following paragraph and insert the underlined wording:

"**15.2.5** The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject ~~to mediation and, if the parties fail to resolve their dispute through mediation,~~ to ~~binding~~ dispute resolution."

15.2.6

Delete sub-article 15.2.6 from the document.

15.3

Delete sub-article 15.3 from the document.

15.4

Delete sub-article 15.4 from the document.

END OF SECTION

SECTION 01 10 00
SUMMARY

PART 1 GENERAL

1.01 PROJECT

A. Refer to Cover Sheet on Drawings for project title and location.

B. Refer to 00 11 13 Advertisement for Bids for brief description of Project.

1.02 RELATED REQUIREMENTS

A. Section 01 50 00 - Temporary Facilities: Requirements for temporary utilities.

B. Section 01 70 00 - Administrative Requirements: Contract limits and protection of existing conditions.

1.03 CONTRACT DESCRIPTION

A. Contract Type: A single prime contract based on a Stipulated Price as described in Document 00 52 00 - Agreement Form.

1.04 PHASED CONSTRUCTION

A. The Work shall be conducted in a single phase.

1.05 WORK BY OTHERS

A. Items indicated "N.I.C." on the Project Drawings will be furnished and installed by others not a party to the Prime Contracts.

1.06 OWNER OCCUPANCY

A. Owner intends to occupy the Project area upon Substantial Completion.

1.07 CONTRACTOR USE OF SITE AND PREMISES

A. Construction Operations:
   1. Locate and conduct construction activities in ways that will limit disturbance to site.

B. Arrange use of site and premises to allow:
   1. Owner construction and planning activities.
   2. Work by others at owner's direction.

C. Provide access to and from site as required by law and by Owner:
   1. Do not obstruct roadways, sidewalks, or other public ways without permit.

D. Time Restrictions:
   1. Work on the Project shall be done during normal working hours approved by the Owner. If at any time during construction it becomes necessary to accelerate the Work in order to meet completion dates for portions or all of the Work, all trades shall work overtime at no additional cost to Owner.

E. Utility Outages and Shutdown:
   1. Notify Owner within 48 hours of necessary interruptions of services including, but not limited to: HVAC systems, water service (hot & cold), electrical service, communications systems.
   2. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, without 7 days notice to Owner and authorities having jurisdiction.
   3. Prevent accidental disruption of utility services to other facilities.

1.08 CONSTRUCTION SCHEDULE

A. Date of Commencement of the Work: July 5, 2023.

B. Date of Substantial Completion: July 2, 2024.

C. Final Completion: The completion of all Work according to the contract Documents, approved by the AE and accepted by the Owner shall be within 30 days after the Date of Substantial Completion.

D. Exceptions: The only exceptions to the above completion dates are delay or termination because of a national emergency and/or extension of time for completion claimed and allowed according to the General Conditions and/or Supplementary Conditions

1.09 WORK SEQUENCE

A. Coordinate construction schedule and operations with A/E.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 23 00
ALTERNATES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Description of Alternates.

1.02 RELATED REQUIREMENTS

A. Document 00 21 13 - Instructions to Bidders: Instructions for preparation of pricing for Alternates.

1.03 DESCRIPTION

A. Conditions of the Contract and pertinent portions of Sections in Division One of this Project Manual, apply to the Work of this Section as fully as though repeated herein.

B. This Section describes the alternates to the project. Refer to the Product/Execution Articles of the Contract Documents for information pertaining to the work of each alternate.

C. Each proposal under an alternate shall include all incidental work and all adjustments necessary to accommodate the changes. All work shall meet the requirements of the Contract Documents.

D. Each alternate proposal shall be submitted as an individual cost for the particular alternate and shall be proposed under the premise that no other alternates have been accepted. Should the work of an alternate called for by the Bid Form not affect the cost of the work, "No Change" shall be stated.

E. Owner may, at Owner's option, vary the scope of the work by authorizing alternates which will add to the work, deduct from the work or substitute materials, equipment or methods.

F. Immediately following Award of Contract, awarded Contractor shall prepare and distribute to each party involved, notification of the status of each alternate. Indicate whether alternates have been accepted, rejected, or deferred for consideration at a later date. Include a complete description of negotiated modifications to alternates, if any.

1.04 ACCEPTANCE OF ALTERNATES

A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in the Owner-Contractor Agreement.

1.05 SCHEDULE OF ALTERNATES

A. Alternate No. 1: Natural Play Area
   1. The following work shall be priced under Alternate No. 1: State the amount to be deducted from the base bid to leave the area without the improvements indicated. Work includes but is not limited to eliminating a 3 sided fencing enclosure. Refer to Specification Section 32 31 19 and Drawing number C101.

B. Alternate No. H1: Alternate Kitchen Equipment
   1. The following work shall be priced under Alternate No. 2: State the amount to be deducted from the base bid to not provide the items indicated on the drawing and to provide finishes as though the items were not part of the project. Work includes but is not limited to not providing MAU, Kitchen Hood, Exhaust Fan and associated Ductwork, Grilles and Accessories. Refer to Drawing number M100.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

Page Intentionally Left Blank

SECTION 01 70 00
EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Examination, preparation, and general installation procedures.

B. Requirements for alterations work, including selective demolition.

C. Pre-installation meetings.

D. Cutting and patching.

E. Cleaning and protection.

F. Starting of systems and equipment.

G. Demonstration and instruction of Owner personnel.

H. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.

I. General requirements for maintenance service.

1.02 RELATED REQUIREMENTS

A. Section 01 10 00 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.

B. Section 01 30 00 - Administrative Requirements: Submittals procedures, Electronic document submittal service.

C. Section 01 40 00 - Quality Requirements: Testing and inspection procedures.

D. Section 01 78 00 - Closeout Submittals: Project record documents, operation and maintenance data, warranties, and bonds.

1.03 SUBMITTALS

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

B. Project Record Documents: Accurately record actual locations of capped and active utilities.

1.04 REQUIREMENTS OF REGULATORY AGENCIES

A. Comply with National Electric Code for temporary power.

B. Comply with Federal, State and local codes and regulations, and with utility company requirements.

1.05 PROJECT CONDITIONS

A. Grade site to drain. Maintain excavations free of water.

B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

C. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

D. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.

E. Erosion and Sediment Control: Plan and execute work by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation. Refer to Division 31.

F. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.

G. Rodent Control: Provide methods, means, and facilities to prevent rodents from accessing or invading premises.

H. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

1.06 CONTRACT LIMITS AND PROTECTION OF EXISTING CONDITIONS

A. All work shall be confined within the Contract limits indicated on the Project Drawings. Do not infringe upon other areas without the permission of the AE. If not indicated otherwise, consider the property lines to be the Contract limits.

B. Existing property, buildings, walks, curbs, trees, shrubs, lawns, boulevards, and the Work of other Contractors, which are damaged or disturbed outside the Contract limits shall be restored to original condition or better. Contractor shall be responsible for the damage or disturbance and shall restore disturbed lawn areas with sod and replace damaged trees and shrubs.

C. Existing Pavement and Flatwork Protection
   1. Where excessive loading of trucks and travel of tracked equipment occurs over existing asphalt paving and concrete flatwork, provide constructions mats to prevent cracking, deformation or similar damage. Damaged pavements, slabs or curb and gutter shall be replaced with new. Prior to construction start, review existing conditions with Owner and A/E and document with photos

D. Existing shrubs and trees indicated on the Project Drawings to remain shall be protected from physical damage. Observe the following precautions within a distance of 15 feet of the trunk of such trees:
   1. Install temporary fencing as required to control traffic under trees.
   2. Dump no trash, especially concrete, plaster, mortar, or wash water.
   3. No storing of cement, plaster, concrete block, brick and similar products.
   4. Provide and maintain good drainage; no ponding water permitted.
   5. Clean up the area immediately as nearby construction work is completed

E. Existing raw materials such as soil, trees, etc. are owned by the Owner. If such materials must be relocated off the site seek direction from the Owner on the Owner's choice of disposal and storage location on the reservation and deliver the materials to that location.

1.07 COORDINATION

A. See Section 01 10 00 for occupancy-related requirements.

B. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.

C. Notify affected utility companies and comply with their requirements.

D. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

E. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing indicated for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

F. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

G. Coordinate completion and clean-up of work of separate sections.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.

B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.

C. Examine and verify specific conditions described in individual specification sections.

D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or miss-fabrication.

E. Verify that utility services are available, of the correct characteristics, and in the correct locations.

F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 GENERAL INSTALLATION REQUIREMENTS

A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.

B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.

C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.

D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.

E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.04 CUTTING AND PATCHING

A. Whenever possible, execute the work by methods that avoid cutting or patching.

B. Perform whatever cutting and patching is necessary to:
   1. Complete the work.
   2. Fit products together to integrate with other work.
   3. Provide openings for penetration of mechanical, electrical, and other services.
   4. Match work that has been cut to adjacent work.
   5. Repair areas adjacent to cuts to required condition.
   6. Repair new work damaged by subsequent work.
   7. Remove samples of installed work for testing when requested.
   8. Remove and replace defective and non-complying work.

C. Unless noted otherwise, each major subcontractor shall be responsible for all cutting and patching of the structure and appurtenances to complete that subcontractors Work for this Project.

D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing.

E. General Contractor is responsible to verify warranty requirements at areas of alteration and to make certain that required certified installers are employed for repairs to maintain said warranty.

F. Employ skilled and experienced installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.

G. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

H. Restore work with new products in accordance with requirements of Contract Documents.

I. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

J. Patching:
   1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
   2. Match color, texture, and appearance.
   3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.
   4. At patches/repairs in rated walls verify required UL fire rating design to confirm integrity of fire rating at completion of repair.

3.05 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition. Accomplish rubbish removal weekly and additionally as directed by the AE. Keep interior of building free of unattended combustible rubbish at all times.

B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

E. Remove all tools, equipment, scaffolding and temporary facilities immediately when no longer required for execution of the Work.

F. As used herein, the term "premises" shall include all areas within and outside the construction limits which have been soiled, littered or disturbed in any manner by the Work of the Project.

3.06 PROTECTION OF INSTALLED WORK

A. Protect installed work from damage by construction operations.

B. Provide special protection where specified in individual specification sections.

C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

D. Protect installed work from damage by construction operations. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
   1. The General Contractor shall assume responsibility for the floors being in like new condition upon completion of the Project.
   2. Exercise care to prevent damage to exposed, finished concrete floor surfaces during the course of construction of the Project. Remove all spills or smears immediately and sweep floors frequently.
   3. Instruct all workmen and deliverymen to exercise caution against accidental damage to the floors by actions such as dropping heavy objects like tools and products, or scratching by sliding objects, or scoring by vibration from metal legs of stand mounted power tools, or permanent discoloration from oil dripping from pipe thread cutting machine, or the like.
   4. Avoid using areas with exposed concrete floors as workshops or in any other way which would damage the finished floors. When rooms or areas must be so used, cover floor with 5/8 inch thick plywood panels fastened together and underlain with 10 mil minimum plastic taped in place.
   5. Allowable Carpet Protection:
      a. Pedestrian Traffic: Polyethylene protective film, industrial duty, temporary protection, plastic carpet film with a pressure sensitive water-based self-adhesive system allowing clean release for easy removal without adhesive transfer. Any other protection system shall be approved by A/E.

b. Equipment Traffic (wheelbarrows, carts etc.): Plywood or similar board protection over 10 mil minimum reinforced plastic taped in place over floor finish.

6. Allowable Resilient and Hard Surface Floor Protection:
   a. Plywood sheets over 10 mil minimum reinforced plastic, resin paper or tarp taped in place.

F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

G. Prohibit traffic from landscaped areas.

H. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

3.07 SYSTEM STARTUP

A. Coordinate schedule for start-up of various equipment and systems.

B. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.

C. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.

D. Verify that wiring and support components for equipment are complete and tested.

E. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.

F. Submit a written report that equipment or system has been properly installed and is functioning correctly.

3.08 DEMONSTRATION AND INSTRUCTION

A. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time, at equipment location.

B. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.

C. Provide a qualified person who is knowledgeable about the Project to perform demonstration and instruction of owner personnel.

3.09 ADJUSTING

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.10 FINAL CLEANING

A. Execute final cleaning after Substantial Completion but before making final application for payment. Clean all surfaces to condition acceptable for immediate occupancy by the Owner.

B. Use cleaning materials that are nonhazardous.

C. Remove all marks, stains, fingerprints, paint droppings and other foreign matter from all finished surfaces.

D. Clean and polish all hardware.

E. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.

F. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.

G. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

H. Replace filters of operating equipment.

I. Clean debris from roofs, gutters, downspouts, scuppers, overflow drains, area drains, and drainage systems.

J. Clean site; sweep paved areas, rake clean landscaped surfaces.

K. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.11 SUBSTANTIAL COMPLETION

A. Comply with General Conditions of the Contract for Construction and Supplementary Conditions for reaching Substantial Completion.

3.12 FINAL INSPECTION

A. Comply with General Conditions of the Contract for Construction and Supplementary Conditions for completing Final Inspection.

B. Refer to 00 73 00 Supplementary Conditions, Article 9 for time line to complete Final Inspection.

3.13 MAINTENANCE

A. Provide service and maintenance of components indicated in specification sections.

B. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.

C. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.

D. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of the Owner.

END OF SECTION

SECTION 03 30 00
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Concrete formwork.

B. Floors and slabs on grade.

C. Concrete foundation walls and stoops.

D. Fiber reinforcement.

E. Concrete reinforcement.

F. Joint devices associated with concrete work.

G. Underslab vapor barrier.

H. Concrete curing.

1.02 RELATED REQUIREMENTS

A. Refer to Structural Drawings for additional design information.

B. Section 01 40 00 - Quality Requirements

C. Section 07 92 00 - Joint Sealants: Products and installation for sealants and joint fillers for saw cut joints and isolation joints in slabs.

E. Section 07 21 00 - Thermal Insulation: Rigid insulation for installation at foundation walls.

F. Division 9 Floor Finishes: Restrictions for compatibility of flooring adhesives in regards to curing compounds, sealers and slab moisture content.

G. Section 09 05 61 Common Work Results for Flooring Preparation: Floor flatness testing at large format tile locations.

H. Section 32 13 13 - Concrete Paving: Exterior paving, sidewalks, curbs and gutters.

1.03 REFERENCE STANDARDS

A. ACI 117 - Standard Specifications for Tolerances for Concrete Construction and Materials 2010.

B. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete 1991 (Reapproved 2009).

C. ACI 301 - Specifications for Structural Concrete 2010 (Errata 2012).

D. ACI 302.1R - Guide for Concrete Floor and Slab Construction 2004 (Errata 2007).

E. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete 2000.

F. ACI 305R - Hot Weather Concreting 2010.

G. ACI 306R - Cold Weather Concreting 2010.

H. ACI 308R - Guide to Curing Concrete 2001 (Reapproved 2008).

I. ACI 318 - Building Code Requirements for Structural Concrete and Commentary 2014 (Errata 2016).

J. ACI 347R - Guide to Formwork for Concrete 2014.

K. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement 2016.

L. ASTM C1609/C1609M - Standard Test Method for Flexural Performance of Fiber-Reinforced Concrete (Using Beam With Third-Point Loading) 2012.

M. ASTM C33/C33M - Standard Specification for Concrete Aggregates 2016.

N. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens 2016b.

O. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete 2016a.

P. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or (50-mm) Cube Specimens) 2016a.

Q. ASTM C150/C150M - Standard Specification for Portland Cement 2016.

R. ASTM C171 - Standard Specification for Sheet Materials for Curing Concrete 2016.

S. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete 2010a (Reapproved 2016).

T. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete 2016.

U. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete 2015.

V. ASTM C881/C881M - Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete 2015.

W. ASTM C1059/C1059M - Standard Specification for Latex Agents for Bonding Fresh to Hardened Concrete 2013.

X. ASTM C1107/C1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink) 2014a.

Y. ASTM C1315 - Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete 2011.

Z. ASTM D8139 - Standard Specification for Semi-Rigid, Closed-Cell Polypropylene Foam, Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction 2017.

AA. ASTM E154/E154M - Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover 2008a (Reapproved 2013).

BB. ASTM E1155 - Standard Test Method for Determining F(F) Floor Flatness and F(L) Floor Levelness Numbers 2014.

CC. ASTM E1155M - Standard Test Method for Determining F(F) Floor Flatness and F(L) Floor Levelness Numbers (Metric) 2014.

DD. ASTM E1643 - Standard Practice for Selection, Design, Installation and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs 2011.

EE. ASTM E1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs 2011.

FF. ICC (IBC)-2015 - International Building Code 2015.

1.04 SUBMITTALS

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

B. Provide submittal transmittals that include all submittal items identified in each submittal group below.

C. Review Submittals - Preparatory
   1. Mix Design: Submit proposed concrete mix designs prior to proceeding with any concrete work. Do not proceed until A/E responds to permit use of the concrete mixes.
      a. Aggregates: Include service record data indicating absence of deleterious expansion of concrete due to alkali aggregate reactivity.
      b. Admixtures required to meet job and environment requirements.
   2. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.
      a. For curing compounds, provide data on method of removal in the event of incompatibility with floor covering adhesives.
   3. Control Joint Drawings: Prior to start of concrete work submit drawings showing proposed construction and control joints for slabs.

D. Information Submittals - Preparatory
   1. Material Certificates: Provide signed manufacturer certificates:
      a. Cementitious materials.
      b. Admixtures.
   2. Concrete Placement Schedule: Submit to Architect/Engineer prior to placing any concrete.

E. Information Submittals - During Execution
   1. Test Reports: Provide test reports for the work of this section as the test reports are issued by the testing agency. If the A/E is included in the distribution from the testing agency, it is not necessary for test results to be provided via the submittal processas as part of this submittal group. Collected test reports will be required as part of the a closeout submittal group.

F. Closeout Submittals
   1. Project Record Documents: Accurately record actual locations of embedded utilities and components that will be concealed from view upon completion of concrete work.
   2. Test Reports: Laboratory test reports to AE for placed concrete as specified herein.
   3. Submit copies of delivery tickets for each load of concrete delivered to Project with closeout documents.

1.05 QUALITY ASSURANCE

A. Perform work of this section in accordance with ACI 301 and ACI 318.

B. Follow recommendations of ACI 305R when concreting during hot weather.

C. Follow recommendations of ACI 306R when concreting during cold weather.

D. Contractor shall confirm and coordinate various requirements, restrictions or special conditions (i.e. slump, surface finish, curing and sealing compatibility) with floor finish suppliers prior to placing concrete.

PART 2 PRODUCTS

2.01 FORMWORK

A. Formwork Design and Construction: Comply with guidelines of ACI 347R to provide formwork that will produce concrete complying with tolerances of ACI 117.

B. Form Materials: Contractor's choice of standard products with sufficient strength to withstand hydrostatic head without distortion in excess of permitted tolerances.
   1. Form Facing for Exposed Finish Concrete: Contractor's choice of materials that will provide smooth, stain-free final appearance.
   2. Form Coating: Release agent that will not adversely affect concrete or interfere with application of coatings.

2.02 REINFORCEMENT MATERIALS

A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi).
   1. Type: Deformed billet-steel bars.
   2. Finish: Unfinished, unless otherwise indicated.

B. Slab-On-Grade Poly Fiber Reinforcement Systems: (To be used in lieu of welded wire fabric)
   1. Synthetic Structural Fiber Reinforcement: Provide synthetic structural fibers complying with the following requirements:
      a. Synthetic structural fibers shall meet requirements of ASTM C 1116, Paragraph 4.1.3, Type III.
      b. Synthetic structural fibers shall be monofilament, made of polypropylene or polypropylene/polyethylene blend.
      c. Synthetic structural fibers shall have a minimum length of 1.38 inches (35 mm) and a maximum length of 2.00 inches (51 mm).
      d. Specific gravity between 0.90 and 0.95.
      e. Synthetic structural fibers shall have an aspect ratio (length divided by equivalent diameter of fiber) between 60 and 100.

f. Dosage rate:
1) Slabs-On-Grade: 5.0 lbs/cubic yard or the addition rate to achieve the concrete required minimum equivalent flexural strength, fe3 of 165 psi for a concrete with a compressive strength of 4,000 psi at 28 days. Determined from the manufacturer's test data verifying fiber performance in concrete based on ASTM C1609/C1609M, utilizing the beam size 6" x 6"x 20" (fe3) calculated using JCI-SF4 method.

g. Synthetic structural fibers shall be:
1) Grace STRUX, 90/40 synthetic fiber.
2) Propex Concrete Systems, Novomesh 950 Synthetic Fiber.
3) Euclid Chemical Company, Tuf-Strand SF.
4) Substitutions: See Section 01 60 00 - Product Requirements.

2.03 CONCRETE MATERIALS

A. Cement: ASTM C150/C150M, Type I - Normal Portland type.
1. Acquire cement for entire project from same source.

B. Air Entraining Portland Cement: ASTM C 150, Type 1A.

C. Fine and Coarse Aggregates: ASTM C33/C33M.
1. Acquire aggregates for entire project from same source.

D. Fly Ash: ASTM C618, Class C.

E. Calcined Pozzolan: ASTM C618, Class C.

F. Water: Clean and not detrimental to concrete in accordance with ASTM C1602/C1602M.

2.04 ADMIXTURES

A. Except for air entraining and water reducing, admixtures are not permitted without approval of Architect/Engineer. Submit manufacturer's information to A/E with historical stress testing.

B. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement.

C. Air Entrainment Admixture: ASTM C260/C260M. Use for exterior walls, exterior slabs, walks, platforms, ramps, steps, portions of parking ramp and other concrete exposed to freezing and thawing. Air entrainment not allowed at interior floor slabs.
1. Products:
a. Darex II - W.R. Grace.
b. AEA 92S - Euclid.
c. Catexol AE 260 - Axim Concrete Technologies
d. General Resource Technology - Polychem SA-50
e. MasterAir Series – Master Builders Solutions
f. Substitutions: See Section 01 60 00 - Product Requirements.

D. Mid-Range Water Reducing: ASTM C494/C494M Type A or Type F.
1. Products: Subject to compliance with requirements, provide one of the following:
a. Daracem 65 - W.R. Grace.
b. Eucon MR - Euclid.
c. Catexol 3500N" – Axim Concrete Technologies
d. General Resource Technology - KB-1200
e. MasterPolyheed Series" - Master Builders Solutions
f. Substitutions: See Section 01 60 00 - Product Requirements.

E. High Range Water Reducing Admixture (Super Plasticizer: ASTM C494/C494M Type F or type G.
1. Products: Subject to compliance with requirements, provide one of the following
a. Daracem 19 - W.R. Grace.
b. ADVA 100 - W.R. Grace & Co.
c. Catexol 1000SP-MN – Axim Concrete Technologies
d. General Resource Technology - Melchem Superplasticizer
e. MasterRheobuild 1000 or MasterGlenium Series - Master Builders Solutions

f. Substitutions: See Section 01 60 00 - Product Requirements.

F. Water Reducing, Non-Chloride Accelerating Admixture: ASTM C494/C494M Type C or E.
1. Products: Subject to compliance with requirements, provide one of the following:
a. Polarset - W.R. Grace.
b. Catexol 2000RHE – Axim Concrete Technologies
c. General Resource Technology - Polychem Superset
d. MasterSet AC 534 or MasterSet FP 20 - Master Builders Solutions
e. Substitutions: See Section 01 60 00 - Product Requirements.

G. Water Reducing and Retarding Admixture: ASTM C494/C494M Type D.
1. Products: Subject to compliance with requirements, provide one of the following:
a. Daratard 17 - W.R. Grace.
b. Eucon Retarder 100 - Euclid.
c. Catexol 1000R – Axim Concrete Technologies
d. MasterSet R Series or MasterSet DELVO Series - Master Builders Solutions
e. Substitutions: See Section 01 60 00 - Product Requirements.

H. Water Reducing Admixture: ASTM C494/C494M Type A.
1. Products: Subject to compliance with requirements, provide one of the following:
a. WRDA 82 - W.R. Grace.
b. MasterPozzolith Series – Master Builders Solutions
c. Catexol 1000N – Axim Concrete Technologies
d. Substitutions: See Section 01 60 00 - Product Requirements.

2.05 ACCESSORY MATERIALS

A. Underslab Vapor Retarder:
1. Sheet Material: ASTM E1745, Class A; stated by manufacturer as suitable for installation in contact with soil or granular fill under concrete slabs. Single-ply polyethylene is prohibited.
2. Accessory Products: Vapor retarder manufacturer's recommended tape, adhesive, mastic, prefabricated boots, etc., for sealing seams and penetrations.
3. Products:
a. Fortifiber Building Systems Group: Moistop Ultra 15. www.fortifiber.com/#sle.
b. Inteplast Group; Barrier-Bac VB-350: www.barrierbac.com/#sle.
c. ISI Building Products; Viper VaporCheck II 15-mil (Class A): www.isibp.com/#sle.
d. Poly-America; Husky Yellow Guard 15-mil Vapor Barrier: www.yellowguard.com/#sle.
e. Stego Industries, LLC; Stego Wrap 15 mil: www.stegoindustries.com.
f. W. R. Meadows, Inc; PERMINATOR Class A - 15 mils (0.38 mm): www.wrmeadows.com/#sle.
g. Vaporblock VB15 by Raven Industries: www.vaporblock.com
h. Substitutions: See Section 01 60 00 - Product Requirements.

B. Non-Shrink Cementitious Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.
1. Grout: Comply with ASTM C1107/C1107M.
2. Minimum Compressive Strength at 48 Hours, ASTM C109/C109M: 2,000 pounds per square inch.
3. Minimum Compressive Strength at 28 Days, ASTM C109/C109M: 8000 pounds per square inch.
4. Flowable Products:
a. Five Star Products, Inc; Five Star Fluid Grout 100: www.fivestarproducts.com/#sle.
b. W. R. Meadows, Inc; 588-10K: www.wrmeadows.com/#sle.
c. Substitutions: See Section 01 60 00 - Product Requirements.
5. Low-Slump, Dry Pack Products:
a. Five Star Products, Inc; Five Star Grout: www.fivestarproducts.com/#sle.
b. SpecChem, LLC; SC Multipurpose Grout: www.specchemllc.com/#sle.
c. W. R. Meadows, Inc; PAC-IT: www.wrmeadows.com/#sle.

d. Substitutions: See Section 01 60 00 - Product Requirements.

C. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf.

D. Moisture-Retaining Cover: ASTM C171; clear polyethylene, white polyethylene, or white burlap-polyethylene sheet.

E. Bond Breaker: 4 mil plastic, 15# building paper, or vapor retarder returned up on wall.

2.06 BONDING AND JOINTING PRODUCTS

A. Latex Bonding Agent: Non-redispersable acrylic latex, complying with ASTM C1059/C1059M, Type II.
   1. Products:
      a. Kaufman Products Inc; SureBond: www.kaufmanproducts.net/#sle.
      b. SpecChem, LLC; Strong Bond Acrylic Bonder: www.specchemllc.com/#sle.
      c. W. R. Meadows, Inc; ACRY-LOK-: www.wrmeadows.com/#sle.
      d. Substitutions: See Section 01 60 00 - Product Requirements.

B. Epoxy Bonding System:
   1. Products:
      a. Dayton Superior Corporation; Slow Set Bonding Agent: www.daytonsuperior.com/#sle.
      b. Kaufman Products Inc; SurePoxy HM EPL: www.kaufmanproducts.net/#sle.
      c. Kaufman Products Inc; SurePoxy HM Class B: www.kaufmanproducts.net/#sle.
      d. SpecChem, LLC; SpecPoxy 1000, SpecPoxy 2000, SpecPoxy 3000, or SpecPoxy 3000FS: www.specchemllc.com/#sle.
      e. W. R. Meadows, Inc; Rezi-Weld Gel Paste, Rezi-Weld Gel Paste State, Rezi-Weld 1000: www.wrmeadows.com/#sle.
      f. Substitutions: See Section 01 60 00 - Product Requirements.

C. Slab Isolation Joint Filler: 1/2 inch thick, height equal to slab thickness, with removable top section that will form 1/2 inch deep sealant pocket after removal.
   1. Material: ASTM D8139, semi-rigid, closed-cell polypropylene foam.
   2. Products:
      a. Nomaco, Inc; Isoflex: www.nomaco.com.
      b. Sakrete: Concrete Expansion Joint. www.sakrete.com
      c. Quikcrete: Concrete Expansion Joint. www.quikrete.com
      d. Greensteak: Polypropylene Expansion Board with Expansion Board Cap. www.greenstreak.com
      e. Substitutions: See Section 01 60 00 - Product Requirements.

D. Slab Contraction Joint Device: Preformed linear strip intended for pressing into wet concrete to provide straight route for shrinkage cracking.
   1. Products:
      a. W. R. Meadows, Inc; Speed-E-Joint: www.wrmeadows.com/#sle.
      b. Greenstreak: Zipcap. www.greenstreak.com
      c. Substitutions: See Section 01 60 00 - Product Requirements.

E. Slab Construction Joint Devices: Combination keyed joint form and screed, galvanized steel or plastic, with minimum 1 inch diameter holes for conduit or rebars to pass through at 6 inches on center; ribbed steel stakes for setting. Removable screed cap to form minimum 1/4 inch wide by 3/8 inch deep joint.
   1. Provide removable plastic cap strip that forms wedge-shaped joint for sealant installation.
   2. Height: To suit slab thickness.
   3. Manufacturers:
      a. Form-A-Key Concrete Specialties Products: Key-Loc Joint System with #3017 Clean-Strip Cap. www.formakey.com
      b. Greenstreak: Screed Cap. www.greenstreak.com
      c. Substitutions: See Section 01 60 00 - Product Requirements.

2.07 CURING MATERIALS

A. Evaporation Reducer: Liquid thin-film-forming compound that reduces rapid moisture loss caused by high temperature, low humidity, and high winds; intended for application immediately after concrete placement.
   1. Products:
      a. Dayton Superior Corporation; Aquafilm Concentrate J74: www.daytonsuperior.com/#sle.
      b. SpecChem, LLC; SpecFilm Concentrate or SpecFilm: www.specchemllc.com/#sle.
      c. W. R. Meadows, Inc ; Evapre or Evapre-RTU: www.wrmeadows.com/#sle.
      d. Substitutions: See Section 01 60 00 - Product Requirements.

B. Curing and Sealing Compound, Low Gloss: Liquid, membrane-forming, clear, non-yellowing acrylic; complying with ASTM C1315 Type 1 Class A.
   1. Vehicle: Water-based.
   2. Solids by Mass: 25 percent, minimum.
   3. VOC Content: OTC compliant.
   4. Products:
      a. Concrete Sealers USA; TS202 Acrylic WB-25 Topical Sealer w/ Low Gloss : www.concretesealersusa.com/#sle.
      b. Euclid Chemical Company; DIAMOND CLEAR VOX: www.euclidchemical.com/#sle.
      c. ProSpec: Cure & Seal WB 1315. www.tccmaterials.com
      d. SpecChem; Cure & Seal 25. www.specchemllc.com
      e. Lucas Products: #7200 Cure Seal Water Based. www.rmlucas.com
      f. W. R. Meadows, Inc; VOCOMP-25: www.wrmeadows.com/#sle.
      g. TK Products; TK TRI-SEAL 1315. www.tkproducts.com
      h. Substitutions: See Section 01 60 00 - Product Requirements.

C. Curing and Sealing Compound, High Gloss: Liquid, membrane-forming, clear, non-yellowing acrylic; complying with ASTM C1315 Type 1 Class A.
   1. Vehicle: Solvent-based.
   2. Solids by Mass: 25 percent, minimum.
   3. VOC Content: Ozone Transport Commission (OTC) compliant.
   4. Products:
      a. Master Builders Solutions: MasterKure CC 300 SB.
      b. BRICKFORM: BRICKFORM Gem Cure and Seal 1315 - 650 VOC: www.brickform.com/#sle.
      c. Kaufman Products Inc; Krystal 25: www.kaufmanproducts.net/#sle.
      d. TK Products: Tri-Kure and Seal 1315. www.tkproducts.com
      e. W. R. Meadows, Inc; Decra-Seal: www.wrmeadows.com/#sle.

D. Moisture-Retaining Sheet: ASTM C171.
   1. Curing paper, regular.
   2. Polyethylene film, white opaque, minimum nominal thickness of 4 mil, 0.004 inch.
   3. White-burlap-polyethylene sheet, weighing not less than 3.8 ounces per square yard.

E. Water: Potable, not detrimental to concrete.

2.08 CONCRETE MIX DESIGN

A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.
   1. Replace as much Portland cement as possible with fly ash, ground granulated blast furnace slag, silica fume, or rice hull ash as is consistent with ACI recommendations.

B. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended or required by manufacturer.

C. Normal Weight Concrete: Design all concrete mixes from the following table of requirements:

	W/C Max	Percentage of Entrained Air +- 1%	Max Slump (inches)	MIN f'c(psi) @ 28 days
1. Concrete				
a. Footings, Drilled Piers, Steel Pile Fill	0.55		4	See Struct Drawings
b. Foundation walls, Integral Piers	0.50	*	4	See Struct Drawings
c. Interior Slab-on-Grade	0.50		4	See Struct Drawings
d. Exterior Slab-on Grade (incl. stoops)	0.50	6	4	See Struct Drawings
* Concrete not backfilled and concrete exposed to weather - Entrained Air 6% +-1%				
2. Concrete shown on civil drawings (excluding stoops)	see Division 32 specifications			

1. Fly Ash Content: Maximum 20 percent of cementitious materials by weight when used alone.
   a. At walls, piers, interior slab on grade, bond beams and metal pan stairs: A maximum of 50 percent total replacement of portland cement with fly ash at a 1:1 ratio; up to 350 pounds, with a maximum 20 percent fly ash.
   b. At exposed columns, exterior slab on grade and miscellaneous non-scheduled concrete: A maximum of 20 percent total replacement of Portland cement with fly ash at a 1:1 ratio where freeze-thaw durability and exposure to deicers is likely; up to 350 pounds, with a maximum 20 percent fly ash.
2. Calcined Pozzolan Content: Maximum 10 percent of cementitious materials by weight.
   a. Note: Total of combination of flyash and calcined pozzalon shall not exceed 20 percent.
3. Maximum Coarse Aggregate Size: For footings 1 1/2 inch.
4. Maximum Coarse Aggregate Size: For slabs, walls, precast plank topping and piers: 3/4 inch.

2.09 MIXING

A. Transit Mixers: Comply with ASTM C94/C94M except where requirements in table above are more restrictive.

B. Adding Water: If concrete arrives on-site with slump less than suitable for placement, do not add water that exceeds the maximum water-cement ratio or exceeds the maximum permissible slump.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify lines, levels, and dimensions before proceeding with work of this section.

3.02 PREPARATION

A. Formwork: Comply with requirements of ACI 301. Design and fabricate forms to support all applied loads until concrete is cured, and for easy removal without damage to concrete.

B. Inspect all excavations and/or prepared subgrade for suitability of pouring concrete. No standing water, organic material, debris, etc., should be present. Slab subgrade should be compacted as specified and have optimum moisture content.

C. Points of concrete placement shall be clean, damp but not wet surfaces, or properly consolidated fills, but never soft mud, dry porous earth, or frozen ground.

D. Verify that forms are clean and free of rust before applying release agent.

E. Coordinate placement of embedded items with erection of concrete formwork and placement of form accessories.

F. Contractor shall make certain that references to all related sections for floor finishes and their substrate finish requirements are complied with including but not limited to; mix/slump, flatness, curing/sealing compounds, curing timeframe, aggregate colors etc.

G. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning and applying bonding agent in according to bonding agent manufacturer's instructions.
   1. Use epoxy bonding system for bonding to damp surfaces, for structural load-bearing applications, and where curing under humid conditions is required.
   2. Use latex bonding agent only for non-load-bearing applications.

H. Interior Slabs on Grade: Install vapor retarder under interior slabs on grade. Comply with ASTM E1643. Lap joints minimum 6 inches. Seal joints, seams and penetrations watertight with manufacturer's recommended products and follow manufacturer's written instructions. Repair damaged vapor retarder before covering.
   1. Vapor Retarder Over Granular Fill: Install compactible granular fill before placing vapor retarder as indicated on drawings. Do not use sand.

I. Repair underslab vapor barrier damaged during placement of concrete reinforcing. Repair with vapor retarder material; lap over damaged areas minimum 6 inches and seal watertight.

3.03 INSTALLING REINFORCEMENT AND OTHER EMBEDDED ITEMS

A. Comply with requirements of ACI 301. Clean reinforcement of loose rust and mill scale, and accurately position, support, and secure in place to achieve not less than minimum concrete coverage required for protection.

3.04 PLACING CONCRETE

A. Place concrete in accordance with ACI 304R.

B. Place concrete for floor slabs in accordance with ACI 302.1R.

C. Ensure reinforcement, inserts, waterstops, and embedded parts will not be disturbed during concrete placement.

D. **Addition of water or admixtures to concrete on site without written approval of Architect/Engineer is prohibited and shall be grounds for rejection.**

E. Convey concrete from mixing to point of placement rapidly and continuously until unit of operation is completed using methods which prevent segregation or loss of ingredients. Deposit at or very near final placement position. Use chutes such that the concrete slides in the chute and does not flow. For vertical drops more than 5 feet, utilize tremies or similar devices to prevent segregation of concrete ingredients. Do not convey or handle concrete in containers or devices made of aluminum.

F. Place concrete continuously without construction (cold) joints wherever possible; where construction joints are necessary, before next placement prepare joint surface by removing laitance and exposing the sand and sound surface mortar, by sandblasting or high-pressure water jetting.

G. Consolidate placed concrete by vibration so the concrete is thoroughly worked around reinforcement, around embedded items, and into corners of forms, eliminating air or stone pockets which may cause honeycombing, pitting, or planes of weakness. Use mechanical vibrators with a minimum frequency of 7,000 revolutions per minute, operated by competent workmen. Use of vibrators to move concrete within forms is not permitted. Insert and withdraw vibrators at many points, from 18 to 30 inches apart for 5 to 10 seconds duration. Keep a spare vibrator on the Project Site during all concrete placement operations. Use vibrators of internal type, apply directly to concrete, not through formwork, except in sections too thin to permit insertion of internal type, in which case, employ use of form vibrators approved by Architect/Engineer.

H. Finish floors level and flat, unless otherwise indicated, within the tolerances specified below.

I. Concrete in vertical members shall have been in place at least four hours before concrete in horizontal or vertical members resting thereon is placed.

J. Placing concrete shall be continuous between vertical construction joints. Make vertical construction joints at approximately the center of a panel or beam, in a straight line to the full depth. See Project Drawings for location of architecturally delineated construction joints.

3.05 SLAB JOINTING

A. Locate joints as indicated on drawings.

B. Anchor joint fillers and devices to prevent movement during concrete placement.

C. Isolation Joints: Use preformed joint filler with removable top section for joint sealant, total height equal to thickness of slab, set flush with top of slab.
   1. Install wherever necessary to separate slab from other building members, including columns, walls, equipment foundations, footings, stairs, manholes, sumps, and drains.
   2. Conform to Section 07 92 00 for finish joint sealer requirements.

D. Saw Cut Contraction Joints: Saw cut joints as soon as joints can be cut without joint deformation; use 3/16 inch thick blade and cut at least 1 inch deep but not less than one quarter (1/4) the depth of the slab. Apply specified sealant from 07 92 00 flush with floor.

E. Construction Joints: Where not otherwise indicated, use metal combination screed and key form, with removable top section for joint sealant.

F. Separate slabs on grade from vertical surfaces with bond break of #15 felt, 6 mil poly or slab vapor barrier.

3.06 STRUCTURAL COMPONENT JOINTS

A. Construction joints for walls and continuous wall footings shall have reinforcing cross joints so that shear keys will not be necessary. Construction joints will be located at Contractor's discretion and will be at such locations that each section can be filled in one continuous operation.

B. Construction joints for concrete beams and structural slabs shall be at mid-span. Reinforcing shall extend through joint. No horizontal joint will be allowed.

C. Construction joints for concrete columns shall be at underside of each floor level.

3.07 FLOOR FLATNESS AND LEVELNESS TOLERANCES

A. An independent testing agency, as specified in Section 01 40 00, will inspect finished slabs for compliance with specified tolerances.

B. Minimum F(F) Floor Flatness and F(L) Floor Levelness Values:
   1. Exposed to View and Foot Traffic: F(F) of 20; F(L) of 15, on-grade only.
   2. Under Carpeting: F(F) of 25; F(L) of 20, on-grade only. Comply with flooring manufacturer requirements.
   3. Under Thin Resilient Flooring and Thinset Tile: F(F) of 35; F(L) of 25, on-grade only. Comply with flooring manufacturer requirements and TCNA handbook.

C. Measure F(F) and F(L) in accordance with ASTM E1155, no sooner than 28 days after slab installation; report both composite overall values and local values for each measured section.

D. Correct the slab surface if composite overall value is less than specified and if local value is less than two-thirds of specified value or less than F(F) 13/F(L) 10.

E. Correct defects by grinding or by removal and replacement of the defective work. Areas requiring corrective work will be identified. Re-measure corrected areas by the same process.

3.08 COLD WEATHER REQUIREMENTS

A. Cold weather requirements govern when minimum ambient temperature is expected to fall below 40 degrees F.
   1. Concrete will not be placed on frozen ground.
   2. Mix, place, protect and cure concrete in strict accordance with ACI 306 R-88 "cold Weather Concreting".

3.09 HOT WEATHER REQUIREMENTS

A. Hot weather requirements govern when maximum ambient temperature is expected to rise above 85 degrees F.

B. Mix, place, protect and cure concrete in strict accordance with ACI 305R.

C. Admixtures proposed for construction under these conditions, such as water-reducing retarders, shall be tested thoroughly with concrete mixes for this job. All aspects of concrete construction applicable shall be considered before approval. Submit specifications on retarder to Engineer for approval with concrete mix designs.

D. Batch, mix and transport concrete per ACI 304R.

E. Water curing will be required for hot weather construction.

3.10 CONCRETE FINISHING

A. Concrete Slabs: Finish to requirements of ACI 302.1R, and as follows:
   1. Surfaces to Receive Thin Floor Coverings: "Steel trowel" as described in ACI 302.1R thin floor coverings include carpeting, resilient flooring, thin set ceramic tile, thin set quarry tile, and epoxy terrazzo. High gloss finish from power trowel not acceptable.
   2. Surfaces to be Sealed: Troweled finish.

B. Exterior Foundation Wall Surface Form Finish: Rub down or chip off fins or other raised areas 1/4 inch or more in height. Fill tie break-off holes with grout flush with wall.

C. Surfaces to Receive Thick Floor Coverings: "Wood float" as described in ACI 302.1R; thick floor coverings include quarry tile, ceramic tile, and Portland cement terrazzo with full bed setting system.

D. Exposed Form Finish: Rub down or chip off and smooth fins or other raised areas 1/4 inch or more in height. Provide finish as follows:
   1. Smooth Rubbed Finish: Wet concrete and rub with carborundum brick or other abrasive, not more than 24 hours after form removal.
   2. Other Surfaces to Be Left Exposed: Trowel as described in ACI 302.1R, minimizing burnish marks and other appearance defects.

3.11 CURING AND PROTECTION

A. Moisture cure slabs only. Exception; where curing/sealing compounds are indicated.

B. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

C. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
   1. Normal concrete: Not less than seven days.
   2. High early strength concrete: Not less than four days.

D. Formed Surfaces: Cure by moist curing with forms in place for full curing period.

E. Surfaces Not in Contact with Forms:
   1. Initial Curing: Start as soon as free water has disappeared and before surface is dry. Keep continuously moist for not less than three days by water-fog spray or saturated burlap.
   2. Final Curing: Begin after initial curing but before surface is dry.
      a. Moisture-Retaining Cover: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches and sealed by waterproof tape. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
      b. Curing/Sealing Compound (At sealed concrete locations only): Apply in two coats at right angles, using application rate recommended by manufacturer.

3.12 FIELD QUALITY CONTROL

A. An independent testing agency will perform field quality control tests, as specified in Section 01 40 00 - Quality Requirements.

B. Provide free access to concrete operations at project site and cooperate with appointed firm.

C. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of concrete operations.

D. Record time, place, mix design, quantity, slump, concrete temperature, air temperature and weather conditions, cylinders taken, date shoring is removed, curing and other data pertaining to concrete placement.

E. Tests of concrete and concrete materials may be performed at any time to ensure compliance with specified requirements.

F. Compressive Strength Tests: ASTM C39/C39M. For each test, mold and cure four concrete test cylinders. Obtain test samples for first 50 cu yd or less of each class of concrete placed. Cast one set of four test cylinders for each additional 100 cu. yd.
   1. Test one (1) cylinder at 7 days and two (2) cylinders at 28 days and (1) on hold.
   2. For first set of cylinders cast for slab-on-grade, test one (1) cylinder at 3 days. Analyze probable 28 day strength. Inform Architect/Engineer immediately by telephone if there appears to be concern for achieving required 28 day strength.
   3. If reasonable consistency of slump and air tests is recorded on 4 consecutive tests, testing company may reduce requirements to test every 150 cu. yds.

G. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.

H. Deviation from specifications shall be grounds for rejection.

I. **Addition of water or admixtures to concrete on site without written approval of Architect/Engineer is prohibited and shall be grounds for rejection.**

3.13 MOISTURE TESTING

A. Testing requirements are addressed in Section 09 05 61.

3.14 DEFECTIVE CONCRETE

A. Test Results: The testing agency shall report test results in writing to A/E and Contractor within 24 hours of test.

B. Defective Concrete: Concrete not complying with required lines, details, dimensions, tolerances or specified requirements.

C. Repair or replacement of defective concrete will be determined by the A/E. The cost of additional testing shall be borne by Contractor when defective concrete is identified.

D. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of A/E for each individual area.

END OF SECTION

SECTION 05 40 00
COLD-FORMED METAL FRAMING

PART 1 GENERAL

1.01 SECTION INCLUDES

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

B. Exterior wall sheathing.

C. Air barrier over sheathing.

1.02 RELATED REQUIREMENTS

A. Refer to Structural Drawings for additional design information.

B. Section 05 12 00 - Structural Steel framing: Structural building framing.

C. Section 05 31 00 - Steel Decking.

D. Section 07 21 00 - Thermal Insulation: Rigid insulation sheathing.

E. Section 07 24 00 - Exterior Insulation and Finish System: Coordinate sheathing requirements.

F. Section 07 27 00 - Air Barriers: Air barrier over sheathing.

1.03 REFERENCE STANDARDS

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

B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware 2016a.

C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2022.

D. ASTM C955 - Standard Specification for Cold-Formed Steel Structural Framing Members 2018, with Editorial Revision.

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

F. ASTM C1177/C1177M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing 2017.

G. AWS D1.1/D1.1M - Structural Welding Code - Steel 2020, with Errata (2022).

H. SSPC-Paint 20 - Zinc-Rich Coating (Type I - Inorganic, and Type II - Organic) 2019.

1.04 SUBMITTALS

A. Review Submittals - Preparatory
   1. Product Data: Provide data on standard framing members; describe materials and finish, product criteria, limitations.
   2. Product Data: Provide manufacturer's data on factory-made framing connectors, showing compliance with requirements.
   3. 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.
      a. Indicate stud layout.
      b. Describe method for securing studs to tracks and for bolted framing connections.

B. Information Submittal - Preparatory
   1. Manufacturer's Installation Instructions: Indicate special procedures, conditions requiring special attention .

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the types of products specified in this section, and with minimum three years of documented experience.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Metal Framing:
   1. ClarkDietrich Building Systems: www.clarkdietrich.com.
   2. Marino: www.marinoware.com.
   3. The Steel Network, Inc: www.SteelNetwork.com.
   4. Substitutions: See Section 01 60 00 - Product Requirements.

B. Framing Connectors and Accessories:
   1. Same manufacturer as metal framing.
   2. Simpson Strong Tie: www.strongtie.com.
   3. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 FRAMING SYSTEM

A. Provide primary and secondary framing members, bridging, bracing, plates, gussets, clips, fittings, reinforcement, and fastenings as required to provide a complete framing system.

2.03 FRAMING MATERIALS

A. Studs and Track: ASTM C955; studs formed to channel, C- or Sigma-shaped with punched web; U-shaped track in matching nominal width and compatible height.
   1. Gauge and Depth: As required to meet specified performance levels and dimensions provided on the drawings.
   2. Galvanized in accordance with ASTM A653/A653M, G90/Z275 coating.

B. Jamb Studs: Engineered, C-shaped with wide flanges, designed to replace conventional double-stud framing at openings.

C. Header: Design to match the configuration presented in the drawings.

D. Framing Connectors: Factory-made, formed steel sheet.
   1. Material: ASTM A653/A653M SS Grade 33 and 40 (minimum), with G90/Z275 hot dipped galvanized coating for base metal thickness less than 10 gauge, 0.1345 inch, and factory punched holes and slots.
   2. Structural Performance: Maintain load and movement capacity required by applicable code, when evaluated in accordance with AISI S100.
   3. 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.
      a. Where top of stud wall terminates below roof, connect studs to structure in manner allowing vertical and horizontal movement of slab without affecting studs; allow for minimum movement of 1/2 inch.
      b. Provide top track preassembled with connection devices spaced to fit stud spacing indicated on drawings; minimum track length of 10 feet.
   4. Fixed Connections: Provide non-movement connections for tie-down to foundation, floor-to-floor tie-down, roof-to-wall tie-down, joist hangers, gusset plates, and stiffeners.

2.04 FASTENERS

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

B. Anchorage Devices: Powder actuated.

2.05 WALL SHEATHING

A. Glass mat faced gypsum board; ASTM C1177/C1177M, square long edges, 1/2 inch (or 5/8 inch with StoCorp brand EIFS See Section 07 24 00) thick, Type X - Fire Resistant.
   1. Glass-Mat-Faced Products:
      a. CertainTeed Corporation; GlasRoc Brand.
      b. Continental Building Products; Weather Defense Platinum; www.continental-bp.com.

c. Georgia-Pacific Gypsum; DensGlass Sheathing.
d. National Gypsum Company; Gold Bond Brand eXP Extended Exposure Sheathing.
e. Temple-Inland Building Products by Georgia-Pacific, LLC; GreenGlass Exterior Sheathing.
f. USG Corporation; Securock Glass-Mat Sheathing.
g. Substitutions: See Section 01 60 00 - Product Requirements.
    1) Provide EIFS manufacturer documentation indicating approval of any substitute sheathing products.

2.06 ACCESSORIES

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

B. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20 Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.
    1. ZRC Worldwide; Galvilite. www.zrcworldwide.com

C. Water-Resistive Barrier: No. 15 asphalt felt.

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.

C. Discrepancies:
    1. Immediately notify Architect of discrepancies.
    2. Do not proceed with installation in areas of discrepancies until such discrepancy has been fully resolved.

3.02 INSTALLATION OF STUDS

A. Install components in accordance with ASTM C1007 requirements and ASTM C1007 requirements.

B. Align floor and ceiling tracks; locate to wall layout. Secure in place with fasteners at maximum 24 inches on center.

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

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

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

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

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

H. Provide deflection allowance in stud track, directly below horizontal building framing at non-load bearing framing.

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

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

K. Touch-up field welds and damaged galvanized surfaces with primer.

3.03 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.
    1. Place air barrier horizontally over wall sheathing, weather lapping edges, and ends.

END OF SECTION

Page Intentionally Left Blank

SECTION 07 21 00
THERMAL INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Board insulation at perimeter foundation wall and over roof deck.

B. Batt insulation for filling perimeter window and door shim spaces and soffits over exterior doors.

1.02 RELATED REQUIREMENTS

A. Section 07 24 00 - Exterior Insulation and Finish Systems: Wall insulation

B. Section 07 27 00 - Air Barriers: Separate air barrier materials.

1.03 REFERENCE STANDARDS

A. ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation 2015b.

B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2016.

C. ASTM E136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace At 750 Degrees C 2016.

1.04 SUBMITTALS

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

B. Provide submittal packages that contain all the information identified in the submittal groups identified below. Follow any instructions regarding coordinating submittal timing between submittals of different sections.

C. Review Submittals - Preparatory
   1. Product Data: Provide data on product characteristics, performance criteria, and product limitations.

1.05 FIELD CONDITIONS

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

1.06 SEQUENCING

A. Sequence work to ensure air barrier materials are in place before beginning or continuation of work in this section.

PART 2 PRODUCTS

2.01 APPLICATIONS

A. Insulation at Perimeter of Foundation: Extruded polystyrene board.

B. Insulation in Metal Framed Exterior Soffits: Batt insulation with no vapor retarder.

2.02 FOAM BOARD INSULATION MATERIALS

A. Extruded Polystyrene Board Insulation (Foundation Walls): Insulation, ASTM C578 Type IV at foundation walls. Extruded polystyrene board with either natural skin or cut cell surfaces; with the following characteristics:
   1. Flame Spread Index (FSI): Class A - 0 to 25, when tested in accordance with ASTM E84.
   2. Smoke Developed Index (SDI): 450 or less, when tested in accordance with ASTM E84.
   3. Thermal Resistance, R-Value: 5.0 per inch.
   4. Board Thickness: As noted on drawings.
   5. Products:
      a. Dow: Styrofoam XPS
      b. DuPont de Nemours, Inc: www.dupont.com.
      c. Kingspan Insulation LLC: www.kingspan.com/#sle.
      d. Owens Corning Corporation: www.ocbuildingspec.com/#sle.
      e. DiversiFoam Products: www.diversifoam.com

f. Substitutions: See Section 01 60 00 - Product Requirements.

2.03 MINERAL FIBER BLANKET INSULATION MATERIALS

A. Flexible Glass Fiber Blanket Thermal Insulation: Preformed insulation, complying with ASTM C665; friction fit.
   1. Flame Spread Index: 25 or less, when tested in accordance with ASTM E84.
   2. Smoke Developed Index: 450 or less, when tested in accordance with ASTM E84.
   3. Combustibility: Non-combustible, when tested in accordance with ASTM E136, except for facing, if any.
   4. Formaldehyde Content: Zero.
   5. Facing: Unfaced.
   6. Products:
      a. CertainTeed Corporation: www.certainteed.com.
      b. Johns Manville: www.jm.com.
      c. Owens Corning Corporation: www.ocbuildingspec.com.
   7. Substitutions: See Section 01 60 00 - Product Requirements.

2.04 FOAMED-IN PLACE JOINT AND CREVICE FILLER INSULATION

A. Insulation joint and gap filler.
   1. PUR FILL Fireblock Foam: www.todol.com
   2. BASF Polyurethane Foam Enterprises LLC; CF-178 Series and Zerodraft: www.foamenterprises.com.
   3. Demilec (USA) LLC; SEALection 500: www.demilecusa.com.
   4. North Carolina Foam Industries; ThermalStop: www.ncfi.com.
   5. Dow; Great Stuff Pro: www.greatstuff.dow.com
   6. Convenience Products: Touch 'n Seal. 800-325-6180
   7. Substitutions: See Section 01 60 00 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation and adhesive.

B. Verify substrate surfaces are flat, free of honeycomb, fins, irregularities, or materials or substances that may impede adhesive bond.

3.02 BOARD INSTALLATION AT FOUNDATION PERIMETER

A. Adhere a 6 inch wide strip of polyethylene sheet over construction, control, and expansion joints with double beads of adhesive each side of joint.
   1. Tape seal joints.
   2. Extend sheet full height of joint.

B. Install boards horizontally on foundation perimeter.
   1. Place boards to maximize adhesive contact.
   2. Install in running bond pattern.
   3. Apply expanding sealant to edges or install board with shiplap edges.
   4. Butt edges and ends tightly to adjacent boards and to protrusions.

C. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane. Fill all gaps and voids with expanding foam insulation.

3.03 BATT INSTALLATION

A. Install insulation in accordance with manufacturer's instructions.

B. Install in exterior ceiling spaces without gaps or voids. Do not compress insulation.

C. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.

D. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.

E. Coordinate work of this section with construction of air barrier seal, see Section 07 27 00.

3.04 JOINT AND CREVICE FILLING FOR AIR SEALING

A. Low Rise Expanding Foam: Where applicable install low rise foam to fill gaps and crevices. Follow manufacturer recommendations at windows and doors to prevent swelling of frames and causing doors or windows to become inoperable.

3.05 PROTECTION

A. Do not permit installed insulation to be damaged prior to its concealment.

END OF SECTION

Page Intentionally Left Blank

SECTION 07 24 00
EXTERIOR INSULATION AND FINISH SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Composite wall cladding of rigid insulation and reinforced finish coating ("Class PB").

B. Drainage and water-resistive barriers behind insulation board.

1.02 RELATED REQUIREMENTS

A. Section 07 27 00 - Air barriers: Air barriers installed at exterior wall locations other than EIFS installations.

B. Section 07 62 00 - Sheet Metal Flashing and Trim: Perimeter flashings.

C. Section 07 92 00 - Joint Sealants: Sealing joints between EIFS and adjacent construction and penetrations through EIFS.

1.03 REFERENCE STANDARDS

A. ASTM B117 - Standard Practice for Operating Salt Spray (Fog) Apparatus 2016.

B. ASTM C297/C297M - Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions 2016.

C. ASTM C1397 - Standard Practice for Application of Class PB Exterior Insulation and Finish Systems (EIFS) and EIFS with Drainage 2013.

D. ASTM D968 - Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive 2015.

E. ASTM D2247 - Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity 2015.

F. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber 2016.

G. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2016.

H. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference 2000 (Reapproved 2016).

I. ASTM E2273 - Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies 2003 (reapproved 2011).

J. ASTM E2486/E2486M - Standard Test Method for Impact Resistance of Class PB and PI Exterior Insulation and Finish Systems (EIFS) 2013.

K. ASTM G153 - Standard Practice for Operating Enclosed Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials 2013.

L. ASTM G155 - Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Nonmetallic Materials 2013.

M. ICC-ES AC219 - Acceptance Criteria for Exterior Insulation and Finish Systems 2009.

N. ICC-ES AC235 - Acceptance Criteria for EIFS Clad Drainage Wall Assemblies 2004 (Editorially revised 2009).

O. NFPA 259 - Standard Test Method for Potential Heat of Building Materials 2013.

P. NFPA 268 - Standard Test Method for Determining Ignitibility of Exterior Wall Assemblies Using a Radiant Heat Energy Source 2012.

Q. NFPA 285 - Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components 2012.

1.04 SUBMITTALS

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

B. Review Submittals - Preparatory
   1. Product Data: Provide data on system materials, product characteristics, performance criteria, and system limitations.
   2. Shop Drawings: Indicate wall joint patterns, joint details, and molding profiles.

C. Review Submittals - Samples
   1. Selection Samples: Submit manufacturer's standard range of samples illustrating available coating colors and textures.
   2. Verification Samples: Submit actual samples of selected coating on specified substrate, minimum 12 inches square, illustrating project colors and textures.

D. Information Submittals - Preparatory
   1. Manufacturer's Installation Instructions: Indicate preparation required, installation techniques, and jointing requirements.

1.05 QUALITY ASSURANCE

A. Maintain copy of specified installation standard and manufacturer's installation instructions at project site during installation.

B. EIFS Manufacturer Qualifications: Provide EIFS products other than insulation from the same manufacturer with qualifications as follows:
   1. Member in good standing of EIMA (EIFS Industry Members Association).
   2. Manufacturer of EIFS products for not less than 5 years.

C. Insulation Manufacturer Qualifications: Approved by manufacturer of EIFS and approved and labeled under third party quality program as required by applicable building code.

D. Installer Qualifications: Company specializing in the type of work specified and with at least three years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver materials to project site in manufacturer's original, unopened containers with labels intact. Inspect materials and notify manufacturer of any discrepancies.

B. Storage: Store materials as directed by manufacturer's written instructions.
   1. Protect Portland cement based materials from moisture and humidity. Store under cover off the ground in a dry location.
   2. Protect insulation materials from exposure to sunlight.

1.07 FIELD CONDITIONS

A. Do not prepare materials or apply EIFS under conditions other than those described in the manufacturer's written instructions.

B. Do not prepare materials or apply EIFS during inclement weather unless areas of installation are protected. Protect installed EIFS areas from inclement weather until dry.

C. Do not install coatings or sealants when ambient temperature is below 40 degrees F.

D. Do not leave installed insulation board exposed to sunlight for extended periods of time.

1.08 WARRANTY

A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.

B. Provide manufacturer's standard material warranty, covering a period of not less than 5 years.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Dryvit Systems, Inc; Dryvit Outsulation X EIFS, Class PB with Moisture Drainage: www.dryvit.com.

B. Sto Corp; StoTherm ci XPS Classic: www.stocorp.com.

C. BASF Wall Systems (Senergy Platinum CI - GPS): www.wallsystems.basf.com.

2.02 EXTERIOR INSULATION AND FINISH SYSTEM

A. Exterior Insulation and Finish System: DRAINAGE type; reinforced finish coating on insulation board with drainage grooves adhesive-applied to water-resistive coating over substrate; provide a complete system that has been tested to show compliance with the following characteristics; include all components of specified system and substrate(s) in tested samples.

B. Fire Characteristics:
   1. Flammability: Pass, when tested in accordance with NFPA 285.
   2. Ignitibility: No sustained flaming when tested in accordance with NFPA 268.
   3. Potential Heat of Foam Plastic Insulation Tested Independently of Assembly: No portion of the assembly having potential heat that exceeds that of the insulation sample tested for flammability (above), when tested in accordance with NFPA 259 with results expressed in Btu per square foot.

C. Adhesion of Water-Resistive Coating to Substrate: For each combination of coating and substrate, minimum flatwise tensile bond strength of 15 psi, when tested in accordance with ASTM C297/C297M.

D. Adhesion to Water-Resistive Coating: For each combination of insulation board and substrate, when tested in accordance with ASTM C297/C297M, maximum adhesive failure of 25 percent unless flatwise tensile bond strength exceeds 15 psi in all samples.

E. Water Penetration Resistance: No water penetration beyond the plane of the base coat/insulation board interface after 15 minutes, when tested in accordance with ASTM E331 at 6.24 psf differential pressure with tracer dye in the water spray; include in tested sample at least two vertical joints and one horizontal joint of same type to be used in construction; disassemble sample if necessary to determine extent of water penetration.

F. Drainage Efficiency: Average minimum efficiency of 90 percent, when tested in accordance with ASTM E2273 for 75 minutes.

G. Salt Spray Resistance: No cracking, checking, crazing, erosion, blistering, peeling, delamination, or corrosion of finish coating after 300 hours exposure in accordance with ASTM B117, using at least three samples matching intended assembly, at least 4 by 6 inches in size.

H. Freeze-Thaw Resistance: No cracking, checking, crazing, erosion, blistering, peeling, delamination, or corrosion of finish coating when viewed under 5x magnification after 10 cycles, when tested in accordance with ICC-ES AC219 or ICC-ES AC235.

I. Weathering Resistance: No cracking, checking, crazing, erosion, blistering, peeling, delamination, or corrosion of finish coating when viewed under 5x magnification after 2000 hours of accelerated weathering conducted in accordance with ASTM G153 Cycle 1 or ASTM G155 Cycles 1, 5, or 9.

J. Water Degradation Resistance: No cracking, checking, crazing, erosion, blistering, peeling, delamination, or corrosion of finish coating after 14 days exposure, when tested in accordance with ASTM D2247.

K. Mildew Resistance: No growth supported on finish coating during 28 day exposure period, when tested in accordance with ASTM D3273.

L. Abrasion Resistance Of Finish: No cracking, checking or loss of film integrity when tested in accordance with ASTM D968 with 113.5 gallons of sand.

M. Impact Resistance: Construct system to provide the following impact resistance without exposure of broken reinforcing mesh, when tested in accordance with ASTM E2486/E2486M:
   1. Standard: 25 to 49 in-lb, for areas not indicated as requiring higher impact resistance.
   2. Medium: 50 to 89 in-lb, for areas adjacent to exterior paving up to first horizontal joint.

2.03 MATERIALS

A. In general, as recommended by the EIFS manufacturer as part of the manufacturer's system.

B. Finish Coating Top Coat: Water-based, air curing, acrylic or polymer-based finish with integral color and texture.
   1. Texture: Medium.

C. Base Coat: Fiber-reinforced, acrylic or polymer-based product compatible with insulation board and reinforcing mesh, Class PB.

D. Reinforcing Mesh: Balanced, open weave glass fiber fabric, treated for compatibility and improved bond with coating, weight, strength, and number of layers as required to meet required system impact rating.

E. Graphite Polystyrene (GPS) Board Insulation: Complies with ASTM C578, Type VIII.
   1. Complies with fire resistance requirements shown on the drawings as part of an exterior non-load-bearing exterior wall assembly when tested in accordance with NFPA 285.
   2. Board Edges: Square.
   3. Compressive Resistance: 14 psi.
   4. Thermal Resistance: R-value of 5 per 1 inch at 75 degrees F mean temperature.
   5. Products:
      a. As required by EIFS manufacturer based on conformance to NFPA 285 requirements.

F. Extruded Polystyrene (XPS) Board Insulation: Complies with ASTM C578, with natural skin surfaces.
   1. Complies with fire resistance requirements shown on the drawings as part of an exterior non-load-bearing exterior wall assembly when tested in accordance with NFPA 285.
   2. Board Edges: Square.
   3. Type and Compressive Resistance: Type X, 15 psi (104 kPa), minimum.
   4. Type and Thermal Resistance, R-value (RSI-value): Type X, 5.0 (0.88) per 1 inch thickness at 75 degrees F mean temperature.
   5. Products:
      a. As required by EIFS manufacturer based on conformance to NFPA 285 requirements.

G. Water-Resistive Barrier Coating: Fluid-applied air and water barrier membrane; applied to sheathing; furnished or approved by EIFS manufacturer.

2.04 ACCESSORIES

A. Insulation Adhesive: Type required by EIFS manufacturer for project substrate.

B. Metal Flashings: See Section 07 62 00.

C. Trim: EIFS manufacturer's standard PVC or galvanized steel trim accessories, as required for a complete project and including starter track and drainage accessories.

D. Sealant Materials: Compatible with EIFS materials and as recommended by EIFS manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that substrate is sound and free of oil, dirt, other surface contaminants, efflorescence, loose materials, or protrusions that could interfere with EIFS installation and is of a type and construction that is acceptable to EIFS manufacturer. Do not begin work until substrate and adjacent materials are complete and thoroughly dry.

B. Verify that substrate surface is flat, with no deviation greater than 1/4 in when tested with a 10 ft straightedge.

3.02 INSTALLATION - GENERAL

A. Install in accordance with EIFS manufacturer's instructions and ASTM C1397.
   1. Where different requirements appear in either document, comply with the most stringent.
   2. Neither of these documents supersedes provisions of Contract Documents that defines contractual relationships between parties or scope of this work.

3.03 INSTALLATION - AIR/WATER-RESISTIVE BARRIER

A. Apply barrier coating as recommended by coating manufacturer; prime substrate as required before application.

B. Seal substrate transitions and intersections with other materials to form continuous air/water-resistive barrier on exterior of sheathing, using method recommended by manufacturer.

C. At door and window rough openings and other wall penetrations, seal air/water-resistive barrier and flexible flashings to rough opening before installation of metal flashings, sills, or frames, using method recommended by manufacturer.

D. Lap flexible flashing or flashing tape at least 2 inches on each side of joint or transition.

3.04 INSTALLATION - INSULATION

A. Install in accordance with manufacturer's instructions.

B. Prior to installation of boards, install starter track and other trim level and plumb and securely fastened. Install only in full lengths, to minimize moisture intrusion; cut horizontal trim tight to vertical trim.

C. Install back wrap reinforcing mesh at all openings and terminations that are not to be protected with trim.

D. On wall surfaces, install boards vertically.

E. Place boards in a method to maximize tight joints. Stagger vertical joints and interlock at corners. Butt edges and ends tight to adjacent board and to protrusions. Achieve a continuous flush insulation surface, with no gaps in excess of 1/16 inch.

F. Fill gaps greater than 1/16 inch with strips or shims cut from the same insulation material.

G. Rasp irregularities off surface of installed insulation board.

H. Mechanical Fastening: Space fasteners as recommended by EIFS manufacturer.

I. Adhesive Attachment: Use method required by manufacturer to achieve drainage efficiency specified; do not close up drainage channels when placing insulation board.

J. Provide maximum 1/2 inch deep V-groove joints as detailed.

3.05 INSTALLATION - CLASS PB FINISH

A. Base Coat: Apply in thickness as necessary to fully embed reinforcing mesh, wrinkle free, including back-wrap at terminations of EIFS. Install reinforcing fabric as recommended by EIFS manufacturer.
   1. Lap reinforcing mesh edges and ends a minimum of 2-1/2 inches.
   2. Allow base coat to dry a minimum of 24 hours before next coating application.

B. Apply finish coat after base coat has dried not less than 24 hours and finish to a uniform texture and color.

C. Finish Coat Thickness: As recommended by manufacturer.

D. Seal control and expansion joints within the field of exterior finish and insulation system, using procedures recommended by sealant and finish system manufacturers.

E. Apply sealant at finish perimeter in accordance with sealant manufacturer's instructions.

3.06 CLEANING

A. See Section 01 70 00 - Execution and Closeout Requirements for additional requirements.

B. Clean EIFS surfaces and work areas of foreign materials resulting from EIFS operations.

END OF SECTION

Page Intentionally Left Blank

SECTION 07 27 00
AIR BARRIERS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Air barriers.

1.02 RELATED REQUIREMENTS

A. Section 07 21 19 - Foamed-In-Place Insulation: Component of Air Barrier System

B. Section 07 24 00 - Exterior Insulation and Finish Systems: Component of Air Barrier System

C. Section 07 61 00 - Sheet Metal Roofing: Underlayment as component of Air Barrier System

D. Division 8 - Openings - Openings in exterior walls are components of the Air Barrier System

1.03 DEFINITIONS

A. Air Barrier: Airtight barrier made of material that is virtually air impermeable but water vapor permeable, both to amount as specified, with sealed seams and sealed joints to adjacent surfaces.

1.04 SUBMITTALS

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

B. Review Submittals - Preparatory
   1. Product Data: Provide data on material characteristics, performance criteria, and limitations.

C. Information Submittals - Preparatory
   1. Statement by manufacturers of air barrier materials of compatiblity with each other.
   2. ABAA Field Quality Control Submittals: Submit third-party reports of testing and inspection required by ABAA QAP.
   3. ABAA Manufacturer Qualification: Submit documentation of current evaluation of proposed manufacturer and materials.
   4. ABAA Installer Qualification: Submit documentation of current contractor accreditation and current installer certification; keep copies of each contractor accreditation and installer certification on site during and after installation, and present on-site documentation upon request.

1.05 QUALITY ASSURANCE

A. Air Barrier Association of America (ABAA) Quality Assurance Program (QAP); www.airbarrier.org/#sle:
   1. Installer Qualification: Use accredited contractor, certified installers, evaluated materials, and third-party field quality control audit.

PART 2 PRODUCTS

2.01 AIR BARRIER PRODUCTS

A. See products identified in the Related Requirements paragraph

2.02 ACCESSORIES

A. Sealants, Tapes, and Accessories for Sealing Air Barrier and Adjacent Substrates: As indicated or in compliance with air barrier manufacturer's installation instructions.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces and conditions are ready for work of this section.

B. Where existing conditions are responsibility of another installer, notify A/E of unsatisfactory conditions.

C. Do not proceed with this work until unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Remove projections, protruding fasteners, and loose or foreign matter that might interfere with proper installation.

B. Clean and prime substrate surfaces to receive adhesives and sealants in accordance with manufacturer's installation instructions.

3.03 INSTALLATION

A. Install materials in accordance with manufacturer's installation instructions.

B. Air Barriers: Install continuous airtight barrier over surfaces indicated, with sealed seams and with sealed joints to adjacent surfaces.

C. Apply sealants and adhesives within recommended temperature range in accordance with manufacturer's installation instructions.

E. Openings and Penetrations in Exterior Air Barriers:
   1. Install flashing over sills, covering entire sill frame member, extending at least 5 inches onto air barrier and at least 6 inches up jambs; mechanically fasten stretched edges.
   2. At openings with frames having nailing flanges, seal head and jamb flanges using a continuous bead of sealant compressed by flange and cover flanges with sealing tape at least 4 inches wide; do not seal sill flange.
   3. At openings with non-flanged frames, seal air barrier to each side of framing at opening using flashing at least 9 inches wide, and covering entire depth of framing.
   4. At head of openings, install flashing under air barrier extending at least 2 inches beyond face of jambs; seal air barrier to flashing.
   5. At interior face of openings, seal gap between window/door frame and rough framing, using joint sealant over backer rod.
   6. Service and Other Penetrations: Form flashing around penetrating item and seal to air barrier surface.

3.04 FIELD QUALITY CONTROL

A. See Section 01 40 00 - Quality Requirements for additional requirements.

B. Coordination of ABAA Tests and Inspections:
   1. Provide testing and inspection required by ABAA QAP.
   2. Notify ABAA in writing of schedule for air barrier work, and allow adequate time for testing and inspection.
   3. Cooperate with ABAA testing agency.
   4. Allow access to air barrier work areas and staging.
   5. Do not cover air barrier work until tested, inspected, and accepted.

C. Do not cover installed air barriers until required inspections have been completed.

D. Take digital photographs of each portion of installation prior to covering up air barriers.

3.05 PROTECTION

A. Do not leave materials exposed to weather longer than recommended by manufacturer.

END OF SECTION

ELEVATION GENERAL NOTES:

A. SEE DETAIL 8/A501 FOR MASONRY VENEER MOVEMENT JOINT (MJ) INFORMATION.

B. SEE SPECIFICATION FOR MATERIAL TYPE.

ELEVATION LEGEND:

1 KEYNOTE TAG

1 WINDOW TAG - SEE SHEET **A600** FOR FRAME ELEVATIONS

MJ MASONRY VENEER MOVEMENT JOINT - SEE DETAIL **8/A501**

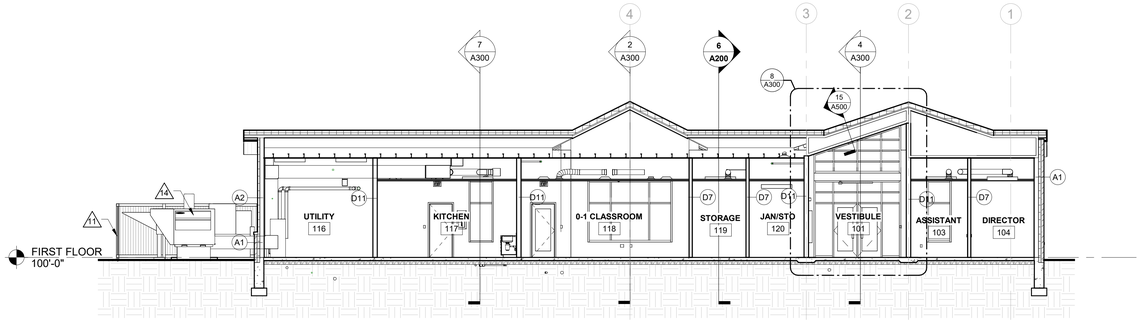
EEJ EIFS EXPANSION JOINT - PER MANUFACTURER'S DETAILS

CONC MASONRY VENEER UNITS

EIFS

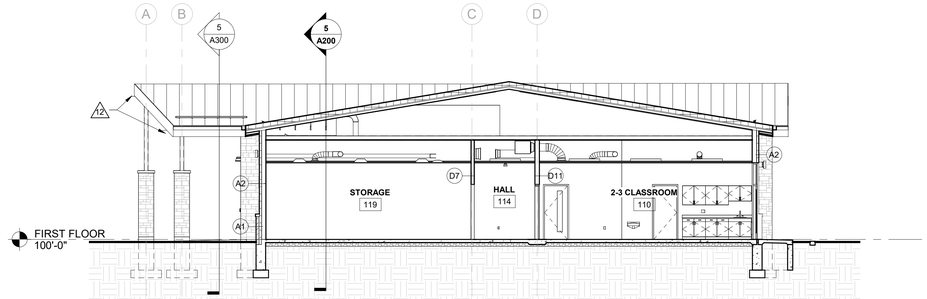
KEY NOTES ELEVATION

1	CONC MASONRY VENEER UNITS
2	EIFS WALL FINISH
3	CAST STONE
4	STANDING SEAM METAL ROOFING
5	CONC FOUNDATION - SEE STRUCTURAL
6	CONC FOOTING - SEE STRUCTURAL
7	PREFINISHED ALUM GUTTER AND OPEN FACE DOWNSPOUT
8	PREFINISHED ALUM FASCIA
9	STEEL COLUMN (PAINT) - SEE STRUCTURAL
10	ALUM LETTER BUILDING SIGNAGE (10" HIGH "LITTLE DREAMS", 6" HIGH "CHILDCARE CENTER")
11	FENCE - SEE CIVIL
12	GLULAM BEAM - SEE STRUCTURAL. PROVIDE PREFINISHED METAL CAP ON TOP OF BEAM WHERE EXPOSED TO WEATHER.
13	ELECTRICAL EQUIPMENT/LIGHT FIXTURE - SEE ELECTRICAL
14	MECHANICAL EQUIPMENT - SEE MECHANICAL
15	BAR-TYPE SNOW GUARD



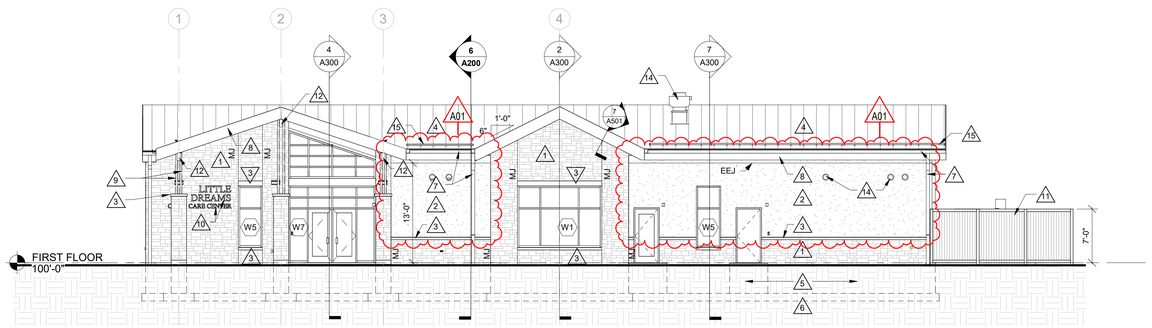
5 BUILDING SECTION

1/8" = 1'-0"



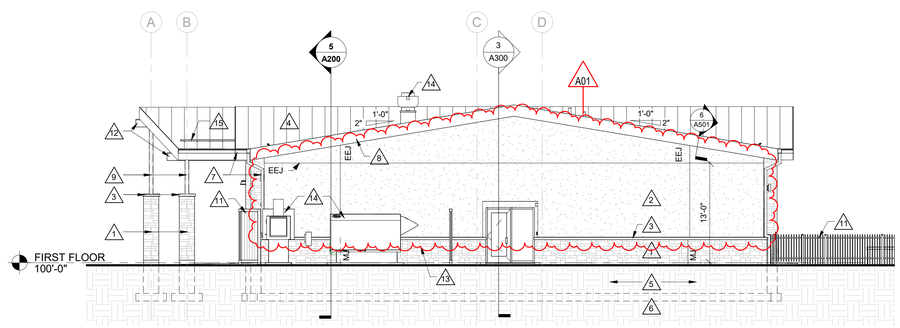
6 BUILDING SECTION

1/8" = 1'-0"



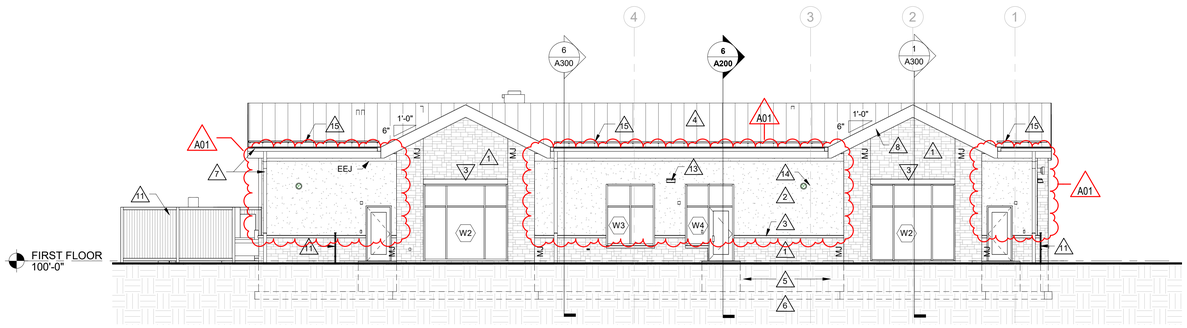
3 WEST ELEVATION

1/8" = 1'-0"



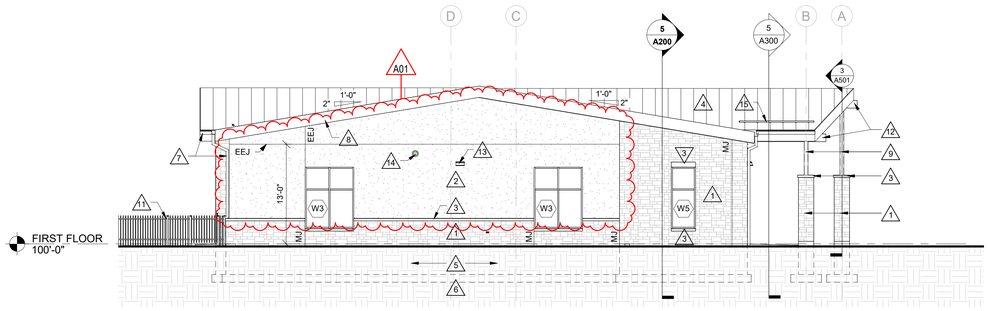
4 SOUTH ELEVATION

1/8" = 1'-0"



1 EAST ELEVATION

1/8" = 1'-0"



2 NORTH ELEVATION

1/8" = 1'-0"

ARCHITECTURE
ENGINEERING
INTERIOR DESIGN

HSR ASSOCIATES INC.
100 MILWAUKEE STREET
LA CROSSE, WISCONSIN
PHONE: 608.784.1830
FAX: 608.782.5844
www.hsrassociates.com

Consultant:

Project Title: **LAC DU FLAMBEAU CHILD DAYCARE CENTER**

Project Location: Youth Center Lane, Lac du Flambeau, Wisconsin

Sheet Title: **ELEVATIONS**

HSR Project Number: **22066**

Project Date: **APRIL 2023**

Drawn By: **DJH**

Key Plan:

BID DOCUMENTS

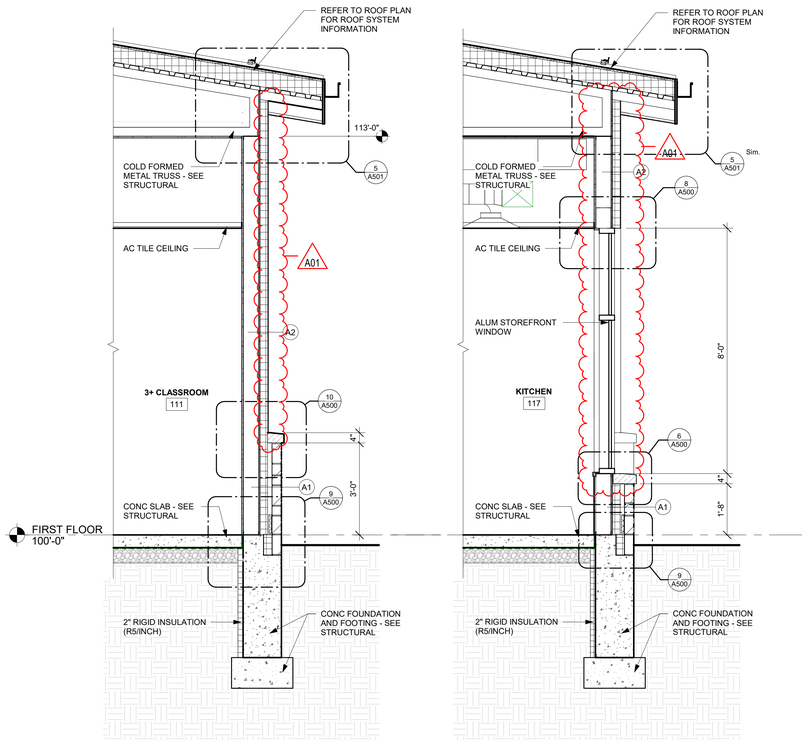
Revisions:

No.	Description	Date
A01	ADDENDUM 1	5/3/2023

Graphic Scale: 0' 2' 4' 8' 12'

Last Update: **5/3/2023 3:28:30 PM**

A200

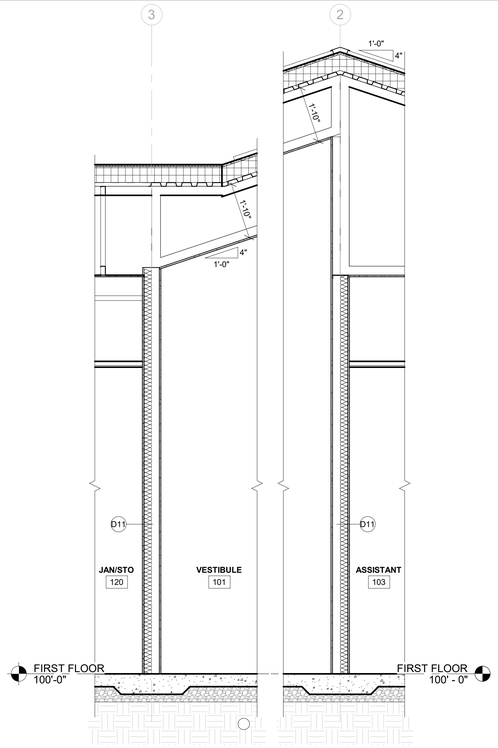


6 WALL SECTION

1/2" = 1'-0"

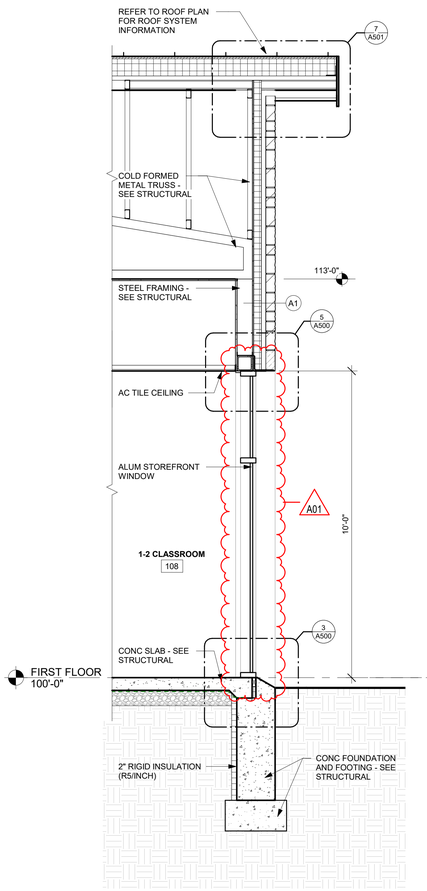
7 WALL SECTION

1/2" = 1'-0"



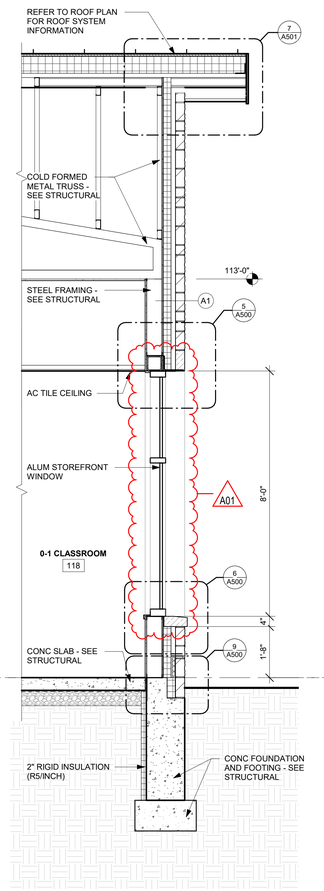
8 WALL SECTION

1/2" = 1'-0"



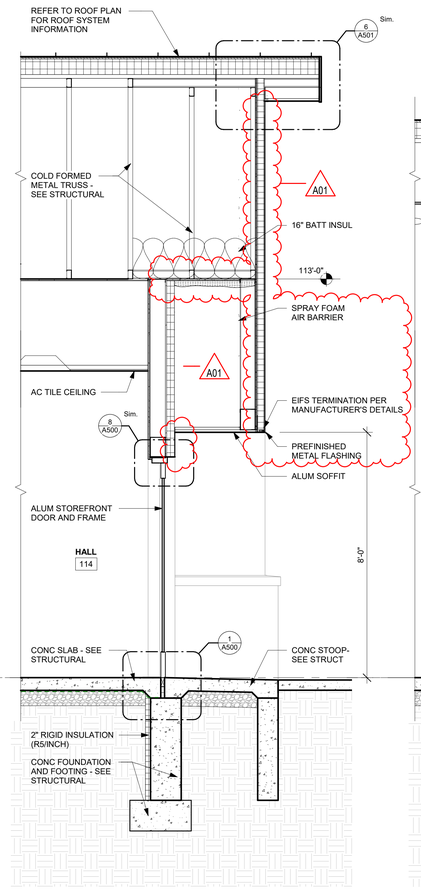
1 WALL SECTION

1/2" = 1'-0"



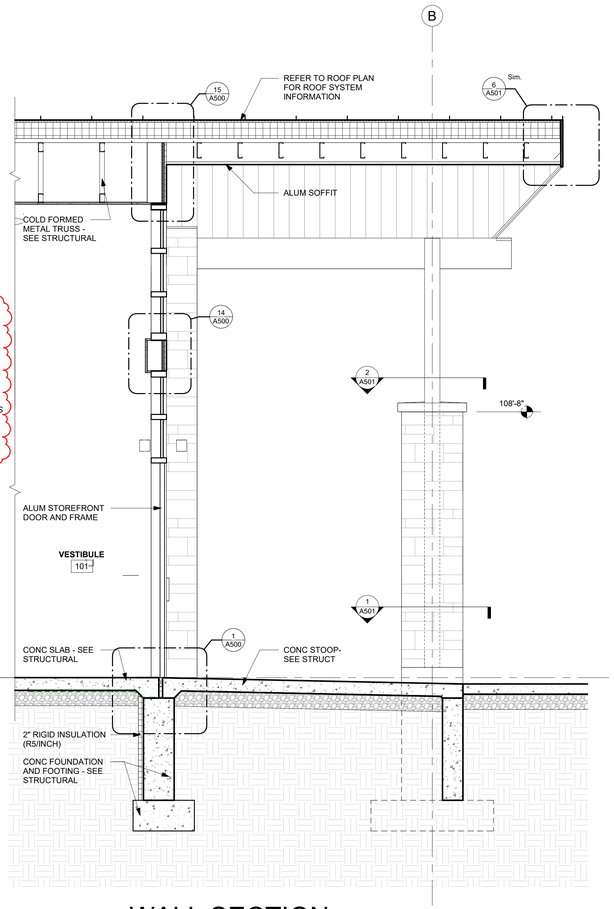
2 WALL SECTION

1/2" = 1'-0"



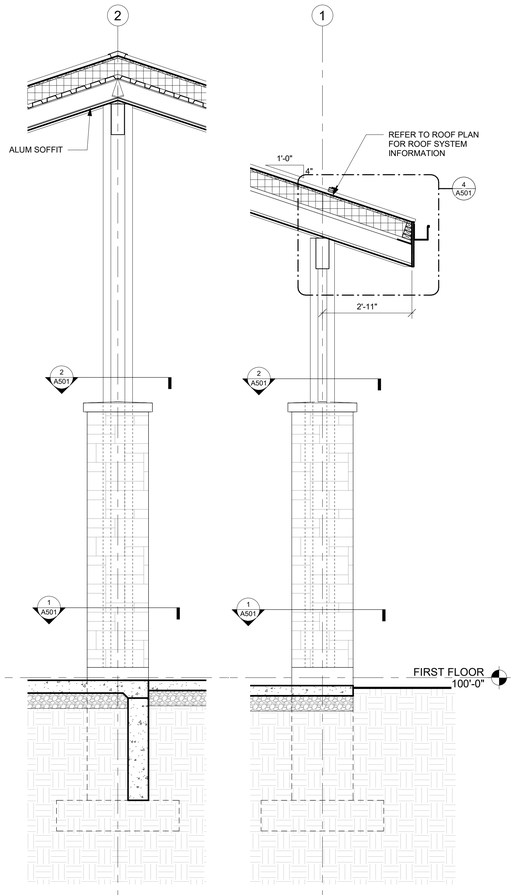
3 WALL SECTION

1/2" = 1'-0"



4 WALL SECTION

1/2" = 1'-0"



5 WALL SECTION

1/2" = 1'-0"

ARCHITECTURE
ENGINEERING
INTERIOR DESIGN

HSR ASSOCIATES INC.
100 MILWAUKEE STREET
LA CROSSE, WISCONSIN
PHONE: 608.784.1830
FAX: 608.782.5844
www.hsrassociates.com

Consultant:

Project Title: **LAC DU FLAMBEAU CHILD DAYCARE CENTER**

Project Location: Youth Center Lane Lac du Flambeau, Wisconsin

Sheet Title: **SECTIONS**

HSR Project Number: **22066**

Project Date: **APRIL 2023**

Drawn By: **DJH**

Key Plan:

BID DOCUMENTS

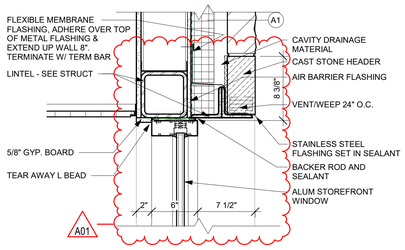
Revisions:

No.	Description	Date
A01	ADDENDUM 1	5/3/2023

Graphic Scale: 0" 6" 1' 2' 3'

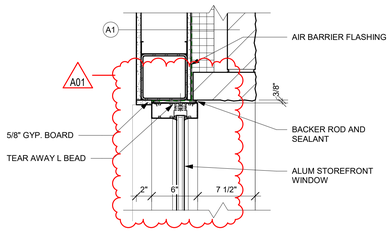
Last Update: **5/3/2023 3:30:43 PM**

A300



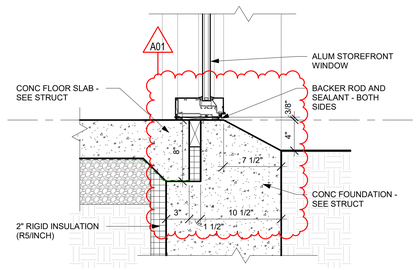
5 WINDOW HEAD DETAIL

1 1/2" = 1'-0"



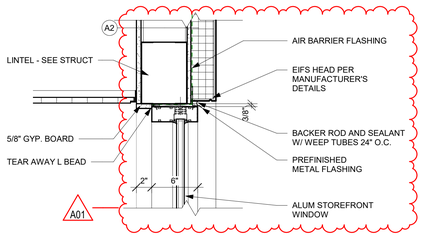
4 WINDOW JAMB DETAIL

1 1/2" = 1'-0"



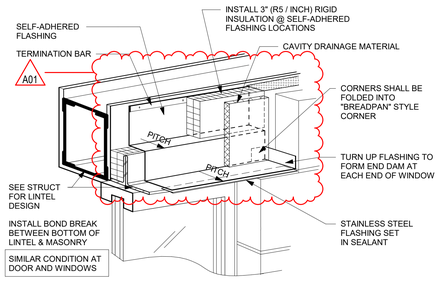
3 WINDOW SILL DETAIL

1 1/2" = 1'-0"



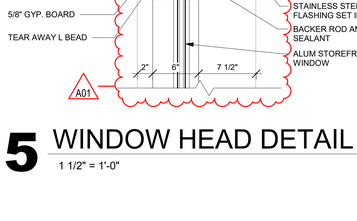
8 WINDOW HEAD DETAIL

1 1/2" = 1'-0"



11 HEAD FLASHING DETAIL

1 1/2" = 1'-0"



2 DOOR JAMB DETAIL

1 1/2" = 1'-0"

7 WINDOW JAMB DETAIL

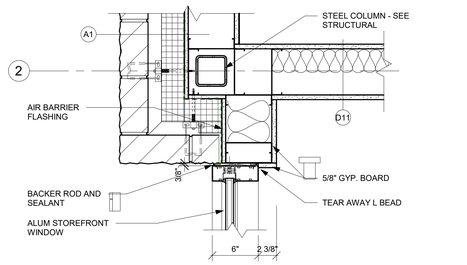
1 1/2" = 1'-0"

10 WALL DETAIL

1 1/2" = 1'-0"

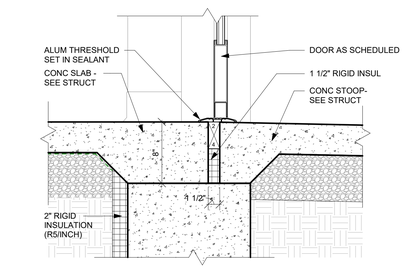
13 COILING DR JAMB

1 1/2" = 1'-0"



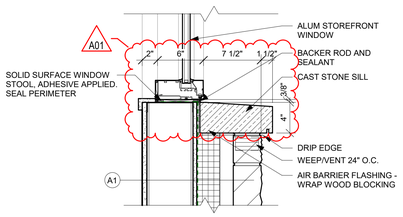
15 WINDOW HEAD DETAIL

1 1/2" = 1'-0"



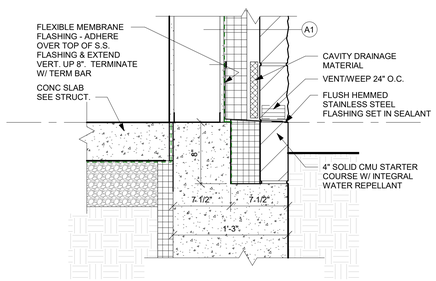
1 DOOR SILL DETAIL

1 1/2" = 1'-0"



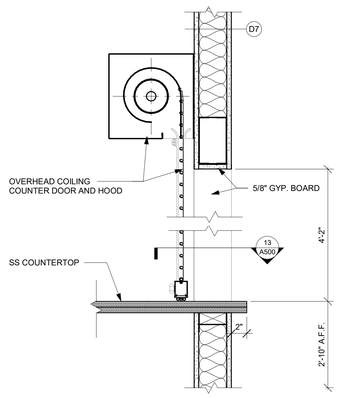
6 WINDOW SILL DETAIL

1 1/2" = 1'-0"



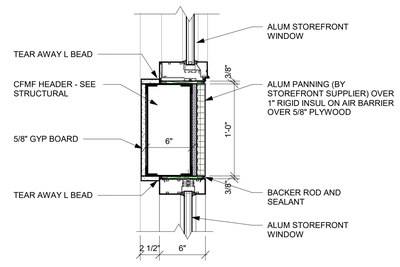
9 WALL DETAIL

1 1/2" = 1'-0"



12 COILING DR SECTION

1 1/2" = 1'-0"



14 WINDOW HEAD DETAIL

1 1/2" = 1'-0"

ARCHITECTURE
ENGINEERING
INTERIOR DESIGN

HSR ASSOCIATES INC.
100 MILWAUKEE STREET
LA CROSSE, WISCONSIN
PHONE: 608.784.1830
FAX: 608.782.5844
www.hsrassociates.com

Consultant:

Project Title: **LAC DU FLAMBEAU CHILD DAYCARE CENTER**

Project Location: Youth Center Lane Lac du Flambeau, Wisconsin

Sheet Title: **DETAILS**

HSR Project Number: **22066**

Project Date: **APRIL 2023**

Drawn By: **DJH**

Key Plan:

BID DOCUMENTS

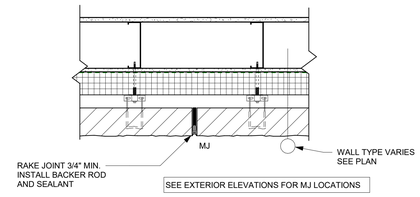
Revisions:

No.	Description	Date
A01	ADDENDUM 1	5/3/2023

Graphic Scale: 0 2" 4" 8" 1'

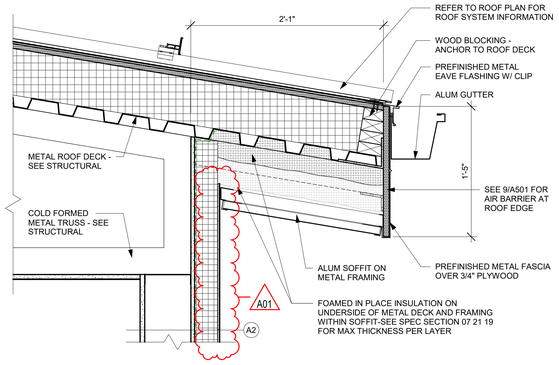
Last Update: **5/3/2023 3:31:20 PM**

A500



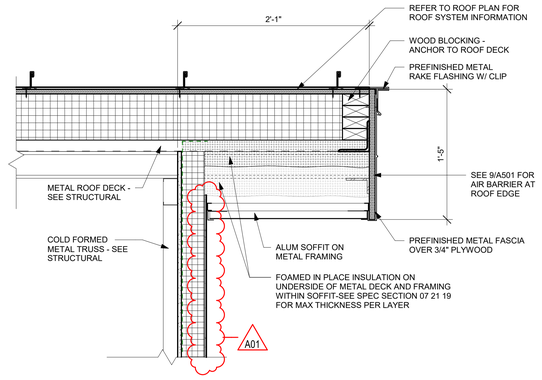
8 VENEER MOVEMENT JOINT

1 1/2" = 1'-0"



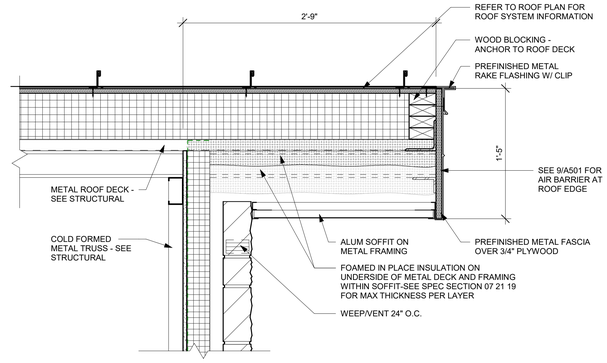
5 ROOF DETAIL

1 1/2" = 1'-0"



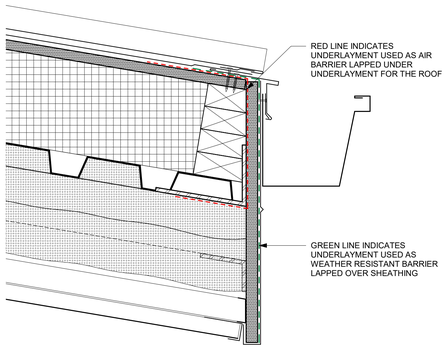
6 ROOF DETAIL

1 1/2" = 1'-0"



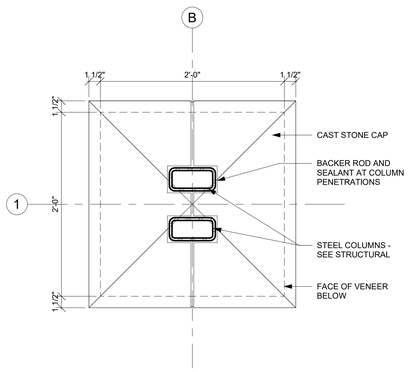
7 ROOF DETAIL

1 1/2" = 1'-0"



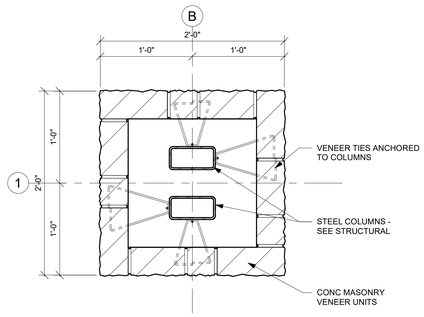
9 AIR BARRIER AT ROOF EDGES

3" = 1'-0"



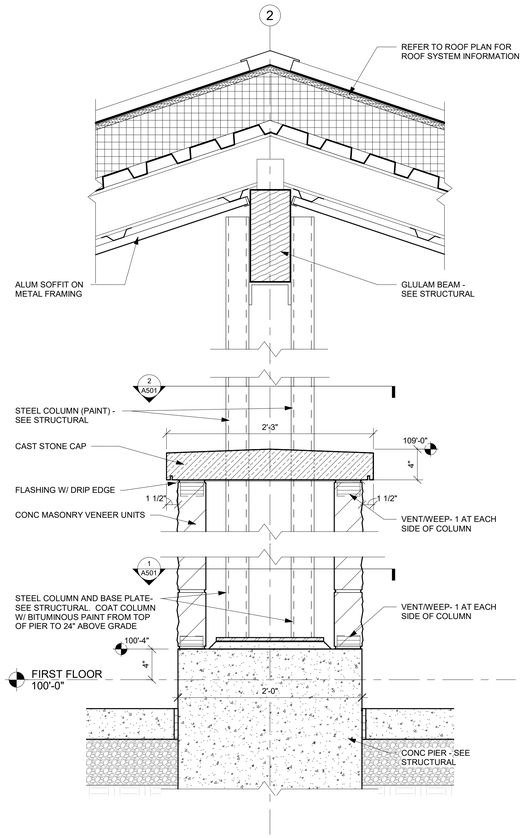
2 COLUMN DETAIL

1 1/2" = 1'-0"



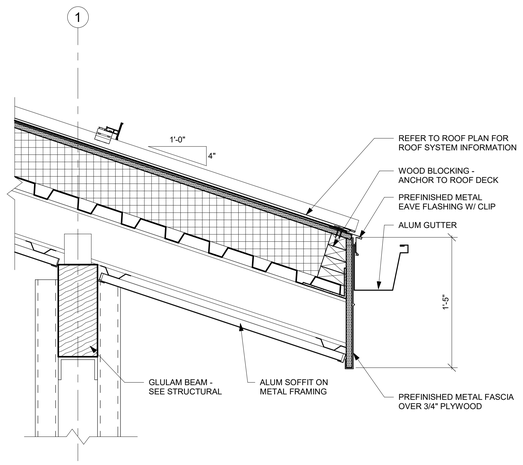
1 COLUMN DETAIL

1 1/2" = 1'-0"



3 COLUMN SECTION

1 1/2" = 1'-0"



4 ROOF DETAIL

1 1/2" = 1'-0"

ARCHITECTURE
ENGINEERING
INTERIOR DESIGN

HSR ASSOCIATES INC.
100 MILWAUKEE STREET
LA CROSSE, WISCONSIN
PHONE: 608.784.1830
FAX: 608.782.5844
www.hsrassociates.com

Consultant:

Project Title: LAC DU FLAMBEAU CHILD DAYCARE CENTER

Project Location: Youth Center Lane
Lac du Flambeau, Wisconsin

Sheet Title: DETAILS

HSR Project Number: 22066

Project Date: APRIL 2023

Drawn By: DJH

Key Plan:

BID DOCUMENTS

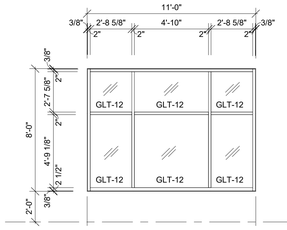
Revisions:

No.	Description	Date
A01	ADDENDUM 1	5/3/2023

Graphic Scale: VARIES

Last Update: 5/3/2023 3:31:51 PM

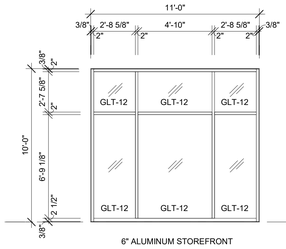
A501



6" ALUMINUM STOREFRONT

W1 FRAME W1

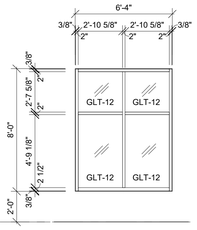
1/4" = 1'-0"



6" ALUMINUM STOREFRONT

W2 FRAME W2

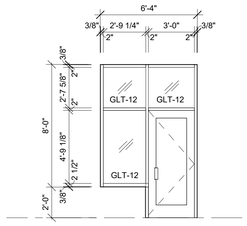
1/4" = 1'-0"



6" ALUMINUM STOREFRONT

W3 FRAME W3

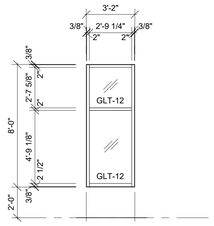
1/4" = 1'-0"



6" ALUMINUM STOREFRONT

W4 FRAME W4

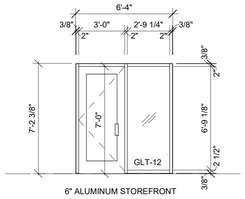
1/4" = 1'-0"



6" ALUMINUM STOREFRONT

W5 FRAME W5

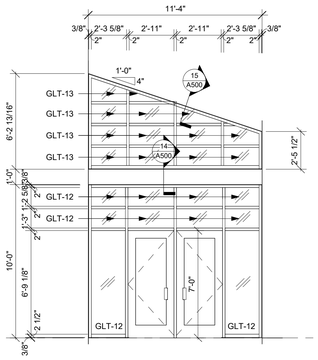
1/4" = 1'-0"



6" ALUMINUM STOREFRONT

W6 FRAME W6

1/4" = 1'-0"



W7 FRAME W7

1/4" = 1'-0"

DOOR SCHEDULE

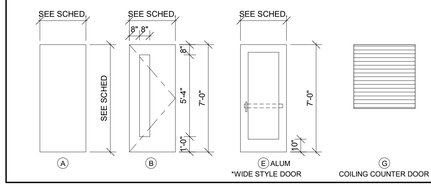
DOOR NO.	DOOR SIZE W	SIZE H	SIZE T	DOOR MAT'L	DOOR TYPE	DOOR GLASS TYPE	DOOR U-CUT OR LOUVER	FRAME MAT'L	FRAME ELEV	FRAME DEPTH	DETAILS HEAD	DETAILS JAMB	DETAILS SILL	FIRE LABEL	HDWR GROUP	REMARKS
101.1	3' - 0"	7' - 0"	1 3/4"	ALUM	E	GLT-12		ALUM	W7/A600	6"			1/A500		1	1
101.2	3' - 0"	7' - 0"	1 3/4"	ALUM	E	GLT-12		ALUM	W7/A600	6"			1/A500		1	2
101.3	3' - 0"	7' - 0"	1 3/4"	ALUM	E	GLT-8		ALUM	HH	6"					2	1
101.4	3' - 0"	7' - 0"	1 3/4"	ALUM	E	GLT-8		ALUM	HH	6"					2	2
103	3' - 0"	7' - 0"	1 3/4"	SCWD	E	GLT-4		HM	AA	8 1/4"		2/A500			4	
104	3' - 0"	7' - 0"	1 3/4"	SCWD	A			HM	AA	5 7/8"		2/A500			4	
106	3' - 0"	7' - 0"	1 3/4"	SCWD	A			HM	AA	5 7/8"		2/A500			7	
107	3' - 0"	7' - 0"	1 3/4"	SCWD	A			HM	AA	5 7/8"		2/A500			6	
108.1	3' - 0"	7' - 0"	1 3/4"	SCWD	A			HM	GG	8 1/4"		2/A500			4	
108.2	3' - 0"	7' - 0"	1 3/4"	ALUM	E	GLT-12		ALUM	AA	6"	8/A500 SIM.	4/A500, 7/A500 SIM.	1/A500		3	1
109.1	3' - 0"	7' - 0"	1 3/4"	SCWD	A			HM	AA	8 1/4"		2/A500			8	
109.2	3' - 0"	7' - 0"	1 3/4"	SCWD	A			HM	AA	5 7/8"		2/A500			8	
110.1	3' - 0"	7' - 0"	1 3/4"	SCWD	A			HM	GG	8 1/4"		2/A500			4	
110.2	3' - 0"	7' - 0"	1 3/4"	ALUM	E	GLT-12		ALUM	W4/A600	6"	8/A500 SIM.	4/A500, 7/A500 SIM.	1/A500		3	1
110.3	3' - 0"	7' - 0"	1 3/4"	SCWD	B	GLT-4		HM	AA	8 1/4"		2/A500			5	
111.1	3' - 0"	7' - 0"	1 3/4"	SCWD	A			HM	GG	8 1/4"		2/A500			4	
111.2	3' - 0"	7' - 0"	1 3/4"	ALUM	E	GLT-12		ALUM	AA	6"	8/A500 SIM.	4/A500, 7/A500 SIM.	1/A500		3	1
111.3	3' - 0"	7' - 0"	1 3/4"	SCWD	B	GLT-4		HM	AA	8 1/4"		2/A500			5	
112	3' - 0"	7' - 0"	1 3/4"	SCWD	A			HM	AA	5 7/8"		2/A500			8	
113	3' - 0"	7' - 0"	1 3/4"	SCWD	A			HM	AA	5 7/8"		2/A500			7	
114	3' - 0"	7' - 0"	1 3/4"	ALUM	E	GLT-12		ALUM	W6/A600	6"	8/A500 SIM.	4/A500, 7/A500 SIM.	1/A500		3	1
115	3' - 0"	7' - 0"	1 3/4"	SCWD	A			HM	AA	5 7/8"		2/A500			9	
116	3' - 0"	7' - 0"	1 3/4"	SCWD	A			HM	AA	5 7/8"		2/A500			7	
117.1	3' - 0"	7' - 0"	1 3/4"	SCWD	A			HM	AA	5 7/8"		2/A500			4	
117.2	3' - 0"	7' - 0"	1 3/4"	FRP	A			ALUM	AA	6"	8/A500 SIM.	4/A500, 7/A500 SIM.	1/A500		3	3
117.3	4' - 0"	4' - 2"	1/2"	STEEL	G						12/A500	13/A500			10	
118.1	3' - 0"	7' - 0"	1 3/4"	SCWD	A			HM	GG	5 7/8"		2/A500			4	
118.2	3' - 0"	7' - 0"	1 3/4"	ALUM	E	GLT-12		ALUM	AA	6"	8/A500 SIM.	4/A500, 7/A500 SIM.	1/A500		3	1
118.3	3' - 0"	7' - 0"	1 3/4"	SCWD	A			HM	AA	5 7/8"		2/A500			7	
119	3' - 0"	7' - 0"	1 3/4"	SCWD	A			HM	AA	5 7/8"		2/A500			7	
120	3' - 0"	7' - 0"	1 3/4"	SCWD	A			HM	AA	8 1/4"		2/A500			7	
121	3' - 0"	7' - 0"	1 3/4"	SCWD	A			HM	AA	5 7/8"		2/A500			6	

DOOR SCHEDULE GENERAL NOTES

HM = HOLLOW METAL ALUM = ALUMINUM SCWD = SOLID CORE WOOD DOOR

A. SEE SPECIFICATIONS FOR DOOR HARDWARE GROUPS
B. ALL HM (HOLLOW METAL) DOORS AND FRAMES SHALL BE PAINTED
C. ALL DOUBLE DOORS TO HAVE TWO EQUAL LEAFS UNLESS NOTED OTHERWISE

DOOR TYPES



DOOR SCHEDULE REMARKS

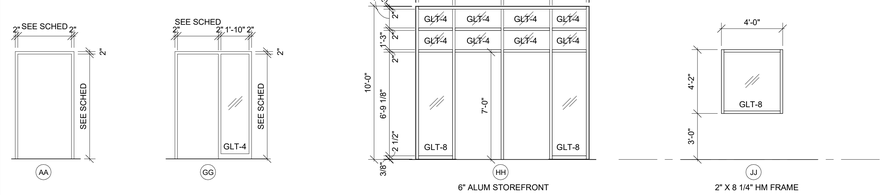
1. ELECTRONIC FOB ACCESS AND ELECTRIC STRIKE REQUIRED.
2. AUTOMATIC DOOR OPENER - SEE FLOOR PLAN FOR ACTUATOR SWITCH LOCATIONS
3. KEYPAD ACCESS AND ELECTRIC STRIKE REQUIRED.

DOOR FRAME GENERAL NOTES

HM = HOLLOW METAL ALUM = ALUMINUM

A. ALL HM (HOLLOW METAL) FRAMES SHALL BE PAINTED.

DOOR FRAME TYPES



WALL ASSEMBLY R-VALUE COMPONENT TABLE:

COMPONENT	R-VALUE
FILM (INSIDE)	.68
5/8" GYP BOARD	.52
6" MTL STUD	- -
8" CMU	1.11
CONCRETE	.08 PER INCH (above grade); .11 PER INCH (foundation)
1/2 GYP SHEAT	.69
FILM (OUTSIDE)	.17
RIGID FOAM	5 PER INCH
SPRAY FOAM	7 PER INCH
DEAD AIR	.85
BRICK	.44
STONE	.44
MTL PANEL	.62
SEE WALL TYPE FOR TOTAL WALL R-VALUE	

WALL TYPE GENERAL NOTES:

A. REFER TO MASTER COLOR SCHEDULE AND INTERIOR DESIGN SHEETS FOR ADDITIONAL WALL FINISHES.

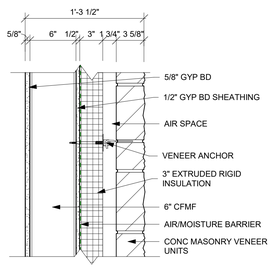
B. WHERE INTERIOR DESIGN SHEETS INDICATE WALL TILE, INSTALL BACKER BOARD AT WET AND NON-WET LOCATIONS AS LISTED IN 09 21 16

C. NON RATED WALLS, INCLUDING BULKHEADS SHALL HAVE FRAMING EXTENDED TO BOTTOM OF TRUSS SHEATHING. GYP BOARD SHALL EXTEND TO 4" ABOVE CEILING UNLESS NOTED OTHERWISE. COLUMN FURRING MAY STOP 4" ABOVE CEILING.

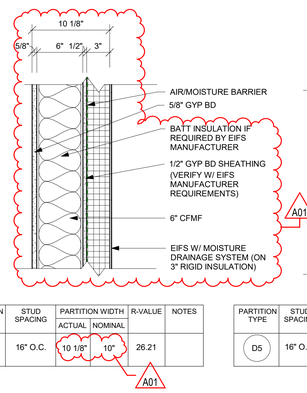
D. EXTEND STUDS, GYP BOARD AND SOUND BLANKET TO BOTTOM OF TRUSS SHEATHING ABOVE AT SOUND CONTROL WALLS (INDICATED BY SOUND ATTENUATION BLANKETS, SOUND SEAL NOTE OR STC RATING). LEVEL OF FINISH ABOVE CEILING AS NOTED IN SECTION 09 21 16

E. INSTALL GYPSUM BOARD CONTROL JOINTS AT TOP OF ALL INTERIOR TOP OF DOOR JAMBS TO TOP OF GYPSUM BOARD WALLS. OTHER CONTROL JOINTS TO BE INSTALLED PER PLAN OR AT 30'-0" O.C. MAX. REVIEW LOCATION REQUIREMENTS WITH A/E PRIOR TO START OF INSTALLATION OF GYPSUM BOARD ASSEMBLIES.

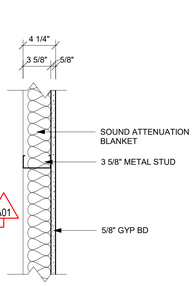
F. AT SOUND CONTROL WALLS (INDICATED BY SOUND ATTENUATION BLANKETS, SOUND SEAL NOTE OR STC RATING) APPLY CONTINUOUS BEAD OF ACOUSTICAL SEALANT AT FLOOR/CEILING TRACK STUDS AND STUD AT WALL; APPLY CONTINUOUS BEAD OF ACOUSTICAL SEALANT AT PERIMETER OF GYP BOARD HOLDING EDGE OF GYP BOARD AWAY FROM ADJACENT STRUCTURE NO MORE THAN 3/8". SEAL ALL M/E/P/FP PENETRATIONS WITH SOUND BLANKET, BACKING, ACOUSTICAL SEALANT AND FIRE STOPPING. AFTER INSTALLING ONE SIDE OF GYP BOARD, APPLY OVERSIZED 2" SOUND BLANKET OVER BACK SIDE OF ELECTRICAL BOXES AND SIMILAR PENETRATIONS. WHERE WALL BOXES OCCUR AT OPPOSITE SIDES, APPLY INSULATION TO BACKSIDE OF WALL BOXES.



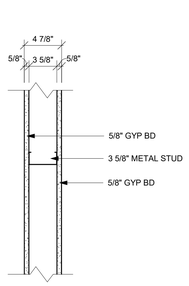
PARTITION TYPE	STUD SPACING	PARTITION WIDTH ACTUAL	PARTITION WIDTH NOMINAL	R-VALUE	NOTES
A1	16" O.C.	1'- 3 1/2"	1'-3 1/2"	27.00	-



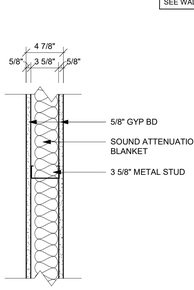
PARTITION TYPE	STUD SPACING	PARTITION WIDTH ACTUAL	PARTITION WIDTH NOMINAL	R-VALUE	NOTES
A2	16" O.C.	10 1/8"	10"	26.21	A01



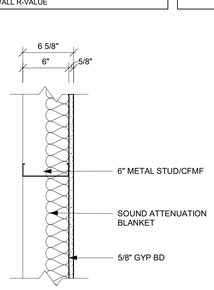
PARTITION TYPE	STUD SPACING	PARTITION WIDTH ACTUAL	PARTITION WIDTH NOMINAL	FIRE RATING	UL #	STC RATING
D5	16" O.C.	4 1/4"	4"	-	-	39



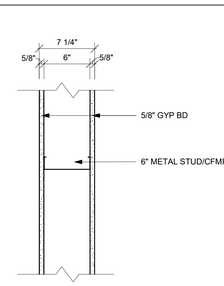
PARTITION TYPE	STUD SPACING	PARTITION WIDTH ACTUAL	PARTITION WIDTH NOMINAL	FIRE RATING	UL #	STC RATING
D6	16" O.C.	4 7/8"	5"	-	-	38



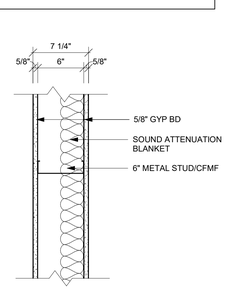
PARTITION TYPE	STUD SPACING	PARTITION WIDTH ACTUAL	PARTITION WIDTH NOMINAL	FIRE RATING	UL #	STC RATING
D7	16" O.C.	4 7/8"	5"	-	-	49



PARTITION TYPE	STUD SPACING	PARTITION WIDTH ACTUAL	PARTITION WIDTH NOMINAL	FIRE RATING	UL #	STC RATING
D9	16" O.C.	6 5/8"	7"	-	-	42



PARTITION TYPE	STUD SPACING	PARTITION WIDTH ACTUAL	PARTITION WIDTH NOMINAL	FIRE RATING	UL #	STC RATING
D10	16" O.C.	7 1/4"	7"	-	-	41



PARTITION TYPE	STUD SPACING	PARTITION WIDTH ACTUAL	PARTITION WIDTH NOMINAL	FIRE RATING	UL #	STC RATING
D11	16" O.C.	7 1/4"	7"	-	-	47

ARCHITECTURE
ENGINEERING
INTERIOR DESIGN

HSR ASSOCIATES INC.
100 MILWAUKEE STREET
LA CROSSE, WISCONSIN
PHONE: 608.784.1830
FAX: 608.782.5844
www.hsrassociates.com

Consultant:

Project Title: LAC DU FLAMBEAU CHILD DAYCARE CENTER

Project Location: Youth Center Lane Lac du Flambeau, Wisconsin

Sheet Title: DOOR SCHEDULE, WALL TYPES

HSR Project Number: 22066

Project Date: APRIL 2023

Drawn By: DJH

Key Plan:

BID DOCUMENTS

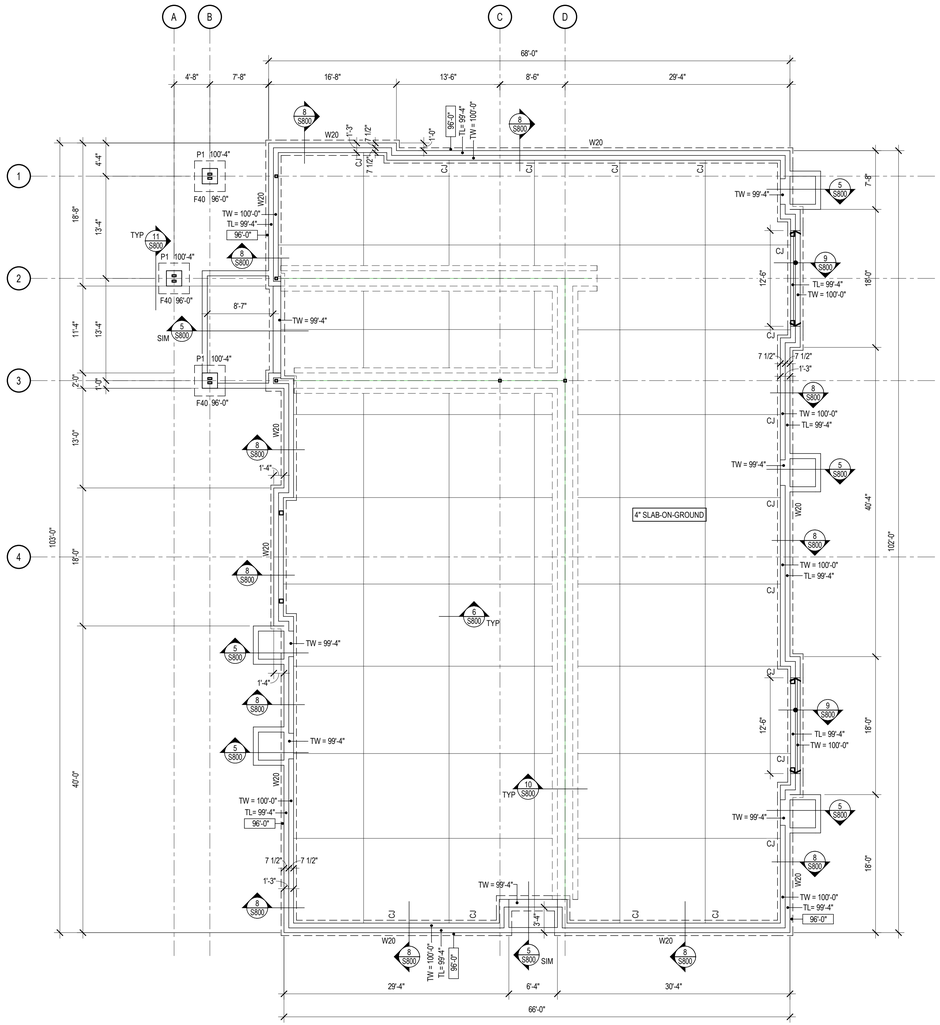
Revisions:

No.	Description	Date
A01	ADDENDUM 1	5/3/2023

Graphic Scale: VARIES

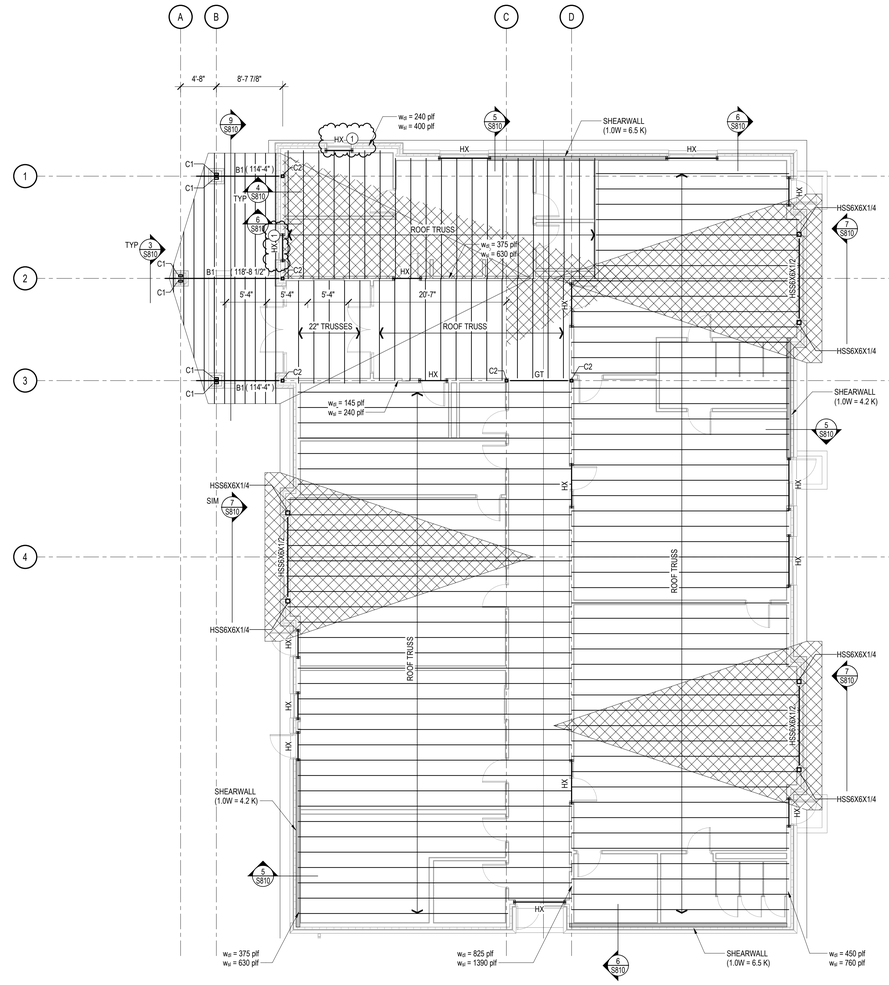
Last Update: 5/3/2023 3:32:23 PM

A600



1 S100 FOUNDATION PLAN

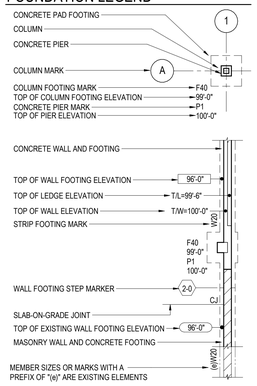
SCALE: 1/8" = 1'-0"



2 S100 ROOF FRAMING PLAN

SCALE: 1/8" = 1'-0"

FOUNDATION LEGEND



FOUNDATION PLAN NOTES

1. FINISH SLAB ELEVATION = 100'-0", LOCAL DATUM UNLESS NOTED OTHERWISE. TOP OF FOOTING ELEVATION = 99'-0" UNLESS NOTED OTHERWISE.
2. SLAB-ON-GROUND TO BE 4" THICK REINFORCED WITH SLB/CY OF MACRO POLYPROPYLENE SYNTHETIC FIBERS OR 6X6 W4.0XW4.0 WWF AT CONTRACTORS OPTION. PLACE SLAB ON VAPOR BARRIER (REFER TO SPECIFICATION) OVER 6" COARSE STONE BASE UNLESS NOTED OTHERWISE.
3. TYPICAL WHERE SLAB-ON-GROUND ABUTS WALL OR COLUMN, PROVIDE 1/4" x (SOG THICKNESS) ISOLATION FILLER STRIP. SET STRIP 1/4" BELOW FINISH SLAB ELEVATION.
4. OVER-EXCAVATION PER DETAIL 1/S800 MAY BE REQUIRED TO REMOVE EXISTING UNDOCUMENTED FILL AND UNSUITABLE BEARING SOIL.
5. TYPICAL DETAILS THAT APPLY TO PLAN INCLUDE:
   2/S800 CONCRETE WALL JOINT
   3/S800 CONCRETE WALL AND FOOTING CORNER REINFORCEMENT
   4/S800 PIPE PASSING UNDER WALL FOOTING
   5/S800 STOOP DETAIL
   6/S800 CONSTRUCTION AND CONTRACTION JOINTS IN SLAB-ON-GROUND
   7/S800 ADDED REINFORCEMENT AT WALL OPENING

CONTINUOUS FOOTING SCHEDULE

MARK	CONTINUOUS FOOTING DIMENSIONS WIDTH	THICKNESS	FOOTING REINFORCEMENT	REMARKS
W20	2'-0"	12"	(2) #5; B, CONT	

ISOLATED FOOTING SCHEDULE

MARK	ISOLATED FOOTING DIMENSIONS LENGTH	WIDTH	THICKNESS	FOOTING REINFORCEMENT	REMARKS
F40	4'-0"	4'-0"	12"	(4) #5; B, EW	

NOTES:
1. B = BOTTOM, T = TOP, LW = LONG WAY, SW = SHORT WAY, EW = EACH WAY.
2. ALL REINFORCEMENT BARS TO BE BOTTOM BARS UNLESS NOTED OTHERWISE.

CONCRETE PIER SCHEDULE

MARK	PIER DIMENSIONS X	Y	PIER TYPE	REINFORCEMENT VERTICAL	TIES	REMARKS
P1	24"	24"	I	(6) #7	#3 @ 12" OC	

NOTES:
1. PIERS TO BE CENTERED ON BUILDING GRID LINE(S), UNLESS NOTED OTHERWISE.
2. REFERENCE DETAIL 11/S800 FOR TYPICAL PIER INFORMATION.
3. CAST PIER MONOLITHICALLY WITH FOUNDATION WALL.
4. PIER TYPES:

PROVIDE 2" CLEAR COVER

ROOF FRAMING PLAN NOTES

1. COLD FORM TRUSS BEARING ELEVATION = 113'-0" UNLESS NOTED OTHERWISE ON PLAN AS (X'-X") OR (T/S = X'-X")].
2. OVERBUILD IN TRUSSES IS INDICATED BY [X'-X"]. OVERBUILD TO BE PLACED ON TOP OF ROOF DECKING. TRUSS SUPPLIER OPTION: INTEGRATE ROOF PROFILE WITH BASE TRUSS SYSTEM IN THESE AREAS.
3. WOOD BEAM ELEVATIONS NOTED ON PLAN.
4. HX INDICATED HEADER TO BE DESIGNED BY CFMF DESIGNER.
5. B1 = 5 1/8" X 12" GLULAM BEAM. SEE S001 FOR BEAM SPECIFICATIONS.
6. C1 = HSS6X3X3/8. SEE 12/S800 FOR BASE PLATE CONNECTION.
7. C2 = HSS4X4X1/4. SEE 13/S800 FOR BASE PLATE CONNECTION.
8. ROOF DECKING SHALL BE 1 1/2" x 22GA WIDE RIB GALVANIZED METAL ROOF DECK FASTENED TO SUPPORTING STRUCTURE USING 36/4 PATTERN WITH BUILDEX #12 TEK SCREWS AS SHOWN IN DETAIL 1/S810 WITH #10 TEK SIDELAP FASTENERS AT 18" OC. PROVIDE DECK WITH THE FOLLOWING PROPERTIES:

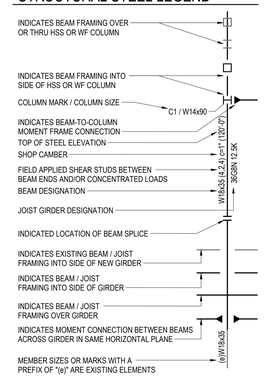
   THICK = 0.0295 in I_p = 0.155 in⁴/ft S_p = 0.186 in³/ft F_y = 50 KSI MIN
   I_n = 0.183 in⁴/ft S_n = 0.192 in³/ft

   INSTALL DECK UNDER 3 OR MORE SPAN CONDITIONS.

S100 KEY NOTES

1. 2L6X4X5/16 LOOSE LINTEL. PROVIDE 6" BEARING ON BOTH SIDES

STRUCTURAL STEEL LEGEND



ARCHITECTURE
ENGINEERING
INTERIOR DESIGN

HSR ASSOCIATES INC.
100 MILWAUKEE STREET
LA CROSSE, WISCONSIN
PHONE: 608.784.1830
FAX: 608.782.5844
www.hsrassociates.com

Consultant:
raSmith
CREATIVITY BEYOND ENGINEERING
4001 Telland Road, Suite 108
Madison, WI 53718-6459
(608)467-3034
rasmith.com
project number: 2220692

Project Title: **LAC DU FLAMBEAU CHILD DAYCARE CENTER**

Project Location: Lac du Flambeau, Wisconsin

Sheet Title: **PLAN VIEWS**

HSR Project Number: **22066**

Project Date: **APRIL 2023**

Drawn By: **HJL**

Key Plan:

BID DOCUMENTS

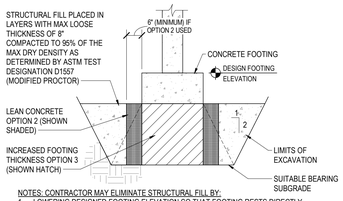
Revisions:

No.	Description	Date
A01	ADDENDUM 1	5-04-2023

Graphic Scale: **VARIES**

Last Update: **5/4/2023 8:28:53 AM**

S100

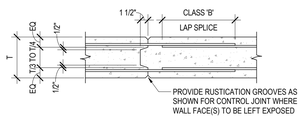


NOTES: CONTRACTOR MAY ELIMINATE STRUCTURAL FILL BY:

1. LOWERING DESIGNED FOOTING ELEVATION SO THAT FOOTING RESTS DIRECTLY ON SUITABLE BEARING SUBGRADE.
2. BY PROVIDING LEAN CONCRETE (f'c=500 PSI) UNDER THE FOOTING TO SUITABLE BEARING SUBGRADE AS SHOWN SHADED ABOVE. (NOT APPLICABLE IN GRANULAR SOILS)
3. BY INCREASING FOOTING THICKNESS TO REACH SUITABLE BEARING SUBGRADE AS SHOWN HATCHED ABOVE.

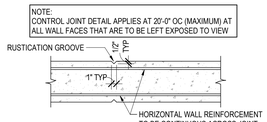
THIS DETAIL APPLIES ONLY AT THOSE LOCATIONS WHERE GEOTECHNICAL ENGINEER DEEM SOILS AT DESIGN FOOTING ELEVATION INADEQUATE OF FOOTING SUPPORT.

1 S800 OVER EXCAVATION DETAIL
SCALE: 1/2" = 1'-0"



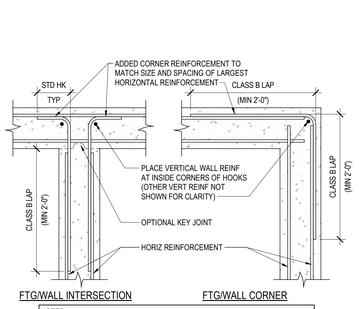
CONSTRUCTION JOINT

NOTE:
CONTROL JOINT DETAIL APPLIES AT 20'-0" OC (MAXIMUM) AT ALL WALL FACES THAT ARE TO BE LEFT EXPOSED TO VIEW



CONTROL JOINT

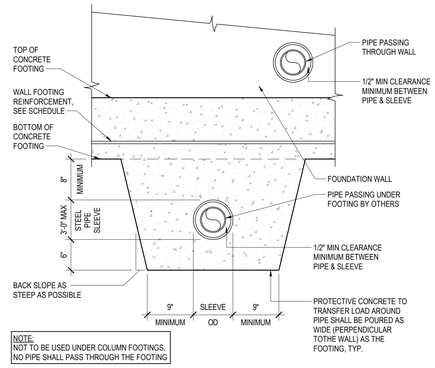
2 S800 TYPICAL CONCRETE WALL JOINTS
SCALE: 1" = 1'-0"



FTG/WALL INTERSECTION FTG/WALL CORNER

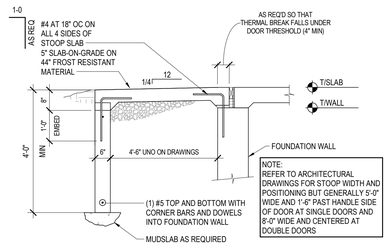
NOTES:
1. CONTRACTOR MAY EXTEND HORIZ WALL REINF WITH STD 90° HOOK IN LIEU OF ADDED CORNER REINFORCEMENT.
2. NO VERTICAL WALL CONSTRUCTION JOINT WITHIN 5'-0" OF WALL CORNER.

3 S800 TYPICAL CONCRETE WALL AND FOOTING CORNER REINFORCEMENT
SCALE: 1" = 1'-0"



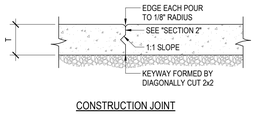
NOTE:
NOT TO BE USED UNDER COLUMN FOOTINGS, NO PIPE SHALL PASS THROUGH THE FOOTING

4 S800 PIPE PASSING UNDER WALL FOOTING
SCALE: 1" = 1'-0"

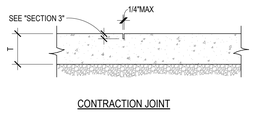


NOTE:
REFER TO ARCHITECTURAL DRAWINGS FOR STOOP WIDTH AND POSITIONING BUT GENERALLY 5'-0" WIDE AND 1'-6" PAST HANDLE SIDE OF DOOR AT SINGLE DOORS AND 8'-0" WIDE AND CENTERED AT DOUBLE DOORS

5 S800 TYPICAL STOOP DETAIL
SCALE: 1/2" = 1'-0"



CONSTRUCTION JOINT



CONTRACTION JOINT

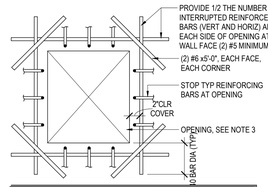
SECTION 1: SLAB-ON-GRADE NOTES
- SLAB-ON-GRADE TO BE PLACED USING ALTERNATING STRIPS IF SLAB NOT PLACED USING LASER SCREED.
- SLAB-ON-GRADE CONSTRUCTION SHOULD CONFORM WITH THE RECOMMENDATIONS AND REQUIREMENTS SET FORTH IN THE LATEST RELEASE OF ACI 302 GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION.
- REFER TO THE GENERAL NOTES, THE SPECIFICATIONS, AND THE DRAWINGS FOR SUB-FLOOR DRAINAGE SYSTEM, SUBGRADE PREPARATION, AND/OR MUD SLAB AND VAPOR RETARDER REQUIREMENTS.
- THE SUBGRADE SHALL BE FREE OF STANDING WATER AT THE TIME OF CONCRETE PLACEMENT.
- REFER TO PLANS FOR SLAB THICKNESS (T) AND REINFORCEMENT (WWF OR REINFORCEMENT BARS). REFER TO SPECIFICATIONS FOR FIBER REINFORCEMENT TO BE INCORPORATED IN CONCRETE MIX, IF ANY. WHERE PRESENT, REINFORCING BARS SHALL BE CHAIRED BY SOIL SUPPORTED SLAB BOLSTERS.
- PROVIDE (2) #5 x5'-0" AT ALL RE-ENTRANT CORNERS AND OTHER SIMILAR SLAB DISCONTINUITIES.
- UNLESS SHOWN OTHERWISE ON THE DRAWINGS, PROVIDE CONTRACTION AND/OR CONSTRUCTION JOINTS AT EVERY COLUMN LINE AND IN BETWEEN THE COLUMNS SUCH THAT THE JOINT SPACING DOES NOT EXCEED 30x(T) UNO. THE RESULTING PANELS SHOULD BE APPROXIMATELY SQUARE.

SECTION 2: CONSTRUCTION JOINT NOTES
- BREAK THE BOND BETWEEN NEW AND PREVIOUSLY PLACED SLABS BY SPRAYING OR BY PAINTING THE EXPOSED SIDE OF THE JOINT WITH A CURING COMPOUND, ASPHALTIC EMULSION, OR FORM OIL.

SECTION 3: CONTRACTION JOINT NOTES
- FOR SAW-CUT CONTRACTION JOINTS, MAKE THE SAW-CUT AS SOON AS THE SLAB IS ABLE TO SUPPORT THE WEIGHT OF WORKERS AND SAWING EQUIPMENT WITHOUT DAMAGE TO THE FINISHED SURFACE OF THE SLAB, BUT WITHIN 24 HOURS.
- DEPTH OF SAW-CUT SHOULD BE 1-1/4" IF PRODUCED USING THE EARLY ENTRY DRY-CUT PROCESS AND T/4 (1" MIN) IF PRODUCED USING THE CONVENTIONAL WET-CUT PROCESS.
- REFER TO SPECIFICATIONS REGARDING EPOXY RESIN OR ELASTOMERIC SEALANT FOR REQUIREMENTS AT CONTRACTION JOINTS.

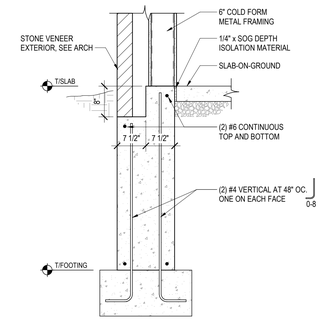
SECTION 4: FORMED CONTRACTION JOINT OPTION NOTES
- FORM CONTRACTION JOINTS BY INSERTING A PRE-MOLDED STRIP INTO THE FRESH CONCRETE UNTIL THE TOP SURFACE OF THE STRIP IS FLUSH WITH THE TOP SURFACE OF THE SLAB.
- TOOL THE SLAB EDGES ROUND ON EACH SIDE OF THE INSERT, 1/8" MAX RADIUS.
- AFTER THE CONCRETE HAS CURED, REMOVE THE INSERTS AND CLEAN THE GROOVE OF LOOSE DEBRIS.

6 S800 TYPICAL CONSTRUCTION AND CONTRACTION JOINTS IN SLAB-ON-GROUND - KEYWAY JOINT
SCALE: 1" = 1'-0"

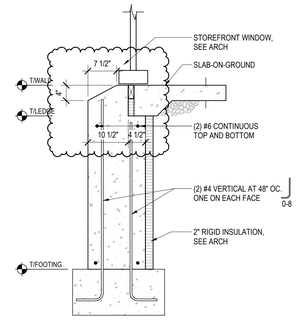


NOTES:
1. ADDED REINFORCEMENT AS SHOWN SHALL BE PROVIDED FOR ALL OPENINGS 12" DIA OR 12" SQUARE AND LARGER IN SIZE.
2. SPACE ADDED BARS AS CLOSE AS PERMISSIBLE BY CODE FOR THE REQUIRED BAR SIZE.
3. VERIFY SIZE & LOCATION OF OPENINGS WITH TRADE OR SUBCONTRACTOR WHICH REQUIRES OPENING.

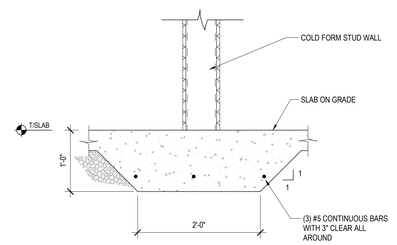
7 S800 ADDED REINFORCEMENT AT WALL OPENING
SCALE: 1" = 1'-0"



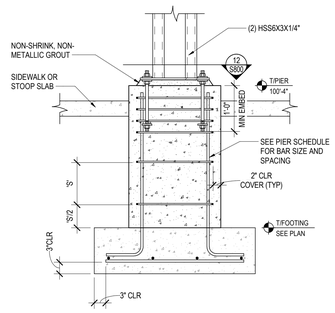
8 S800 TYPICAL FOUNDATION WALL
SCALE: 3/4" = 1'-0"



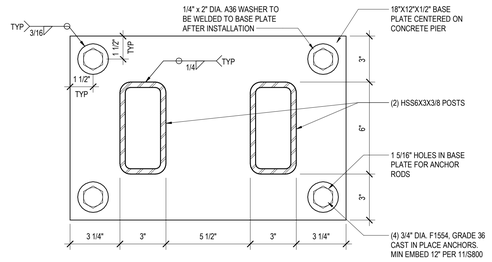
9 S800 TYPICAL FOUNDATION WALL AT WINDOW
SCALE: 3/4" = 1'-0"



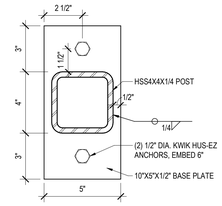
10 S800 TYPICAL THICKENED SLAB AT INTERIOR BEARING WALLS
SCALE: 1" = 1'-0"



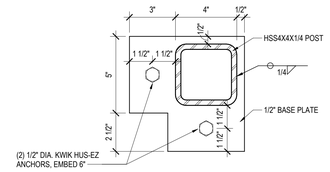
11 S800 EXTERIOR CONCRETE PIER
SCALE: 3/4" = 1'-0"



12 S800 C1 BASE PLATE
SCALE: 3" = 1'-0"

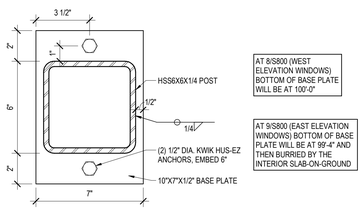


5" DIMENSION OF BASE PLATE TO FIT INSIDE THE STUD WALL CAVITY



ORIENTATE BASE PLATE TO FIT INSIDE STUD WALL CAVITY AT CORNER LOCATIONS

13 S800 C2 BASE PLATE
SCALE: 3" = 1'-0"



AT S/S800 (WEST ELEVATION WINDOWS) BOTTOM OF BASE PLATE WILL BE AT 100'-0"

AT S/S800 (EAST ELEVATION WINDOWS) BOTTOM OF BASE PLATE WILL BE AT 99'-4" AND THEN BURRIED BY THE INTERIOR SLAB-ON-GROUND

14 S800 HSS6X6 BASE PLATE ON FOUNDATION WALL
SCALE: 3" = 1'-0"

ARCHITECTURE
ENGINEERING
INTERIOR DESIGN

HSR ASSOCIATES INC.
100 MILWAUKEE STREET
LA CROSSE, WISCONSIN
PHONE: 608.784.1830
FAX: 608.782.5844
www.hsrassociates.com

Consultant:

raSmith
CREATIVITY BEYOND ENGINEERING
project number: 2220692
4001 Felland Road, Suite 108
Madison, WI 53718-8459
(608)467-3034
rasmith.com

Project Title: LAC DU FLAMBEAU CHILD DAYCARE CENTER

Project Location: Lac du Flambeau, Wisconsin

Sheet Title: FOUNDATION DETAILS

HSR Project Number: 22066

Project Date: APRIL 2023

Drawn By: Author

Key Plan:

BID DOCUMENTS

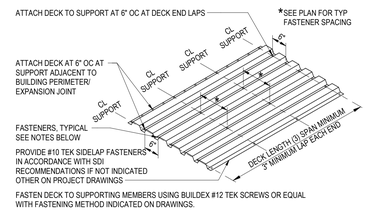
Revisions:

No.	Description	Date
A01	ADDENDUM 1	5-04-2023

Graphic Scale: VARIES

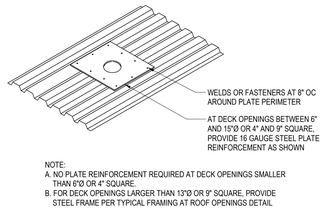
Last Update: 5/4/2023 8:28:53 AM

S800



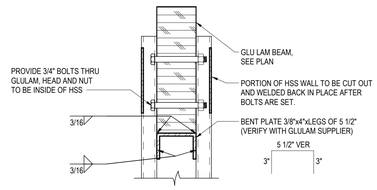
1 S810 METAL DECK FASTENING DETAIL

SCALE: 12" = 1'-0"



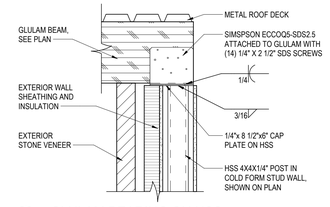
2 S810 TYPICAL ROOF DECK OPENING

SCALE: 1" = 1'-0"



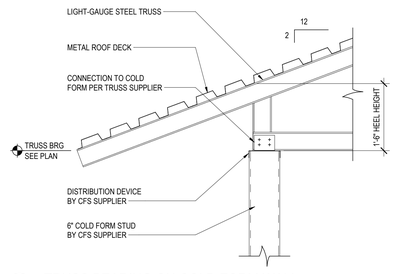
3 S810 COLUMN - GLULAM CONNECTION

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



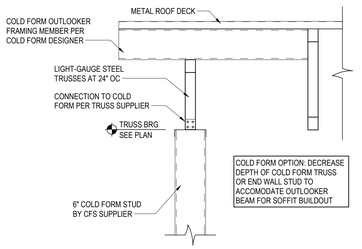
4 S810 GLULAM BEARING ON HSS

SCALE: 1" = 1'-0"



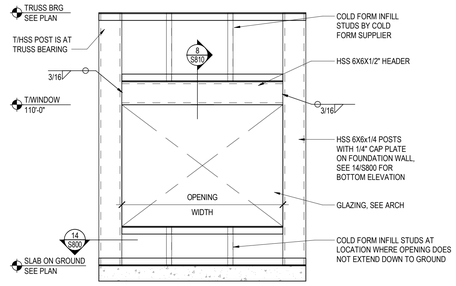
5 S810 TRUSS BEARING ON COLD FORM WALL

SCALE: 1" = 1'-0"



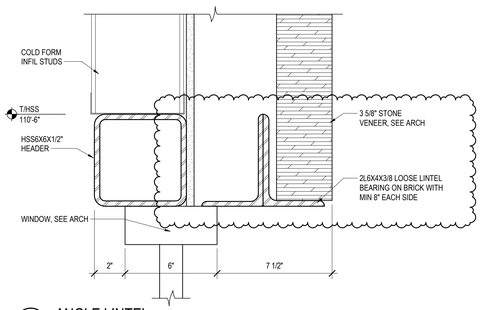
6 S810 NON LOAD BEARING WALL

SCALE: 1" = 1'-0"



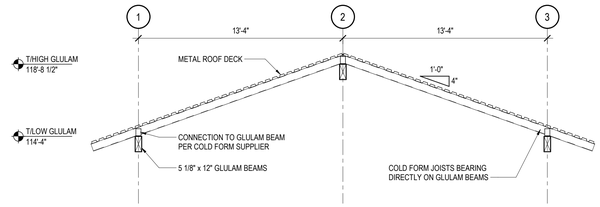
7 S810 HSS HEADERS

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



8 S810 ANGLE LINTEL

SCALE: 3" = 1'-0"



9 S810 CF JOISTS BERAING ON GLULAMS

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

ARCHITECTURE
ENGINEERING
INTERIOR DESIGN

HSR ASSOCIATES INC.
100 MILWAUKEE STREET
LA CROSSE, WISCONSIN
PHONE: 608.784.1830
FAX: 608.782.5844
www.hsrassociates.com

Consultant:

raSmith
CREATIVITY BEYOND ENGINEERING
4001 Felland Road, Suite 108
Madison, WI 53718-6459
(608)467-3034
rasmith.com
project number: 2220692

Project Title: LAC DU FLAMBEAU CHILD DAYCARE CENTER

Project Location: Lac du Flambeau, Wisconsin

Sheet Title: FRAMING DETAILS

HSR Project Number: 22066

Project Date: APRIL 2023

Drawn By: Author

Key Plan:

BID DOCUMENTS

Revisions:

No.	Description	Date
A01	ADDENDUM 1	5-04-2023

Graphic Scale: VARIES

Last Update: 5/4/2023 8:28:53 AM

S810

COLD-FORMED FRAMING DRAWINGS FOR:

LAC DU FLAMBEAU CHILD DAYCARE CENTER

LAC DU FLAMBEAU, WI

GENERAL NOTES

1-1 CONTENTS OF THIS SUBMITTAL SHOW THE INTENDED APPLICATION OF COLD FORMED FRAMING COMPONENTS. FRAMING ERECTOR IS TO REFER TO THE PROJECT CONTRACT DOCUMENTS FOR ADDITIONAL CONSTRUCTION ASSEMBLY REQUIREMENTS.

1-2 DIMENSIONS SHOWN HERE HAVE BEEN DETERMINED PER THE CONTRACT DOCUMENTS AND ARE FOR DESIGN REFERENCE ONLY. ALL CONDITIONS SHALL BE FIELD VERIFIED PRIOR TO ERECTION.

1-3 THIS SUBMITTAL IS ALSO SUBJECT TO THE REVIEW AND CONCEPTUAL APPROVAL OF THE PROJECT ENGINEER AND/OR ARCHITECT PRIOR TO ERECTION.

1-4 ADEQUACY OF THE PRIMARY STRUCTURE FOR LOADS IMPOSED BY THE COLD-FORMED FRAMING SYSTEM IS NOT THE RESPONSIBILITY OF R.A. SMITH, Inc.

1-5 FOR SPECIFIC REQUIREMENTS AND WARRANTY INFORMATION ON SYSTEMS OR MATERIALS CONNECTED AND APPURTENANT TO THE COLD-FORMED STEEL FRAMING INCLUDING WINDOWS, CAULKING AND FLASHINGS REFER TO THE MANUFACTURER'S DATA. R.A. SMITH, Inc. ASSUMES NO RESPONSIBILITY FOR THE PROPER CONSTRUCTION OR FUNCTION OF THE TOTAL ARCHITECTURAL ASSEMBLY.

1-6 DETAILS OF WALL FINISHES ARE FOR ARRANGEMENT AND REFERENCE. FOR SPECIFIC REQUIREMENTS, METHODS, MATERIALS AND EXECUTION STANDARDS, REFER TO TECHNICAL DATA FROM PRODUCT MANUFACTURER. IN THE EVENT OF CONFLICT, THE MANUFACTURER'S INSTRUCTIONS SHALL DICTATE.

1-7 CONDITIONS AND/OR SECTIONS ENCIRCLED THUS ⬭ REQUIRE SPECIAL REVIEW BY THE PROJECT ARCHITECT AND/OR STRUCTURAL ENGINEER. ADDITIONAL PROJECT DETAIL INFORMATION AND VERIFICATION OF CONDITIONS ARE REQUIRED.

INSTALLATION

2-1 ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS REQUIRED FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE HELD POSITIVELY IN PLACE UNTIL PROPERLY FASTENED.

2-2 TEMPORARY BRACING SHALL BE PROVIDED AND REMAIN IN PLACE UNTIL WORK IS COMPLETELY STABILIZED.

2-3 ALL FIELD CUTTING OF STUDS MUST BE DONE BY SAWING OR SHEARING. TORCH CUTTING OF COLD-FORMED MEMBERS IS UNACCEPTABLE.

2-4 WHEN REQUIRED FOR BRIDGING PURPOSES, FRAMING FABRICATOR IS TO ENSURE PUNCH-OUT ALIGNMENT WHEN ASSEMBLING FRAMING AND FIELD CUTTING STUDS TO LENGTH. REFER TO TYPICAL STUD/TRACK CONNECTION AND INDEXING DETAIL.

2-5 NO SPLICES IN STUDS, JOISTS, OR OTHER LOAD CARRYING MEMBERS MAY BE MADE WITHOUT PRIOR ENGINEERING REVIEW AND SPECIFIC DETAILS FOR ANY SUCH SPLICE(S).

2-6 WHERE SPLICING OF WALL TRACK IS NECESSARY BETWEEN STUD SPACINGS, A PIECE OF STUD SHALL BE PLACED IN THE ADJOINING TRACK SECTIONS AND FASTENED TO THE TRACK FLANGES AT BOTH SIDES OF THE WALL OR THE TRACKS SHALL BE BUTTED TIGHT TOGETHER AND FASTENED TO STRUCTURE EITHER SIDE OF THE JOINT.

CONNECTIONS

3-1 IF REQUIRED, ALL WELDED CONNECTIONS ARE TO BE PERFORMED IN ACCORDANCE WITH THE LATEST VERSION OF AWS D1.3 SPECIFICATIONS FOR WELDING SHEET STEEL IN STRUCTURES. CONSULT AWS D1.3 WELDING ZINC COATED STEEL AND ANSI STANDARD 49.1 FOR INFORMATION REGARDING SAFE WELDING PROCEDURES. ALL WELDS ARE TO BE TOUCHED UP WITH A RUST INHIBITIVE GALVANIZING PAINT.

3-2 SUGGESTED WELD METAL AND PROCESS FOR SHOP WELDING ARE: 60 KSI WELD METAL STRENGTH (MINIMUM) - MIG.

SUGGESTED METHODS FOR FIELD WELDING: 1/8" (UNLESS OTHERWISE NOTED) E60XX (MINIMUM) ELECTRODE - SMAW; OR SHIELDED OR FLUX CORE WIRE-FEEDING WELDING.

MINIMUM WELD THROAT THICKNESS (t) MUST MATCH OR EXCEED THE BASE STEEL THICKNESS OF THE THINNEST CONNECTED PART UNLESS NOTED OTHERWISE.

3-3 UNLESS NOTED OTHERWISE, REFER TO LITERATURE PUBLISHED BY HILTI FASTENING SYSTEMS, INC. FOR EXPANSION BOLT AND POWDER DRIVEN FASTENER INFORMATION. USE 1 1/4" MINIMUM EMBEDMENT FOR EACH POWDER DRIVEN FASTENER UNLESS NOTED OTHERWISE. REFER TO BUILDEX,INC. TECHNICAL INFORMATION FOR TEK SCREW DATA ALTERNATE MANUFACTURERS FASTENERS OF COMPARABLE SPECIFICATIONS AND LOAD CAPACITIES ARE ACCEPTABLE.

MATERIALS

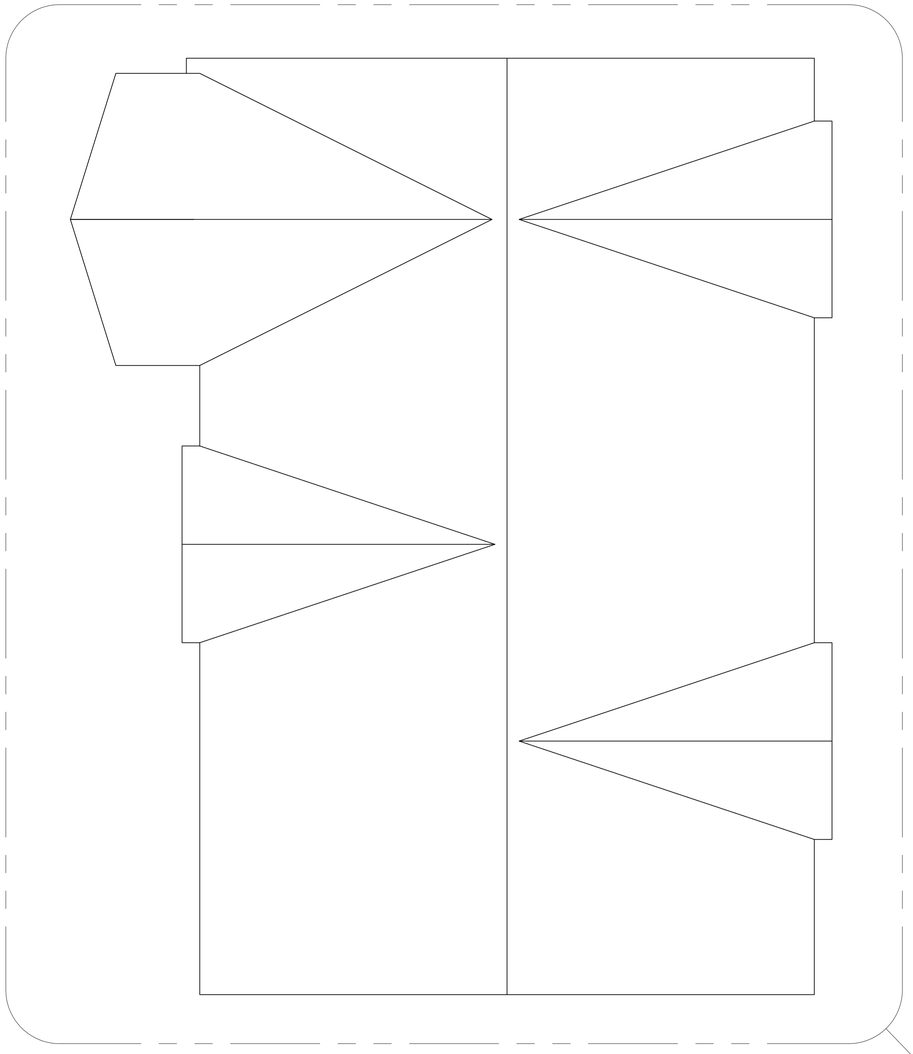
4-1 ALL STUD AND JOIST MEMBERS 16 GAGE AND HEAVIER SHALL BE FORMED FROM STEEL CORRESPONDING TO A TYPE LISTED IN THE A.I.S.I SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, WITH A MINIMUM YIELD STRENGTH OF 50 KSI.

4-2 ALL 18 GAGE AND LIGHTER MEMBERS, AND ALL TRACK, BRIDGING, AND ACCESSORY ITEMS SHALL BE FORMED FROM STEEL MEETING THE CRITERIA AS LISTED ABOVE, WITH A MINIMUM YIELD STRENGTH OF 33 KSI UNLESS SPECIFICALLY NOTED OTHERWISE.

4-3 ALL FRAMING PRODUCTS SHALL BE FORMED FROM STEEL POSSESSING A G-60 ZINC COATING CORRESPONDING TO THE MINIMUM REQUIREMENTS OF ASTM A653.

4-4 STRUCTURAL PROPERTIES USED IN THIS SUBMITTAL ARE THOSE PUBLISHED BY THE STEEL FRAMING INDUSTRY ASSOCIATION. SFIA MANUFACTURER'S MEMBERS OR APPROVED EQUAL ARE ACCEPTABLE.

4-5 STRUCTURAL PROPERTIES AND CAPABILITIES OF STEEL FRAMING COMPONENTS SHALL BE IN ACCORDANCE WITH THE A.I.S.I COLD-FORMED DESIGN SPECIFICATIONS. MINIMUM MANUFACTURER'S PROPERTIES SHALL BE 95% OF THOSE USED IN THIS SUBMITTAL, AND MINIMUM BASE STEEL THICKNESS SHALL BE 95% OF DESIGN THICKNESS.



ROOF PLAN

1
CF1.1

NORTH

APPROVER NOTE:
COLD FORMED ROOF TRUSS SHOP DRAWINGS REQUIRED TO VERIFY FRAMING.

SFIA PRODUCT INFORMATION

600 S 162 - 43

- 600 — MEMBER DEPTH (WEB)
- S — MEMBER TYPE
- 162 — FLANGE WIDTH
- 43 — MATERIAL THICKNESS (MILS)

MEMBER DEPTH (WEB SIZE) COMPARISON TABLE

MEMBER DEPTH	SFIA IDENTIFICATION
2 1/2"	250
3 5/8"	362
4"	400
6"	600
8"	800
10"	1000
12"	1200

PRODUCT SECTION COMPARISON TABLE

SECTION	FLANGE WIDTH	SFIA IDENTIFICATION
S-SECTIONS (STUDS)	1 3/8"	S137
	1 5/8"	S162
	2"	S200
	2 1/2"	S250
T-SECTIONS (TRACKS)	1 1/4"	T125
	2"	T200
	3"	T300
U-SECTIONS (U-CHANNEL)	3/4"	075U50
	1 1/2"	150U50
	2"	200U50
	2 1/2"	250U50

MATERIAL THICKNESS COMPARISON TABLE

MILS	GAGE	MINIMUM DELIVERED THICKNESS	DESIGN THICKNESS
33	20	0.0329"	0.0346"
43	18	0.0428"	0.0451"
54	16	0.0538"	0.0566"
68	14	0.0677"	0.0713"
97	12	0.0966"	0.1017"
118	10	0.1180"	0.1242"

FOR APPROVAL ONLY
NOT FOR CONSTRUCTION

INDEX

CERTIFICATION FOR THE SHEETS INDEXED ABOVE

NOTE:
CERTIFICATION FOR THE ABOVE SHEETS WILL BE PROVIDED UPON CONCEPTUAL APPROVAL.

raSmith
16745 W. Bluemound Road
Brookfield, WI 53005-5938
(262) 781-1000
rasmith.com
CREATIVITY BEYOND ENGINEERING

LAC DU FLAMBEAU CHILD DAYCARE CENTER
LAC DU FLAMBEAU, WI

LAC DU FLAMBEAU
BAND OF LAKE SUPERIOR CHIPPEWA INDIANS

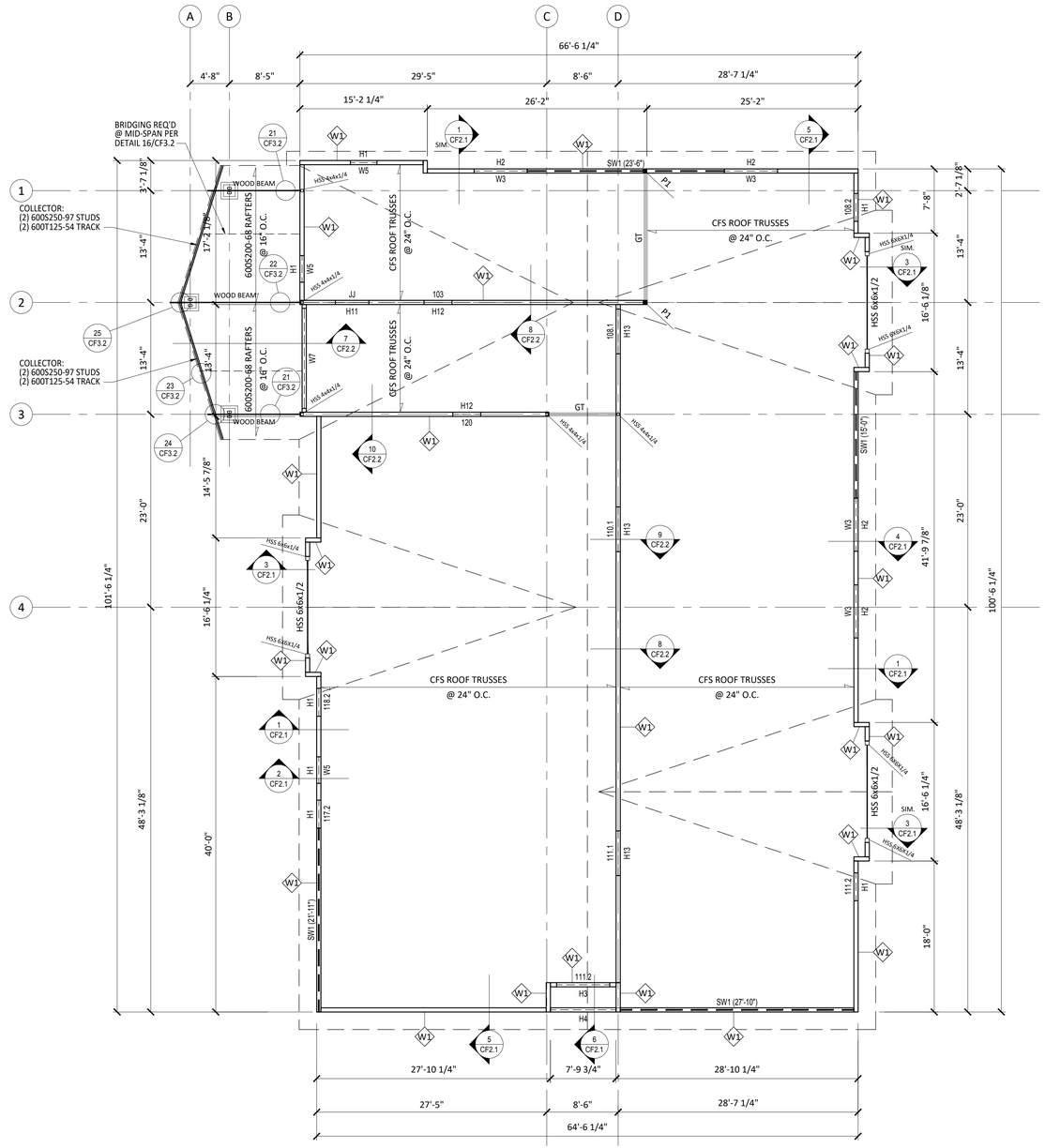
Revisions:

No.	Date:	Description:	By:

Sheet Title:
GENERAL NOTES AND ROOF PLAN

Project Number:	Drawn By:
2220692	JFK
Date Issued:	Reviewed By:
5/4/23	WCS / JPD

Sheet Number:
CF0.1



1 CF1.1 ROOF FRAMING PLAN

FIRST FLOOR BEARING BELOW

SCALE: 1/8" = 1'-0"

NORTH

NOTES:

1. TRUSS BEARING = 113'-0"
2. DIMENSIONS, WALL LOCATIONS & GRID LINES SHOWN ARE FOR REFERENCE ONLY. DETERMINE ACTUAL REQUIREMENTS FROM THE ARCHITECTURAL DRAWINGS AND FIELD VERIFY.
3. DIRECTION OF CFS ROOF TRUSS SPAN @ 24" O.C. W/ 1 1/2"x22 GA. WIDE RIB METAL DECK. (DESIGNED BY OTHERS)
4. W1 INDICATES WALL TYPE PER SCHEDULE.
5. HX INDICATES OPENING TYPE PER SCHEDULE.
6. P1 INDICATES (2) 600S200-68 STUDS (BACK-TO-BACK).
7. SWX INDICATES SHEARWALL TYPE PER SCHEDULE.

OPENING SCHEDULE

TYPE		OPENING SIZE (MAX.)	HEADER AT T/OPENING	DETAIL	SILL (AS REQ'D)	DETAIL	JAMBS (K=KING S=SHOULDER)	REMARKS
EXTERIOR OPENINGS	H1	3'-2" W. X 8'-0" T	(2) 600S162-68 (2) 600T125-54	9/CF3.1	(1) 600T125-43	7/CF3.1	(1) 600S162-54 (K) (1) 600S200-54 (S)	-
	H2	6'-4" W. X 8'-0" T.	(2) 600S200-68 (2) 600T125-54	9/CF3.1	(1) 600T125-43	7/CF3.1	(1) 600S200-68 (K) (1) 600S200-68 (S)	-
	H3	6'-4" W. X 7'-2" T.	(2) 600S162-68 (2) 600T125-54	8/CF3.1	N/A	N/A	(1) 600S162-54 (K) (1) 600S162-54 (S)	-
	H4	7'-8" W. X 8'-0" T.	(2) 600S162-68 (2) 600T125-54	8/CF3.1	N/A	N/A	(1) 600S162-54 (K) (1) 600S200-54 (S)	-
INTERIOR OPENINGS	H11	4'-0" W. X 4'-2" T.	(2) 600S162-68 (2) 600T125-54	9/CF3.1	(1) 600T125-43	N/A	(1) 600S162-54 (K) (1) 600S200-54 (S)	-
	H12	3'-2" W. X 7'-2" T.	(2) 600S162-68 (2) 600T125-54	9/CF3.1	N/A	N/A	(1) 600S162-54 (K) (1) 600S200-54 (S)	-
	H13	5'-4" W. X 7'-2" T.	(2) 600S250-97 (2) 600T125-54	20/CF3.2	N/A	N/A	(1) 600S200-68 (K) (1) 600S200-68 (S)	-

NOTES:
1. ALL HEADER, SILL, AND JAMB MEMBERS MUST BE FULL LENGTH. NO SPLICES ARE ALLOWED.
2. WALL TOP TRACK MUST BE FULL LENGTH OVER ALL OPENINGS. NO SPLICES ARE ALLOWED.
3. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT ROUGH OPENING SIZE REQUIREMENTS. DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
4. HEADER STUD AND TRACK MEMBERS MUST BE UNPUNCHED.
5. AT POSTS LOCATED AT OPENINGS JAMBS, THE POST MEMBERS WILL ACT AS KING STUDS (K) AND ALL SHOULDER STUDS (S) ARE STILL REQUIRED.
6. ADDITIONAL 16 GA. MIN. TRACK(S) MAY BE REQUIRED AT JAMB ASSEMBLIES. TRACK(S) MAY BE REQUIRED AT OPENING SIDE OR FOR THE ATTACHMENT OF MULTIPLE MEMBERS.
7. ALL BRICK AT EXTERIOR OPENINGS ASSUMED TO BE SUPPORTED BY LOOSE LINTELS. HEADERS AND JAMBS HAVE NOT BEEN DESIGNED FOR ADDITIONAL BRICK LOAD ABOVE OPENINGS.

X-BRACED SHEAR WALL SCHEDULE

FLR	COMPONENT	SW1
1ST	END POST	(2) 600S162-54
	STRAP SIZE	3" x 54 MIL (50 KSI)(BOTH-SIDES)
	STRAP CONNECTION	SCREW
	STRAP CONNECTION	(10) #10 TO TRACK/BLOCKING, (10) #10 TO POST
	BOTTOM TRACK	600T125-54
	BOTTOM TRACK FASTENERS	(1) .157" Ø x 1 1/4" EMBED. P.D.F.(S) @ 8" O.C.
	HOLDOWN	(1) HTT5 w/(26) #10 SCREWS @ EA. POST
	HOLDOWN ANCHOR	5/8" DIA. X 5" EMBED HILTI HUS-EZ ANCHOR

NOTES:
1. NO PENETRATIONS ALLOWED IN WALL TRACKS @ SHEAR WALLS.
2. STRAP TO BE CONTINUOUS BOTH SIDES OF WALL AND EACH WAY. DO NOT CONNECT STRAPS TO INTERMEDIATE WALL STUDS. ALL STRAPS TO BE 50 KSI STEEL.
3. ALL TOP AND BOTTOM TRACKS TO BE CONTINUOUS. NO SPLICES ALLOWED.
4. TOP TRACK TO BE T125 AND SAME SIZE AND GAUGE AS TYPICAL WALL STUD.
5. HOLDOWN CONNECTION TO POST PER MANUFACTURERS RECOMMENDATION.
6. REFERENCE SHEAR WALL ELEVATION ON SHEET CF2.3 FOR CONNECTION DETAILS.
7. DESIGN LOADS PER EOR (PAGE 2/S100)

WALL STUD SCHEDULE

All Studs are spaced @ 16" O.C. (U.N.O.)

FLR	W1	–	–
1ST	600S162-54	–	–

NOTES:
1. ALL TRACKS FOR TOP & BOTTOM OF WALLS ARE TO BE T125 AND MATCH SIZE AND GA. OF WALL. (TYP. THRUOUT U.N.O.)
2. REFER TO DETAIL 1/CF3.1 FOR TYPICAL STUD TO TRACK AND 2/CF3.1 FOR BRIDGING REQUIREMENTS. SEE 4/CF3.1 FOR ALLOWABLE BRIDGING REPAIRS.
3. NOTCHING OF STUDS IS NOT ALLOWED. SEE DETAIL 3/CF3.1 FOR ALLOWABLE PENETRATION LIMITATIONS.

raSmith
16745 W. Bluemound Road
Brookfield, WI 53005-5938
(262) 781-1000
rasmith.com
CREATIVITY BEYOND ENGINEERING

LAC DU FLAMBEAU CHILD DAYCARE CENTER
LAC DU FLAMBEAU, WI

LAC DU FLAMBEAU
BAND OF LAKE SUPERIOR CHIPPEWA INDIANS

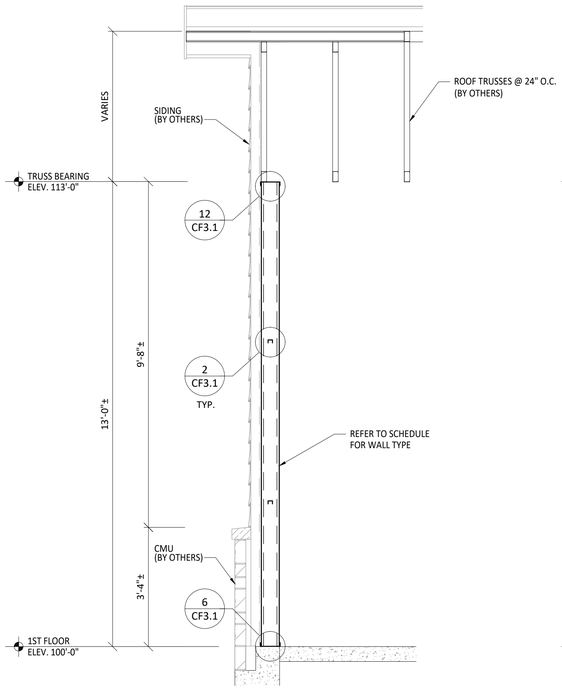
Revisions:

No.	Date:	Description:	By:

Sheet Title: ROOF FRAMING PLAN

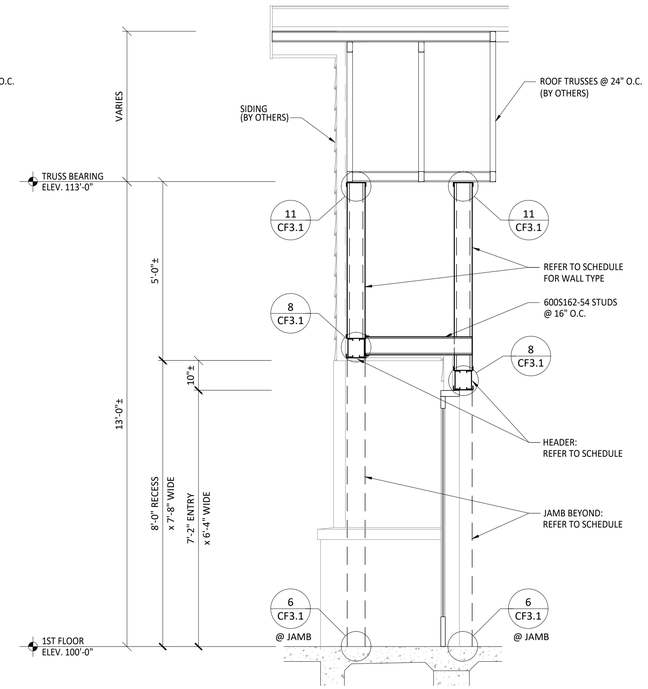
Project Number:	Drawn By:
2220692	JFK
Date Issued: 5/4/23	Reviewed By: WCS / JPD

Sheet Number: CF1.1



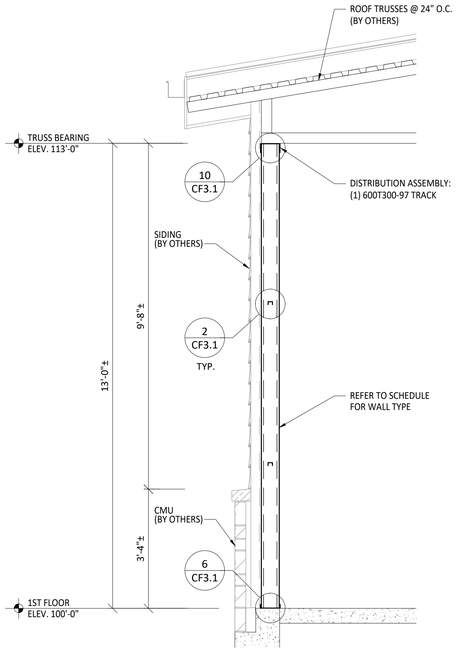
5 CF2.1 EXTERIOR WALL SECTION

REFER TO ARCHITECTURAL DWGS: 3/A300 (SIM.)
REFER TO STRUCTURAL DWGS: 6/S810



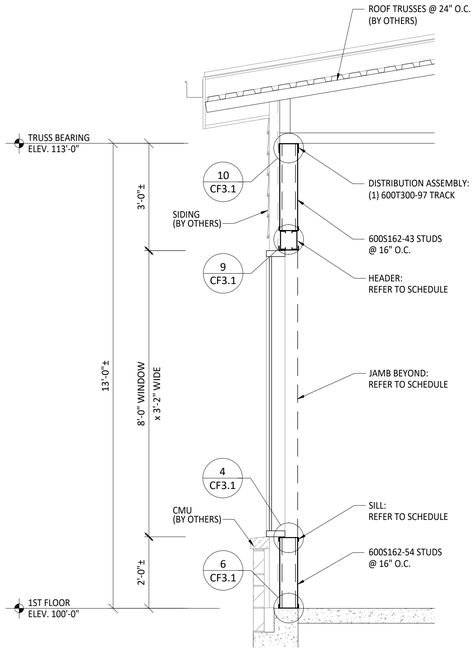
6 CF2.1 EXTERIOR WALL SECTION @ ENTRY

REFER TO ARCHITECTURAL DWGS: 3/A300
REFER TO STRUCTURAL DWGS: 6/S810



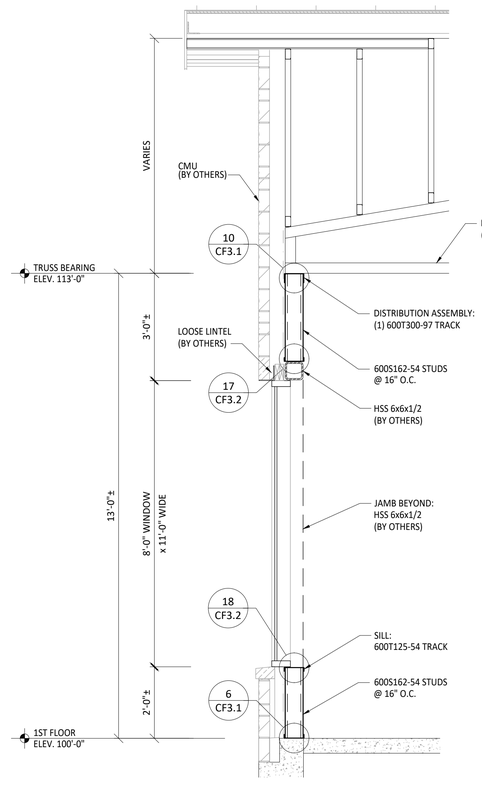
1 CF2.1 EXTERIOR WALL SECTION

REFER TO ARCHITECTURAL DWGS: 6/A300
REFER TO STRUCTURAL DWGS: 5/S810



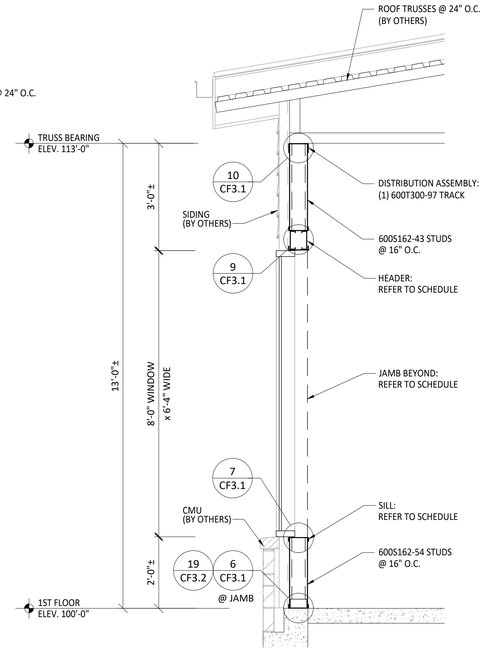
2 CF2.1 EXTERIOR WALL SECTION @ WINDOW

REFER TO ARCHITECTURAL DWGS: 7/A300
REFER TO STRUCTURAL DWGS: 5/S810



3 CF2.1 EXTERIOR WALL SECTION @ WINDOW

REFER TO ARCHITECTURAL DWGS: 2/A300
REFER TO STRUCTURAL DWGS: 7/S810, 8/S810



4 CF2.1 EXTERIOR WALL SECTION @ WINDOW

REFER TO ARCHITECTURAL DWGS: 7/A300
REFER TO STRUCTURAL DWGS: 5/S810

SECTION NOTES:
1. ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. COORDINATION WITH CONTRACT DOCS. & G.C. REQ'D. PRIOR TO ERECTION.
2. ALL TRACKS ARE TO BE SAME DEPTH & GAGE (T125) AS ADJACENT STUD OR JOIST (TYPICAL)(U.N.O.)
3. FOR TYPICAL STUD TO TRACK CONNECTION, SEE DETAIL 1/CF3.1.

raSmith
16745 W. Bluemound Road
Brookfield, WI 53005-5938
(262) 781-1000
rasmith.com
CREATIVITY BEYOND ENGINEERING

LAC DU FLAMBEAU CHILD DAYCARE CENTER
LAC DU FLAMBEAU, WI

LAC DU FLAMBEAU
BAND OF LAKE SUPERIOR CHIPPEWA INDIANS

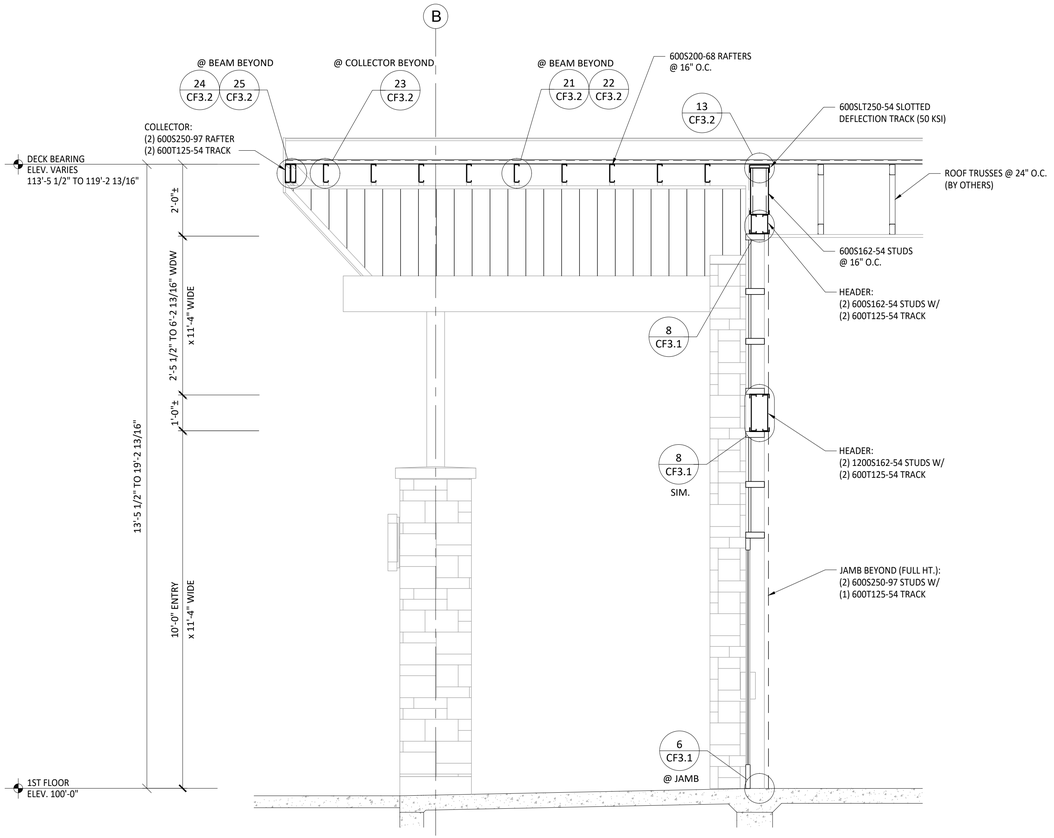
Revisions:

No.	Date:	Description:	By:

Sheet Title:
SECTIONS

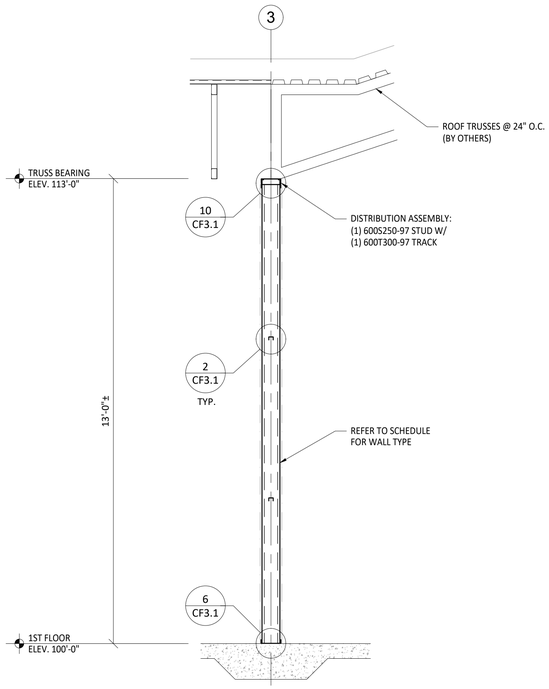
Project Number:	Drawn By:
2220692	JFK
Date Issued:	Reviewed By:
5/4/23	WCS / JPD

Sheet Number:
CF2.1



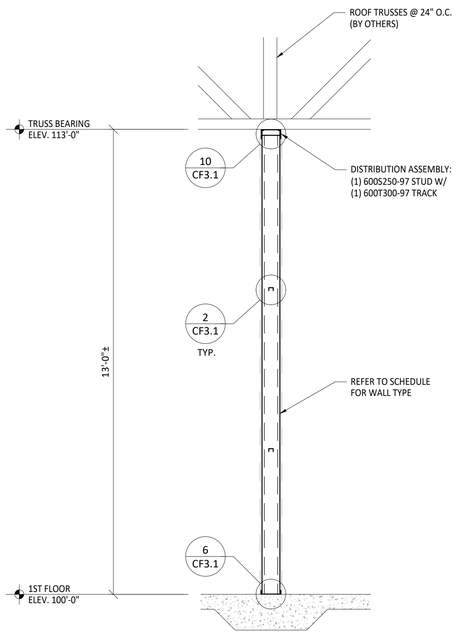
7 CF2.2 EXTERIOR WALL SECTION @ VESTIBULE

REFER TO ARCHITECTURAL DWGS: 4/A300
REFER TO STRUCTURAL DWGS: -



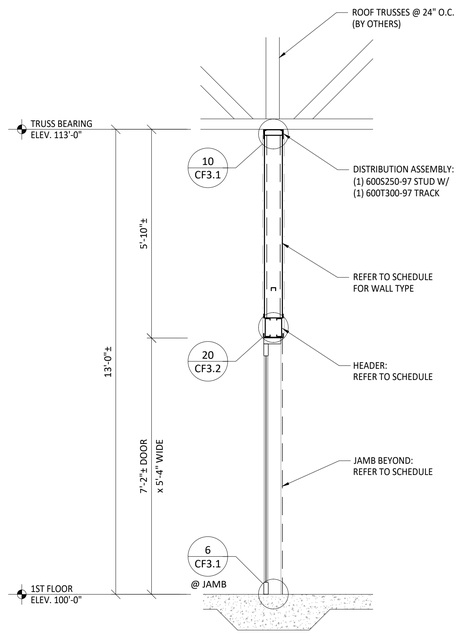
10 CF2.2 TYPICAL INTERIOR WALL SECTION

REFER TO ARCHITECTURAL DWGS: 8/A200
REFER TO STRUCTURAL DWGS: 10/S800



8 CF2.2 TYPICAL INTERIOR WALL SECTION

REFER TO ARCHITECTURAL DWGS: 6/A200
REFER TO STRUCTURAL DWGS: 10/S800



9 CF2.2 INTERIOR WALL SECTION @ DOOR

REFER TO ARCHITECTURAL DWGS: 6/A200
REFER TO STRUCTURAL DWGS: 10/S800

SECTION NOTES:
1. ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. COORDINATION WITH CONTRACT DOCS. & G.C. REQ'D. PRIOR TO ERECTION.
2. ALL TRACKS ARE TO BE SAME DEPTH & GAGE (T125) AS ADJACENT STUD OR JOIST (TYPICAL)(U.N.O.)
3. FOR TYPICAL STUD TO TRACK CONNECTION, SEE DETAIL 1/CF3.1.

raSmith
16745 W. Bluemound Road
Brookfield, WI 53005-5938
(262) 781-1000
rasmith.com
CREATIVITY BEYOND ENGINEERING

LAC DU FLAMBEAU CHILD DAYCARE CENTER
LAC DU FLAMBEAU, WI

LAC DU FLAMBEAU
BAND OF LAKE SUPERIOR CHIPPEWA INDIANS

Revisions:

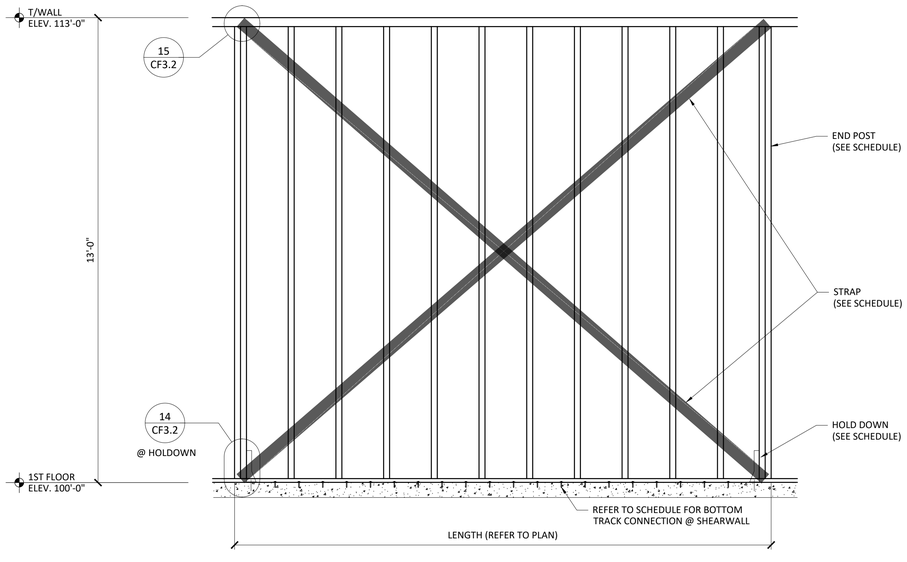
No.	Date:	Description:	By:

Sheet Title:
SECTIONS

Project Number:	Drawn By:
2220692	JFK
Date Issued:	Reviewed By:
5/4/23	WCS / JPD

Sheet Number:
CF2.2

SECTION NOTES:
1. ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. COORDINATION WITH CONTRACT DOCS. & G.C. REQ'D. PRIOR TO ERECTION.
2. ALL TRACKS ARE TO BE SAME DEPTH & GAGE (T125) AS ADJACENT STUD OR JOIST (TYPICAL)(U.N.O.)
3. FOR TYPICAL STUD TO TRACK CONNECTION, SEE DETAIL 1/CF3.1.



A
CF2.3 SHEAR WALL ELEVATION

raSmith
16745 W. Bluemound Road
Brookfield, WI 53005-5938
(262) 781-1000
rasmith.com

CREATIVITY BEYOND ENGINEERING

LAC DU FLAMBEAU CHILD DAYCARE CENTER
LAC DU FLAMBEAU, WI

LAC DU FLAMBEAU
BAND OF LAKE SUPERIOR CHIPPEWA INDIANS

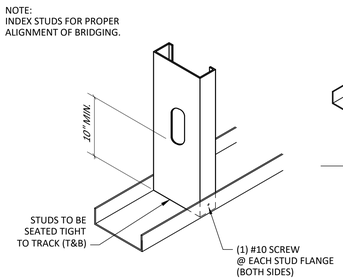
Revisions:

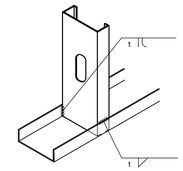
No.	Date:	Description:	By:

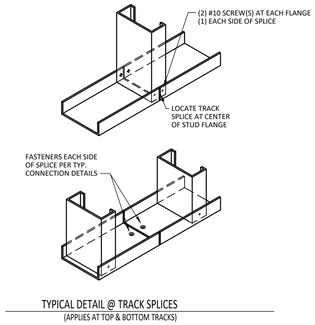
Sheet Title:
SHEAR WALL
ELEVATIONS

Project Number:	Drawn By:
2220692	JFK
Date Issued:	Reviewed By:
5/4/23	WCS / JPD

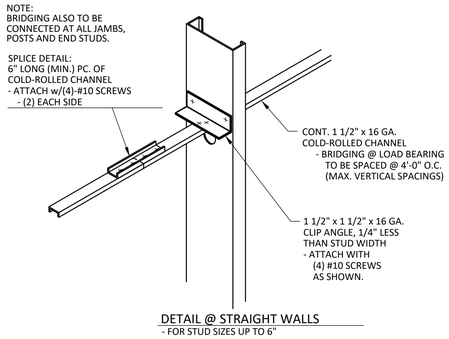
Sheet Number:
CF2.3



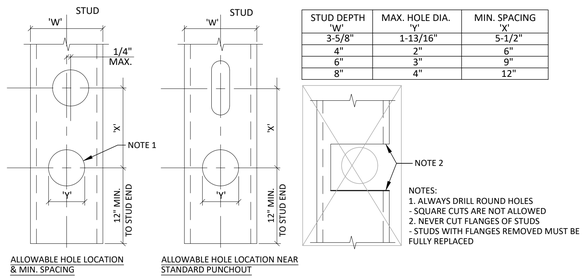




1 CF3.1 TYPICAL STUD TO TRACK (LOAD BEARING)

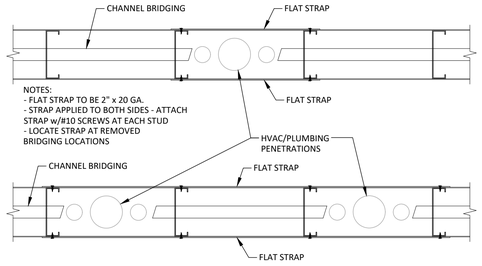


2 CF3.1 TYPICAL BRIDGING @ LOAD BEARING WALL

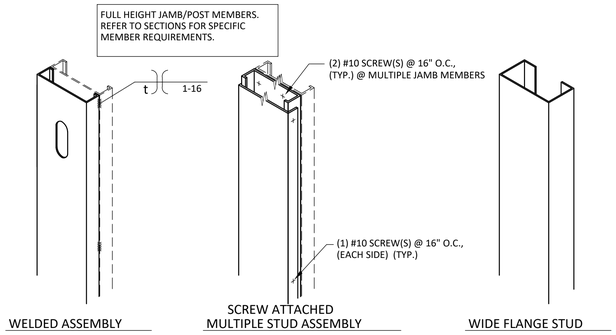


STUD DEPTH 'W'	MAX. HOLE DIA. 'Y'	MIN. SPACING 'X'
3-5/8"	1-13/16"	5-1/2"
4"	2"	6"
6"	3"	9"
8"	4"	12"

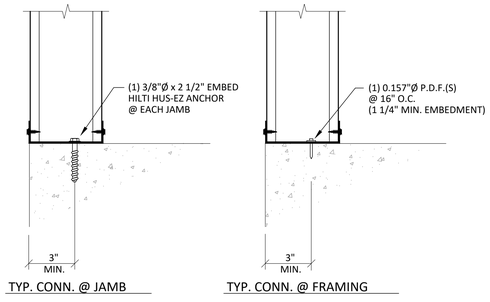
3 CF3.1 STUD PENETRATION LIMITATIONS



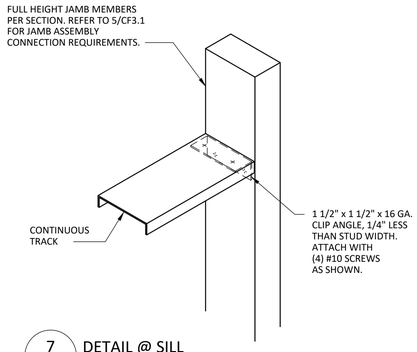
4 CF3.1 CHANNEL BRIDGING MODIFICATION DETAIL



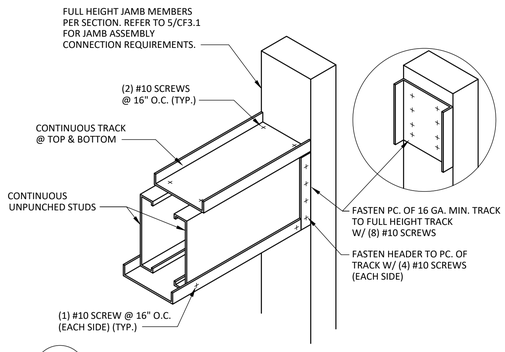
5 CF3.1 TYPICAL SINGLE AND MULTIPLE STUD JAMB/POST ASSEMBLY CONNECTION



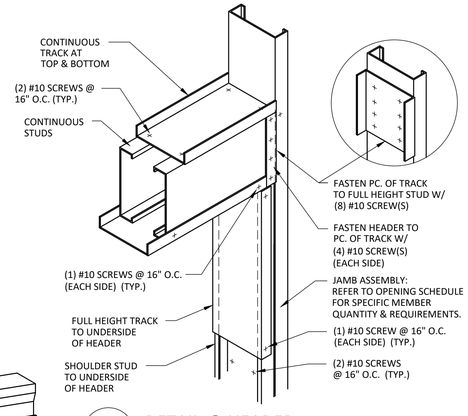
6 CF3.1 TYPICAL CONNECTION @ BASE



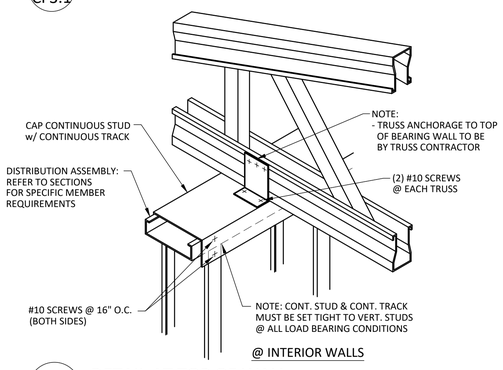
7 CF3.1 DETAIL @ SILL

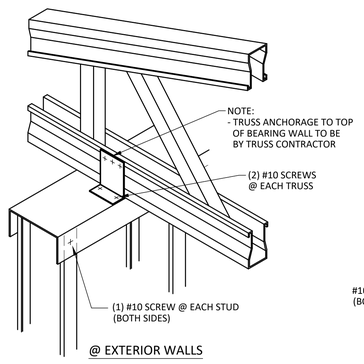


8 CF3.1 DETAIL @ HEADER

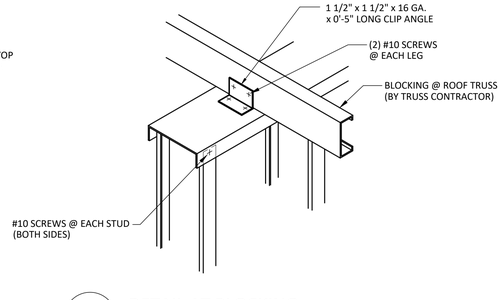


9 CF3.1 DETAIL @ HEADER

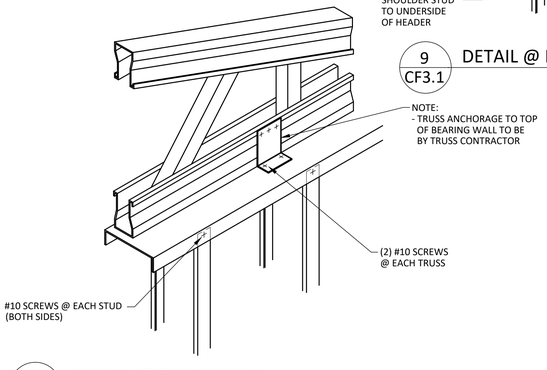




10 CF3.1 DETAIL AT TOP OF WALL



11 CF3.1 DETAIL AT BLOCKING



12 CF3.1 DETAIL AT TOP OF WALL

raSmith
16745 W. Bluemound Road
Brookfield, WI 53005-5938
(262) 781-1000
rasmith.com
CREATIVITY BEYOND ENGINEERING

LAC DU FLAMBEAU CHILD DAYCARE CENTER
LAC DU FLAMBEAU, WI

LAC DU FLAMBEAU
BAND OF LAKE SUPERIOR CHIPPEWA INDIANS

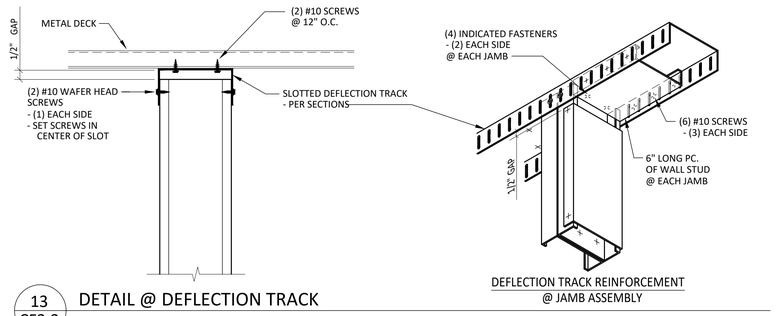
Revisions:

No.	Date:	Description:	By:

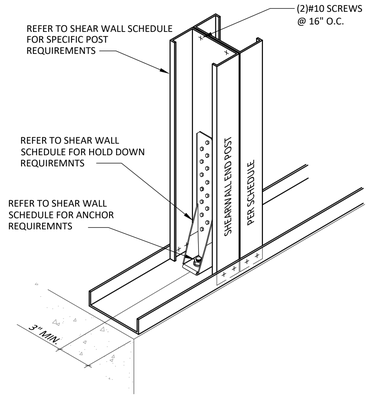
Sheet Title:
DETAILS

Project Number:	Drawn By:
2220692	JFK
Date Issued:	Reviewed By:
5/4/23	WCS / JPD

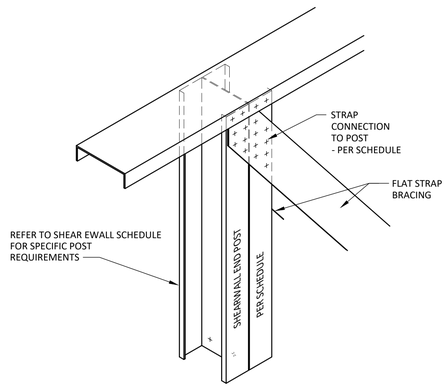
Sheet Number:
CF3.1



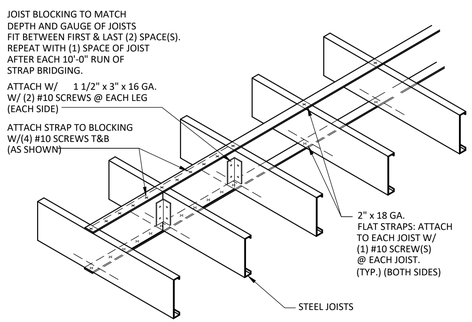
13 CF3.2 DETAIL @ DEFLECTION TRACK



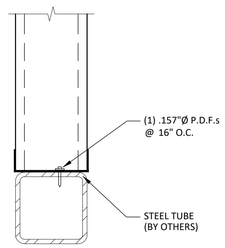
14 CF3.2 DETAIL AT SHEAR WALL BASE



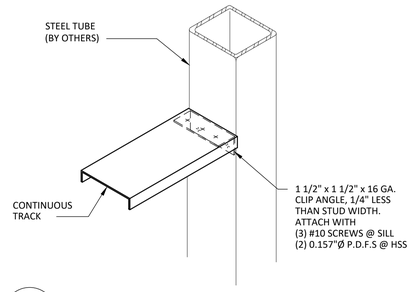
15 CF3.2 SHEAR WALL AT TOP OF WALL



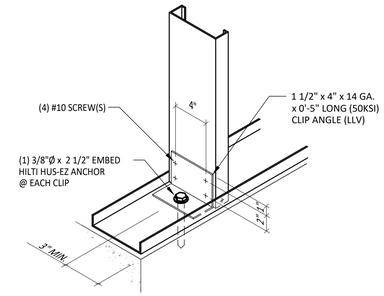
16 CF3.2 DETAIL AT JOIST BLOCKING



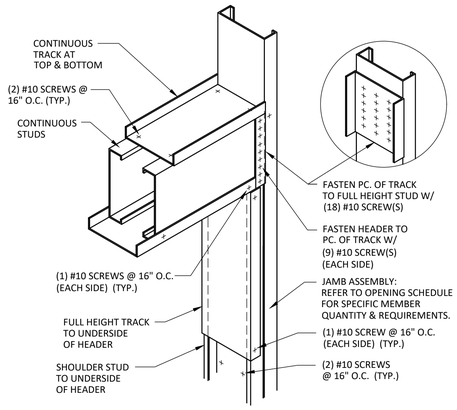
17 CF3.2 DETAIL



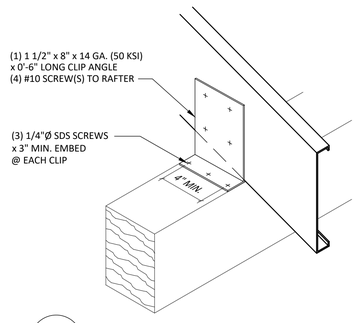
18 CF3.2 DETAIL @ SILL



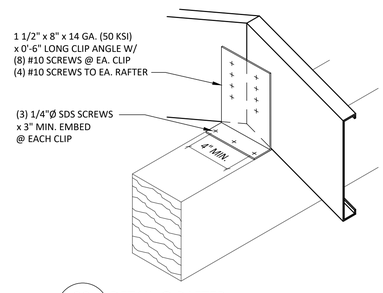
19 CF3.2 DETAIL @ MOMENT CONN.



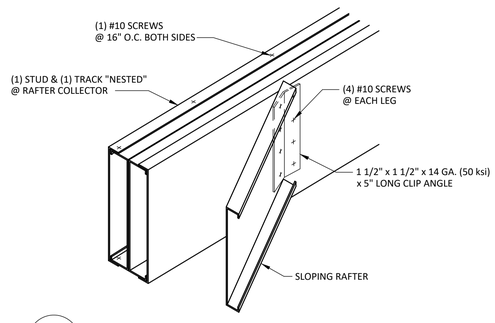
20 CF3.2 DETAIL @ HEADER



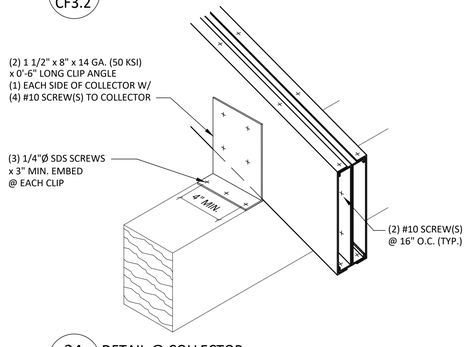
21 CF3.2 DETAIL @ RAFTER



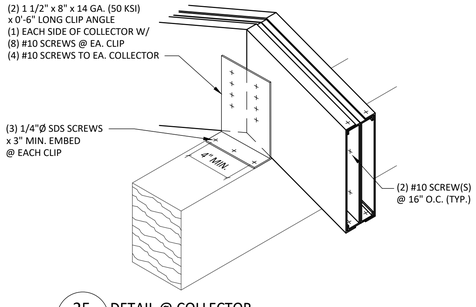
22 CF3.2 DETAIL @ RAFTER



23 CF3.2 DETAIL @ RAFTER



24 CF3.2 DETAIL @ COLLECTOR



25 CF3.2 DETAIL @ COLLECTOR

raSmith
16745 W. Bluemound Road
Brookfield, WI 53005-5938
(262) 781-1000
rasmith.com

CREATIVITY BEYOND ENGINEERING

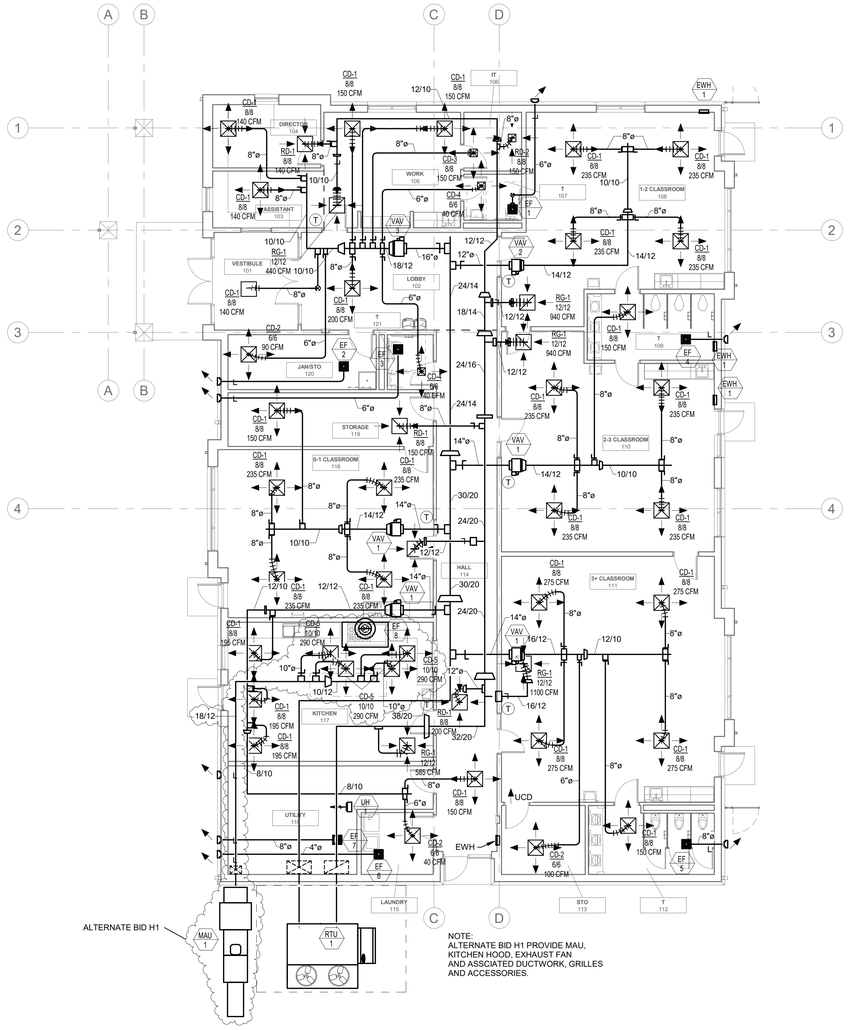
LAC DU FLAMBEAU CHILD DAYCARE CENTER
LAC DU FLAMBEAU, WI
LAC DU FLAMBEAU
BAND OF LAKE SUPERIOR CHIPPEWA INDIANS

Revisions:			
No.	Date:	Description:	By:

Sheet Title: DETAILS

Project Number:	Drawn By:
2220692	JFK
Date Issued:	Reviewed By:
5/4/23	WCS / JPD

Sheet Number: CF3.2



1 FIRST FLOOR PLAN - MECHANICAL

0' 2' 4' 8' 12'

ARCHITECTURE
ENGINEERING
INTERIOR DESIGN

HSR ASSOCIATES INC.
100 MILWAUKEE STREET
LA CROSSE, WISCONSIN
PHONE: 608.784.1830
FAX: 608.782.5844
www.hsrassociates.com

Consultant:

THUNDERBIRD ENGINEERING INC
MILWAUKEE PH: (414) 352-2211
MIDDLETON PH: (608) 820-1201
www.thunderbirdengineering.com
TBE # 22-028

Project Title: **LAC DU FLAMBEAU CHILD DAYCARE CENTER**

Project Location: **Lac du Flambeau, Wisconsin**

Sheet Title: **FIRST FLOOR PLAN - MECHANICAL**

HSR Project Number: **22066**

Project Date: **FEBRUARY 2023**

Drawn By: **Author**

Key Plan:

BID PACK #1

Revisions:

No.	Description	Date

Graphic Scale: **VARIES**

Last Update: **4/27/2023 1:36:56 PM**

M100