ARCHITECHNICS, INC. 510 MAINE STREET QUINCY, ILLINOIS 62301

PROJECT NO.: 6463

ADDENDUM NO.: 2

ISSUED: <u>4/22/2024</u>

Main Level Foundation Plan

Project: Mississippi River Recreation Center

106 Lewis Street Canton, Missouri 63435

This addendum becomes a part of the bidding and contract documents and modifies the drawings and specifications dated April 2, 2024. Acknowledge receipt of this addendum by noting such on the Contractor's Proposal (Bid) Form.

#### FAILURE TO DO SO MAY SUBJECT BIDDER TO DISQUALIFICATION

| ITEM |   | DESCRIPTIO   | N   |
|------|---|--------------|---|
|      |   |              |   |
| Subs | titutions                                     |              |   |
| 1.0  | Wood Athletic Flooring                        | Add          | Robbins Bio-Cushion Classic with Zero/G Shock Pad   |
| Spec | ifications                                    |              |   |
| 1.0  | 00 4323<br>Alternates Form                    | Add          | Addition of Alternates A-2 and A-3  |
| 2.0  | 01 2300<br>Alternates                         | Add          | Alternate A-2: An additive amount to provide and install Wood Athletic Flooring (WAF-1) Robbins Bio-Cushion Classic with Zero/G Shock Pad or approved equal where specified.                          |
| 3.0  | 01 2300<br>Alternates                         | Add          | Alternate A-3: A deductive amount should the 24" of low volume change fill material not be required based on the results of the field tests, performed by the contractor's geotechnical testing firm. |
| 4.0  | 23 7416, 23 7416.10<br>RTUs                   | Revise       | Single wall construction is allowed. RTU-1, 4 can have the option of 3 compressors providing 5 stages of cooling in lieu of 3 variable speed compressors.   |
| 5.0  | 33 4211<br>Storm Water Piping                 | Revise       | SDR26 piping is acceptable.   |
| Draw | <u>rings</u>                                  |              |   |
| 1.0  | A102<br>Roof Plan                             | Revise       | Vestibule/Reception Roof equal to CECO Superlok (12 inch) panel   |
| 2.0  | I000<br>Interior Finish Plan and Specificatio | Revise<br>ns | WAF-1 Equal to Robbins Bio-Cushion Classic with Zero/G Shock Pad (Omit reference to Connor Sports "VIP" performance hardwood system)  |
| 3.0  | S100  | Replace      | Replace with attached sheet.  |

| 4.0 | S101<br>Second Level Framing Plan      | Replace | Replace with attached sheet.                                  |
|-----|--|---------|---|
| 5.0 | S103<br>Main Level Masonry Lintel Plan | Replace | Replace with attached sheet.                                  |
| 6.0 | S401<br>Masonry Detail                 | Replace | Replace with attached sheet.                                  |
| 7.0 | S502<br>Steel Details                  | Replace | Replace with attached sheet.                                  |
| 8.0 | E300                                   | Revise  | Add an 800A main breaker to the Main Distribution Panelboard. |

Attachments: Plan-Spec List, Bid RFI Log; spec. sections 00 4323, 01 2300, 13 3419, Sheets A102, I000, S100, S101, S103, S401, S502

## **RECORD OF PLANS AND SPECIFICATIONS**

|               |              |               |                              |            | PAGE NO. | One |
|---------------|--------------|---------------|------------------------------|------------|----------|-----|
| NAME OF PROJ  | ECT          |               | Mississippi River Rec Cente  | er         | <u>-</u> |     |
|               |              |               |                              |            |          |     |
| PROJECT NO.   | 6463         | DATE BIDS DUE | Thursday, April 25, 2024     | DEPOSIT    | \$50.0   | 0   |
| -             |              | _             |                              |            |          |     |
| TIME AND PLAC | E OF LETTING |               | 2:00 PM Architechnic         | s, Inc     |          |     |
|               |              | <u> </u>      | 510 Maine Street - Floor 10, | Quincy, IL |          | •   |

|                                       | _    | 510 Maine Street - Floor 10, Quincy, IL |          |          |          |  |
|---------------------------------------|------|---|----------|----------|----------|--|
| *** Indicates Potential Bidding Contr |      |   |          |          |          |  |
| CONTRACTOR NAME                       | COPY | DATE                                    | DATE     | DEPOSIT  | DEPOSIT  |  |
| ADDRESS/PHONE/EMAIL                   | NO.  | RECEIVED                                | RETURNED | RECEIVED | RETURNED |  |
| Architect                             | #1   |   |          |          |          |  |
| Owner                                 | #2   |   |          |          |          |  |
| Bleigh Construction                   |      |   |          |          |          |  |
| PO Box 957                            |      |   |          |          |          |  |
| Hannibal, MO 63401                    | D    | 4/5/2024                                |          |          |          |  |
| 573-221-2247                          |      | 4/0/2024                                |          |          |          |  |
| Fax 573-221-4331                      |      |   |          |          |          |  |
| lvannatta@bleigh.com                  |      |   |          |          |          |  |
| Keck Heating & A/C                    |      |   |          |          |          |  |
| 431 State Street                      |      |   |          |          |          |  |
| Quincy, IL 62301                      | D    | 4/5/2024                                |          |          |          |  |
| 217-223-5325                          |      |   |          |          |          |  |
| Fax 217-223-8325                      |      |   |          |          |          |  |
| keckhvac@keckheatingandair.com        |      |   |          |          |          |  |
| Rees Construction                     |      |   |          |          |          |  |
| 330 S 5th                             |      |   |          |          |          |  |
| Quincy, IL 62301                      | D    | 4/5/2024                                |          |          |          |  |
| 217-222-0748                          |      |   |          |          |          |  |
| Fax 217-222-2613                      |      |   |          |          |          |  |
| info@reesconstructionco.com           |      |   |          |          |          |  |
| Precision Mechanical Group Inc        |      |   |          |          |          |  |
| 922 Main St                           |      |   |          |          |          |  |
| Keokuk, IA 52632                      | D    | 4/5/2024                                |          |          |          |  |
| 217-357-1843                          |      |   |          |          |          |  |
| mark@precisionmechanicalgrouping      | ]    |   |          |          |          |  |
| Custom Glass & Glazing                | 1    |   |          |          |          |  |
| 420 S 7th St                          |      |   |          |          |          |  |
| Quincy, IL 62301                      |      |   |          |          |          |  |
| 217-223-4527                          | D    | 4/5/2024                                |          |          |          |  |
| Fax: 217-221-0694                     |      |   |          |          |          |  |
| customgg@sbcglobal.net                |      |   |          |          |          |  |
| M.E. Mechanical                       |      |   |          |          |          |  |
| 2501 Ellington Rd                     |      |   |          |          |          |  |
| Quincy, IL 62305                      | _    | 4/=/0.00                                |          |          |          |  |
| 217-242-0395                          | D    | 4/5/2024                                |          |          |          |  |
|                                       |      |   |          |          |          |  |
| eric@memechanicalllc.com              |      |   |          |          |          |  |
| Heimer Construction Co.               |      |   |          |          |          |  |
| 6811 Co Rd 344                        |      |   |          |          |          |  |
| Taylor, MO 63471                      |      | A   E   O O O A                         |          |          |          |  |
| 573-769-5515                          | D    | 4/5/2024                                |          |          |          |  |
| Fax: 573-769-5516                     |      |   |          |          |          |  |
| darinh@heimerconstruction.com         |      |   |          |          |          |  |
| Schwada Builders, Inc.                |      |   |          |          |          |  |
| PO Box 487                            |      |   |          |          |          |  |
| lot 11.1 110 00 100                   |      |   | 1        |          |          |  |

D

4/5/2024

Shelbina, MO 63468

573-588-4079 Fax: 573-588-7605 bschwada@yahoo.com

## **RECORD OF PLANS AND SPECIFICATIONS**

PAGE NO. Two

Mississippi River Rec Center

| PROJECT NO. 6463                  |      |            |          | DEPOSIT: | \$50.00  |
|-----------------------------------|------|------------|----------|----------|----------|
| CONTRACTOR NAME                   | COPY | DATE       | DATE     | DEPOSIT  | DEPOSIT  |
| ADDRESS/PHONE/EMAIL               | NO.  | RECEIVED   | RETURNED | RECEIVED | RETURNED |
| JH Concrete                       |      |            |          |          |          |
| PO BOX 1088                       |      |            |          |          |          |
| Quincy, IL 62306                  | D    | AIEIOOOA   |          |          |          |
| 217-224-9043                      | ן ט  | 4/5/2024   |          |          |          |
| Fax: 217-224-9121                 |      |            |          |          |          |
| justin@jhconcrete.com             |      |            |          |          |          |
| Maas Construction Co.             |      |            |          |          |          |
| 3615 St. Anthony's Rd.            |      |            |          |          |          |
| Quincy, IL 62305                  | _    |            |          |          |          |
| 217-228-1105                      | D    | 4/5/2024   |          |          |          |
| Fax: 217 228-1151                 |      |            |          |          |          |
| maas@maasconstruction.net         |      |            |          |          |          |
| S.M. Wilson & Co.                 |      |            |          |          |          |
| 2185 Hampton Ave.                 |      |            |          |          |          |
| St. Louis, MO 63139               |      |            |          |          |          |
|                                   | D    | 4/5/2024   |          |          |          |
| 314 645-9595<br>Fox: 314 645 4700 |      |            |          |          |          |
| Fax: 314 645-1700                 |      |            |          |          |          |
| jake.fenster@smwilson.com         |      |            |          |          |          |
| Trotter General Contracting, Inc  |      |            |          |          |          |
| 900 Doran Drive                   |      |            |          |          |          |
| Macomb, IL 61455                  | D    | 4/8/2024   |          |          |          |
| 309-836-5040                      |      | 71 JI LULT |          |          |          |
| Fax: 309-836-3756                 |      |            |          |          |          |
| tgci820@yahoo.com                 |      |            |          |          |          |
| Million Construction, Ltd         |      |            |          |          |          |
| 3626 South 46th Street            |      |            |          |          |          |
| Quincy, IL 62305                  |      | 4/0/0004   |          |          |          |
| 217-222-5202                      | D    | 4/8/2024   |          |          |          |
| Cell: 217242-5204                 |      |            |          |          |          |
| mmillionltd@comcast.net           |      |            |          |          |          |
| Brinkman Plumbing Co.             |      |            |          |          |          |
| 2510 Ellington Rd.                |      |            |          |          |          |
| Quincy, IL 62301                  |      |            |          |          |          |
| 217 223-1962                      | D    | 4/9/2024   |          |          |          |
| Fax: 217 223-1972                 |      |            |          |          |          |
|                                   |      |            |          |          |          |
| janderson@brinkmanplumbing.com    |      |            |          |          |          |
| D&L Excavating, Inc.              |      |            |          |          |          |
| 1958 Hwy 104                      |      |            |          |          |          |
| Liberty, IL 62347                 | D    | 4/9/2024   |          |          |          |
| 217 645-3701                      |      | 3.2427     |          |          |          |
| Fax: 217 645-3692                 |      |            |          |          |          |
| dlexcavatinginc@yahoo.com         |      |            |          |          |          |
| Jansen Electric                   |      |            |          |          |          |
| 4421 N. 60th Street               |      |            |          |          |          |
| Quincy, IL 62305                  | D    | 4/10/2024  |          |          |          |
| 217-223-4016                      | '    | 4/10/2024  |          |          |          |
| Fax 217-223-8046                  |      |            |          |          |          |
| jansen@adams.net                  |      |            |          |          |          |
| Emrick Brothers Construction      |      |            |          |          |          |
| 2208 S 12th St                    |      |            |          |          |          |
| Quincy, IL 62305                  |      |            |          |          |          |
| 217-617-7799                      | D    | 4/17/2024  |          |          |          |
|                                   |      |            |          |          |          |
| hunteremrick7@gmail.com           |      |            |          |          |          |
| 12-D Construction                 | -    |            |          |          |          |
|                                   |      |            |          |          |          |
| 100 Greenway Dr                   |      |            |          |          |          |
| Shelbina, MO 63468                | D    | 4/18/2024  |          |          |          |
| 660-415-7362                      |      |            |          |          |          |
|                                   |      |            |          | •        |          |

**NAME OF PROJECT** 

## **RECORD OF PLANS AND SPECIFICATIONS**

PAGE NO. Three

NAME OF PROJECT Mississippi River Rec Center

|     | PROJECT NO. 6463                                 |      | DEPOSIT: \$50.00 |          |          |          |
|-----|--|------|------------------|----------|----------|----------|
|     | CONTRACTOR NAME                                  | COPY | DATE             | DATE     | DEPOSIT  | DEPOSIT  |
|     | ADDRESS/PHONE/EMAIL                              | NO.  | RECEIVED         | RETURNED | RECEIVED | RETURNED |
| *** | J Reiff Construction                             |      |                  |          |          |          |
|     | 347 S Ridge St                                   |      |                  |          |          |          |
|     | Memphis, MO 63555                                | D    | 4/18/2024        |          |          |          |
|     | 660-342-0552                                     |      | 4/10/2024        |          |          |          |
|     |  |      |                  |          |          |          |
| *** | jonathan@jreiffconstruction.com                  |      |                  |          |          |          |
|     | PSR Construction, Inc.<br>800 N. Centennial Ave. |      |                  |          |          |          |
|     | Kirksville, MO 63501                             |      |                  |          |          |          |
|     | 660 627-3600                                     | D    | 4/18/2024        |          |          |          |
|     | Fax: 660 627-3601                                |      |                  |          |          |          |
|     | terry@psrconstructioninc.com                     |      |                  |          |          |          |
|     | Breckenkamp Painting                             |      |                  |          |          |          |
|     | 3820 Stonegate Rd.                               |      |                  |          |          |          |
|     | Quincy, IL 62305                                 | _    |                  |          |          |          |
|     | 217-242-8610                                     | D    | 4/18/2024        |          |          |          |
|     | Fax: 217-223-6293                                |      |                  |          |          |          |
|     | michaelbreckenkamp@yahoo.com                     |      |                  |          |          |          |
|     |  |      |                  |          |          |          |
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Mississippi River
Recreation Center
4/2/2024

| Recreation<br>Item # | Date      | Contractor/Vendor           | Question   | Response   | Add. # | Ву | Date              |
|----------------------|-----------|-----------------------------|--|--|--------|----|-------------------|
| iteili#              | Date      | Contractor/vendor           |  |  | Auu. # | Бу | Date              |
| 1                    | 4/9/2024  | SM Wilson                   | Please indicate the brand/type, specifications of the wood flooring to be provided by owner and installed by contractor  | Basis of Design for the Wood Athletic Floor (WAF-1) to be Connor Sports "VIP" Performance Hardwood System. Response revised in Addendum #2, see Alternate A-2  | 2      | JS | 4/18/24 & 4/22/24 |
| 2                    | 4/11/2024 | SM Wilson                   | Please indicate if additional information and/or specifications are available regarding the storm sewer system   | Subsurface storage system is described on drawing C101 and detailed on C501, we would recommend contacting the vendor directly for additional information.   | n/a    | JS | 4/15/2024         |
| 3                    | 4/11/2024 | SM Wilson                   | Please indicate if a control point or boundary survey has been completed for the site  | Yes, a boundary survey and utility survey has been obtained  | n/a    | JS | 4/15/2024         |
| 4                    | 4/12/2024 | SM Wilson                   | Has a geotechnical report been done on this site? If so, please provide direction on how we are to handle any unforseen underground conditions.  | No there has not been a geotechnical report completed for the site. Review sheets 5001 and 5100 for required removal of 24" of existing subgrade (below slab elevation and replacement with 24" of low volume change fill material.                              | 1      | BS | 4/18/2024         |
| 5                    | 4/12/2024 | Brinkman                    | On the architectural drawings, there was a washer and dryer but on the pluming drawings it doesn't show a rough-in for one.  | will add in addendum 1   | 1      | IM | 4/18/2024         |
| 6                    | 4/12/2024 | Brinkman                    | Outside water service shows a fire protection and a separate domestic service coming into the building. Spoke with City of Canton water supervisor (Cindy) and explained because of legionary, it is common to bring one service into the building and set meter inside and is code in IL but not yet code required in MO. Cindy agreed and had no problems with it. | will add a note on C101 in addendum 1  | 1      | IM | 4/18/2024         |
| 7                    | 4/12/2024 | Bleigh                      | Room Signs: What is the size of the sign and what material for the sign. The specification says plastic. Supplier inquired if it should be rigid vinyl, acrylic, or photopolymer. Is there a sign schedule.  | The specification is accurate with identifying plastic but it is a general material description. Rigid vinyl, acrylic and photopolymer are types of plastics and are acceptable to use. The size of the signs and locations are identified on drawing sheet 1000 | n/a    | JS | 4/12/2024         |
| 8                    | 4/12/2024 | Bleigh                      | Dimensional Signs: What type of letter is requested? Cast aluminum or aluminum Sheet Flat. If aluminum sheet flat, what thickness do you want for the letter.  | Spec section 10 1419 identifies the metal letters as aluminum flat sheet and font/finish as selected by architect from manufacturer's full range. Additional information: thickness 1/2", mounting with 1" standoffs to accommodate ribs in metal wall panel     | 1      | JS | 4/18/2024         |
| 9                    | 4/12/2024 | Horton                      | 08 7100 Door Hardware: We are unable to source the LCN,<br>Norton, Precision or Besam brand automatic door operator.<br>Substitution request for a Horton Series 4100LE.   | Substitution request is not approved as the specified LCN is a hyraulic door closer  | n/a    | JS | 4/17/2024         |
| 10                   | 4/16/2024 | Bleigh                      | Detail 1/S401 provides a lintel schedule but we can't find a reference on the architectural or structural sheets were they occur   | Sheets S103 and S104 are provided in Addendum 1  | 1      | BS | 4/18/2024         |
| 11                   | 4/16/2024 | Bleigh                      | Detail 3/A500 (Openings 121 E and 124B) show a top of window elevation of 112' but Detail 8/S401 gives the top of masonry wall at 113'-2", is there a detail of what is intended above the openings.   | Structural Framing Plan S101 shows the required framing above the aluminum framing.  | 1      | BS | 4/18/2024         |
| 12                   | 4/16/2024 | St. Louis Lighting<br>Group | E000 Lighting Fixture Schedule: We are unable to source the manufacurers specified. Substitution request for Lithonia, Mark Lighting, Prudential manufacturers   | Substitution request approved  | 1      | JS | 4/18/2024         |
| 13                   | 4/16/2024 | Shortridge                  | Can CECO's 24" wide Double-Lok panel be used in lieu of 16" Super-Lok?   | Metal roof panel to be equal to CECO Double-Lok<br>(24" wide) Galvalume Finish   | 1      | JS | 4/18/2024         |
| 14                   | 4/16/2024 | Shortridge                  | We didn't see any deflections listed in bid documents.<br>Please advise.   | See revised Metal Building specificaiton in Addendum 1   | 1      | BS | 4/18/2024         |

| 15 | 4/16/2024 | Shortridge | Should the metal panels be Signature 200 or Signature 300 paint finish?  | Wall panel finish to be equal to CECO Signature 200 (AMENDED IN ADDENDUM 2)   | 1   | JS | 4/18/2024 |
|----|-----------|------------|--|---|-----|----|-----------|
| 16 | 4/17/2024 | Rees       | Is the storm sewer pipe PVC or dual wall HDPE? Can you verify sizing for each storm run? Should there be cleanouts or structures in lieu of 90 degree bends? Do you have a depth for the sanitary sewer? It shows the sanitary going in right next to an existing power pole, can this be moved? | Specs reference SDR 11 or solid wall HDPE. They are labeled 8, 12, 15" along the pipe runs. Piping from downspout boots can be 6" if connected to a single downspout. We can add cleanouts in an addendum. We can add the elevations of the NE manhole in the addedum indicating it is 8.5' deep. We can offset the pipe west in an addendum. | 1   | IM | 4/18/2024 |
| 17 | 4/18/2024 | Bleigh     | Reference detail: 11/S502. 8/S502. 12/S502 The details indicate a carriage angle support for the follow core slab, but no size is shown, please provide.   | Carriage angle to be L5X5X3/8   | 2   | ВМ | 4/22/2024 |
| 18 | 4/18/2024 | Bleigh     | W12 (PEMB) - What is this indicating on S102 along the perimeter of the building? The PEMB will be designed with main frame members, but is there a beam other than their main frame that needs to accounted for where these are indicated?  | W12 PEMB is indicating the endwall rake framing member which is by the PEMB supplier.   | n/a | ВМ | 4/22/2024 |
| 19 | 4/18/2024 | Bleigh     | There is X bracing shown on the side walls at both ends with none in between. There will likely be X bracing needed and will possiblly interfere with the window locations   | Final coordination of windows will be completed when PEMB design complete with bracing locations is finalized.  | n/a | вм | 4/22/2024 |
| 20 | 4/18/2024 | Bleigh     | The Circles with the numbers from the General Notes on \$102, 9 is labeled on column lines H, J, K< and L, but the loading is not given for 9 on the loading chart detail 13/S501, please provide.   | This item was addressed in Addendum #1  | 1   | ВМ | 4/18/2024 |

#### SECTION 00 4323 ALTERNATES FORM

# **PARTICULARS** 1.01 THE FOLLOWING IS THE LIST OF ALTERNATES REFERENCED IN THE BID SUBMITTED BY: 1.02 (BIDDER) \_\_\_\_\_ 1.03 TO (OWNER): RIVER GIRLS, LLC 1.04 DATED AND WHICH IS AN INTEGRAL PART OF THE BID FORM. **ALTERNATES LIST** 2.01 THE FOLLOWING AMOUNTS SHALL BE ADDED TO OR DEDUCTED FROM THE BID AMOUNT. REFER TO SECTION 01 2300 - ALTERNATES. ALTERNATE # A1: ADD / (DEDUCT) \$ \_\_\_\_\_ 2.02 DESCRIPTION: PROVIDE A PRE-ENGINEERED METAL BUILDING WITH AN ADDITIONAL COLUMN LINE HALFWAY BETWEEN COLUMN LINES 01 AND 09 APPROXIMATELY EQUAL TO 77'-0". IF THIS ALTERNATE BID IS ACCEPTED THE LOCATIONS/ORIENTATION OF DOOR THAT OCCUR ALONG THIS NEW PROPOSED COLUMN LINE WILL BE ADJUSTED OR MODIFIED. ACTUAL MODIFICATIONS WILL BE DETERMINED IF THE ALTERNATE IS ACCEPTED. 2.03 THE FOLLOWING AMOUNTS SHALL BE ADDED TO OR DEDUCTED FROM THE BID AMOUNT. REFER TO SECTION 01 2300 - ALTERNATES. ALTERNATE # A2: (ADD) / DEDUCT \$\_\_\_\_\_

- 2.04 DESCRIPTION: AN ADDITIVE AMOUNT TO PROVIDE AND INSTALL WOOD ATHLETIC FLOORING (WAF-1) ROBBINS BIO-CUSHION CLASSIC WITH ZERO/G SHOCK PAD.
- 2.05 THE FOLLOWING AMOUNTS SHALL BE ADDED OR DEDUCTED FROM THE BID AMOUNT.

  REFER TO SECTION 01 2300 ALTERNATES.

  ALTERNATE # A3: ADD / (DEDUCT) \$
- 2.06 DESCRIPTION: A DEDUCTIVE AMOUNT SHOULD THE 24" OF LOW VOLUME CHANGE FILL
  MATERIAL NOT BE REQUIRED BASED ON THE RESULTS OF THE FIELD TEST

#### PERFORMED BY THE CONTRACTOR'S GEOTECHNICAL TESTING FIRM.

**END OF SECTION** 

#### SECTION 01 2300 ALTERNATES

#### **PART 1 GENERAL**

#### 1.01 SECTION INCLUDES

- A. Description of Alternates.
- B. Documentation of changes to Contract Price and Contract Time.

#### 1.02 RELATED REQUIREMENTS

- A. Document 00 2113 Instructions to Bidders: Instructions for preparation of pricing for Alternates.
- B. Document 00 4323 Alternates Form: List of Alternates as supplement to Bid Form.
- C. Document 00 5200 Agreement Form: Incorporating monetary value of accepted Alternates.

#### 1.03 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.
- B. Coordinate related work and modify surrounding work to integrate the Work of each Alternate.

#### 1.04 SCHEDULE OF ALTERNATES

#### A. Alternate No. A - 1:

- 1. Base Bid Item: Provide a Pre-Engineered Metal Building with a clear span Column Lines 01 and 09 approximately equal to 154'-0".
- Alternate Item: Provide a Pre-Engineered Metal Building with an additional column line halfway between Column Lines 01 and 09 approximately equal to 77'-0". If this alternate bid is accepted the locations/orientation of doors that occur along this new proposed column line will be adjusted or modified. Actual modifications will be determined if the alternate is accepted.

#### B. Alternate No. A - 2:

- 1. Base Bid Item: Wood Athletic Flooring (WAF-1) to be provided by owner, installed by contractor.
- Alternate Item: An additive amount to provide and install Wood Athletic Flooring (WAF-1)
  Robbins Bio-Cushion Classic with Zero/G Shock Pad or approved equal where specified.

#### C. Alternate No. A - 3:

- Base Bid Item: Scope includes to remove and replace grade below area of interior concrete slab on grade with 24" of low volume change fill material. See Sheet S001 for additional information. Geotechnical testing agency shall confirm the acceptance or nonconformance of existing subgrade material prior to removal and replacement.
- 2. Alternate Item: A dedective amount should the 24" of low volume change fill material not be required based on the results of the field tests performed by the contractor's

Alternates 01 2300-1

### geotechnical testing firm.

PART 2 PRODUCTS - NOT USED

**PART 3 EXECUTION - NOT USED** 

**END OF SECTION** 

Alternates 01 2300-2

## SECTION 13 3419 METAL BUILDING SYSTEMS

#### **PART 1 GENERAL**

#### 1.01 SECTION INCLUDES

- A. Manufacturer-engineered, shop-fabricated structural steel building frame.
- B. Metal wall and roof panels including soffits and gutters and downspouts.

#### 1.02 RELATED REQUIREMENTS

- A. Section 07 9200 Joint Sealants: Sealing joints between accessory components and wall system.
- B. Section 08 1113 Hollow Metal Doors and Frames.
- C. Section 08 3323 Overhead Coiling Doors: Exterior overhead doors.
- D. Section 08 4313 Aluminum-Framed Storefronts: Alumininum window framing.
- E. Section 08 8000 Glazing.

#### 1.03 REFERENCE STANDARDS

- A. AISC 360 Specification for Structural Steel Buildings; 2022.
- B. ASTM A36/A36M Standard Specification for Carbon Structural Steel; 2019.
- C. ASTM A153/A153M Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.
- D. ASTM A500/A500M Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2023.
- E. ASTM A501/A501M Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing; 2021.
- F. ASTM A529/A529M Standard Specification for High-Strength Carbon-Manganese Steel of Structural Quality; 2019.
- G. ASTM A653/A653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- H. ASTM C1107/C1107M Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink); 2020.
- ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- J. ASTM E96/E96M Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2023.
- K. ASTM F1554 Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength; 2020.
- L. ASTM F3125/F3125M Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile

- Strength; 2023.
- M. AWS A2.4 Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2020.
- N. AWS D1.1/D1.1M Structural Welding Code Steel; 2020, with Errata (2023).
- O. IAS AC472 Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems; 2018, with Editorial Revision (2019).
- P. MBMA (MBSM) Metal Building Systems Manual; 2019.
- Q. SSPC-Paint 20 Zinc-Rich Coating (Type I Inorganic, and Type II Organic); 2019.

#### 1.04 DEFINITIONS

- A. Metal Building System: A building system that will employ:-
  - 1. Either a continuous or simple-span 'Z' or 'C'-shaped cold-formed purlins or open-web steel joists for support of the roof cladding.-Either a continuous or simple-span 'Z' or 'C'-shaped cold-formed girts or open-web steel joists for support of the steel wall cladding.- Three-plate, built-up rigid space frames and/or cold-formed 'C' or hot-rolled I-shaped post-and-beam framing to support the roof and wall secondary members.- All systems (cladding, roof and wall secondary, lateral primary framing, and longitudinal bracing) work together to provide resistance to vertical and lateral loading demands.
  - 2. Either a continuous or simple-span 'Z' or 'C'-shaped cold-formed girts or open-web steel joists for support of the steel wall cladding.
  - 3. All systems (cladding, roof and wall secondary, lateral primary framing, and longitudinal bracing) work together to provide resistance to vertical and lateral loading demands.
- B. Gable Symmetrical: A continuous frame building with the ridge in the center of the building, consisting of tapered or straight columns and tapered or straight rafters. The sidewall girts may be continuous (by-passing the columns) or simple span (inset in the column line).
- C. Roof Slope: Pitch expressed as inches of rise for each 12 inches of horizontal run.
- D. Building Eave Height: Nominal dimension measured from finished floor to top flange of eave strut.
- E. Building Width: Measured from outside to outside of side wall secondary structural member.
- F. Building Length: Measured from outside to outside of end wall secondary structural member.
- G. Collateral Loads: Weight of any non-moving equipment or material, such as ceilings, electrical or mechanical equipment, sprinkler systems, plumbing, or ceilings.
- H. Dead Load: Actual weight of building system as supplied by manufacturer supported by given member.
- I. Floor Live Loads: Loads induced on floor system by building occupants and possessions including but not limited to furniture and equipment.
- J. Roof Live Loads: Loads produced by maintenance activities, rain, erection activities, and or movable or moving loads but not including wind, snow, seismic, crane, or dead loads.
- K. Roof Snow Loads: Gravity load induced by weight of snow or ice on roof, assumed to act on horizontal projection of roof.
- L. Seismic Loads: Loads acting in any direction on structural system due to action of an earthquake.

M. Wind Loads: Loads on structure induced by forces of wind blowing from any horizontal direction.

#### 1.05 DESIGN REQUIREMENTS

A. Governing Design Code: Structural design for the metal building system shall be performed by the manufacturer of the metal building system in accordance with the building code provided in the contract documents.

#### B. General

1. The building manufacturer will use standards, specifications, recommendations, findings and/or interpretations of professionally-recognized groups such as AISC, AISI, AWS, ASTM, CSA, CWB, MBMA, Federal Specifications, and unpublished research by MBMA as the basis for establishing design, drafting, fabrication, and quality criteria, practices, and tolerances. The Manufacturer's design, drafting, fabrication and quality criteria, practices, and tolerances shall govern, unless specifically countermanded by the contract documents.

#### C. Design Basis

- Design structural mill sections and built-up plate sections in accordance with codeappropriate edition of AISC's "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings", ANSI/AISC 360 ASD method.
- Cold-Formed steel structural members and panels will generally be designed in accordance with "Specifications for the Design of Cold-Formed Steel Structural Members", ANSI/AISI S-100.
- 3. Structural Welding Design per AWS D1.1, "Structural Welding Code Steel", Latest Edition.
- 4. Structural Bolt Design of all bolted joints in accordance with RCSC Specification.
- 5. Design structures in accordance with MBMA Practices and Manual including fabrication and erection tolerances.

#### D. Design Loads:

- 1. In accordance with Contract Documents and manufacturer's standard design practices.
- 2. Design loads include dead loads, roof live loads, wind loads, seismic loads, collateral loads, auxiliary loads, floor live loads and applied or specified loads.

#### E. General Serviceability Limits:

- 1. Deflection Limits shall be in accordance with the applicable provisions of the Metal Building Systems Manual (MBMA), latest edition.
- 2. Maximum Lateral Building Deflection: The maximum horizontal building defection measured at the building eave line shall be H/150 or 2" which ever is less.

#### 1.06 SUBMITTALS

- A. See Section 01 3000 Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on profiles, component dimensions, fasteners.
- C. Shop Drawings: Indicate assembly dimensions, locations of structural members, connections, attachments, openings, and loads; wall and roof system dimensions, panel layout, general

- construction details, anchors and methods of anchorage, and installation; framing anchor bolt settings, sizes, locations from datum, and foundation loads; indicate welded connections with AWS A2.4 welding symbols; indicate net weld lengths; provide professional seal and signature.
- D. Samples: Submit two samples of precoated metal panels for each color selected 4" x 4" in size illustrating color and texture of finish.
- E. Manufacturer's Instructions: Indicate preparation requirements, anchor bolt placement.
- F. Erection Drawings: Indicate members by label, assembly sequence, and temporary erection bracing.
- G. Designer's Qualification Statement.
- H. Manufacturer's Qualification Statement: Provide documentation showing metal building manufacturer is accredited under IAS AC472.
  - Include statement that manufacturer designs and fabricates metal building system as integrated components and assemblies, including but not limited to primary structural members, secondary members, joints, roof, and wall cladding components specifically designed to support and transfer loads and properly assembled components form a complete or partial building shell.
- I. Erector's Qualification Statement.

#### 1.07 QUALITY ASSURANCE

- A. Designer Qualifications: Design structural components, develop shop drawings, and perform shop and site work under direct supervision of a Professional Structural Engineer experienced in design of this type of work.
  - 1. Design Engineer Qualifications: Licensed in the State in which the Project is located.
  - 2. Comply with applicable code for submission of design calculations and reviewed shop and erection drawings as required for acquiring permits.
  - 3. Cooperate with regulatory agency or authorities having jurisdiction (AHJ), and provide data as requested.
- B. Perform work in accordance with AISC 360 and MBMA (MBSM).
  - 1. Maintain one copy on site.
- C. Manufacturer Qualifications: Company specializing in the manufacture of products similar to those required for this project.
  - 1. Not less than five years of documented experience.
  - 2. Accredited by IAS in accordance with IAS AC472.
- D. Erector Qualifications: Company specializing in performing the work of this section with minimum five years experience.

#### 1.08 WARRANTY

- A. See Section 01 7800 Closeout Submittals for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.
- C. Provide five year manufacturer warranty including:

 Include coverage for exterior pre-finished surfaces to cover pre-finished color coat against chipping, cracking or crazing, blistering, peeling, chalking, or fading. Include coverage for weather tightness of building enclosure elements after installation.

#### **PART 2 PRODUCTS**

#### 2.01 MANUFACTURERS

- A. Metal Buildings Systems:
  - 1. Butler Manufacturing Company: www.butlermfg.com/#sle.
  - 2. Ceco Building Systems: www.cecobuildings.com/#sle.
  - 3. Metallic Building Systems: www.metallic.com/#sle.
  - 4. Nucor Building Systems: www.nucorbuildingsystems.com/#sle.
  - 5. VP Buildings: www.vp.com/#sle.
  - 6. Substitutions: See Section 01 6000 Product Requirements.

#### 2.02 ASSEMBLIES

- A. Single span rigid frame.
- B. Primary Framing: Rigid frame of rafter beams and columns, braced end frames and end wall columns, and wind bracing.
- C. Secondary Framing: Purlins, Girts, Eave struts, Flange bracing, Sill supports, and Clips, and other items detailed.
- D. Wall System: Preformed metal panels of vertical profile, with sub-girt framing/anchorage assembly, insulation, and liner sheets, and accessory components.
- E. Roof System: Preformed metal panels oriented parallel to slope, with sub-girt framing/anchorage assembly, insulation, and liner panels, and accessory components.
- F. Roof Slope: 1" to 12".

#### 2.03 PERFORMANCE REQUIREMENTS

- A. Installed Thermal Resistance of Wall System: Refer to code review sheet G000 for energy code desing criteria.
- B. Installed Thermal Resistance of Roof System:Refer to code review sheet G000 for energy code desing criteria.
- C. Design structural members to withstand dead loads, live loads, applicable snow load, and design loads due to pressure and suction of wind calculated in accordance with applicable code and as indicated on contract documents.
- D. Exterior wall and roof system shall withstand imposed loads with maximum allowable deflection of 1/180 of span.
- E. Provide drainage to exterior for water entering or condensation occurring within wall or roof system.

- F. Permit movement of components without buckling, failure of joint seals, undue stress on fasteners or other detrimental effects, when subject to temperature range of 70 degrees F.
- G. Size and fabricate wall and roof systems free of distortion or defects detrimental to appearance or performance.

#### 2.04 MATERIALS - FRAMING

- A. Structural Steel Members: ASTM A36/A36M.
- B. Structural Tubing: ASTM A500/A500M Grade B cold-formed.
- C. Plate or Bar Stock: ASTM A529/A529M, Grade 50.
- D. Anchor Bolts: ASTM F1554, Grade 36, Class 1A, with no preference for protective coating.
- E. Bolts, Nuts, and Washers: ASTM F3125/F3125M, Type 1; galvanized to ASTM A153/A153M.
- F. Welding Materials: Perform in accordance with AWS D1.1/D1.1M.
- G. Primer: SSPC-Paint 20 zinc rich.
- H. Grout: ASTM C1107/C1107M; Non-shrink; premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.
  - 1. Minimum Compressive Strength at 48 Hours: 2,000 pounds per square inch.
  - 2. Minimum Compressive Strength at 28 Days: 7,000 pounds per square inch.

#### 2.05 MATERIALS - WALLS AND ROOF

- A. Steel Sheet: Refer to drawings for panel product basis of design.
- B. Insulation: Batt glass fiber type, unfaced, ASTM E84 Class A, flame spread index of 25 or less where exposed, friction fit, thickness to achive energy code compliance.
- C. Metal Building Type, Factory Applied, Vapor-Barrier Insulation Facings: Water vapor permeance no greater than 0.10 perm when tested in accordance with ASTM E96/E96M; flame spread index of 25 or less, and smoke developed index of 40 or less when tested in accordance with ASTM E84.
  - 1. Manufacturers:
    - a. Lamtec Corporation; WMP-VR: www.lamtec.com/#sle.
    - b. Substitutions: See Section 01 6000 Product Requirements.
- D. Joint Seal Gaskets: Manufacturer's standard type.
- E. Fasteners: Manufacturer's standard type, galvanized to comply with requirements of ASTM A153/A153M, finish to match adjacent surfaces when exterior exposed.
- F. Sealant: Manufacturer's standard type.
- G. Trim, Closure Pieces, Caps, Flashings, Gutters, Downspouts, Fascias and Infills: Same material, thickness and finish as exterior sheets; brake formed to required profiles.

#### 2.06 COMPONENTS

- A. Doors and Frames: See Section 08 1113.
- B. Overhead Doors: See Section 08 3323.

C. Windows: See Section 08 431230.

#### 2.07 FABRICATION - FRAMING

- A. Fabricate members in accordance with AISC 360 for plate, bar, tube, or rolled structural shapes.
- B. Anchor Bolts: Formed with bent shank, assembled with template for casting into concrete.
- C. Provide wall opening framing for doors, windows, and other accessory components.

#### 2.08 FABRICATION - WALL AND ROOF PANELS

- A. Siding: Main Roof Basis of design CECO "PBR" Panel, lapped edges fitted with continuous gaskets. Metal thickness to be determined by PEMB based on specified structural design loads. Finish: As selected by architect from the standard Signature 200 Series
- B. Siding: Vesibule/Reception Roof Basis of design CECO "PBR" Panel, lapped edges fitted with continuous gaskets. Metal thickness: 26 gage. Finish: Signature 300 Series
- C. Roofing: Main Roof Basis of design CECO Double-Lok Panel (24" width), lapped edges fitted with continuous gaskets. Metal thickness to be determined by PEMB based on specified structural design loads. Finish: Main Roof Gavalume Plus
- D. Roofing: Vestibule/Reception Roof Basis of design CECO Superlok Panel (12" width), lapped edges fitted with continuous gaskets. Metal thickness: 26 gage. Finish: Vestibule/Reception As selected by architect from the standard Signature 300 Series
- E. Liner: Basis of design CECO "PBR" Panel 26 Gauge, lapped V edges fitted with continuous gaskets. Finish: As selected by architect from the standard Signature 200 Series.
- F. Soffit Panels: Basis of design CECO "PBR" Panel . Metal thickness: 24 gage. Finish: As selected by architect from the standard Signature 300 Series
- G. Girts/Purlins: Rolled formed structural shape to receive siding, roofing and liner sheet.
- H. Internal and External Corners: Same material thickness and finish as adjacent material, profile brake formed to required angles.
- I. Expansion Joints: Same material and finish as adjacent material where exposed, thick, manufacturer's standard brake formed type, of profile to suit system.
- J. Flashings, Closure Pieces, Fascia: Same material and finish as adjacent material, profile to suit system.
- K. Fasteners: To maintain load requirements and weather tight installation, same finish as cladding, non-corrosive type.

#### 2.09 FABRICATION - GUTTERS AND DOWNSPOUTS

- A. Fabricate of same material and finish as roofing metal.
- B. Form gutters and downspouts of rectangular profile and size indicated to collect and remove water. Fabricate with connection pieces.

- C. Form sections in maximum possible lengths. Hem exposed edges. Allow for expansion at joints.
- D. Fabricate support straps of same material and finish as roofing metal, color as selected.

#### 2.10 FINISHES

- A. Framing Members: Clean, prepare, and shop prime. Do not prime surfaces to be field welded.
- B. Exterior Surfaces of Wall Components and Accessories: Precoated enamel on steel of polyvinyl flouride finish, color as selected from manufacturer's standard range.
- C. Interior Surfaces of Wall Components and Accessories: Precoated enamel on steel of siliconized polyester finish, color as selected from manufacturer's standard range.

#### **PART 3 EXECUTION**

#### 3.01 EXAMINATION

A. Verify that foundation, floor slab, mechanical and electrical utilities, and placed anchors are in correct position

#### 3.02 ERECTION - FRAMING

- A. Erect framing in accordance with AISC 360.
- B. Provide for erection and wind loads. Provide temporary bracing to maintain structure plumb and in alignment until completion of erection and installation of permanent bracing. Locate braced bays as indicated.
- C. Set column base plates with non-shrink grout to achieve full plate bearing.
- D. Do not field cut or alter structural members without approval.
- E. After erection, prime welds, abrasions, and surfaces not shop primed.

#### 3.03 ERECTION - WALL AND ROOF PANELS

- A. Install in accordance with manufacturer's instructions.
- B. Exercise care when cutting prefinished material to ensure cuttings do not remain on finish surface.
- C. Fasten cladding system to structural supports, aligned level and plumb.
- D. Locate end laps over supports. End laps minimum 2 inches. Place side laps over bearing.
- E. Provide expansion joints where indicated.
- F. Use concealed fasteners.
- G. Install insulation and vapor retarder utilizing \_\_\_\_\_ for attachment. Place wire mesh under vapor retarder for support between framing members.
- H. Install sealant and gaskets, providing weather tight installation.

#### 3.04 ERECTION - GUTTERS AND DOWNSPOUTS

- A. Rigidly support and secure components. Join lengths with formed seams sealed watertight. Flash and seal gutters to downspouts.
- B. Slope gutters minimum 1/16 inch/ft.
- C. Connect downspouts to storm sewer system.

#### 3.05 INSTALLATION - ACCESSORY COMPONENTS IN WALL SYSTEM

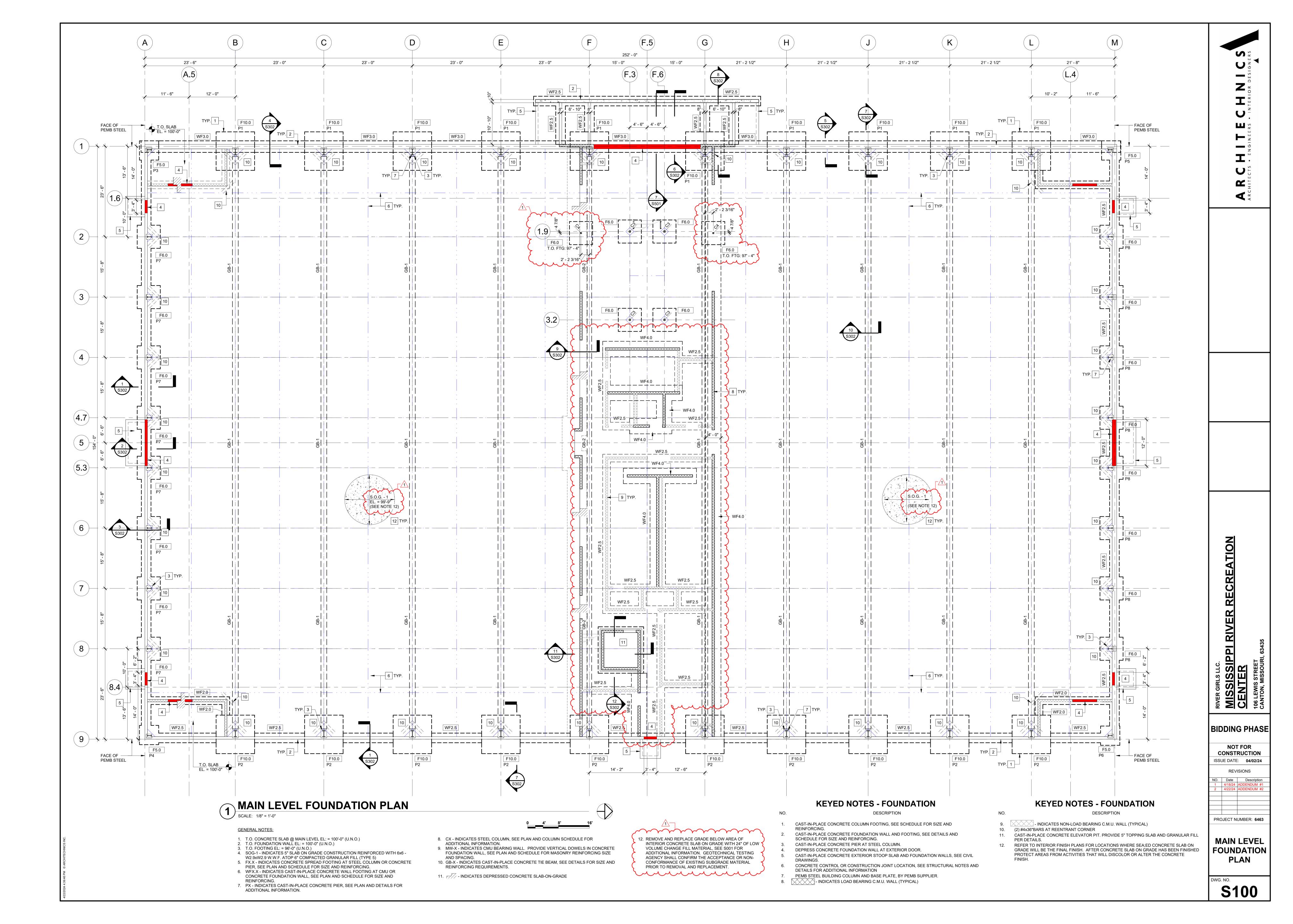
A. Install door frames, doors, overhead doors, and windows and glass in accordance with manufacturer's instructions.

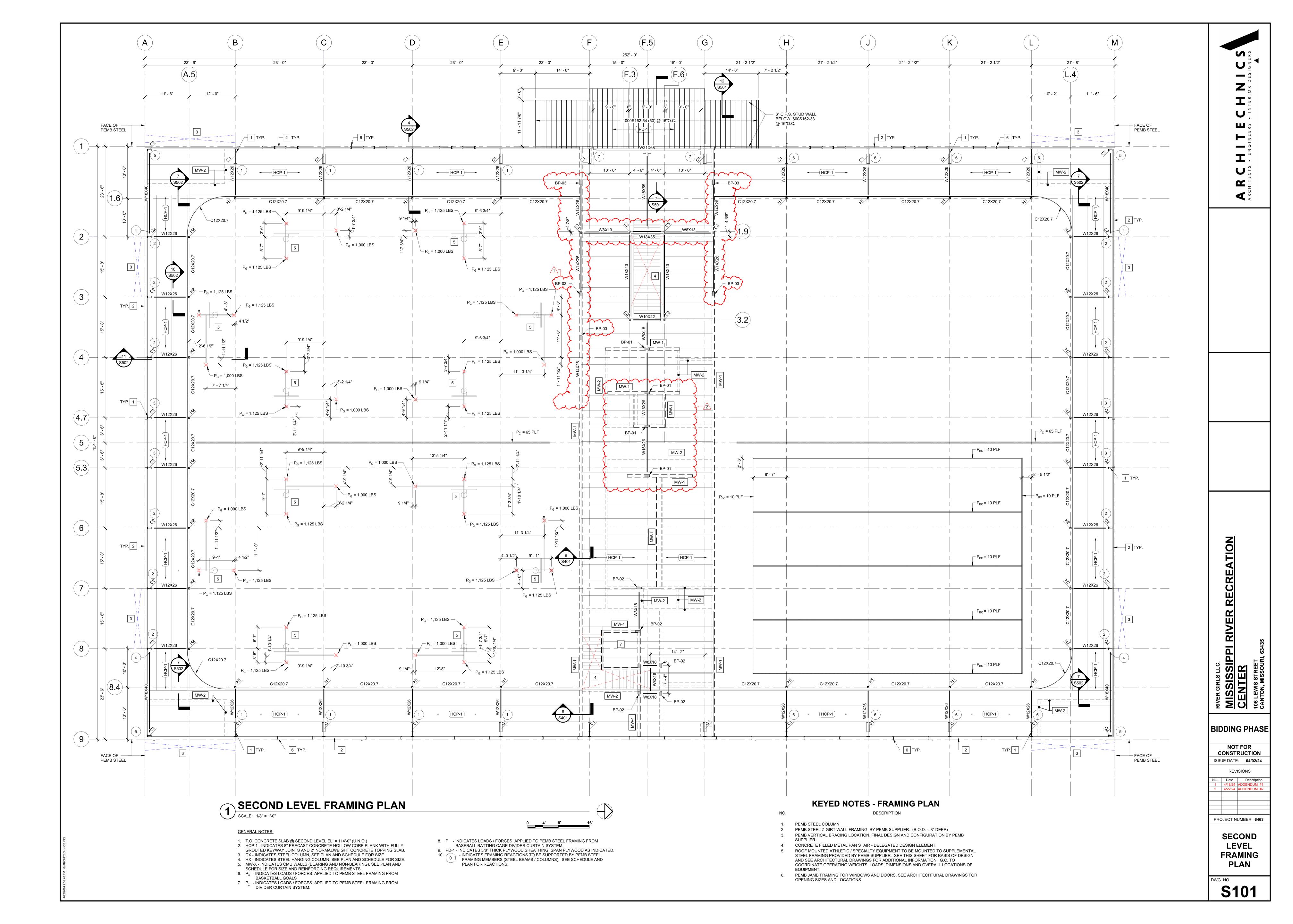
#### 3.06 TOLERANCES

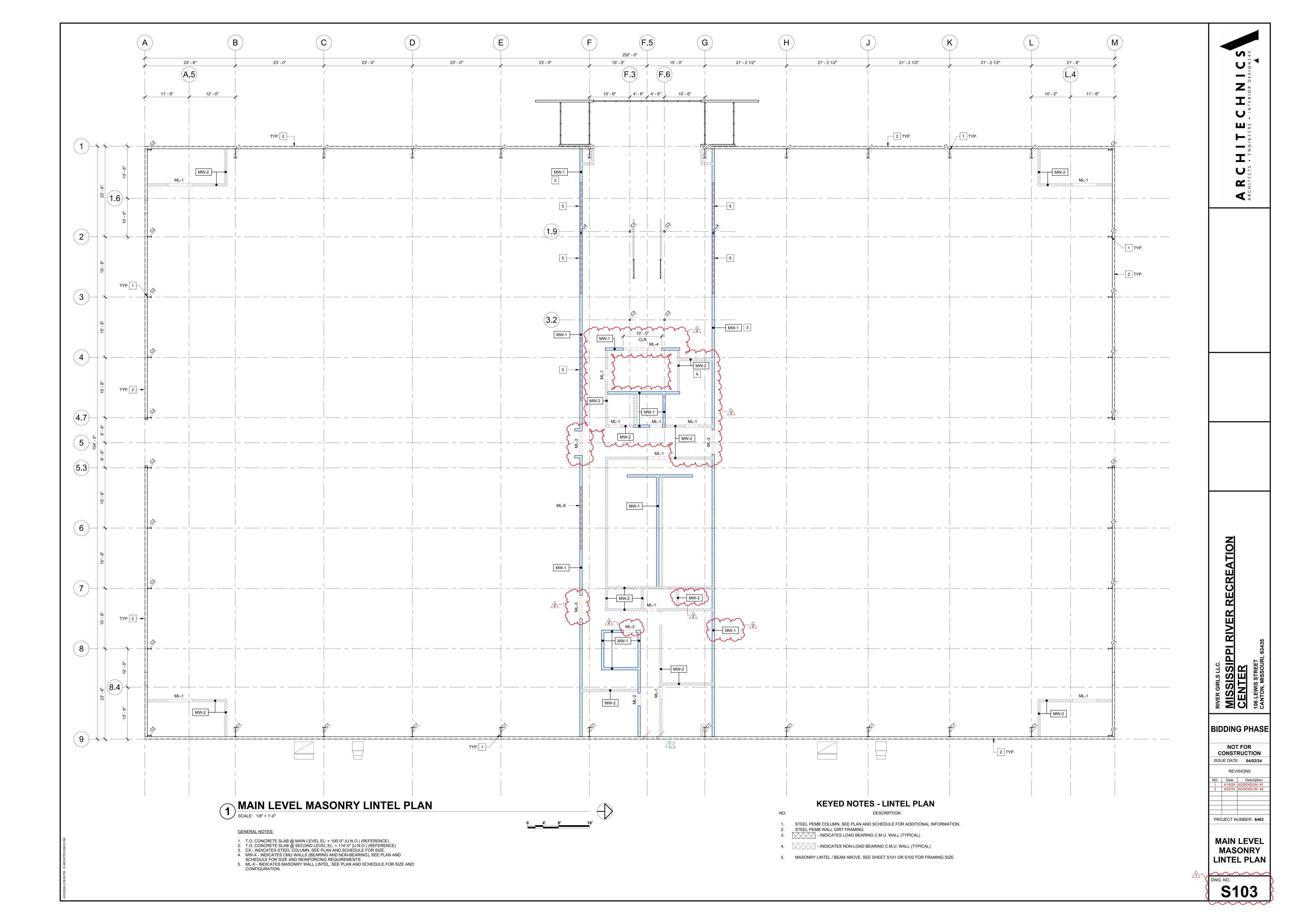
- A. Framing Members: 1/4 inch from level; 1/8 inch from plumb.
- B. Siding and Roofing: 1/8 inch from true position.

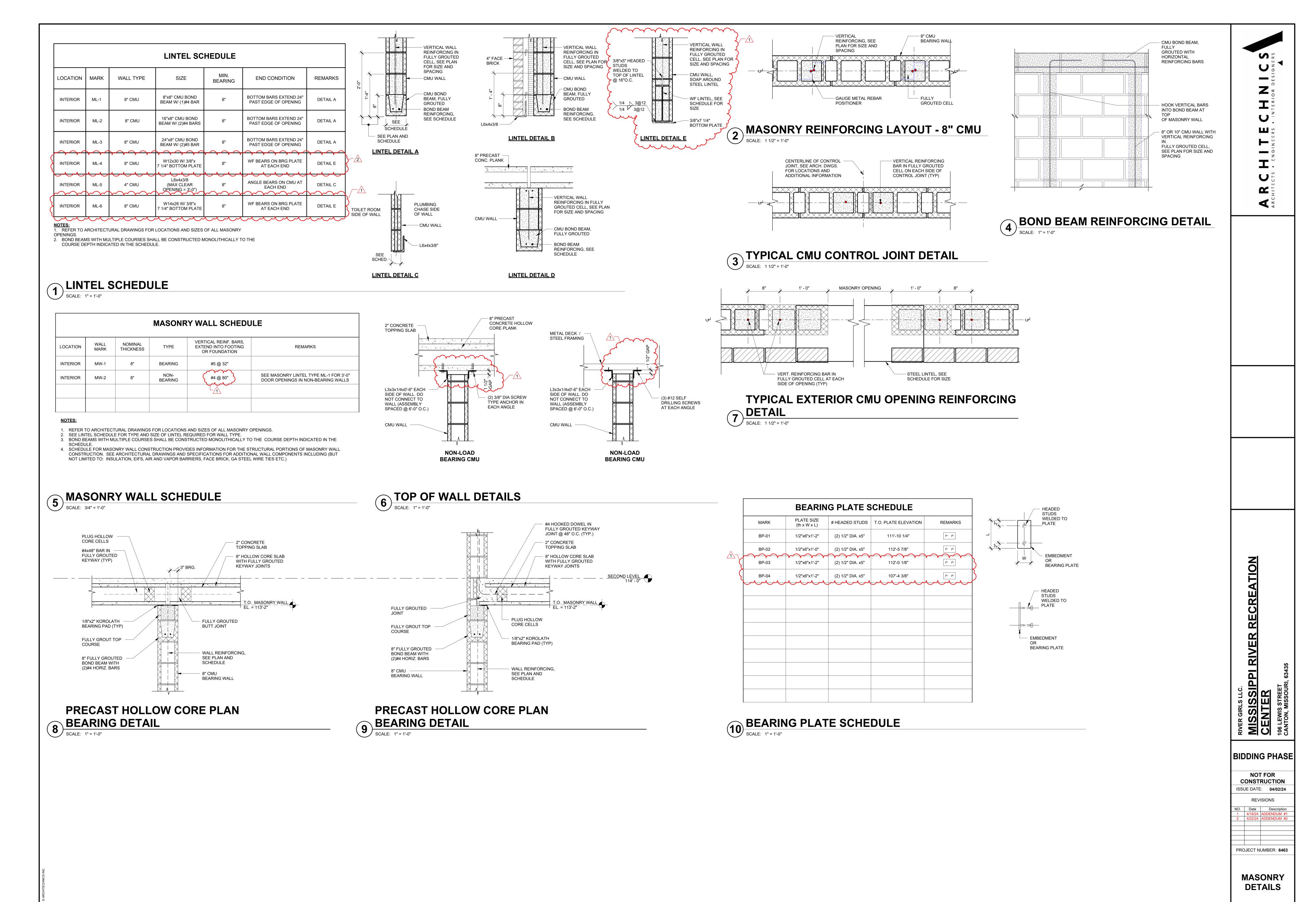
#### **END OF SECTION**











S401

