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New Construction for:

# Belmont College - Construction Trades Building

## Addendum No. 01 – 21.162

July 16, 2025

This Addendum shall hereby be and become a part of the Contract Documents the same as if originally bound thereto. The following clarifications, amendments, revisions, changes and modifications change the original Contract Documents only in the amount and to the extent hereinafter specified in this Addendum. Each bidder shall acknowledge receipt of this Addendum in his bid proposal. Bidders shall be responsible for becoming familiar with every item of this Addendum.

General:

1. Pre bid meeting agenda and sign-in sheet attached.

2. Substitution Request – Capitol Aluminum & Glass Corp.

   Response: Capitol Aluminum & Glass Corp. acceptable manufacturer for FRP Doors, Aluminum-Framed Storefront, and Glazed Aluminum Curtain Walls.

3. Question: Can you please RFI if exterior building-mounted signage will be added into the project scope? There is a spec for it, but no signage is shown in the drawings.

   Response: Exterior building mounted signage to be provided by owner.

4. Question: Document 001000 (Solicitation) states that the bids will be opened at 11:00 am on August 5, 2025. Public Bid Advertisements state that bids are due at 1:00 pm on August 5, 2025. Document 004113 (Bid Form) lists the deadline as January 23, 2025 at 11:00 am. Please confirm which time is correct.

   Response: Bids will be due at 11:00 on August 5, 2025.

5. Question: Ref. Public Bid Advertisement documents. Is there an EDGE participation goal on this project?

   Response: No EDGE requirement for 2-year college.

6. Question: Document 002200 (Supplementary Instructions) is included in the Project Manual as a sample template. If it was intended, please provide a completed copy.

   Response: Spec section has been removed.

7. Question: Bid Alternates listed in document 001000 do not correspond to Alternates listed in Document 004113 (Bid Form) or Spec Section 0123000 (Alternates). Please clarify.

Response: Document 004113 & Spec Section 0123000 have had alternate lists revised to match Document 001000.

8. Question: Can you provide the Hardware Schedule for this project?

Response: Hardware schedule is provided at the end of the specification manual.

9. Question: I would point out that on the below section it shows a '2/12' roof slope, but everywhere else it shows 1/12 and when I scale I get the 1/12 also, so I believe that is just a misprint and wanted to pass that on.

Response: The roof slope note on building section C1/6.2 has been revised to 1/12. See Drawing 6.2.

10. Question: On 3.11 at gridline(s) A, 11 there is a call out for W8x10. What is the length for this beam along gridline A?

Response: This beam length is approximately 7'-0". It bears on the CMU to the west and connects to the W8x10 outrigger to the east.

11. Question: Who will supply Anchor Rods and Base plates shown on 3.20 and 9/3.30? Will these be supplied by PEMB or Taflan Steel?

Response: It is the engineer's understanding that the anchor rods are to be provided by the steel contractor. GC shall confirm with final PEMB supplier and drawings.

12. Question: If Taflan Steel is to supply anchors and baseplates, do we need to supply leveling plates or leveling nuts?

Response: If the steel contractor is providing anchor rods, this is the contractor's option. Per Typical Anchor Rod Detail on sheet 3.20, "Contractor may use leveling nuts or leveling plates at Contractor's option."

13. Question: 8/3.30 calls out 5/8" adhesive anchors to attach W12x35 GIRT to CMU. Will these be supplied by PEMB or Taflan Steel?

Response: These will need to be supplied by the steel contractor.

14. Question: Are we bidding only on Storage Mezzanine shown on 3.11, or do we need to supply materials shown on 3.10 and lintels around exterior doors shown on 1.01 according to the Lintel Schedule shown on 3.20?

Response: This is for the GC to determine which contractors are to provide what materials

15. Question: Will Taflan Steel need to supply Bollards shown on 5.1-5.2. If so, can you provide a bollard detail for reference?

Response: GC to determine which contractors are to provide what materials. Refer to spec section 323300 and drawing sheet

Specifications:

1. Specification 00 01 01 – Table of Contents:
   A. Section 00 22 00 removed from Table of Contents
2. Specification 00 41 13 – Bid Form
   A. Bid general info revised for deadline and advertised date.
   B. List of alternates revised to match spec sections 00 10 00 & 01 23 00
   C. EDGE requirement section crossed out.
3. Appendix D has been revised for David Bacon prevailing wages

Architectural / Structural Drawings:

1. Drawing 6.2 – BUILDING SECTIONS
   A. Section C1 – Building Section – Roof slope note revised to show a 1/12 slope.

- - - END OF ADDENDUM NO. 01 - - -

Attachments:

Pre bid Meeting Agenda

Pre bid meeting sign in sheet

Specification 00 01 10 – Table of Contents

Specification 00 41 13 – Bid Form

Specification 01 23 00 – Alternates

Specification 08 16 14 – FRP Doors

Specification 08 43 00 – Aluminum-Framed Storefront (High Performance)

Specification 08 43 00 – Aluminum-Framed Storefront (Interior)

Specification 08 44 13 – Glazed Aluminum Curtain Walls

Appendix D – Davis Bacon Wage Rates

Drawing 6.2 – BUILDING SECTIONS

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# Pre-Bid Meeting Agenda

## Belmont College Construction Trades Building

EDA Award No: 06-01-06458
7.15.2025

1. Introductions

   A. Owner
      1. Belmont College – 68094 Hammond Road, St. Clairsville, OH 43950
         a. Dr. Paul F. Gasparro – College President
         b. Kristy M. Kosky – Chief of Staff and Executive Assistant to the President
         c. Edward Mowrer – Energy Institute – Manager
         d. Keith Kaczor – Director of Industrial Trades
         e. Derrick Smith – Assistant Professor, BPR
         f. Dr. Davis – VP of Operations

   B. Owner Representatives
      1. Ohio Facilities Construction Commission
         a. Chris Frommeyer – Project Manager
      2. Ohio Mid-Eastern Governments Association
         a. Evan Scurti – Economic Development Director

   C. Architect – SoL Harris/Day Architects
      1. Justin Gantz – Project Architect
      2. Karpinski Engineering – MEP Engineer
      3. Thorson Baker + Associates – Structural Engineer
      4. Wallace Pancher Group – Civil engineer, Landscape Architecture

   D. Fill out “Contacts” sheet
      1. Supply current and active e-mail address
      2. I will distribute the contact list this week
      3. As more contacts are relevant, I will add them to the list and re-distribute

2. Project Overview:

   A. The work consists of the new Belmont Construction Trades Building facility with an approximate building square footage of 20,000 sf and associated site and utilities work for Belmont College.
      1. Single prime contract

   B. SCHEDULE OF ALTERNATES
      1. **Alternate #1:** Build-out of Study Café & Comp Lab/Library
         a. Base Bid item: Build out space as provided in drawings with complete interior walls, finishes, and casework.
         b. Alternate item: Space to remain “white box” with simple finishes. All HVAC
      2. **Alternate #2**: Asphalt Parking Lot and Access Drive
         a. Base Bid item: Aggregate Paving (Access Road and Parking)
         b. Alternate item: Asphalt access road and parking with parking stall striping
      3. **Alternate #3:** Brick Paver College Logo
         a. Base Bid item: Conctete Slab.
         b. Alternate item: Two (2) Belmont College logo in brick pavers

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4. **Alternate #4:** Aluminum Curtain Wall Sunshade
   a. Base Bid Item: No sunshades on Frame Elevation F22.
   b. Alternate item: Provide and install sunshade for Frame Elevation 22 as outlined in the drawings.
5. **Alternate #5:** Classroom – Casework
   a. Base Bid Item: Install wall finishes in lieu of casework shown.
   b. Alternate Item: Provide and install casework as identified on the drawings.
6. **Alternate #6**: Owner to Furnish Dust Collector
   a. Base Bid Item: Contractor to furnish and install dust collector per drawings.
   b. Alternate Item: Owner to provide and contractor to install dust collector.
7. **Alternate #7**: ~~Air Handling Unit-3~~ Landscape Trees by Owner
   a. Base Bid Item: Contractor to furnish and install landscape trees per drawings.
   b. Alternate Item: Owner to provide and install landscape trees.

C. Estimated cost of construction

1. General Contract.....$7,154,297.000
   Alternate 1: Build-out of Study Café and Comp Lab ..($50,000.00)
   Alternate 2: Asphalt Parking Lot and Access Drive....$67,500.00
   Alternate 3: Brick Paver College Logo .....$20,000.00
   Alternate 4: Aluminum Curtain Wall Sunshade .....$20,000.00
   Alternate 5: Classroom Casework .....$50,000.00
   Alternate 6: Owner to Furnish Dust Collector.....($175,000.00)
   Alternate 7: Landscape trees by owner.....($25,000.00)

D. Electronic bids will be received until **August 5th, 2025**, at **11:00 a.m.**, **via bid express**, when all Bids will be electronically opened. Bid tabulations will be posted no later than 5:00 p.m. on the day Bids are opened.

E. This project is tax-exempt.

3. Building Permits

A. State of Ohio Building Department – Submitted, approved

B. Permits paid for and obtained by the owner.

4. Site Access / Usage

A. Additional site visits during bid will be permitted within College hours of operation.

B. Work restrictions. Material Delivery/Refuse Removal
   1. Time Restrictions: Coordinate with Architect.
   2. Access Restrictions: Coordinate with Architect.

5. Clarifications/Questions/Substitutions

A. All significant questions/clarifications/substitution requests shall be submitted to the architect's office via email no later than July 30th by 5:00pm.

B. Email – jgantz@solharrisday.com

C. Any addenda will be issued via BidExpress.

6. Schedule:

A. Contractor may, but is not required to, include alternative proposed construction schedule and or phasing plan in their bid.

B. Milestone Dates:
   1. Bids Due: August 5th 2025
   2. Apparent low contractor will be given 10 days to provide required bid documents
   3. OFCC will have up to 60 days to execute contract
   4. Construction 1 year.

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**Sign in Sheet**
**Pre-bid Meeting**

# Belmont College Construction Trades Building

EDA Award No: 06-01-06458 7.15.2025

1. Name Rick Astle Company Continental Bldg Co.
   Phone 412-476-3018 Fax Email RASTLE@BUILTBYCONTINENTAL.Co
2. Name Collin Thompson Company Continental Building Co.
   Phone 717-471-5181 Fax Email cthompson@builtbycontinental.com
3. Name Eric Zadecker Company ABLS H&C
   Phone 740-816-4947 Fax Email eric.r@ablsinc.com
4. Name Jarrett Carlson Company Waller Corporation
   Phone 724-223-9680 Fax Email info@wallercorporation.co
5. Name BILL KEITH Company MASCARO
   Phone 412-321-4901 Fax Email BUILDINGS@MASCARO CONSTRUCTION.COM
6. Name RENO COLAIANNI Company COLAIANNI CONST.
   Phone 740-296-8229 Fax 740-769-2069 Email RENO@COLAIANNICONST.COM
7. Name Dale Lewis Company ABTL CONCRETE
   Phone 740-391-3094 Fax Email dlewis@awexcavating.com

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**Sign in Sheet**
**Pre-bid Meeting**
# Belmont College Construction Trades Building

EDA Award No: 06-01-06458 7.15.2025

8. Name Aaron Hindman Company Johnson Controls
Phone (304) 771-8438 Fax ____ Email Aaron.Hindman@JCI.com

9. Name JEFF PATTERSON Company JCI
Phone 412-537-9068 Fax ____ Email JEFFREY.L.PATTERSON@JCI.COM

10. Name Cameron McIntosh Company Graf-Con
Phone 740-282-6830 Fax ____ Email cmcintosh@graccon.com

11. Name William Costello Company ____
Phone 330-351-4918 Fax ____ Email ____

12. Name Mason McTeer Company SA Comunk
Phone 419-617-2330 Fax ____ Email McTeer.Mason@Comunk.com

13. Name Eric Swain Company Control Concepts OHIO
Phone 330-806-5332 Fax ____ Email ericS@controlsohio.com

14. Name Sonny Sora Company Massaro Corporation
Phone 412-537-6117 Fax ____ Email SSora@massarocorporation.com

15. Name Steve Miller Company Stanley Miller Const. G

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**Sign in Sheet**
**Pre-bid Meeting**
# Belmont College Construction Trades Building

EDA Award No: 06-01-06458 7.15.2025

Phone 330.484.2229 Fax 330.484.4510 Email Sarah.miller@smillerconst.com

16. Name Morgan Means Company Higley Construction
Phone 412-862-4999 Fax _____ Email Morgan.Means@higleybuilds.com

17. Name Jon Sweiger Company Truline Group (Concrete)
Phone 419 651 1118 Fax — Email Office manager@thetrulinegroup.com

18. Name Ura Gingerich Company Truline Group (Concrete)
Phone 419 651 1091 Fax — Email officemanager@thetrulinegroup.com

19. Name Keith Hughes Company JDE
Phone 304-780-8299 Fax _____ Email Khughes@jde-inc.com

20. Name Randy Canter Company MET Plumbing Services
Phone 740-298-1804 Fax _____ Email randymetplumbing@gmail.com

21. Name Rick Simpson Company MET Plumbing Services
Phone 740-827-4501 Fax _____ Email RickMETPlumbing@gmail.com

22. Name Forrest Havanis Company STONEMILE
Phone 724-503-8558 Fax _____ Email trent@stonemilegroup.com

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**Sign in Sheet**
**Pre-bid Meeting**

# Belmont College Construction Trades Building

EDA Award No: 06-01-06458 7.15.2025

23. Name Ed Mowrer Company Belmont College
Phone 740 699-3860 Fax Email

24. Name Kristy Kosky Company "
Phone 740- 699-3037 Fax Email

25. Name Heather Davis Company
Phone 740 699-9500 1125 Fax Email

26. Name Brady Flaherty Company "
Phone 740-827-8369 Fax Email

27. Name Company
Phone Fax Email

28. Name Company
Phone Fax Email

29. Name Company
Phone Fax Email

# Document 00 01 10 - Table of Contents (General Contracting Project)
## State of Ohio Standard Requirements for Public Facility Construction

## PROCUREMENT AND CONTRACTING REQUIREMENTS GROUP

### Division 00 – Procurement and Contracting Requirements



## SPECIFICATIONS GROUP

## GENERAL REQUIREMENTS SUBGROUP

| | |
|---|---|
| 01 60 00 | Product Requirements |
| 01 71 23 | Field Engineering |
| 01 73 29 | Cutting & Patching |
| 01 74 00 | Construction Cleaning |
| 01 74 19 | Construction Waste Management |
| 01 77 00 | Closeout Procedures |
| 01 78 36 | Warranty |
| 01 12 16 | Project Phasing & Schedule |
| 01 14 00 | Work Restrictions |
| 01 21 00 | Allowances |
| 01 22 00 | Unit Prices |
| 01 23 00 | Alternates |
| 01 26 00 | Contract Modification Procedures |
| 01 29 00 | Payment Procedures |
| 01 31 00 | Project Management & Coordination |
| 01 32 16 | Construction Progress Schedule |
| 01 32 33 | Photographic Documentation |
| 01 33 00 | Submittal Procedures |
| 01 45 00 | Quality Control |
| 01 45 29 | Testing Laboratory Services |
| 01 50 00 | Temporary Facilities and Controls |
| 01 58 00 | Project Signs |
| 01 60 00 | Product Requirements |
| 01 71 23 | Field Engineering |
| 01 73 29 | Cutting & Patching |
| 01 74 00 | Construction Cleaning |
| 01 74 19 | Construction Waste Management |
| 01 77 00 | Closeout Procedures |
| 01 78 36 | Warranty |

## FACILITY CONSTRUCTION SUBGROUP

| | |
|---|---|
| Division 02 | Existing Conditions |
| 02 41 19 | Selective Demolition |
| Division 03 | Concrete |
| 03 330 00 | Cast-in-Place Concrete |
| 03 35 00 | Liquid Densifier |
| 03 35 36 | Polished Concrete Floor |
| Division 04 | Masonry |
| 04 05 13 | Masonry Mortaring |
| 04 05 16 | Masonry Grouting |
| 04 05 19 | Masonry Anchorage & Reinforcing |
| 04 05 23 | Masonry Accessories |
| 04 20 00 | Unit Masonry |
| Division 05 | Metals |
| 05 12 00 | Structural Steel Framing |
| 05 31 00 | Steel Decking |
| 05 40 00 | Cold-Formed Metal Framing |

05 50 00 Metal Fabrications
~~05 51 00 Metal Stairs~~
05 52 00 Metal Railings

Division 06 Wood, Plastics, and Composites
06 10 00 Rough Carpentry
06 20 00 Finish Carpentry (1)
~~06 22 00 Millwork~~
06 61 16 Solid Surfacing Fabrications (Non Proprietory)

Division 07 Thermal and Moisture Control
07 13 26 Self-Adhering Sheet Waterproofing (Foundation Walls)
07 13 28 Foundation ICF Waterproofing Membrane
07 14 16 Fluid Applied Waterproofing
07 19 00 Water Repellents
07 21 00 Thermal Insulation
07 26 30 Spray Foam Insulation Air Barrier
07 27 26 Fluid Applied Membrane Air & Vapor Barriers
07 52 53 Snow Guards
07 92 00 Joint Sealants

Division 08 Openings
08 11 13 Hollow Metal Doors & Frames
08 11 16 Aluminum Doors Medium & Wide Stile
08 14 29 Pre-Finished Wood Doors
08 16 14 FRP Doors
08 31 00 Access Doors & Frames
08 36 13 Sectional Doors
08 43 00 Aluminum Framed Storefronts (High Performance)
08 43 00 Aluminum Framed Storefronts (Interior)
08 44 13 Glazed Aluminum Curtain Walls
08 71 00 Door Hardware
08 71 13 Automatic Door Operators
08 80 00 Glazing

Division 09 Finishes
09 22 00 Non-Load Bearing Steel Framing
09 22 26 Gypsum Board Suspension System
09 28 13 Cementitious Backing Board
09 29 00 Gypsum Board
09 30 00 Tiling
09 51 00 Acoustical Ceilings
09 65 00 Resilient Flooring (LVT)
09 65 13 Resilient Base and Accessories
09 68 13 Tile Carpeting
09 72 16 Vinyl Wall Coverings
09 90 00 Paints & Coatings

Division 10 Specialties
10 11 00 Visual Display Units
10 14 00 Exterior Illuminated Signage

| | |
|---|---|
| 10 14 00 | Signage |
| 10 14 01 | Exterior Signage Aluminum Letters |
| 10 21 13 | Plastic Toilet Compartments |
| 10 26 13 | Corner Guards |
| 10 28 13 | Toilet Accessories |
| 10 44 00 | Fire Protection Specialties |
| 10 51 13 | Metal Lockers (All Locker Types) |
| 10 81 11 | Electric Hand Dryers |

Division 11 Not Used

Division 12 Furnishings
12 24 13 Roller Window Shades
12 32 16 Manufactured Plastic-Laminate-Clad Casework

Division 13 Special Construction
13 34 19 Metal Building Systems

Division 14 Not Used

**Divisions 15 through 19 – Not Used**

## FACILITY SERVICES SUBGROUP

Division 20 Not Used

Division 21 Fire Suppression
21 01 00 Fire Protection General Provisions
21 01 01 Fire Protection Supplemental General Provisions
21 03 00 Fire Protection Basic materials and Methods
21 04 00 Fire Protection Firestopping
21 10 00 Water Based Fire Protection Systems

Division 22 Plumbing
22 01 00 Plumbing General Provisions
22 01 01 Plumbing Supplemental General Provisions
22 03 00 Plumbing Basic Materials and Methods
22 04 00 Plumbing Firestopping
22 07 00 Plumbing Insulation
22 10 00 Plumbing System Components and Devices
22 13 25 Oil Interceptor – Non-Metallic
22 13 61 Solids Interceptor – Point of Use Fixture Trap
22 34 15 Domestic Water heater – Gas Fired, Storage Type – Condensing [Small, Less than 250 MBH, 30 to 199 Gallon]
22 40 00 Plumbing Fixtures

Division 23 Heating, Ventilating, and Air Conditioning
23 01 00 HVAC General Provisions
23 01 01 HVAC Supplemental General Provisions
23 02 00 HVAC Demolition

23 03 00 HVAC Basic Materials and Methods
23 04 00 HVAC Firestopping
03 05 05 HVAC Equipment Motor Requirements
23 05 13 HVAC Variable Frequency Drives
23 05 93 Testing, Adjusting, and Balancing
23 07 00 HVAC Insulation
23 09 00 HVAC Instrumentation and Control
23 20 00 HVAC Piping and Accessories
23 21 00 Hydronic Pumps
23 21 01 Hydronic Equipment Specialties
23 25 00 HVAC Water Treatment
~~23 25 01 Heat Transfer Fluid~~
23 30 00 Air Distribution
23 34 00 Fans
23 36 00 Air Terminal Units
23 41 00 Particulate Air Filters
23 50 01 Condensing Boilers
23 51 00 Flues
~~23 60 00 Central Cooling Equipment~~
~~23 73 13 Modular Indoor Air Handling Units~~
23 74 00 Packaged Rooftop Air Conditioning Units
23 82 01 Hydronic Heating Units

Division 24 Not Used

Division 25 Integrated Automation – Not Used

Division 26 Electrical
26 01 00 Electrical General Provisions
26 01 01 Electrical Supplemental General Provisions
26 03 00 Electrical Basic Materials and Methods
26 03 10 Low-Voltage Electrical Power Conductors and Cables
26 03 20 Raceways, Enclosures, and Pathways
26 03 40 Wiring Devices
26 04 00 Electrical Firestopping
26 05 00 Equipment Identification
26 08 10 Functional Testing of Lighting Controls
26 21 00 Power Distribution Equipment
26 21 15 Grounding of Electrical Systems
26 22 00 Low Voltage Dry Type Transformers
26 22 35 Overcurrent Protection Devices
26 22 60 Surge Protective Devices (SPDS) Low Voltage Electrical Power Circuits
26 25 00 Power Distribution System Studies
26 51 00 LED Luminaires
26 52 00 Stand Alone Lighting Controls
26 52 25 Lighting Control System
26 53 00 Emergency Lighting Inverter
26 81 40 Addressable Fire Alarm System

Division 27 Communications

27 01 00 Technology General Provisions
27 03 00 Cabling Systems Administration
27 04 00 Technology Firestopping
27 05 00 Technology Basic Materials and Methods
27 06 00 Technology Pathways Hardware
27 07 00 Technology Grounding System
27 11 16 Technology Equipment Racks and Equipment Cabinets
27 11 19 Copper Cabling Termination Hardware
27 12 00 Technology Outside Plant
27 13 13 Backbone High Pair Copper Cabling
27 13 23 Backbone Fiber Optic Cabling
27 15 00 Horizontal Copper Cabling
27 22 00 Controlled Access System Wiring
27 22 50 Video Surveillance System Wiring
27 53 00 Emergency Responder Radio Coverage Testing

Division 28 Electronic Safety and Security – Not Used

Division 29 Not Used

## SITE AND INFRASTRUCTURE SUBGROUP

Division 30 Earthwork
31 10 00 Site Clearing
31 20 00 Earth Moving
31 25 13 Erosion Controls
~~31 34 00 Geopier Rammed Aggregate Piers~~

Division 31 Exterior Improvements
32 12 16 Asphalt Paving
32 13 13 Concrete Paving
32 13 73 Concrete Joint Sealant
32 14 00 Unit Paving
32 17 13 Parking Bumpers
32 17 23 Pavement Markings
32 31 13 Chain Link Fences & Gates
32 33 00 Site Furnishings
32 91 13 Soil Preparation
32 92 00 Turf & Grasses
32 93 00 Plants

Division 32 Not Used

Division 33 Utilities
33 42 00 Stormwater Conveyance
33 46 00 Subdraingage

Division 34 Transportation – Not Used

Division 35 Waterway and Marine – Not used

Divisions 36 through 39 - Not Used

**PROCESS EQUIPMENT SUBGROUP**

Division 40 Process Integration

Division 41 Material Processing and Handling Equipment

Division 42 Process Heating, Cooling, and Drying Equipment

Division 43 Process Gas and Liquid Handling Equipment

Division 44 Pollution Control Equipment

Division 45 Industry-Specific Manufacturing Equipment

Division 46 Water and Wastewater Equipment

Division 47 Not Used

Division 48 Electrical Power Generation

Division 49 Not Used

Appendices

Appendix A Certification of Compliance with the "Buy America" Provision of the Infrastructure Investments and Jobs Act
Appendix B Standard Buy American Specifications for Bid Package
Appendix C Geotechnical Report
Appendix D Davis Bacon Wage Rates
Appendix E EDA Contracting Provisions for Construction Projects
Appendix F EDA Notice of Requirements for Affirmative Action
Appendix G Lobbying Restriction Form
Appendix H EDA Site Sign Specifications

**END OF DOCUMENT**

# Document 00 41 13 - Bid Form (General Contract / Electronic Bid)
## State of Ohio Standard Requirements for Public Facility Construction

**THIS SAMPLE BID FORM IS PROVIDED WITH THE PROJECT MANUAL AS A PLACEHOLDER ONLY – SUBMIT YOUR BID USING THE ELECTRONIC BID FORM ON HTTPS://BIDEXPRESS.COM**

### General Info

Alt Total: 11 Bid Total: 1

**Deadline**
**01/23/2025 11:00 AM EDT/EST**
8/5/2025 11:00AM EST
**Advertised**
~~12/19/2024, 12/26/2024, 01/02/2025~~
7/1/2025
**Number**
EDA Award No: 06-01-06458

**Business Name**
Ohio Facilities Construction Commission

**Description**
The Belmont College Construction Trades Building is a new facility for education in the Industrial Trades of approximately 20,000 total square feet.

### Procurement Documents

«insert Public Bid Advertisement file name»
→ Public Bid Advertisement

«insert Solicitation file name»
→ Notice to Bidders

«insert Project Manual file name»
→ Procurement & Contracting Requirements and Specifications

«insert Drawings file name»
→ Plans, elevations, sections, details, and schedules

«4» Attachments

### Contract Times and Addenda

Contract Times

**The time for Substantial Completion of all Work is 365 consecutive days from the Notice to Proceed.**

Acknowledgement of receipt of Addenda

| Date Addendum #1 Received | Date Addendum #2 Received | Date Addendum #3 Received | Date Addendum #4 Received |
|---|---|---|---|
| | | | |

### Allowance Instructions

Allowance amounts are fixed and no entry of data is required by the Bidder. Include each and every Allowance amount in the Base Bid. The Bidder's Fee (overhead and profit) and costs for unloading and handling on the Site, labor, installation costs, and other expenses contemplated for the Allowance must be included in the Base Bid and NOT in the Allowance amount.

## Allowances (General Contract)

| Item | Description | Allowance Amount* | Extension |
|---|---|---|---|
| Allowance A-1 | Miscellaneous Construction Items | $25,000.00 | |
| | | | |
| | | | |
| | | | |
| | | | |
| «5» Items | | **Total:** | $25,000.00 |

## Unit Price Instructions

Enter the price per unit of measure in the Bid Form and the extension will be automatically calculate. Include the Extension for each and every Unit Price in the Base Bid. Unit prices will be used solely for the purpose of determining the adjustment to the Contract Sum for differences between the estimated quantities on the electronic Bid Form and the actual quantities provided.

## Base Bid Instructions

Enter the amount of the Base Bid for ALL LABOR AND MATERIALS to complete the scope of Work. Include the amount of each Allowance (if applicable) and the subtotal of each Unit Price Extension (if applicable) in the Base Bid amount. Failure to include Allowance or Unit Price Extensions in the Base Bid is the responsibility of the Bidder and will not be sufficient reason for adjustment of the Bid amount after the Bid deadline. Do not include Alternates (if applicable) in the Base Bid amount.

## Base Bid (General Contract)

| Item | Description | Base Bid Amount* | Extension |
|---|---|---|---|
| Base Bid | All Labor and Materials (include Allowances and Unit Price Extensions above) | _____ | |
| **1** Item | | **Total:** | |

## Alternate Instructions

Enter the amount of each and every Alternate to ADD TO or DEDUCT FROM the Base Bid. Indicate amounts to DEDUCT FROM the Base Bid by entering a minus sign (-) before the amount entered. Do not include Alternate amounts in the Base Bid.

*Alternates require approval of the Contracting Authority. Duplicate lines for additional Alternates. Delete lines for unused Alternates. If no Alternates are bid, edit the instructions for Alternates above and delete the entire Alternates block below.*

## Alternates (General Contract)

| Item | Description | Alternate Amount* | Extension |
|---|---|---|---|
| ! Alternate: Owner-agency may award independently from entire bid. | | | |
| ! Alternates are not included in bid total. | | | |
| Alternate 1 | Build-out of Study Café and Comp Lab | _____ | |
| Alternate 2 | Asphalt Parking Lot and Access Drive | _____ | |
| Alternate 3 | Brick Paver College Logo | _____ | |
| Alternate 4 | Aluminum Curtain Wall Sunshade | _____ | |
| Alternate 5 | Classroom Casework | _____ | |
| Alternate 6 | ~~Air Handling Unit - 2~~ Owner to furnish dust collector | _____ | |
| Alternate 7 | ~~Air Handling Unit - 3~~ Landscape trees by owner | _____ | |
| ~~Alternate 8~~ | ~~Air Cooled Chiller - 1~~ | _____ | |
| ~~Alternate 9~~ | ~~Hybrid VRV System~~ | _____ | |
| ~~Alternate 10~~ | ~~Main BAS (Siemens)~~ | | |
| ~~Alternate 11~~ | ~~Manufacturer specified BAS (Trane)~~ | _____ | |
| 11 Items | **Alternate Total:** | **Total:** | |

## Bidder Affirmation and Disclosure

The Bidder acknowledges that by submitting its Bid, the Bidder has read and understands the applicable Executive Orders regarding the prohibitions of performance of offshore services, locating State data offshore in any way, or purchasing from Russian institutions or companies. If awarded a Contract, the Bidder will become the Contractor and affirms that both the Contractor and its Subcontractors shall perform no services requested under this Contract outside of the United States.

The Bidder shall provide the locations where services under this Contract will be performed in the spaces provided below or by attachment. Failure to provide this information as part of its Bid may cause the Bidder to be deemed non-responsive and no further consideration will be given to its Bid. If the Bidder will not be using Subcontractors, indicate "Not Applicable" in the appropriate spaces.

1. Principal business location of Contractor:

**Contractor Address***

**City, State, and Zip***

Name / Principal business location of Subcontractor(s), if known at time of Bid deadline:

**Subcontractor Name*** | **Address, City, State, and Zip***

2. Location(s) where services will be performed by Contractor (Project Sites):

**Name*** | **Address, City, State, and Zip***

Name(s) / Location(s) where services will be performed by Subcontractors (Project Sites):

**Subcontractor Name** | **Address, City, State, and Zip**

3. Location(s) where State data will be located by Contractor:

**Address*** | **City, State, and Zip***

Location(s) where State data will be located by Subcontractor(s), if known at time of Bid deadline:

**Subcontractor Name** | **Address, City, State, and Zip**

Bidder also affirms, understands and agrees that the Contractor and its Subcontractors are under a duty to disclose to the State any change or shift in location of services performed by the Contractor or its Subcontractors before, during and after execution of any Contract with the State. Bidder agrees it shall so notify the State immediately of any such change or shift in location of its services. The State has the right to immediately terminate the contract, unless a duly signed waiver from the State has been attained by the Contractor to perform the services outside the United States.

On behalf of the Bidder, I acknowledge that I am duly authorized to execute this electronic Bid Form including this Bidder Affirmation and Disclosure form and have read and understand that this form is a part of any Contract that Bidder may enter into with the State and is incorporated therein.

## EDGE Program Commitment to Participate

No EDGE requirement

Option A

The Bidder commits to meet or exceed the advertised EDGE Participation Goal of the Contract award amount, calculated as a portion of the Base Bid plus all accepted Alternates, by using EDGE-certified Business(es).

The Bidder agrees that if selected for consideration of the Contract, it shall provide (if not provided with the Bidder's Bid) to the Contracting Authority, at the location required and within 3 business days after receiving notice from the Contracting Authority, its fully completed Bidder's Qualification Form, including an EDGE Affidavit form for each EDGE-certified Business proposed for use by the Bidder if awarded the Contract for this Project.

Option B (indicate percentage of participation below)

The Bidder declares that it does not meet the advertised EDGE Participation Goal percentage, but, if awarded the Contract for this Project, commits to provide the percentage of the Contract award amount, indicated above, calculated as a portion of the Base Bid plus all accepted Alternates, by using EDGE-certified Business(es).

The Bidder acknowledges it understands the requirement for it to provide and agrees to provide to the Contracting Authority, if selected for consideration of the Contract, within 3 business days after notice from the Contracting Authority, a detailed Demonstration of Good Faith form describing its efforts undertaken prior to submitting its Bid to meet the advertised EDGE Participation Goal percentage for the Contract for this Project.

The Bidder commits to provide to the Contracting Authority at the location required, and within 3 days after receiving notice from the Contracting Authority, its fully completed Bidder's Qualifications Form, including an EDGE Affidavit form for each EDGE-certified Business proposed for use by the Bidder if awarded the Contract for this Project.

Option C

The Bidder declares that the Bidder is an EDGE-certified Business and that if awarded this Contract, the EDGE Participation percentage will be 100 percent of the Contract award amount.

**Select EDGE option above***

Choices…

**If option B selected, enter percentage**

## Certifications (Federal Prevailing Wages)

1. The Bidder has read and understands the proposed Contract Documents and agrees to comply with all requirements of the proposed Contract Documents, regardless of whether the Bidder has actual knowledge of the requirements and regardless of any statement or omission made by the Bidder, which might indicate a contrary intention.

2. The Bidder represents that the Bid is based upon the Basis of Design and Acceptable Components specified by the proposed Contract Documents.

3. The Bidder has visited the Site, become familiar with local conditions, and has correlated personal observations about the requirements of the proposed Contract Documents. The Bidder has no outstanding questions regarding the interpretation or clarification of the proposed Contract Documents.

4. The Bidder understands that the execution of the Project will require sequential, coordinated, and interrelated operations, which may involve interference, disruption, hindrance, or delay in the progress of the Bidder's Work. The Bidder agrees that the Contract Sum, as amended from time to time, shall cover all amounts due from the State resulting from interference, disruption, hindrance, or delay that is not caused by the State or its agents and employees. The Bidder agrees that any such interference, disruption, hindrance, or delay is within the contemplation of the Bidder and the State and that the Contractor's sole remedy from the State for any such interference, disruption, hindrance, or delay shall be an extension of time in accordance with the proposed Contract Documents.

5. During the performance of the Contract, the Bidder agrees to comply with Ohio Administrative Code ("OAC") Chapters 123:2-3 through 123:2-9 and agrees to incorporate the monthly reporting provisions of OAC Section 123:2-9-01 into all subcontracts on the Project, regardless of tier. The Bidder understands the State's Equal Opportunity Coordinator or the Contracting Authority may conduct pre-award and post-award compliance reviews to determine if the Bidder maintains nondiscriminatory employment practices, maintains an affirmative action program, and is exerting good faith efforts to accomplish the goals of the affirmative action program. For a full statement of the rules regarding Equal Employment Opportunity in the Construction Industry, see OAC Chapters 123:2-1 through 123:2-9.

6. The Bidder and each Person submitting a Bid on behalf of the Bidder certifies, and in the case of a Bid by a joint venture each member thereof certifies as to such member's entity, under penalty of perjury, that to the best of the undersigned's knowledge and belief: (a) the Base Bid, any Unit Prices, and any Alternate bid in the Bid have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition as to any matter relating to such Base Bid, Unit Prices or Alternate bid with any other Bidder; (b) unless otherwise required by law, the Base Bid, any Unit Prices and any Alternate bid in the Bid have not been knowingly disclosed by the Bidder and shall not knowingly be disclosed by the Bidder prior to the bid opening, directly or indirectly, to any other Bidder who would have any interest in the Base Bid, Unit Prices, or Alternate bid; (c) no attempt has been made or shall be made by the Bidder to induce any other Person to submit or not to submit a Bid for the purpose of restricting competition.

7. The Bidder shall execute the Agreement with the Contracting Authority, if a Contract is awarded on the basis of this Bid, and if the Bidder does not execute the Agreement for any reason, other than as authorized by law, the Bidder and the Bidder's Surety are liable to the State as provided in Article 5 of the Instructions to Bidders.

8. The Bidder certifies that the upon the award of a Contract, as the Contractor it shall make a good faith effort to ensure that all of the Contractor's employees, while working on the Site, shall not purchase, transfer, use, or possess illegal drugs or alcohol or abuse prescription drugs in any way.

9. The Bidder acknowledges that it read all of the Instructions to Bidders, and in particular, Section 2.10 - Submittals With Bid Form, and by submitting its Bid certifies that it has read the Instructions to Bidders and it understands and agrees to the terms and conditions stated in them.

10. The Bidder agrees to furnish any information requested by the Contracting Authority or the Architect/Engineer to evaluate the responsibility of the Bidder.

11. The Bidder agrees to furnish the submittals required by Section 6.1 of the Instructions to Bidders for execution of the Agreement within 10 days of the date of the Notice of Intent to Award.

12. When the Bidder is a corporation, partnership or sole proprietorship, an officer, partner or principal of the Bidder, as applicable, shall enter the legal name of the Bidder and the name of the officer, partner or principal of the Bidder (in lieu of signing the Bid Form) in the data fields provided.

13. When the Bidder is a joint venture, an officer, partner or principal, as applicable, of each member of the joint venture shall enter the legal name of the applicable member and the name of the officer, partner or principal (in lieu of signing the Bid Form) in the data fields provided.

14. The Bidder understands that the Contract is subject to all the provisions, duties, obligations, remedies and penalties of the Davis Bacon Act, 40 United States Code Section 3141 and following, and that the Bidder shall pay any wage increase in the locality during the term of the Contract. Federal Prevailing Wage rates may be subject to change prior to the final award of this Contract.

15. The Bidder represents that the individual that is submitting and digitally signing the electronic Bid is legally authorized to do so.

16. Bidder acknowledges that by the act of submitting an electronic Bid that it is digitally signing the actual Bid, which shall serve as the Bidder's authorization for the further consideration and activity in the bidding and contract process.

☐ The Bidder hereby acknowledges that the above representations in this Bid are material and not mere recitals.*

## Procurement Forms

Document 00 43 13 - Bid Security Form
→ Upload below and provide original document within 3 days

Document 00 45 13 - Bidder's Qualifications
→ Upload below or provide within 3 days of request

~~Document 00 45 39 - EDGE Affidavit~~
→ Upload below or provide within 3 days of request

3 Attachments

## Instructions for Providing Bid Submittals

**Submission of Electronic Facsimile of Bid Guaranty with Electronic Bid**

The Bidder SHALL UPLOAD and ATTACH TO ITS BID an ELECTRONIC FACSIMILE (scanned PDF document) OF ITS BID GUARANTY, payable to the Contracting Authority, in the form of either: (1) the signed and sealed Document 00 43 13 - "Bid Security Form" contained in the Contract Documents (and provided for the Bidder's convenience in the block above) for the amount of the Base Bid plus all additive Alternates; or (2) a certified check, cashier's check, or letter of credit, for 10 percent of the Base Bid, plus all additive Alternates – a letter of credit shall expressly provide that it is revocable only by the Contracting Authority. Refer to Sections 2.10.1.1 and 5.1 of Document 00 21 13 - "Instructions to Bidders."

**Submission of Original Bid Guaranty**

In addition to the Electronic Facsimile above, the Bidder SHALL DELIVER ITS ORIGINAL UNALTERED BID GUARANTY to the Project Coordinator at the address identified below WITHIN 3 BUSINESS DAYS AFTER THE BID DEADLINE as provided in Ohio Administrative Code Section 153:1-8-01(H). THIS REQUIREMENT APPLIES TO ALL BIDDERS. Refer to Section 2.10.1.2 of the Instructions to Bidders.

Gary Kubicki
Project Coordinator
Ohio Facilities Construction Commission
30 West Spring Street, 4th Floor
Columbus, OH 43215

**Non-responsive Bid for Failure to Submit Bid Guaranty**

Each Bidder MUST SUBMIT BOTH THE ELECTRONIC FACSIMILE AND THE ORIGINAL UNALTERED BID GUARANTY as described above. The Contracting Authority SHALL REJECT A BID AS NON-RESPONSIVE if the Bidder fails to submit BOTH elements of the Bid Guaranty. The checkboxes below are to identify that you have uploaded the other form of Bid Guaranty. DO NOT CHECK ALL BOXES. Refer to Section 2.10.1 of the Instructions to Bidders.

**Submission of Bidder's Qualifications and EDGE Affidavit**

The Bidder is encouraged to submit background information with its Bid using Document 00 45 13 - "Bidder's Qualifications" and Document 00 45 39 - "EDGE Affidavit" with the EDGE-certified Business(es) the Bidder proposes to use on the Project (forms provided for the Bidder's convenience in the block above). If the Bidder does not submit the Bidder's Qualifications form and/or the EDGE Affidavit form and related information attached to the electronic Bid Form, the Bidder shall provide it within 3 days of request. Refer to Sections 2.10.3 and 3.5.4 of the Instructions to Bidders.

## Required Bid Guaranty Upload

| Name | File* |
|---|---|
| Document 00 43 13 - Bid Security Form<br>→ Upload a scan of the fully executed Bid Security Form AND submit the original document to the Contracting Authority within 3 days of the bid deadline | Select file... no file selected<br>☐ I am NOT enclosing this document because the omission terms have been met. (Bidder submitted a Cashier's check below) |
| Power of Attorney<br>→ Upload a scan of the fully executed Power of Attorney AND submit the original document to the Contracting Authority within 3 days of the bid deadline | Select file... no file selected<br>☐ I am NOT enclosing this document because the omission terms have been met. (Bidder submitted a Cashier's check below OR included with the Bid Security Form above) |
| Cashier's Check for 10% of the Bid<br>→ Upload a scan of the Cashier's Check AND submit the original check to the Contracting Authority within 3 days of the bid deadline | Select file... no file selected<br>☐ I am NOT enclosing this document because the omission terms have been met. (Bidder submitted the Bid Security Form AND Power of Attorney above) |

3 Required Documents

## Bidder's Qualifications and EDGE Affidavit Upload

| Name | File* |
|---|---|
| Document 00 45 13 - Bidder's Qualifications<br>→ Upload fully completed form and attachments | Select file... no file selected<br>☐ I am NOT enclosing this document because the omission terms have been met. (Must be submitted to the Contracting Authority within 3 days of request) |
| ~~Document 00 45 39 - EDGE Affidavit~~<br>→ Upload a completed form for each EDGE business | Select file... no file selected<br>☐ I am NOT enclosing this document because the omission terms have been met. (Must be submitted to the Contracting Authority within 3 days of request) |

2 Required Documents

## Bidder Signatory Information

Bidder Signatory

**Name of Bidder's Authorized Signatory:*** **Title of Authorized Signatory:***

**All Bidders complete all information in this form. Duplicate and complete the block below for each Joint Venturer:**

Bidder Information

**Business Name:***

**Business Mailing Address, City, State, Zip:***

**Telephone Number:*** **Facsimile Number:** **Email Address:***

**Federal Tax ID Number:*** **State of Incorporation (if applicable):**

**Contact person for Contract processing:*** **Date enrolled in an OBWC-approved DFSP (month/date/year):**

**President or Chief Executive Officer's Name:*** **President or Chief Executive Officer's Title:***

**END OF DOCUMENT**

SECTION 01 23 00

ALTERNATES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. The provisions of the General Conditions, Supplementary Conditions, and the other Sections included under Division 1, General Requirements, are included as a part of this Section as though bound herein.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 ACCEPTANCE OF ALTERNATES

A. The Owner may request bids on alternates. If the Owner requests bids on alternates, the Bidder should include the cost of the alternates requested on its Bid Form.

B. At the time of awarding the contract, the Owner will select or reject alternates as it determines is in its best interest at the time. A Bidder's failure to include in its Bid Form the cost of an alternate selected by the Owner and applicable to the Bidder's work may render the bid non-responsive and be grounds for the rejection of the bid. Otherwise, the failure to include the cost of an alternate will not be deemed material.

C. If, during the progress of the Work, the Owner desires to reinstate any alternate not included in the contract, the Owner reserves the right to reinstate the alternate at the price bid by the contractor on its Bid Form provided that such action is taken in sufficient time so as not to delay the progress of the work or cause the contractor additional expense.

D. If “ADD” or “DEDUCT” is not circled on the bid form in reference to any alternate, the amount will be assumed “ADD”.

1.5 PROCEDURES

A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

B. Notification: Immediately following award of the Contract, the Owner shall notify each party involved, in writing, of the status of each alternate. Owner shall indicate if alternates have been accepted, rejected, or deferred for later consideration and include a complete description of negotiated modifications to alternates.

C. Execute accepted alternates under the same conditions as other work of the Contract.

D. Schedule: A Schedule of Alternates is included at the end of this Section.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate #1: Build-out of Study Café & Comp Lab/Library
1. Base Bid item: Build out space as provided in drawings with complete interior walls, finishes, and casework.
2. Alternate item: Space to remain "white box" with simple finishes. All HVAC

B. Alternate #2: Asphalt Parking Lot and Access Drive
1. Base Bid item: Aggregate Paving (Access Road and Parking)
2. Alternate item: Asphalt access road and parking with parking stall striping

C. Alternate #3: Brick Paver College Logo
1. Base Bid item: Conctete Slab.
2. Alternate item: Two (2) Belmont College logo in brick pavers

D. Alternate #4: Aluminum Curtain Wall Sunshade
1. Base Bid Item: No sunshades on Frame Elevation F22.
2. Alternate item: Provide and install sunshade for Frame Elevation 22 as outlined in the drawings.

E. Alternate #5: Classroom – Casework
1. Base Bid Item: Install wall finishes in lieu of casework shown.
2. Alternate Item: Provide and install casework as identified on the drawings.

F. Alternate #6: Owner to Furnish Dust Collector
1. Base Bid Item: Contractor to furnish and install dust collector per drawings.
2. Alternate Item: owner to provide and contractor to install dust collector.

G. Alternate #7: Landscape Trees by Owner
1. Base Bid Item: Contractor to furnish and install landscape trees per drawings.
2. Alternate Item: Owner to provide and install landscape trees.

H. Alternate #8: Air Cooled Chiller 1

1. ACH-1 purchased by owner and received and installed by the contractor. Provide individual line item for equipment cost. Refer to equipment schedule(s).

I. Alternate #9: Hybrid VRV System

1. Hybrid VRF System purchased by owner and received and installed by the contractor. Provide individual line item for equipment cost. Refer to equipment schedule(s).

J. Alternate #10: Main BAS

1. Main BAS (BOD: Siemens) equipment purchased by owner and received and installed by the contractor. Provide individual line item for equipment cost. Refer to Alternate BAS Architecture Diagram.

K. Alternate #11: Manufacturer specific BAS

1. Manufacturer specific (BAS BOD: Trane) purchased by owner and received and installed by the contractor. Provide individual line item for equipment cost. Refer to Alternate BAS Architecture Diagram.

END OF SECTION

SECTION 08 16 14

FRP FLUSH DOORS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Sections included under Division 0 & Division 1 are included as a part of this Section as though bound herein.

B. If AIA Document 201 is included in this contract (refer to Section 01 11 00 Summary of Work to verify), it is part of this Section as though bound herein.

C. Related Sections:
1. Section 01 74 19 – Construction Waste Management
2. Section 08 71 00 - Door Hardware

1.2 SUMMARY

A. Section includes, but is not limited to:
1. Fiberglass reinforced polyester (FRP) flush doors with aluminum frames

1.3 REFERENCES

A. Reference Standards:
1. AAMA 1503-98 - Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections.
2. ANSI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors and Hardware Reinforcings.
3. ASTM B 117 - Operating Salt Spray (Fog) Apparatus.
4. ASTM B 209 - Aluminum and Aluminum-Alloy Sheet and Plate.
5. ASTM B 221 - Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
6. ASTM D 256 - Determining the Pendulum Impact Resistance of Notched Specimens of Plastics.
7. ASTM D 543 - Evaluating the Resistance of Plastics to Chemical Reagents.
8. ASTM D 570 - Water Absorption of Plastics.
9. ASTM D 638 - Tensile Properties of Plastics.
10. ASTM D 790 - Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
11. ASTM D 1308 - Effect of Household Chemicals on Clear and Pigmented Organic Finishes.
12. ASTM D 1621 - Compressive Properties of Rigid Cellular Plastics.
13. ASTM D 1623 - Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics.
14. ASTM D 2126 - Response of Rigid Cellular Plastics to Thermal and Humid Aging.
15. ASTM D 2583 - Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.
16. ASTM D 5420 – Impact Resistance of Flat Rigid Plastic Specimens by Means of a Falling Weight.

17. ASTM D 6670-01 - Standard Practice for Full-Scale Chamber Determination of Volatile Organic Emissions from Indoor Materials/Products.
18. ASTM E 84 - Surface Burning Characteristics of Building Materials.
19. ASTM E 90 - Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions.
20. ASTM E 283 - Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
21. ASTM E 330 - Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
22. ASTM E 331 - Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
23. ASTM F 476 - Security of Swinging Door Assemblies.
24. NWWDA T.M. 7-90 – Cycle Slam Test Method
25. SFBC PA 201 - Impact Test Procedures.
26. SFBC PA 203 - Criteria for Testing Products Subject to Cyclic Wind Pressure Loading.
27. SFBC 3603.2 (b)(5) - Forced Entry Resistance Test.

1.4 BID REQUIREMENTS

A. If Contractor discovers an apparent conflict or discrepancy between portions of the Contract Documents that appears to be inconsistent or is not reasonably inferred from the intent of the Contract Documents, the Contractor shall include in their bid the most stringent and demanding, or highest cost requirement.

B. Pre-Bid Exceptions: If, for any reason, you deem the designed system is not appropriate or feasible, submit this concern, proposed modification, qualification and / or exception to the drawings and specifications with your bid proposal.

1.5 SUBMITTALS

A. In accordance with Section 01 33 00 – Submittal Procedures.

B. Product Data: Submit manufacturer's product data, including description of materials, components, fabrication, finishes, and installation.

C. Shop Drawings: Submit manufacturer's shop drawings, including elevations, sections, and details, indicating dimensions, tolerances, materials, fabrication, doors, panels, framing, hardware schedule, and finish.

D. Samples for Initial Selection: Color charts consisting of actual materials in small sections for faces of factory-finished doors with transparent finish. Show full range of colors available for stained finishes.

E. Sample Warranty: Sample copy of manufacturer's warranty.

F. Close-Out Document Submittals
1. Warranty: Signed warranty.

2. Operations & Maintenance Data: Submit manufacturer's maintenance and cleaning instructions for doors, including maintenance and operating instructions for hardware.

1.6 QUALITY ASSURANCE

A. Provide door assemblies that have been designed and fabricated to comply with specified performance requirements, as demonstrated by testing manufacturer's corresponding standard systems.

B. Qualifications:
1. Manufacturer Qualifications:
a. Continuously engaged in manufacturing of doors of similar type to that specified, with a minimum of 25 years successful experience.
b. Door and frame components from same manufacturer.
c. Evidence of a compliant documented quality management system.

1.7 DELIVERY, STORAGE & HANDLING

A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying opening door mark and manufacturer.

B. Storage: Store materials in clean, dry area indoors in accordance with manufacturer's instructions.

C. Handling: Protect materials and finish from damage during handling and installation.

1.8 PERFORMACE REQUIREMENTS

A. Air Infiltration: For a single door 3'-0" x 7'-0", test specimen shall be tested in accordance with ASTM E 283 at pressure differential of 6.24 psf. Door shall not exceed 0.90 cfm per linear foot of perimeter crack.

B. Water Resistance: For a single door 3'-0" x 7'-0", test specimen shall be tested in accordance with ASTM E 331 at pressure differential of 7.50 psf. Door shall not have water leakage.

C. Indoor air quality testing per ASTM D 6670-01: GREENGUARD Environmental Institute Certified including GREENGUARD for Children and Schools Certification.

D. Hurricane Test Standards, Single Door with Single-Point Latching:
1. Uniform Static Load, ASTM E 330: Plus or minus 75 pounds per square foot.
2. Forced Entry Test, 300 Pound Load Applied, SFBC 3603.2 (b)(5): Passed.
3. Cyclic Load Test, SFBC PA 203: Plus or minus 53 pounds per square foot.
4. Large Missile Impact Test, SFBC PA 201: Passed.

E. Swinging Door Cycle Test, Doors and Frames, ANSI A250.4: Minimum of 25,000,000 cycles.

F. Cycle Slam Test Mesthod, NWWDA T.M. 7-90: Minimum 5,000,000 Cycles.

G. Swinging Security Door Assembly, Doors and Frames, ASTM F 476: Grade 40.

H. Salt Spray, Exterior Doors and Frames, ASTM B 117: Minimum of 500 hours.

I. Sound Transmission, Exterior Doors, STC, ASTM E 90: Minimum of 25.

J. Thermal Transmission, Exterior Doors, U-Value, AAMA 1503-98: Maximum of 0.29 BTU/hr x sf x degrees F. Minimum of 55 CRF value.

K. Surface Burning Characteristics, FRP Doors and Panels, ASTM E 84:
   1. Flame Spread: Maximum of 200, Class C.
   2. Smoke Developed: Maximum of 450, Class C.

L. Surface Burning Characteristics, Class A Option On Interior Faces of FRP Exterior Panels and Both Faces of FRP Interior Panels, ASTM E 84:
   1. Flame Spread: Maximum of 25.
   2. Smoke Developed: Maximum of 450.

M. Impact Strength, FRP Doors and Panels, Nominal Value, ASTM D 256: 15.0 foot-pounds per inch of notch.

N. Tensile Strength, FRP Doors and Panels, Nominal Value, ASTM D 638: 14,000 psi.

O. Flexural Strength, FRP Doors and Panels, Nominal Value, ASTM D 790: 21,000 psi.

P. Water Absorption, FRP Doors and Panels, Nominal Value, ASTM D 570: 0.20 percent after 24 hours.

Q. Indentation Hardness, FRP Doors and Panels, Nominal Value, ASTM D 2583: 55.

R. Gardner Impact Strength, FRP Doors and Panels, Nominal Value, ASTM D 5420: 120 in- lb.

S. Abrasion Resistance, Face Sheet, Taber Abrasion Test, 25 Cycles at 1,000 Gram Weight with CS-17 Wheel: Maximum of 0.029 average weight loss percentage.

T. Stain Resistance, ASTM D 1308: Face sheet unaffected after exposure to red cabbage, tea, and tomato acid. Stain removed easily with mild abrasive or FRP cleaner when exposed to crayon and crankcase oil.

U. Chemical Resistance, ASTM D 543. Excellent rating.
   1. Acetic acid, Concentrated.
   2. Ammonium Hydroxide, Concentrated.
   3. Citric Acid, 10%.
   4. Formaldehyde.
   5. Hydrochloric Acid, 10%
   6. Sodium hypochlorite, 4 to 6 percent solution.

V. Compressive Strength, Foam Core, Nominal Value, ASTM D 1621: 79.9 psi.

W. Compressive Modulus, Foam Core, Nominal Value, ASTM D 1621: 370 psi.

X. Tensile Adhesion, Foam Core, Nominal Value, ASTM D 1623: 45.3 psi.

Y. Thermal and Humid Aging, Foam Core, Nominal Value, 158 Degrees F and 100 Percent Humidity for 14 Days, ASTM D 2126: Minus 5.14 percent volume change.

1.9 WARRANTY

A. See Section 01 77 00 – Closeout Procedures, for additional close out submittal information.

B. See Section 01 78 36 – Warranties, for additional warranty requirements.

C. Warrant doors, frames, and factory hardware against failure in materials and workmanship, including excessive deflection, faulty operation, defects in hardware installation, and deterioration of finish or construction in excess of normal weathering.

D. Warranty Period: Ten years starting on date of shipment. In addition, a limited lifetime (while the door is in its specified application in its original installation) warranty covering: failure of corner joinery, core deterioration, delamination or bubbling of door skin.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Acceptable Manufacturers:
1. Special-Lite, Inc., Decatur, Michigan
2. Commercial Door Systems
3. Cline Aluminum Doors, Inc.
4. Capitol Aluminum & Glass Corp., Bellevue, Ohio

2.2 FRP FLUSH DOORS

A. Model: SL-17 Flush Doors with SpecLite3 fiberglass reinforced polyester (FRP) face sheets.

B. Door Opening Size: As indicated in the Door Schedule.

C. Construction:
1. Door Thickness: 1-3/4 inches.
2. Stiles and Rails: Aluminum Alloy 6063-T5, minimum of 2-5/16-inch depth.
3. Corners: Mitered.
4. Provide joinery of 3/8-inch diameter full-width tie rods through extruded splines top and bottom integral to standard tubular shaped stiles and rails reinforced to accept hardware as specified.
5. Securing Internal Door Extrusions: 3/16-inch angle blocks and locking hex nuts for joinery. Welds, glue, or other methods are not acceptable.
6. Furnish extruded stiles and rails with integral reglets to accept face sheets. Lock face sheets into place to permit flush appearance.
7. Rail caps or other face sheet capture methods are not acceptable.
8. Extrude top and bottom rail legs for interlocking continuous weather bar.
9. Meeting Stiles: Pile brush weatherseals. Extrude meeting stile to include integral pocket to accept pile brush weatherseals.
10. Bottom of Door: Install bottom weather bar with nylon brush weatherstripping into extruded interlocking edge of bottom rail.

11. Glue: Use of glue to bond sheet to core or extrusions is not acceptable.

D. Face Sheet:
1. Material: SpecLite3 FRP, 0.120-inch thickness, finish color throughout.
2. Protective coating: Abuse-resistant engineered surface. Provide FRP with SpecLite3 protective coating, or equal.
3. Texture: Pebble.
4. Color: As selected by Architect from manufacturer's standard.
5. Adhesion: The use of glue to bond face sheet to foam core is prohibited.

E. Core:
1. Material: Poured-in-place polyurethane foam.
2. Density: Minimum of 5 pounds per cubic foot.
3. R-Value: Minimum of 11.

F. Hardware:
1. Pre-machine doors in accordance with templates from specified hardware manufacturers and hardware schedule.

2.3 MATERIALS

A. Aluminum Members:
1. Extrusions: ASTM B 221.
2. Sheet and Plate: ASTM B 209.
3. Alloy and Temper: As required by manufacturer for strength, corrosion resistance, application of required finish, and control of color.

B. Components: Door and frame components from same manufacturer.

C. Fasteners:
1. Material: Aluminum, 18-8 stainless steel, or other non-corrosive metal.
2. Compatibility: Compatible with items to be fastened.
3. Exposed Fasteners: Screws with finish matching items to be fastened.

2.4 FABRICATION

A. Sizes and Profiles: Required sizes for door and frame units, and profile requirements shall be as indicated on the Drawings.

B. Coordination of Fabrication: Field measure before fabrication and show recorded measurements on shop drawings.

C. Assembly:
1. Complete cutting, fitting, forming, drilling, and grinding of metal before assembly.
2. Remove burrs from cut edges.

D. Welding: Welding of doors or frames is not acceptable.

E. Fit:
1. Maintain continuity of line and accurate relation of planes and angles.

2. Secure attachments and support at mechanical joints with hairline fit at contacting members.

2.5 ALUMINUM DOOR FRAMING SYSTEMS

A. Tubular Framing:
1. Size and Type: As indicated on the Drawings.
2. Materials: Aluminum Alloy 6063-T5, 1/8-inch minimum wall thickness.
3. Applied Door Stops: 0.625-inch high, with screws and weatherstripping. Door stop shall incorporate pressure gasketing for weathering seal. Counterpunch fastener holes in door stop to preserve full metal thickness under fastener head.
4. Frame Members: Box type with 4 enclosed sides. Open-back framing is not acceptable.
5. Caulking: Caulk joints before assembling frame members.
6. Joints:
   a. Secure joints with fasteners.
   b. Provide hairline butt joint appearance.
7. Field Fabrication: Field fabrication of framing using stick material is not acceptable.
8. Applied Stops: For side, transom, and borrowed lites and panels. Applied stops shall incorporate pressure gasketing for weathering seal. Reinforce with solid bar stock fill for frame hardware attachments.
9. Anchors:
   a. Anchors appropriate for wall conditions to anchor framing to wall materials.
   b. Door Jamb and Header Mounting Holes: Maximum of 24-inch centers.
   c. Secure head and sill members of transom, side lites, and similar conditions.

2.6 HARDWARE

A. Pre-machine doors in accordance with templates from specified hardware manufacturers and hardware schedule.

B. Factory install hardware.

C. Hardware Schedule: See Specification Section 08 71 00 – Door Hardware

2.7 ALUMINUM FINISHES

A. Anodized Finish: Class I finish, 0.7 mils thick.
1. Clear 215 R1, AA-M10C12C22A41, Class I, 0.7 mils thick.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine areas to receive doors. Notify Architect of conditions that would adversely affect installation or subsequent use. Do not proceed with installation until unsatisfactory conditions are corrected.

3.2 PREPARATION

A. Ensure openings to receive frames are plumb, level, square, and in tolerance.

3.3 INSTALLATION

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

B. Install doors plumb, level, square, true to line, and without warp or rack.

C. Anchor frames securely in place.

D. Separate aluminum from other metal surfaces with bituminous coatings or other means approved by Architect.

E. Set thresholds in bed of mastic and backseal.

F. Install exterior doors to be weathertight in closed position.

G. Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Architect.

H. Remove and replace damaged components that cannot be successfully repaired as determined by Architect.

3.4 ADJUSTING

A. Adjust doors, hinges, and locksets for smooth operation without binding.

3.5 CLEANING

A. Clean doors promptly after installation in accordance with manufacturer's instructions.

B. Do not use harsh cleaning materials or methods that would damage finish.

3.6 PROTECTION

A. Protect installed doors to ensure that, except for normal weathering, doors will be without damage or deterioration at time of substantial completion.

END OF SECTION

SECTION 08 43 00

HIGH PERFORMANCE ALUMINUM-FRAMED STOREFRONTS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Sections included under Division 0 & Division 1 are included as a part of this Section as though bound herein.

B. If AIA Document 201 is included in this contract (refer to Section 01 11 00 Summary of Work to verify), it is part of this Section as though bound herein.

C. Related Sections:
1. Section 01 74 19 – Construction Waste Management

1.2 SUMMARY

A. Section includes, but is not limited to:
1. Aluminum curtain wall systems, complete with reinforcing, shims, anchors, and attachment devices.
2. Accessories necessary to complete Work.

B. Products Furnished But Not Installed Under this Section:
1. Inserts and anchoring devices which are to be built into structure.

1.3 REFERENCES

A. Reference Standards:
1. Aluminum Association (AA):
a. DAF-45 – Designation System for Aluminum Finishes.
2. American Architectural Manufacturers Association (AAMA):
a. Aluminum Curtain Wall Design Guide Manual.
b. 501.2- Field Check of Metal Curtain Walls for Water Leakage.
c. 2605 - Voluntary Specification for High Performance Organic Coatings on Architectural Extrusions and Panels.
d. 606.1 - Specifications and Inspection Methods for Integral Color Anodic Finishes for Architectural Aluminum.
e. 607.1 - Specifications and Inspection Methods for Clear Anodic Finishes for Architectural Aluminum.
f. 608.1 - Specification and Inspection Methods for Electrolytically Deposited Color Anodic Finishes for Architectural Aluminum.
g. 701.2 - Specifications for Pile Weatherstripping.
h. Manual #10 - Care and Handling of Architectural Aluminum From Shop to Site.
3. American National Standards Institute (ANSI):
a. Z97.1 - Specifications and Methods of Test for Safety Glazing Material Used in Buildings.

4. American Society for Testing and Materials (ASTM):
    a. A36 - Structural Steel.
    b. A123 - Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
    c. A525 - General Requirements for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process.
    d. A526 - Sheet Steel, Zinc Coated (Galvanized) by the Hot-Dip Process, Commercial Quality.
    e. B209 - Aluminum and Aluminum-Alloy Sheet and Plate.
    f. B221 - Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes.
    g. B308 - Aluminum-Alloy 6061-T6 Standard Structural Shapes, Rolled or Extruded.
    h. C716 - Installing Lock-Strip Gaskets and Infill Glazing Materials.
    i. C920 - Elastomeric Joint Sealants.
    j. E283 - Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors.
    k. E330 - Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
    l. E331 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
    m. E773 - Test Method for Seal Durability of Sealed Insulating Glass Units.
    n. E774 - Sealed Insulating Glass Units.
5. Consumer Product Safety Commission (CPSC):
    a. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials.
6. Federal Specifications (FS):
    a. TT-P-645A Primer, Paint, Zinc Chromate, Alkyd Type.
7. Flat Glass Marketing Association (FGMA):
    a. Glazing Manual.
8. Steel Structures Painting Council (SSPC):
    a. SP2 - Hand Tool Cleaning.
    b. SP3 - Power Tool Cleaning.
    c. Paint 12 - Cold-Applied Asphalt Mastic (Extra Thick Film).

1.4 BID REQUIREMENTS

A. If Contractor discovers an apparent conflict or discrepancy between portions of the Contract Documents that appears to be inconsistent or is not reasonably inferred from the intent of the Contract Documents, the Contractor shall include in their bid the most stringent and demanding, or highest cost requirement.

B. Pre-Bid Exceptions: If, for any reason, you deem the designed system is not appropriate or feasible, submit this concern, proposed modification, qualification and / or exception to the drawings and specifications with your bid proposal.

1.5 SUBMITTALS

A. In accordance with Section 01 33 00 – Submittal Procedures.

B. Product Data:
    1. Submit manufacturer's descriptive literature for each manufactured products.
    2. Include information for factory finishes, accessories and other required components.

3. Include color charts for finish indicating manufacturer's standard colors available for selection.

C. Shop Drawings:
1. Submit drawings indicating elevations, detailed design, dimensions, member profiles, joint locations, arrangement of units, member connections, and thickness of various components.
2. Show following items:
a. Details of special shapes.
b. Reinforcing.
c. Drainage details and flow diagrams.
d. Anchorage system.
e. Interfacing with building construction.
f. Provisions for system expansion and contraction.
g. Thermal breaks.
3. Indicate glazing details, methods, locations of various types and thickness of glass and internal sealant requirements.
4. Clearly indicate locations of exposed fasteners and joints for Architect's acceptance.
5. Clearly show where and how manufacturer's system deviates from Contract Drawings and these Specifications.

D. Mock-up Drawings: Submit drawings for mock-ups; refer to Section 01430 for mock-up requirements.

E. Manufacturer's Installation Instructions: Submit manufacturer's printed installation instructions.

F. Samples:
1. Submit manufactures samples indicating quality of finish [in required colors] on alloys used for work, 12 inches long for extrusions and 6 inches square for sheet materials.
2. Where normal texture or color variations are expected, include additional samples illustrating range of variation.

G. Test Reports: Submit certified copies of previous tests reports by independent laboratory substantiating performance of system. Include other supportive data as necessary.

H. Certificates:
1. Submit manufacturer's certification stating that installed system is in compliance with specified requirements.

I. Sample Warranty: Sample copy of manufacturer’s warranty.

J. Close-Out Document Submittals
1. Warranty: Signed warranty.
2. Operations & Maintenance Data: Maintenance instructions.

1.6 QUALITY ASSURANCE

A. Single Source Responsibility:

1. Provide curtainwall systems that are products of a single manufacturer.

B. Qualifications:
1. Engineer Qualifications: Professional Structural Engineer registered in State where Project is located.
2. Installer Qualifications: Certified in writing by system manufacturer as qualified for specified systems.

1.7 DELIVERY, STORAGE & HANDLING

A. Protect finished surfaces to prevent damage.

B. Do not use adhesive papers or sprayed coatings which become firmly bonded when exposed to sun.

C. Do not leave coating residue on surfaces.

D. Deliver glass units with manufacturer's labels intact on interior side of glass. Ensure labels indicate glass thickness, unit location, glass strength and orientation of units in vertical position.

E. Protect glass edges and corners to prevent chipping, cracking, and other similar damages.

1.8 PROJECT CONDITIONS

A. Ensure ambient and surface temperatures and joint conditions are suitable for installation of materials.

1.9 PERFORMACE REQUIREMENTS

A. General Standard: In addition to requirements shown or specified, comply with applicable provisions of Aluminum Curtain Wall Design Guide Manual for design, materials, fabrication and installation of component parts.

B. Design Requirements:
1. Metal stick framed systems with interior and exterior exposed metal framing.
2. System manufacturer shall provide curtainwall systems, including necessary modifications to meet specified requirements and maintaining visual design concepts.
3. System manufacturer shall provide low profile entrance frames as an integral part of the curtain wall system.
4. Fabricate glazing systems for interior [exterior] glazing at vision areas and exterior [interior] glazing at spandrel areas.
5. Perimeter conditions shall allow for installation tolerances, expansion and contraction of adjacent materials, and sealant manufacturer's recommended joint design.
6. Drawings are diagrammatic and do not purport to identify nor solve problems of thermal or structural movement, glazing, anchorage or moisture disposal.
7. Requirements shown by details are intended to establish basic dimension of unit, sight lines and profiles of members.

8. Do not assume glass, sealants, and interior finishes contribute to framing member strength, stiffness, or lateral stability.
9. Attachment considerations are to take into account site peculiarities and expansion and contraction movements so there is no possibility of loosening, weakening or fracturing connection between units and building structure or between units themselves.
10. Anchors, fasteners and braces shall be structurally stressed not more than 50% of allowable stress when maximum loads are applied.
11. Allow for expansion and contraction due to structural movement without detriment to appearance or performance.
12. System shall drain to exterior face of wall, water entering joints and condensation occurring within system by drain holes and gutters of adequate size to evacuate water without infiltration to interior or top of lower light of glass. No visible weep holes allowed.
13. Provide concealed fastening.
14. Metal faces are required to be visually flat under all lighting conditions, subject to acceptance of Architect.
15. Provide uniform color and profile appearance at components exposed to view.
16. Not Permitted: Vibration harmonics, wind whistles, noises caused by thermal movement, thermal movement transmitted to other building elements, loosening, weakening, or fracturing of attachments or components of system.

C. Performance Requirements:
1. Air infiltration: Air leakage shall not exceed 0.03 cfm per square foot of surface area when tested in accordance with ASTM E283 at differential static pressure of 6.24 psf.
2. Water infiltration: No uncontrolled leakage when tested in accordance with ASTM E331 at test pressure of 9.0 psf.

D. Structural Requirements:
1. Wind loading:
   a. Basic zones:_____.
   b. Corner zones:_____.
   c. Parapet zones:_____.
2. Deflection under uniform loading: When tested in accordance with ASTM E330 at design pressure, maximum deflection of exterior member shall not exceed L/175 of span or 3/4 inch or L/240 + ¼" for spans over 13'-6".
3. Parallel to wall and corner mullion deflections: 75% of glass edge bite or 3/8 inch, whichever is less.
4. Compression flanges of flexural members may be assumed to receive effective lateral bracing only from:
   a. Anchors to building structure and
   b. Horizontal glazing rails or interior trim which are in actual contact with compression flange.
5. Do not regard points of contraflexture as lateral braces or as end points of unbraced length; unbraced length is actual distance between effective lateral braces as defined above.
6. Where framing member reaction is resisted by continuous element, maximum assumed effective length of the resisting element is 4 times bearing length, but not more than 12 inches.

E. Thermal Requirements: Framing systems shall accommodate expansion and contraction movement due to surface temperature differential of 180°F without causing buckling, stress on glass, failure of joint seals, excessive stress on structural elements, reduction of performance or other detrimental effects.

F. Interface:
1. Furnish inserts and anchoring devices which need to be preset and built into structure to appropriate trade.
2. Supply on timely basis to avoid delay in Work.
3. Instruct other trades of proper location and position.
4. Furnish setting drawings, diagrams, templates and installation instructions.

1.10 COORDINATION

A. Pre-installation Meeting:
1. Arrange with Construction Manager, Architect and representatives of window and sealant manufacturer to visit Project site before beginning glazing operations to analyze site conditions, and inspect surfaces and joints to be sealed in order that recommendations may be made should adverse conditions exist.
2. Discuss following items:
a. Weather conditions under which work will be done.
b. Anticipated frequency and extent of joint movement.
c. Joint design.
d. Glazing procedures.

1.11 WARRANTY

A. See Section 01 77 00 – Closeout Procedures, for additional close out submittal information.

B. See Section 01 78 36 – Warranties, for additional warranty requirements.

C. Provide written warranty in form acceptable to Owner jointly signed by manufacturer, installer and Contractor warranting work to be watertight, free from deflective materials, defective workmanship, glass breakage due to defective design, and agreeing to replace components which fail within 1 year from date of Substantial Completion.

D. Warranty shall cover following:
1. Complete watertight and airtight system installation within specified tolerances.
2. Glass and glazing gaskets will not break or "pop" from frames due to design wind, expansion or contraction movement or structural loading.
3. Glazing sealants and gaskets will remain free from abnormal deterioration or dislocation due to sunlight, weather or oxidation.

E. Provide written warranty stating organic coating finish will be free from fading more than 10%, chalking, yellowing, peeling, cracking, pitting, corroding or non-uniformity of color, or gloss deterioration beyond manufacturer's descriptive standards for 5 years from date of Substantial Completion and agreeing to promptly correct defects.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Accepted Manufacturers (* indicates the basis of design)
1. Oldcastle (previously Vistawall), Terrell, TX*
a. HP-175 -1-3/4" x 4-1/2", 5-1/4", or 6" mullion profile - front set, exterior loaded, thermally broken system; available with butt glazed verticals, as manufactured by Oldcastle. Can accept 1/4", 1", 1-1/4" glazing and variations in between.
b. Basis-of-design shall be HP-225 - 2-1/4" x 5", 5-3/4", 7", or 7-1/4" mullion profile - front set, exterior loaded; available with butt glazed verticals, as manufactured by Oldcastle. Can accept 1/4", 1", 1-1/4" glazing and variations in between. For applications where longer and wider spans are encountered and/or greater wind load performance is needed.
2. EFCO Corporation, Monett, MO
3. Kawneer Company, Inc., Norcross, GA
4. TRACO, Cranberry Township, PA
5. Tubelite, Inc., Reed City, MI
6. CMI Architectural Products, Inc., Minneapolis, MN
7. YKK AP
8. Capitol Aluminum & Glass Corp., Bellevue, Ohio
9. Or Architect approved equal.

2.2 FRAMING MATERIALS AND ACCESSORIES

A. Aluminum:
1. ASTM B221, alloy 6063-T5 for extrusions; ASTM B209, alloy 5005-H16 for sheets; or other alloys and temper recommended by manufacturer appropriate for specified finish.
2. Minimum thickness of 0.125 inch for framing members and 0.050 inch for glazing stops and similar components.

B. Internal Reinforcing:
1. ASTM A36 for carbon steel; or ASTM B308 for structural aluminum.
2. Shapes and sizes to suit installation.
3. Shop coat steel components after fabrication with alkyd type zinc chromate primer complying with FS TT-P-645.

C. Inserts and Anchorage Devices:
1. Manufacturer's standard formed or fabricated assemblies, steel or aluminum, of shapes, plates, bars or tubes.
2. Hot-dip galvanize steel assemblies after fabrication, comply with ASTM A123, 2.0 ounce minimum coating.

D. Fasteners:
1. Non-magnetic stainless steel or cadmium plated steel coated with yellow or silver iridescence plating, compatible with materials being fastened.
2. Series 300 stainless steel for exposed locations. Cadmium plated steel with 0.0005 inch plating thickness and color chromate coated for concealed locations.

3. Provide nuts or washers of design having means to prevent disengagement; deforming of fastener threads is not acceptable.
4. Provide concealed fasteners wherever possible.
5. For exposed locations, provide countersunk flathead fasteners with finish matching item fastened.

E. Expansion Anchor Devices: Lead-shield or toothed-steel, drilled-in, expansion bolt anchors.

F. Shims: Non-staining, non-ferrous, type as recommended by system manufacturer.

G. Protective Coatings: Cold applied asphalt mastic complying with SSPC-Paint 12, compounded for 30 mil thickness for each coat; or alkyd type zinc chromate primer complying with FS TT-P-645.

H. Glazing Gaskets:
1. Compression type design, replaceable, molded or extruded neoprene, polyvinyl chloride (PVC), or ethylene propylene diene monomer (EPDM).
2. Comply with ASTM C509 or C864.
3. Profile and hardness as necessary to maintain uniform pressure for watertight seal.
4. Manufacturer's standard black color.

I. Internal Sealants: Types recommended by system manufacturer to remain permanently elastic, tacky, non-drying, non-migrating and weathertight.

J. Curtain Wall Insulation and Fire Safing: Refer to Sections 07210 and 07840.

K. Spandrel Panels:
1. Type: Aluminum sheet, 1/8 inch thick, suitably reinforced on concealed surface for surface flatness, or prefabricated sandwich panels at manufacturer's option.
2. Surface flatness: 0.015 inch maximum deviation when measured with 6 inch rule.
3. Squareness: 0.002 inch maximum for each inch of length at panel edge.
4. Anchorage: Allow for expansion and contraction, to minimize oilcanning and distortion.

2.3 GLASS AND GLAZING ACCESSORIES

A. Refer to Section 08800.

2.4 SYSTEM FABRICATION

A. Take accurate field measurements to verify required dimensions prior to fabrication.

B. Location of exposed joints are subject to Architect's acceptance.

C. Fabricate components in accord with approved shop drawings. Remove burrs and ease edges. Shop fabricate to greatest extent practicable to minimize field cutting, splicing, and assembly. Disassemble only to extent necessary for shipping and handling limitations.

D. Steel Components:
1. Clean surfaces after fabrication and immediately prior to application of primer in accord with SSPC-SP2 or SSPC-SP3 at manufacturer's option.

2. Apply specified shop coat primer in accord with manufacturer's instructions to provide 2.0 minimum dry film thickness.

E. Fabricate components true to detail and free from defects impairing appearance, strength or durability. [Fabricate custom extrusions indicated and as necessary for complete installation.]

F. Fabricate components to allow for accurate and rigid fit of joints and corners. Match components carefully ensuring continuity of line and design. Ensure joints and connections will be flush and weathertight. Ensure slip joints make full, tight contact and are weathertight.

G. Reinforce components as required at anchorage and support points, at joints, and at attachment points for interfacing work.

H. Provide structural reinforcing within framing members where required to maintain rigidity and accommodate design loads.

I. Provide holes or slots, deflector plates, internal flashings, and sealants to accommodate internal weep and drainage system.

J. Head and sill extrusions act as gutter and weep water to exterior; do not penetrate sections with fasteners.

K. Allow for adequate clearance around perimeter of system to enable proper installation and for thermal movement within system.

L. Separate dissimilar metals with protective coating or preformed separators to prevent contact and corrosion.

M. Provide framing members to rigidly glaze spandrel panels and column covers within framing system.

N. Provide special shapes and filler pieces with tight corners.

2.5 FINISH

A. Organic Coating high performance fluorocarbon:
1. Comply with requirements of AAMA 2605.
2. Surfaces cleaned and given conversion coating pre-treatment prior to application of 0.3 mil dry film thickness of epoxy or acrylic primer following recommendations of finish coat manufacturer.
3. Finish coat of [50%] [70%] minimum fluorocarbon resin fused to primed surfaces at temperature recommended by manufacturer, 1.0 mil minimum dry film thickness.
4. Acceptable coatings are Trinar by Akzo Coatings, Inc.; Nubelar by Glidden Company; Fluoroceram by Morton International, Inc.; Duranar by PPG Industries Inc.; and Fluropon by Valspar Corporation.
5. Provide in either 2, 3, or 4 coat system as required for color selected.
6. Manufacturer's standard colors as selected by Architect.

B. Clear Anodized:

1. Conforming to AA-M12C22A31 and AAMA 607.1.
2. Architectural Class I, etched, medium matte, clear anodic coating, 0.7 mil minimum thickness.

C. Color Anodized:
1. Conforming to AA-M12C22A42 or A43 or A44 and AAMA 606.1 and 608.1.
2. Architectural Class [I], etched, medium matte, [black] [dark bronze] [medium bronze] [light bronze] colored anodic coating, 0.7 mil minimum thickness.

## PART 3 EXECUTION

### 3.1 EXAMINATION

A. Site Verification of Conditions: Verify substrate conditions are acceptable for product installation in accordance with manufacturer's instructions.

### 3.2 INSTALLATION

A. Install in accordance with manufacturer's instructions and applicable provisions of AAMA Aluminum Curtain Wall Design Guide Manual.

B. Align assemblies plumb and level, free of warp or twist, aligning with adjacent Work.

C. Tolerances:
1. imit variations from plumb and level:
   a. 1/8 inch in 20'-0" vertically and horizontally.
   b. 1/4 inch in 40'-0" either direction.
2. Limit offsets in theoretical end-to-end and edge-to-edge alignment:
   a. 1/16 inch where surfaces are flush or less than 1/2 inch out of flush and separated by not more than 2 inches.
   b. 1/8 inch for surfaces separated by more than 2 inches.
3. Step in face: 1/16 inch maximum.
4. Jog in alignment: 1/16 inch maximum.
5. Location: 1/4 inch maximum deviation of any member at any location.
6. Tolerances are not accumulative.

D. Provide attachments and shims to permanently fasten system to building structure.

E. Anchor securely in place, allowing for required movement, including expansion and contraction.

F. Separate dissimilar materials at contract points, including metal in contact with masonry or concrete surfaces, with protective coating or preformed separators to prevent contact and electrolytic action.

G. Set sill members in bed of sealant. Set other members with internal sealants and baffles to provide weathertight construction.

H. Glazing:

1. Install glazing gaskets and sealants in accordance with manufacturer's instructions without exception, including surface preparations. Refer to Section 08800 for additional requirements.

I. Fire Safing and Curtain Wall Insulation:
1. Install fire safing and curtain wall insulation specified in Section 07210 and 07840.

3.3 FIELD QUALITY CONTROL

A. Field Tests: Independent testing laboratory will perform air infiltration, water infiltration, and] hose test; refer to Section 01411 for requirements.

3.4 CLEANING

A. Clean surfaces in compliance with manufacturer's recommendations; remove excess mastic, mastic smears, and other foreign materials.

B. Clean metal surfaces exercising care to avoid damage.

END OF SECTION

SECTION 08 43 00

INTERIOR ALUMINUM-FRAMED STOREFRONTS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Sections included under Division 0 & Division 1 are included as a part of this Section as though bound herein.

B. If AIA Document 201 is included in this contract (refer to Section 01 11 00 Summary of Work to verify), it is part of this Section as though bound herein.

C. Related Sections:
1. Section 01 74 19 – Construction Waste Management
2. Section 07 92 00 – Joint Sealants
3. Section 08 11 16 – Aluminum Doors
4. Section 08 80 00 – Glazing

1.2 SUMMARY

A. Section includes, but is not limited to:
1. Interior aluminum storefront system, complete with reinforcing, fasteners, shims, anchors, and attachment devices.
2. Interior aluminum storefront system for display cases.
3. Accessories necessary to complete Work.

B. Products Furnished But Not Installed Under this Section:
1. Inserts and anchoring devices which are to be built into structure.

1.3 REFERENCES

A. Reference Standards:
1. Aluminum Association (AA):
a. DAF-45 Designation System for Aluminum Finishes.
2. American Architectural Manufacturers Association (AAMA):
a. 501.2 - Field Check of Metal Curtain Walls for Water Leakage.
b. 2605 - Voluntary Specification for High Performance Organic Coatings on Architectural Extrusions and Panels.
c. 606.1 - Specifications and Inspection Methods for Integral Color Anodic Finishes for Architectural Aluminum.
d. 607.1 - Specifications and Inspection Methods for Clear Anodic Finishes for Architectural Aluminum.
e. 608.1 - Specification and Inspection Methods for Electrolytically Deposited Color Anodic Finishes for Architectural Aluminum.
f. 701.2 - Specifications for Pile Weatherstripping.
g. Manual #10 - Care and Handling of Architectural Aluminum From Shop to Site.

h. SFM-1 – Aluminum Storefront and Entrance Manual.

3. American National Standards Institute (ANSI):
   a. Z97.1 - Specifications and Methods of Test for Safety Glazing Material Used in Buildings.
   b. A117.1 – Safety Standards for the Handicapped.
4. American Society for Testing and Materials (ASTM):
   a. A36 - Structural Steel.
   b. A123 - Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
   c. B209 - Aluminum and Aluminum-Alloy Sheet and Plate.
   d. B221 - Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes.
   e. B308 - Aluminum-Alloy 6061-T6 Standard Structural Shapes, Rolled or Extruded.
   f. E283 - Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors.
   g. E330 - Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
   h. E331 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
5. Consumer Product Safety Commission (CPSC):
   a. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials.
6. Federal Specifications (FS):
   a. TT-P-641G(1) - Primer Coating, Zinc Dust-Zinc Oxide (For Glav. Surfaces)
   b. TT-P-645A - Primer, Paint, Zinc Chromate, Alkyd Type.
7. Steel Structures Painting Council (SSPC):
   a. Paint 12 - Cold-Applied Asphalt Mastic (Extra Thick Film).

1.4 BID REQUIREMENTS

A. If Contractor discovers an apparent conflict or discrepancy between portions of the Contract Documents that appears to be inconsistent or is not reasonably inferred from the intent of the Contract Documents, the Contractor shall include in their bid the most stringent and demanding, or highest cost requirement.

B. Pre-Bid Exceptions: If, for any reason, you deem the designed system is not appropriate or feasible, submit this concern, proposed modification, qualification and / or exception to the drawings and specifications with your bid proposal.

1.5 SUBMITTALS

A. In accordance with Section 01 33 00 – Submittal Procedures.

B. Product Data:
   1. Submit manufacturer's descriptive literature and product specifications.
   2. Include information for factory finishes, hardware, accessories, and other required components.
   3. Include color charts for finish indicating manufacturer's standard colors available for selection.

C. Shop Drawings:

1. Submit shop drawings covering fabrication, installation and finish of specified systems.
2. Include following:
    a. Fully dimensioned plans and elevations with detail coordination keys.
    b. Locations of exposed fasteners and joints.
3. Provide detailed drawings of:
    a. Composite members.
    b. Joint connections for framing systems and for entrance doors.
    c. Anchorage.
    d. System reinforcements.
    e. System expansion and contraction provisions.
    f. Glazing methods and accessories.
    g. Internal sealant requirements.
4. Schedule of finishes.

D. Samples:
1. Submit manufacturers standard samples indicating quality of finish.
2. Where normal texture or color variations are expected, include additional samples illustrating range of variation.

E. Test Reports:
1. Standard Systems: Submit certified copies of previous test reports substantiating performance of system in lieu of retesting. Include other supportive data as necessary.

F. Qualification Data:
1. Submit installer qualifications verifying years of experience.

G. Manufacturer's Installation Instructions: Submit manufacturer's printed installation instructions.

H. Sample Warranty: Sample copy of manufacturer's warranty.

I. Close-Out Document Submittals
1. Warranty: Signed warranty.
2. Operations & Maintenance Data: Maintenance instructions.

1.6 QUALITY ASSURANCE

A. Single Source Responsibility:
1. To ensure quality of appearance and performance, obtain materials for systems from either a single manufacturer or from manufacturer approved by systems manufacturer.

B. Perform Work in accordance with AAMA SFM-1 and manufacturer's written instructions.

C. Conform to requirements of ANSI A117.1 and local amendments.

D. Qualifications:

1. Installer Qualifications: Certified in writing by system manufacturer as qualified for installation of specified systems.

1.7 DELIVERY, STORAGE & HANDLING

A. Protect finished surfaces as necessary to prevent damage.

B. Do not use adhesive papers or sprayed coatings which become firmly bonded when exposed to sun.

C. Do not leave coating residue on any surfaces.

D. Replace damaged units.

1.8 PERFORMACE REQUIREMENTS

A. Design Requirements:
1. Drawings are diagrammatic and do not purport to identify nor solve problems of thermal or structural movement, glazing, anchorage, or moisture disposal.
2. Requirements shown by details are intended to establish basic dimension of units, sight lines and profiles of members.
3. Provide concealed fastening.
4. Provide entrance and storefront systems, including necessary modifications, to meet specified requirements and maintaining visual design concepts.
5. Attachment considerations are to take into account site peculiarities and expansion and contraction movements so there is no possibility of loosening, weakening or fracturing connection between units and building structure or between units themselves.
6. Anchors, fasteners and braces shall be structurally stressed not more than 50% of allowable stress when maximum loads are applied.
7. Provide for expansion and contraction due to structural movement without detriment to appearance or performance.

B. Performance Requirements:
1. Air infiltration: Air leakage through fixed light areas of storefront shall not exceed 0.06 cfm per square foot of surface area when tested in accordance with ASTM E283 at differential static pressure of 6.24 psf.
2. Water infiltration: No uncontrolled leakage when tested in accordance with ASTM E331 at test pressure of 10 psf.

C. Thermal Requirements:
1. Framing systems shall accommodate expansion and contraction movement due to surface temperature differentials of 180°F without causing buckling, stress on glass, failure of joint seals, excessive stress on structural elements, reduction of performance, or other detrimental effects.

D. Structural Requirements, as measured in accordance with ANSI/ASTM E330:
1. Deflection: Maximum calculated deflection of any framing member in direction normal to plane of wall when subjected to specified design pressures for spans up to and including 13'-6" shall be limited to 1/175 of its clear span and for spans

greater than 13'-6" deflection shall be limited to 1/240 + ¼" of its clear span, except that maximum deflection of members supporting plaster surfaces shall not exceed 1/360 of its span.

E. Testing Requirements: Provide components that have been previously tested by an independent testing laboratory.

1.9 WARRANTY

A. See Section 01 77 00 – Closeout Procedures, for additional close out submittal information.

B. See Section 01 78 36 – Warranties, for additional warranty requirements.

C. Provide written warranty in form acceptable to Owner jointly signed by manufacturer, installer and Contractor warranting work to be watertight, free from deflective materials, defective workmanship, glass breakage due to defective design, and agreeing to replace components which fail within 1 year from date of Substantial Completion.

D. Warranty shall cover following:
1. Complete watertight and airtight system installation within specified tolerances.
2. System is structurally sound and free from distortion.

E. Provide written warranty stating anodized finish will be free from abnormal aging or deterioration beyond manufacturer's descriptive standards for two (2) years from date of Substantial Completion and agreeing to promptly correct defects.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Accepted Manufacturers (* indicates the basis of design)
1. Oldcastle (previously Vistawall), Terrell, TX*
   a. Flush Glazed System, center set, exterior loaded: Series 2000; 1-3/4" x 4-1/2" mullion profile; accommodates ¼" glazing only.
   b. Flush Glazed System, center set, exterior loaded: Series 3000; For storefront requiring ½" glazing
   c. These products to be used on interior applications only.
2. Kawneer Company, Inc., Norcross, GA
3. Wausau Metals Corp., Wausau, WI
4. YKK AP
5. Capitol Aluminum & Glass Corp., Bellevue, Ohio
6. Or Architect approved equal.

2.2 FRAMING MATERIALS AND ACCESSORIES

A. Aluminum:
1. ASTM B221, alloy 6063-T5 for extrusions; ASTM B209, alloy 5005-H16 for sheets; or other alloys and temper recommended by manufacturer appropriate for specified finish.
2. Minimum thickness of 0.078 inch for main framing members.

B. Internal Reinforcing:
   1. ASTM A36 for carbon steel; or ASTM B308 for structural aluminum.
   2. Shapes and sizes to suit installation.
   3. Steel components factory coated with alkyd type zinc chromate primer complying with FS TT-P-645.

C. Anchorage Devices:
   1. Manufacturer's standard formed or fabricated steel or aluminum assemblies of shapes, plates, bars or tubes.
   2. Hot-dip galvanize steel assemblies after fabrication, comply with ASTM A123, 2.0 ounce minimum coating.

D. Fasteners:
   1. Aluminum, non-magnetic stainless steel or other non-corrosive materials compatible with items being fastened.
   2. Provide concealed fasteners wherever possible.
   3. For exposed locations, provide Phillips flathead screws with finish matching item fastened.
   4. For concealed locations, provide manufacturer's standard fasteners.

E. Expansion Anchor Devices: Lead-shield or toothed-steel, drilled-in, expansion bolt anchors.

F. Protective Coatings: Cold-applied asphalt mastic complying with SSPC-Paint 12, compounded for 30 mil thickness for each coat; or alkyd type zinc chromate primer complying with FS TT-P-645.

G. Touch-Up Primer for Galvanized Components: Zinc oxide conforming with FS TT-P-641.

H. Glazing Gaskets:
   1. Compression type design, replaceable, molded or extruded, of neoprene, polyvinyl chloride (PVC), or ethylene propylene diene monomer (EPDM).
   2. Profile and hardness as required to maintain uniform pressure for watertight seal.

I. Internal Sealants and Baffles.

2.3 GLASS AND GLAZING ACCESSORIES

A. Refer to Section 08800.

2.4 FABRICATION

A. Coordination of Fabrication:
   1. Check actual frame or door openings required in construction work by accurate field measurements before fabrication.
   2. Fabricate units to withstand loads which will be applied when system is in place.

B. General
   1. Conceal fasteners wherever possible.
   2. Reinforce work as necessary for performance requirements, and for support to structure.

3. Separate dissimilar metals and aluminum in contact with concrete utilizing protective coating or preformed separators which will prevent contact and corrosion.
4. Comply with Section 08800 for glazing requirements.

C. Aluminum Framing:
1. Provide members of size, shape and profile indicated, designed to provide for glazing from exterior.
2. Fabricate frame assemblies with joints straight and tight fitting.
3. Reinforce internally with structural members as necessary to support design loads.
4. Maintain accurate relation of planes and angles, with hairline fit of contacting members.
5. Seal horizontals and direct moisture accumulation to exterior.
6. Provide flashings and other materials used internally or externally that are corrosive resistant, non-staining, non-bleeding and compatible with adjoining materials.
7. Provide manufacturer's extrusions and accessories to accommodate expansion and contraction due to temperature changes without detrimental to appearance or performance.
8. Make provisions in framing for minimum edge clearance, nominal edge cover and nominal pocket width for thickness and type of glazing or infill used in accordance with recommendations of manufacturer and FGMA Glazing Manual.

D. Welding:
1. Comply with recommendations of the American Welding Society.
2. Use recommended electrodes and methods to avoid distortion and discoloration.
3. Grind exposed welds smooth and flush with adjacent surfaces; restore mechanical finish.

E. Flashings: Form from sheet aluminum with same finish as extruded sections. Material thickness as required to suit condition without deflection or "oilcanning".

2.5 FINISHES

A. Clear Anodized:
1. Conforming to AA-M12C22A31 and AAMA 607.1.
2. Architectural Class I, etched, medium matte, clear anodic coating, 0.7 mil minimum thickness.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions: Verify substrate conditions are acceptable for product installation in accordance with manufacturer's instructions.

3.2 INSTALLATION

A. Erection Tolerances:
1. Limit variations from plumb and level:

a. 1/8 inch in 10'-0" vertically.
b. 1/8 inch in 20'-0" horizontally.

2. Limit variations from theoretical locations: 1/4 inch for any member at any location.
3. Limit offsets in theoretical end-to-end and edge-to-edge alignment: 1/16 inch from flush surfaces not more than 2 inches apart or out-of-flush by more than 1/4 inch.

B. Set units plumb, level and true to line, without warp or rack of frame.

C. Anchor securely in place, allowing for required movement, including expansion and contraction.

D. Separate dissimilar materials at contact points, including metal in contact with masonry or concrete surfaces, with bituminous paint or preformed separators to prevent contact and corrosion.

E. Set sill members in bed of sealant. Set other members with internal sealants and baffles to provide weathertight construction.

F. Coordinate installation of perimeter sealant and backing materials between assemblies and adjacent construction in accordance with requirements of Section 07920.

G. Glazing: Refer to requirements of Section 08800.

3.3 CLEANING

A. Clean surfaces in compliance with manufacturer's recommendations; remove excess mastic, mastic smears, foreign materials and other unsightly marks.

B. Clean metal surfaces exercising care to avoid damage.

END OF SECTION

SECTION 08 44 13

GLAZED ALUMINUM CURTAIN WALLS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Sections included under Division 0 & Division 1 are included as a part of this Section as though bound herein.

B. If AIA Document 201 is included in this contract (refer to Section 01 11 00 Summary of Work to verify), it is part of this Section as though bound herein.

C. Related Sections:
1. Section 01 74 19 – Construction Waste Management

1.2 SUMMARY

A. Section includes, but is not limited to:
1. Aluminum curtain wall systems, complete with reinforcing, shims, anchors, [operable concealed vents] and attachment devices.
2. Accessories necessary to complete Work.

B. Products Furnished But Not Installed Under this Section:
1. Inserts and anchoring devices which are to be built into structure.

1.3 REFERENCES

A. Reference Standards:
1. Aluminum Association (AA):
a. DAF-45 - Designation System for Aluminum Finishes.
2. American Architectural Manufacturers Association (AAMA):
a. Aluminum Curtain Wall Design Guide Manual.
b. 501.2 - Field Check of Metal Curtain Walls for Water Leakage.
c. 2605 - Voluntary Specification for High Performance Organic Coatings on Architectural Extrusions and Panels.
d. 606.1 - Specifications and Inspection Methods for Integral Color Anodic Finishes for Architectural Aluminum.
e. 607.1 - Specifications and Inspection Methods for Clear Anodic Finishes for Architectural Aluminum.
f. 608.1 - Specification and Inspection Methods for Electrolytically Deposited Color Anodic Finishes for Architectural Aluminum.
g. 701.2 - Specifications for Pile Weatherstripping.
h. Manual #10 - Care and Handling of Architectural Aluminum From Shop to Site.
3. American National Standards Institute (ANSI):
a. Z97.1 - Specifications and Methods of Test for Safety Glazing Material Used in Buildings.

4. American Society for Testing and Materials (ASTM):
    a. A36 - Structural Steel.
    b. A123 - Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
    c. A525 - General Requirements for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process.
    d. A526 - Sheet Steel, Zinc Coated (Galvanized) by the Hot-Dip Process, Commercial Quality.
    e. B209 - Aluminum and Aluminum-Alloy Sheet and Plate.
    f. B221 - Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes.
    g. B308 - Aluminum-Alloy 6061-T6 Standard Structural Shapes, Rolled or Extruded.
    h. C716 - Installing Lock-Strip Gaskets and Infill Glazing Materials.
    i. C920 - Elastomeric Joint Sealants.
    j. E283 - Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors.
    k. E330 - Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
    l. E331 - Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
    m. E773 - Test Method for Seal Durability of Sealed Insulating Glass Units.
    n. E774 - Sealed Insulating Glass Units.
5. Consumer Product Safety Commission (CPSC):
    a. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials.
6. Federal Specifications (FS):
    a. TT-P-645A - Primer, Paint, Zinc Chromate, Alkyd Type.
7. Flat Glass Marketing Association (FGMA):
    a. Glazing Manual.
8. Steel Structures Painting Council (SSPC):
    a. SP2 - Hand Tool Cleaning.
    b. SP3 - Power Tool Cleaning.
    c. Paint 12 - Cold-Applied Asphalt Mastic (Extra Thick Film).

1.4 BID REQUIREMENTS

A. If Contractor discovers an apparent conflict or discrepancy between portions of the Contract Documents that appears to be inconsistent or is not reasonably inferred from the intent of the Contract Documents, the Contractor shall include in their bid the most stringent and demanding, or highest cost requirement.

B. Pre-Bid Exceptions: If, for any reason, you deem the designed system is not appropriate or feasible, submit this concern, proposed modification, qualification and / or exception to the drawings and specifications with your bid proposal.

1.5 SUBMITTALS

A. In accordance with Section 01 33 00 – Submittal Procedures.

B. Product Data:
    1. Submit manufacturer's descriptive literature for each manufactured products.
    2. Include information for factory finishes, accessories and other required components.

3. Include color charts for finish indicating manufacturer's standard colors available for selection.

C. Shop Drawings:
1. Submit drawings indicating elevations, detailed design, dimensions, member profiles, joint locations, arrangement of units, member connections, and thickness of various components.
2. Show following items:
a. Details of special shapes.
b. Reinforcing.
c. Drainage details and flow diagrams.
d. Anchorage system.
e. Interfacing with building construction.
f. Provisions for system expansion and contraction
g. Thermal breaks.
3. Indicate glazing details, methods and internal sealant requirements.
4. Clearly indicate locations of exposed fasteners and joints for Architect's acceptance.
5. Clearly show where and how manufacturer's system deviates from Contract Drawings and these Specifications.

D. Mock-up Drawings: Submit drawings for mock-ups; refer to Section 01430 for mock-up requirements.

E. Samples:
1. Submit manufactures samples indicating quality of finish in required colors.
2. Where normal texture or color variations are expected, include additional samples illustrating range of variation.

F. Test Reports: Submit certified copies of previous tests reports by independent laboratory substantiating performance of system. Include other supportive data as necessary.

G. Certificates:
1. Submit manufacturer's certification stating that installed system is in compliance with specified requirements.

H. Manufacturer's Installation Instructions: Submit manufacturer's printed installation instructions.

I. Warranty: Submit specified warranties.

J. Close-Out Document Submittals
1. Warranty: Signed warranty.
2. Operations & Maintenance Data: Maintenance instructions.

1.6 QUALITY ASSURANCE

A. Single Source Responsibility:
1. Provide curtainwall systems that are products of a single manufacturer.

B. Qualifications:

1. Engineer Qualifications: Professional Structural Engineer registered in State where Project is located.
2. Installer Qualifications: Certified in writing by system manufacturer as qualified for specified systems.

1.7 DELIVERY, STORAGE & HANDLING

A. Protect finished surfaces to prevent damage.

B. Do not use adhesive papers or sprayed coatings which become firmly bonded when exposed to sun.

C. Do not leave coating residue on surfaces.

D. Deliver glass units with manufacturer's labels intact on interior side of glass. Ensure labels indicate glass thickness, unit location, glass strength and orientation of units in vertical position.

E. Protect glass edges and corners to prevent chipping, cracking, and other similar damages.

1.8 PROJECT CONDITIONS

A. Ensure ambient and surface temperatures and joint conditions are suitable for installation of materials.

1.9 PERFORMACE REQUIREMENTS

A. General Standard: In addition to requirements shown or specified, comply with applicable provisions of Aluminum Curtain Wall Design Guide Manual for design, materials, fabrication and installation of component parts.

B. Design Requirements:
1. Metal stick framed systems with interior and exterior exposed metal framing.
2. System manufacturer shall provide low profile entrance frames as an integral part of the curtain wall system.
3. System manufacturer shall provide curtainwall systems, including necessary modifications to meet specified requirements and maintaining visual design concepts.
4. Fabricate glazing systems for exterior glazing at vision areas and exterior glazing at spandrel areas.
5. Perimeter conditions shall allow for installation tolerances, expansion and contraction of adjacent materials, and sealant manufacturer's recommended joint design.
6. Drawings are diagrammatic and do not purport to identify nor solve problems of thermal or structural movement, glazing, anchorage or moisture disposal.
7. Requirements shown by details are intended to establish basic dimension of unit, sight lines and profiles of members.
8. Do not assume glass, sealants, and interior finishes contribute to framing member strength, stiffness, or lateral stability.

9. Attachment considerations are to take into account site peculiarities and expansion and contraction movements so there is no possibility of loosening, weakening or fracturing connection between units and building structure or between units themselves.
10. Anchors, fasteners and braces shall be structurally stressed not more than 50% of allowable stress when maximum loads are applied.
11. Allow for expansion and contraction due to structural movement without detriment to appearance or performance.
12. System shall be internally drained to exterior of wall. Water entering joints and condensation occurring within system will be evacuated without infiltration to interior. No visible weep holes allowed.
13. Provide concealed fastening.
14. Metal faces are required to be visually flat under all lighting conditions, subject to acceptance of Architect.
15. Use rigid isolators to maintain flatness of face cap.
16. Provide uniform color and profile appearance at components exposed to view.
17. Provide interior closed cell polymeric sponge gasket with sealed corners, with maximum 30% compression when glazed, to create a water and air seal.
18. Provide pre-punched pressure plates to ensure correct quantity and spacing of fasteners.
19. Not Permitted: Vibration harmonics, wind whistles, noises caused by thermal movement, thermal movement transmitted to other building elements, loosening, weakening, or fracturing of attachments or components of system.

C. Performance Requirements:
1. Air infiltration: The test specimen shall be tested in accordance with ASTM E 283. Air infiltration rate shall not exceed 0.06 CFM/ft$^2$ at a static air pressure differential of 6.24 psf.
2. Water infiltration: The test specimen shall be tested in accordance with ASTM E 331. There shall be no leakage at an air pressure differential of 12 psf as defined in AAMA 501.
3. Uniform Load: A static air design load of 40 psf shall be applied in the positive and negative direction in accordance with ASTM E 330. There shall be no deflection in excess of L/175 of the span of any framing member at design load. At structural test load equal to 1.5 times the specified design load, no glass breakage or permanent set in the framing members in excess of 0.2% of their clear spans shall occur.
4. Thermal Performance tested to AAMA 1503.98, the thermal transmittance (Ufactor) not more than 0.52 (low-e).
5. Thermal Performance tested to NFRC102-2004, the thermal transmittance (Ufactor) not more than 0.49 (low-e).
6. Condensation Resistance (CRF): When tested to AAMA 1503.98 the condensation factor not less than 62 (frame) and 62 (glass-low-e).
7. Sound Transmission (STC) tested to ASTM E 90, the sound transmittance not less than 35 when glazed with 1" insulated glass or not less than 48 when glazed with 1" insulated glass with blind sash.
8. Requirements shown by details are intended to establish basic dimension of unit, sight lines and profiles of members.

9. Do not assume glass, sealants and interior finishes contribute to framing member strength, stiffness or lateral stability.
10. Assemblies shall be free from rattles, wind whistles and noise due to thermal and structural movement and wind pressure.
11. Attachment considerations are to take into account site peculiarities and expansion and contraction movements so there is no possibility of loosening, weakening or fracturing connection between units and building structure or between units themselves.
12. Allow for expansion and contraction without detriment to appearance or performance.
13. System shall drain to the exterior of system any water entering system.

D. Structural Requirements:
1. Deflection under uniform loading: When tested in accordance with ASTM E330 at design pressure, maximum deflection of exterior member shall not exceed L/175 of span or 3/4 inch or L/240 + ¼" for spans over 13'-6".
2. Parallel to wall and corner mullion deflections: 75% of glass edge bite or 3/8 inch, whichever is less.
3. Compression flanges of flexural members may be assumed to receive effective lateral bracing only from:
   a. Anchors to building structure and
   b. Horizontal glazing rails or interior trim which are in actual contact with compression flange.
4. Do not regard points of contraflexture as lateral braces or as end points of unbraced length; unbraced length is actual distance between effective lateral braces as defined above.
5. Where framing member reaction is resisted by continuous element, maximum assumed effective length of the resisting element is 4 times bearing length, but not more than 12 inches.

E. Thermal Requirements: Framing systems shall accommodate expansion and contraction movement due to surface temperature differential of 180°F without causing buckling, stress on glass, failure of joint seals, excessive stress on structural elements, reduction of performance or other detrimental effects.

F. Interface:
1. Furnish inserts and anchoring devices which need to be preset and built into structure to appropriate trade.
2. Supply on timely basis to avoid delay in Work.
3. Instruct other trades of proper location and position.
4. Furnish setting drawings, diagrams, templates and installation instructions.

1.10 COORDINATION

A. Pre-installation Meeting:
1. Arrange with Construction Manager, Architect and representatives of window and sealant manufacturer to visit Project site [factory] before beginning glazing operations to analyze site conditions, and inspect surfaces and joints to be sealed in order that recommendations may be made should adverse conditions exist.
2. Discuss following items:

a. Weather conditions under which work will be done.
b. Anticipated frequency and extent of joint movement.
c. Joint design.
d. Glazing procedures.

1.11 WARRANTY

A. See Section 01 77 00 – Closeout Procedures, for additional close out submittal information.

B. See Section 01 78 36 – Warranties, for additional warranty requirements.

C. Provide written warranty in form acceptable to Owner jointly signed by manufacturer, installer and Contractor warranting work to be watertight, free from deflective materials, defective workmanship, glass breakage due to defective design, and agreeing to replace components which fail within 1 year from date of Substantial Completion.

D. Warranty shall cover following:
1. Complete watertight and airtight system installation within specified tolerances.
2. Glass and glazing gaskets will not break or "pop" from frames due to design wind, expansion or contraction movement or structural loading.
3. Glazing sealants and gaskets will remain free from abnormal deterioration or dislocation due to sunlight, weather or oxidation.

E. Provide written warranty stating organic coating finish will be free from fading more than 10%, chalking, yellowing, peeling, cracking, pitting, corroding or non-uniformity of color, or gloss deterioration beyond manufacturer's descriptive standards for 5 years from date of Substantial Completion and agreeing to promptly correct defects.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers:
1. Kawneer / TRACO, Cranberry Township, PA (Basis-of-Design).
1600 Curtain Wall

2. Tubelite, Inc., Reed City, MI
400T Series Thermal Curtain Wall System

3. United Glass & Panel System, North Canton, Ohio
a. Old Castle – Reliance SS

4. YKK AP America Inc.
a. YCW 750 OG, captured and YCW 750 SSG butt glazed

5. Capitol Aluminum & Glass Corp., Bellevue, Ohio
a. 2500XT Curtain Wall

B. Product: Basis-of-design shall be 2 ½ " x 7 1/2" mullion profiles and 2 ½" x 6"; pressure glazed, front set, interior loaded, stick wall system; accommodate 1" glazing. Intermediate horizontals to be 6" or less if possible.

2.2 FRAMING MATERIALS AND ACCESSORIES

A. Aluminum:
1. ASTM B221, alloy 6063-T5 for extrusions; ASTM B209, alloy 5005-H16 for sheets; or other alloys and temper recommended by manufacturer appropriate for specified finish.

B. Internal Reinforcing:
1. ASTM A36 for carbon steel; or ASTM B308 for structural aluminum.
2. Shapes and sizes to suit installation.
3. Shop coat steel components after fabrication with alkyd type zinc chromate primer complying with FS TT-P-645.

C. Inserts and Anchorage Devices:
1. Manufacturer's standard formed or fabricated assemblies, steel or aluminum, of shapes, plates, bars or tubes.
2. Hot-dip galvanize steel assemblies after fabrication, comply with ASTM A123, 2.0 ounce minimum coating.

D. Fasteners:
1. Non-magnetic stainless steel or cadmium plated steel coated with yellow or silver iridescence plating, compatible with materials being fastened.
2. Series 300 stainless steel for exposed locations. Cadmium plated steel with 0.0005 inch plating thickness and color chromate coated for concealed locations.
3. Provide nuts or washers of design having means to prevent disengagement; deforming of fastener threads is not acceptable.
4. Provide concealed fasteners wherever possible.
5. For exposed locations, provide countersunk flathead fasteners with finish matching item fastened.

E. Expansion Anchor Devices: Lead-shield or toothed-steel, drilled-in, expansion bolt anchors.

F. Shims: Non-staining, non-ferrous, type as recommended by system manufacturer.

G. Protective Coatings: Cold applied asphalt mastic complying with SSPC-Paint 12, compounded for 30 mil thickness for each coat; or alkyd type zinc chromate primer complying with FS TT-P-645.

H. Glazing Gaskets:
1. Compression type design, exterior replaceable, extruded neoprene. Interior is a closed cell sponge tape gasket.
2. Comply with ASTM C509 or C864.
3. Profile and hardness as necessary to maintain uniform pressure for watertight seal.
4. Manufacturer's standard black color.

I. Sunshade Device:

1. Type: Extruded aluminum anchors, outriggers, louvers, and fascia.
2. Shapes: May be chosen from manufacturer's standard shapes shown on website or in Detail Catalog, or customized by manufacturer.
3. Engineering: Manufacturer to verify sufficient strength of wall system to support loads imposed by the sunshade.

2.3 GLASS AND GLAZING ACCESSORIES

A. Refer to Section 08 80 00.

2.4 SYSTEM FABRICATION

A. Take accurate field measurements to verify required dimensions prior to fabrication.

B. Location of exposed joints are subject to Architect's acceptance.

C. Provide rigid, thermal break isolators to prevent exterior and interior aluminum framing members from being in contact with each other.

D. Fabricate components in accord with approved shop drawings. Remove burrs and ease edges. Shop fabricate to greatest extent practicable to minimize field cutting, splicing, and assembly. Disassemble only to extent necessary for shipping and handling limitations.

E. Steel Components:
1. Clean surfaces after fabrication and immediately prior to application of primer in accord with SSPC-SP2 or SSPC-SP3 at manufacturer's option.
2. Apply specified shop coat primer in accord with manufacturer's instructions to provide 2.0 minimum dry film thickness.

F. Fabricate components true to detail and free from defects impairing appearance, strength or durability.

G. Fabricate components to allow for accurate and rigid fit of joints and corners. Match components carefully ensuring continuity of line and design. Ensure joints and connections will be flush and weathertight. Ensure slip joints make full, tight contact and are weathertight.

H. Reinforce components as required at anchorage and support points, at joints, and at attachment points for interfacing work.

I. Provide structural reinforcing within framing members where required to maintain rigidity and accommodate design loads.

J. System design and sealants to accommodate internal weep and drainage system not visible to the exterior.

K. Allow for adequate clearance around perimeter of system to enable proper installation and for thermal movement within system.

L. Separate dissimilar metals with protective coating or preformed separators to prevent contact and corrosion.

M. Provide framing members to rigidly glaze spandrel panels and column covers within framing system.

N. Provide special shapes and filler pieces with tight corners.

2.5 FINISHES

A. Color Anodized:
1. Conforming to AA-M12C22A44 and AAMA 606.1 and 608.1.
2. Architectural Class II, medium matte, dark bronze colored anodic coating, 0.7 mil minimum thickness.

PART 3 EXECUTION

3.1 EXAMINATION

A. Site Verification of Conditions: Verify substrate conditions are acceptable for product installation in accordance with manufacturer's instructions.

3.2 INSTALLATION

A. Install in accordance with manufacturer's instructions and applicable provisions of AAMA Aluminum Curtain Wall Design Guide Manual.

B. Align assemblies plumb and level, free of warp or twist, aligning with adjacent Work.

C. Tolerances:
1. Limit variations from plumb and level:
a. 1/8 inch in 20'-0" vertically and horizontally.
b. 1/4 inch in 40'-0" either direction.
2. Limit offsets in theoretical end-to-end and edge-to-edge alignment:
a. 1/16 inch where surfaces are flush or less than 1/2 inch out of flush and separated by not more than 2 inches.
b. 1/8 inch for surfaces separated by more than 2 inches.
3. Step in face: 1/16 inch maximum.
4. Jog in alignment: 1/16 inch maximum.
5. Location: 1/4 inch maximum deviation of any member at any location.
6. Tolerances are not accumulative.

D. Provide attachments and shims to permanently fasten system to building structure.

E. Anchor securely in place, allowing for required movement, including expansion and contraction.

F. Separate dissimilar materials at contract points, including metal in contact with masonry or concrete surfaces, with protective coating or preformed separators to prevent contact and electrolytic action.

G. Set sill members in bed of sealant. Set other members with internal sealants and baffles to provide weathertight construction.

H. Glazing:

1. Install glazing gaskets and sealants in accordance with manufacturer's instructions without exception, including surface preparations. Refer to Section 08800 for additional requirements.

I. All systems are to be installed prior to finishing drywall tight to these systems.

3.3 FIELD QUALITY CONTROL

A. Field Tests: Independent testing laboratory will perform [air infiltration,] [water infiltration,] [and] hose test; refer to Section 01411 for requirements.

3.4 CLEANING

A. Clean surfaces in compliance with manufacturer's recommendations; remove excess mastic, mastic smears, and other foreign materials.

B. Clean metal surfaces exercising care to avoid damage.

END OF SECTION

"General Decision Number: OH20250069 07/11/2025

Superseded General Decision Number: OH20240069

State: Ohio

Construction Type: Building

County: Belmont County in Ohio.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

| | |
|---|---|
| If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022: | . Executive Order 14026 generally applies to the contract.<br>. The contractor must pay all covered workers at least $17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025. |
| If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022: | . Executive Order 13658 generally applies to the contract.<br>. The contractor must pay all covered workers at least $13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025. |

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

| Modification Number | Publication Date |
|---|---|
| 0 | 01/03/2025 |
| 1 | 02/14/2025 |
| 2 | 05/30/2025 |

ASBE0008-010 03/01/2025

| | Rates | Fringes |
|---|---|---|
| ASBESTOS WORKER/HEAT & FROST INSULATOR | $ 35.23 | 23.04 |

BROH0006-008 05/01/2023

| | Rates | Fringes |
|---|---|---|
| TILE SETTER | $ 33.46 | 21.37 |

BROH0008-007 06/01/2024

| | Rates | Fringes |
|---|---|---|
| TILE FINISHER | $ 25.37 | 17.42 |

BROH0009-003 07/01/2024

| | Rates | Fringes |
|---|---|---|
| BRICKLAYER | $ 30.55 | 26.41 |

CARP0186-001 05/01/2024

| | Rates | Fringes |
|---|---|---|
| CARPENTER | $ 31.82 | 25.07 |

ELEC0141-001 06/02/2024

| | Rates | Fringes |
|---|---|---|
| ELECTRICIAN | $ 39.04 | 27.62 |

ENGI0018-036 05/01/2024

| | Rates | Fringes |
|---|---|---|
| POWER EQUIPMENT OPERATOR | | |
| Backhoe/Excavator/Trackhoe; Bulldozer; Crane | $ 44.14 | 16.41 |

ENGI0066-045 06/01/2017

| | Rates | Fringes |
|---|---|---|
| POWER EQUIPMENT OPERATOR | | |
| Forklift | $ 28.87 | 19.66 |
| Grader/Blade | $ 32.42 | 19.66 |
| Mechanic | $ 32.92 | 19.66 |

IRON0549-005 12/01/2022

| | Rates | Fringes |
|---|---|---|
| IRONWORKER (Metal Building Structural Frame Installation Only) | $ 35.19 | 25.66 |

IRON0549-014 12/01/2022

| | Rates | Fringes |
|---|---|---|
| IRONWORKER, STRUCTURAL (Excluding Metal Building Structural Frame Installation) | $ 35.19 | 25.66 |

* IRON0550-012 05/01/2025

| | Rates | Fringes |
|---|---|---|
| IRONWORKER, ORNAMENTAL | $ 36.00 | 23.57 |

LABO1149-002 12/01/2023

| | Rates | Fringes |
|---|---|---|
| LABORER Common or General; Mason Tender - Brick | $ 24.92 | 16.55 |

PLUM0094-005 05/01/2025

| | Rates | Fringes |
|---|---|---|
| PLUMBER (Excludes HVAC Pipe Installation) | $ 47.48 | 27.14 |

PLUM0168-003 06/01/2024

| | Rates | Fringes |
|---|---|---|
| PIPEFITTER (Excludes HVAC Pipe Installation) | $ 39.43 | 37.29 |

PLUM0495-008 06/01/2024

| | Rates | Fringes |
|---|---|---|
| PIPEFITTER (HVAC Pipe Installation Only) | $ 33.23 | 36.70 |

ROOF0088-003 06/01/2024

| | Rates | Fringes |
|---|---|---|
| ROOFER | $ 32.10 | 21.45 |

SHEE0033-047 07/01/2024

| | Rates | Fringes |
|---|---|---|
| SHEET METAL WORKER (Including HVAC Duct and Unit Installation) | $ 35.52 | 29.87 |

* UAVG-OH-0021 01/01/2019

| | Rates | Fringes |
|---|---|---|
| OPERATOR: Oiler | $ 27.56 | 16.37 |

* UAVG-OH-0022 01/01/2018

| | Rates | Fringes |
|---|---|---|

IRONWORKER, REINFORCING.....$ 29.81 20.72

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* UAVG-OH-0023 01/01/2019

| | Rates | Fringes |
|---|---|---|
| LABORER: Mason Tender - Cement/Concrete | $ 29.55 | 10.90 |

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SUOH2012-071 08/29/2014

| | Rates | Fringes |
|---|---|---|
| CEMENT MASON/CONCRETE FINISHER | $ 26.07 | 12.34 |
| LABORER: Pipelayer | $ 23.98 | 8.58 |
| OPERATOR: Bobcat/Skid Steer/Skid Loader | $ 30.26 | 12.58 |
| OPERATOR: Bulldozer | $ 22.55 | 8.03 |
| OPERATOR: Crane | $ 29.56 | 11.82 |
| OPERATOR: Loader | $ 29.66 | 12.61 |
| OPERATOR: Paver (Asphalt, Aggregate, and Concrete) | $ 30.28 | 13.29 |
| OPERATOR: Roller | $ 28.83 | 12.72 |
| PAINTER (Brush and Roller) | $ 20.37 | 10.63 |
| PAINTER: Spray | $ 22.78 | 12.40 |
| TRUCK DRIVER: Dump (All Types) | $ 22.78 | 12.61 |

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after

award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

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The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal

number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

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WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via

email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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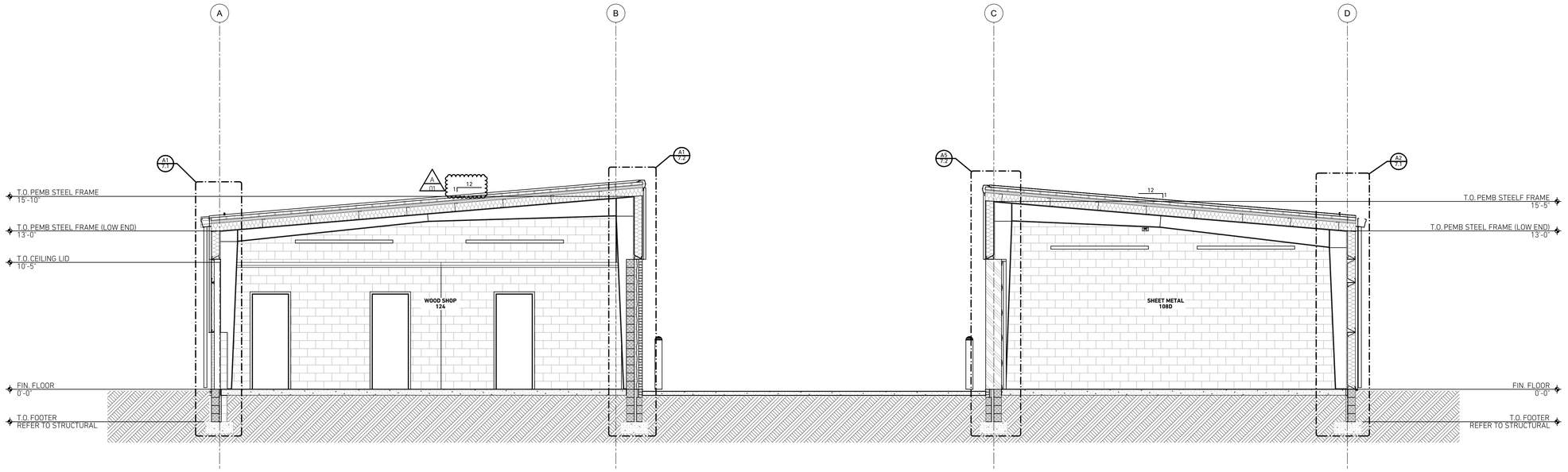
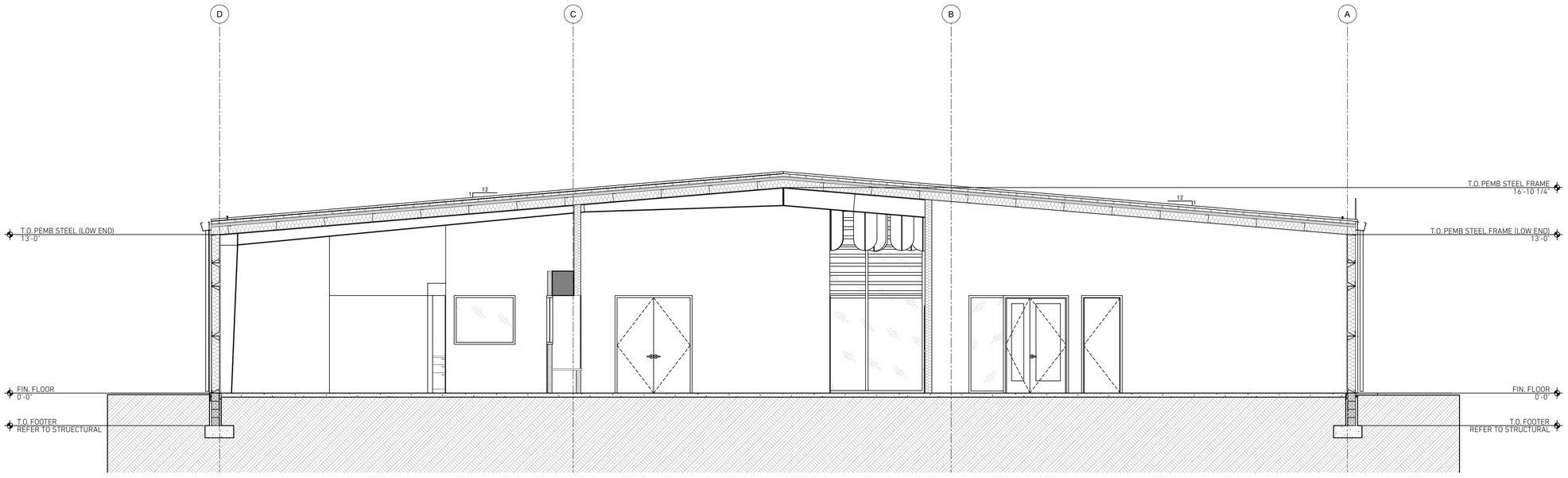
END OF GENERAL DECISION"




C1 BUILDING SECTION

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




A1 BUILDING SECTION

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

Sól Harris/Day Architecture

STATE OF OHIO
JUSTIN
GANTZ
1616769
REGISTERED ARCHITECT

JUSTIN GANTZ, LICENSE #1616769
EXPIRATION DATE: 12/31/2025



# Belmont College Construction Trades Building

45869 Hammond Rd Connector
St Clairsville, OH, 43950

EDA AWARD NUMBER: 06-01-06458

**100% CONSTRUCTION DOCUMENTS: 05/21/2025**

DRAWING UPDATES

| | | |
|---|---|---|
| 1 | ADDENDUM NO 1 | 7.16.2025 |

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## BUILDING SECTIONS

# 6.2