

ADDENDUM #2 – MARCH 14, 2025

**RE: COOS COUNTY AIRPORT DISTRICT
Capital Improvement Project
Project #24.012**

**FROM: HGE ARCHITECTS, Inc.
333 South 4th Street
Coos Bay, Oregon 97420
541-269-1166**



TO: Prospective Bidders

This Addendum forms a part of the Contract Documents and modifies the original Documents dated February 2025, as noted below. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject Bidder to disqualification.

This Addendum consists of **THREE (3)** page(s) together with the following attachments:

- REVISED Specification Section 00-4100 Bid Form
- REVISED Specification Section 08-4313 Aluminum Framed Storefronts
- Specification Section 08-8000 Glazing
- Specification Section 21-1300 Fire Suppression Sprinkler System

CHANGES TO PROJECT MANUAL:

1. **Specification Section 00-4100 Bid Form:** REPLACE section in entirety with attached.
2. **Specification Section 01-2300 Alternates, Paragraph 1.04:** ADD "D. Alternate No. 4 – Metal siding panels: 1. Base Bid: Replace select metal siding panels as noted on Drawings; 2. Alternate Item: Replace all metal siding panels."
3. **Specification Section 07-4213 Metal Wall Panels, Paragraph 1.01:** DELETE reference to Alternate Bid.
4. **Specification Section 08-4313 Aluminum Framed Storefronts:** REPLACE section in entirety with attached.
5. **Specification Section 08-7100 Door Hardware, Paragraph 4.02:** DELETE access control function hardware. REVISE to read as follows:
"A. HW-45: Storeroom function, with keypad access, Non-Fire-Rated:
 1. Cylinder
 2. Balance of hardware by Storefront, Section 08-4313:
 - a. Panic device with level handle exterior side, storeroom function
 - b. Closer
 - c. Hinges
 - d. Weatherstripping
 - e. Threshold

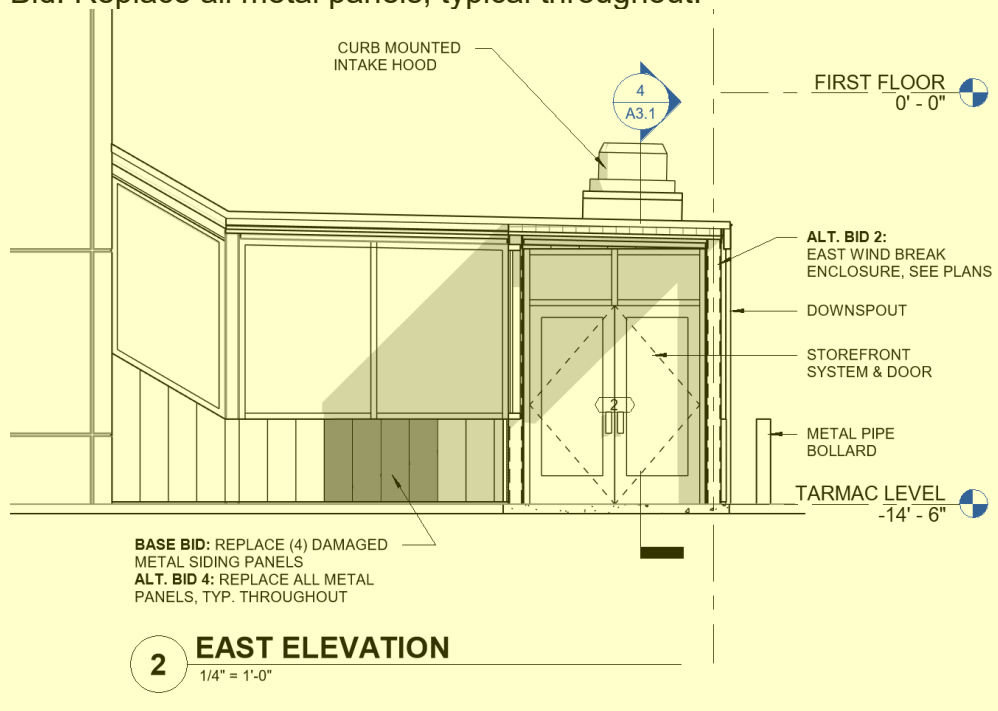
- B. HW-50
1. Cylinder
 2. Balance of hardware by Storefront, Section 08-4313:
 - a. Panic device with level handle exterior side, classroom function (exterior lever locked or unlocked by key).
 - b. Closer
 - c. Hinges
 - d. Weatherstripping
 - e. Threshold
 - f. Hold open"

3. **Specification Section 08-8000 Glazing:** ADD attached section in entirety.

4. **Specification Section 21-1300 Fire Suppression Sprinkler System:**
ADD attached section in entirety.

CHANGES TO DRAWINGS:

1. **Sheet A2.1 Floor Plan:** Make the following change:
 - a. ADD "Note: Per code summary plan, extend fire sprinkler system into 1st Floor Vestibule and Tarmac Vestibule (entire space) per NFPA. Refer to Specification Section 21-1300 Fire Suppression Sprinkler System (attached)."
 - b. REVISE Note: "Storefront framing noted panels for reuse at windbreak" with "From west wall, contractor to determine panels suitable for reuse as windbreak."
2. **Sheet 4.1 East Elevation:** ADD "NOTE: Base Bid: Replace (4) panels. Alternate Bid: Replace all metal panels, typical throughout."



3. **Sheet A5.1 Building Details, Detail 3/A5.1 and 7/A5.1:** ADD “Note: Provide continuous 2” x 3-3/8” galvanized clip angle to secure 2x6 PT nailer to metal decking.”

4. **Sheet A6.1 Interior Elevations & Schedules, Room Finish Schedule:**
REVISE 1st Floor Vestibule and Tarmac Vestibule schedule to read:

ROOM NAME	ROOM NO.	FLOOR FINISH	BASE	NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL	CEILING FINISH
1ST FLOOR VESTIBULE	1	CPT-1 (ALT. BID 3)	RB-1	NONE	WP-1	NONE	WP-2	GYP BD & ACP (ALT. BID 1)
TARMAC VESTIBULE	2	WOM (ALT. BID 3)	RB-1	WP-2	WP-2	NONE	WP-2	GYP BD & ACP (ALT. BID 1)

SUBSTITUTION APPROVALS: None.

END OF ADDENDUM #2

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**SECTION 00-4100
BID FORM**

THE PROJECT AND THE PARTIES

1.01 TO:

Owner: **COOS COUNTY AIRPORT DISTRICT**

1.02 FOR: COOS COUNTY AIRPORT DISTRICT - CONCOURSE CAPITAL IMPROVEMENT PROJECT

PROJECT LOCATION: SOUTHWESTERN OREGON REGIONAL AIRPORT, 1100 AIRPORT LANE, NORTH BEND, OR 97459

1.03 DATE: _____ (BIDDER TO ENTER DATE)

1.04 SUBMITTED BY:

NAME OF FIRM (PLEASE PRINT): _____

1.05 GENERAL

- A. The Bidder declares that they have carefully examined the Contract Documents for the construction of the proposed improvements; that the Bidder has personally inspected the contemplated construction area, that the Bidder has satisfied themselves as to the quantities of materials, items of equipment, possible difficulties, and conditions of work involved.
- B. By signing this Proposal, the Bidder certifies that the provisions required by ORS 279C.800 to 279C.870 relating to prevailing wage rates shall be included in this Contract, are understood by the Bidder, and will be complied with during the Work.
- C. The bidder further declares that they are registered with the Construction Contractor's Board as required by ORS 701.35 to 701.55, and possess such additional licenses and certifications as required by law for the performance of the work proposed herein.
- D. The subcontractor(s) performing work as described in ORS 701.005(2) will be registered with the Construction Contractors Board in accordance with ORS 701.035 to 701.055 before the subcontractor(s) commence work under the Contract.
- E. Pursuant to ORS 279A.120, Bidder hereby certifies the Bidder _____ is / _____ is not (**check one**) a Resident Bidder as defined by ORS 279.029.
- F. Bidder certifies that the provisions required by ORS 279C.836, unless exempt under Sections (4), (7), (8), or (9), before starting work on this Contract, or any subcontract hereunder, Contractor and all subcontractors shall have on file with the Construction Contractor's Board a public works bond with corporate surety authorized to do business in the State of Oregon in the amount of \$30,000.
- G. The Bidder agrees that if this Proposal is accepted, the Bidder will, within ten (10) calendar days after receiving contract forms, execute the Agreement between Owner and Contractor as specified, and deliver to the Owner the Performance and Labor and Payment Bonds required herein.

1.06 BIDS:

- A. The undersigned bidder, in submitting his bid, authorizes the Owner to evaluate the bid and make a single award on the basis of the bid.
- B. After having examined all of the contract documents as prepared by HGE ARCHITECTS, Inc., 333 South 4th Street, Coos Bay, Oregon 97420, we do hereby propose to furnish labor and materials to complete the work required by said documents for the following fixed sum (*fill in lump sum amount for each bid unit, in written words in space provided, and in numerals within parenthesis*):

C. **BASE BID:**

_____ Dollars

and _____ Cents (\$ _____) complete.

D. **ALTERNATE BID #1: LIGHTING AND CEILING FINISH**

ADD TO BASE BID:

_____ DOLLARS

AND _____ CENTS (\$ _____) COMPLETE.

E. **ALTERNATE BID #2: EAST WINDBREAK ADDITION**

ADD TO BASIC BID:

_____ DOLLARS

AND _____ CENTS (\$ _____) COMPLETE.

F. **ALTERNATE BID #3: FINISH FLOORING**

ADD TO BASIC BID:

_____ DOLLARS

AND _____ CENTS (\$ _____) COMPLETE.

G. **ALTERNATE BID #4: METAL SIDING PANELS:**

ADD TO BASIC BID:

_____ DOLLARS

AND _____ CENTS (\$ _____) COMPLETE.

H. Bidder further agrees to be bound by the entire Contract Documents, including:

Advertisement for Bids
Issued Addenda
Instructions to Bidders - AIA A701 and Supplemental Instructions to Bidders
Bid Form (this document)
Subcontractor Disclosure Form
General Conditions - AIA 201 and Supplementary Conditions
Contract for Construction: Owner-Contractor Agreement - AIA 101
Performance and Payment Bonds
Technical Specifications
Plans/Drawings
Issued Change Orders and Architect's Supplemental Instructions

1.07 BID SECURITY

- A. Bid security in the form of a certified check of Bid Bond in the amount of 10% of the bid amount is enclosed per ORS 279C.385. The undersigned agrees that Bid Security will be left in escrow with the Owner and that the amount thereof is the measure of liquidated damages which Owner will sustain by failure of the undersigned to deliver and execute the Contract or provide Performance and Payment Bonds and may become the property of the Owner at Owner's option. If this bid is not accepted within thirty (30) days of the time set for the opening of bids or if the undersigned executes and timely delivers said contract and the Performance and Payment Bonds, the Bid Security will be returned.

1.08 COMPLETION DATE AND LIQUIDATED DAMAGES

- A. It is understood that time is of the essence in the execution of this Contract in order to avoid undue hardship upon the Owner. It is the desire of the Owner to issue a Notice to Proceed upon successful review of the lowest qualified bidder and have the project Substantially Complete within 150 calendar days.
- B. The Undersigned agrees that he will have the work Substantially Complete within _____ calendar days after Notice to Proceed (Contractor to fill in the NUMBER OF CALENDAR DAYS he/she will require to substantially complete the Work and this will be the agreed upon construction time period).
- C. The Contractor agrees that said Work shall be prosecuted regularly, diligently, at such rate of progress as will insure Substantial Completion thereof within the time specified. It is expressly understood and agreed, by the Contractor and the Owner, that the time for the completion of the Work described herein is reasonable taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.
- D. If said contractor shall neglect, fail or refuse to coordinate the work within the time herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as a part consideration for the awarding of this Contract, to pay to the Owner the sum of **SIX HUNDRED DOLLARS (\$600)**, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that the contractor shall be in default after the time stipulated in the contract for substantial completion of the work.

1.09 OWNER RIGHTS

- A. The Owner reserves the right to reject any or all bids and to waive all informalities.

1.10 ADDENDA

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

1. Addendum # _____ Dated _____.

2. Addendum # _____ Dated _____.

3. Addendum # _____ Dated _____.

1.11 BIDDER DATA AND SIGNATURE(S)

- A. Name of Firm (please print): _____

- B. Mailing Address: _____

C. Physical Address (*if different*): _____

D. Construction Contractor Board Registration Number: _____

E. Telephone Number: _____

F. Fax
Number: _____

G. Email
Address: _____

H. Signature (*if bid is by a partnership, one of the partners must sign*):

I. Name and Official Capacity of Signatory (*please print*):

J. If Corporation, Attest (*Secretary of Corporation*):

K. SEAL (if Corporation):

L. was hereunto affixed in the presence of:

M. _____

N. (Authorized signing officer, Title)

END OF SECTION

SECTION 08-4313
ALUMINUM-FRAMED STOREFRONTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Aluminum-framed storefront, with vision glass.
- B. Aluminum doors and frames.
- C. Weatherstripping.

1.02 RELATED REQUIREMENTS

- A. Section 07-2500 - Weather Barriers: Sealing framing to water-resistive barrier installed on adjacent construction.
- B. Section 08-7100 - Door Hardware: Hardware items other than specified in this section.
- C. Section 08-8000 - Glazing: Glass and glazing accessories.

1.03 REFERENCE STANDARDS

- A. AAMA CW-10 - Care and Handling of Architectural Aluminum from Shop to Site; 2015.
- B. AAMA 609 & 610 - Cleaning and Maintenance Guide for Architecturally Finished Aluminum (Combined Document); 2015.
- C. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; 2020.
- D. AAMA 1503 - Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections; 2009.
- E. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2021.
- F. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric); 2021.
- G. ASTM E283/E283M - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen; 2019.
- H. ASTM E330/E330M - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference; 2014 (Reapproved 2021).
- I. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference; 2000 (Reapproved 2023).
- J. FLA (PAD) - Florida Building Code Online - Product Approval Directory; Current Edition.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate with installation of other components that comprise the exterior enclosure.
- B. Preinstallation Meeting: Conduct a preinstallation meeting one week before starting work of this section; require attendance by all affected installers.

1.05 SUBMITTALS

- A. See Section 01-3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide component dimensions, describe components within assembly, anchorage and fasteners, glass and infill, door hardware, and internal drainage details.
- C. Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, affected related work, expansion and contraction joint location and details, and field welding required.

- D. Hardware Schedule: Complete itemization of each item of hardware to be provided for each door, cross-referenced to door identification numbers in Contract Documents.
- E. Manufacturer's Maintenance Data: Include manufactures' parts list and maintenance instruction for each type of hardware ad operating component.
- F. Manufacturer's Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing work of type specified and with at least three years of documented experience.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Handle products of this section in accordance with AAMA CW-10.
- B. Protect finished aluminum surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond to aluminum when exposed to sunlight or weather.

1.08 FIELD CONDITIONS

- A. Do not install sealants when ambient temperature is less than 40 degrees F. Maintain this minimum temperature during and 48 hours after installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Aluminum-Framed Storefronts:
 - 1. Kawneer North America: www.kawneer.com.
 - 2. Substitutions: See Section 01-6000 - Product Requirements.

2.02 BASIS OF DESIGN -- FRAMING FOR INSULATING GLAZING

- A. Front-Set Style, Thermally- Broken, Wind-Borne-Debris Resistance Tested:
 - 1. Basis of Design: TriFab 451T.
 - 2. Vertical Mullion Dimensions: 2 inches wide by 4-1/2 inches deep.

2.03 BASIS OF DESIGN -- SWINGING DOORS

- A. Wind-Borne-Debris Resistance Tested:
 - 1. Basis of Design: TriFab 451T.
 - 2. Thickness: Match Existing Doors.
- B. Medium Stile, Insulating Glazing, Thermally-Broken:
 - 1. Thickness: 1-3/4 inches.
- C. Substitutions: See Section 01-6000 - Product Requirements.

2.04 ALUMINUM-FRAMED STOREFRONT

- A. Aluminum-Framed Storefront: Factory fabricated, factory finished aluminum framing members with infill, and related flashings, anchorage and attachment devices.
 - 1. Finish: Class I natural anodized. Not less than 0.7 mils thck.
 - a. Factory finish all surfaces that will be exposed in completed assemblies.
 - b. Touch-up surfaces cut during fabrication so that no natural aluminum is visible in completed assemblies, including joint edges.
 - c. Coat concealed metal surfaces that will be in contact with cementitious materials or dissimilar metals with bituminous paint.
 - 2. Fabrication: Joints and corners flush, hairline, and weatherproof, accurately fitted and secured; prepared to receive anchors and hardware; fasteners and attachments concealed from view; reinforced as required for imposed loads.
 - 3. Construction: Eliminate noises caused by wind and thermal movement, prevent vibration harmonics, and prevent "stack effect" in internal spaces.

4. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.
 5. Expansion/Contraction: Provide for expansion and contraction within system components caused by cycling temperature range of 170 degrees F over a 12 hour period without causing detrimental effect to system components, anchorages, and other building elements.
 6. Movement: Allow for movement between storefront and adjacent construction, without damage to components or deterioration of seals.
 7. Perimeter Clearance: Minimize space between framing members and adjacent construction while allowing expected movement.
 8. Maintain continuous air barrier and/or vapor retarder seal throughout assembly, primarily in line with inside pane of glazing and inner sheet of infill panel, and heel bead of glazing compound.
- B. Performance Requirements
1. Wind Loads: Design and size components to withstand the specified load requirements without damage or permanent set, when tested in accordance with ASTM E330/E330M, using loads 1.5 times the design wind loads and 10 second duration of maximum load.
 - a. Member Deflection: Limit member deflection to flexure limit of glass in any direction, with full recovery of glazing materials.
 2. Wind-Borne-Debris Resistance: Identical full-size glazed assembly without auxiliary protection, having Florida Building Code FLA (PAD) approval for Large and Small Missile impact and pressure cycling at design wind pressure.
 3. Water Penetration Resistance on Manufactured Assembly: No uncontrolled water on interior face, when tested in accordance with ASTM E331 at pressure differential of 8 psf.
 4. Air Leakage: 0.06 cfm/sq ft maximum leakage of storefront wall area when tested in accordance with ASTM E283/E283M at 1.57 psf pressure difference.
 5. Condensation Resistance Factor of Framing: 50, minimum, measured in accordance with AAMA 1503.
 6. Overall U-value Including Glazing: [.60] maximum.

2.05 COMPONENTS

- A. Aluminum Framing Members: Tubular aluminum sections, thermally broken with interior section insulated from exterior, drainage holes and internal weep drainage system.
- B. Glazing: See Section 08-8000.
- C. Swing Doors: Glazed aluminum. - Match Existing door 1C dimensions.
1. Thickness: 1-3/4 inches.
 2. Top Rail: 4 inches wide.
 3. Vertical Stiles: 4-1/2 inches wide.
 4. Bottom Rail: 10 inches wide.
 5. Glazing Stops: Square.
 6. Finish: Same as storefront.

2.06 MATERIALS

- A. Extruded Aluminum: ASTM B221 (ASTM B221M).
- B. Fasteners: Stainless steel.
- C. Glazing Gaskets: Type to suit application to achieve weather, moisture, and air infiltration requirements.

2.07 FINISHES

- A. Class I Natural Anodized Finish: AAMA 611 AA-M12C22A41 Clear anodic coating not less than 0.7 mils thick.

2.08 HARDWARE

- A. For each door, include weatherstripping, sill sweep strip, and threshold.
- B. Other Door Hardware: See Section 08-7100
- C. Weatherstripping: Wool pile, continuous and replaceable; provide on all doors.
- D. Sill Sweep Strips: Resilient seal type, retracting, of neoprene; provide on all doors.
- E. Threshold: Extruded aluminum, one piece per door opening, ribbed surface; provide on all doors.
- F. Pivots: Offset type; top and bottom.
- G. Push/Pull Set: Standard configuration push/pull handles.
- H. Exit Devices: Panic type.
 - 1. Provide on all doors.
 - 2. Function per Hardware set, Section 08-7100.
 - 3. Kawneer 1686EL or approved.
- I. Door Closers: Concealed overhead.
 - 1. Provide on all doors.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify dimensions, tolerances, and method of attachment with other work.
- B. Verify that storefront wall openings and adjoining water-resistive and/or air barrier seal materials are ready to receive work of this section.

3.02 INSTALLATION

- A. Install wall system in accordance with manufacturer's instructions.
- B. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.
- C. Provide alignment attachments and shims to permanently fasten system to building structure.
- D. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.
- E. Provide thermal insulation where components penetrate or disrupt building insulation.
- F. Install sill flashings. Turn up ends and edges; seal to adjacent work to form water tight dam.
- G. Where fasteners penetrate sill flashings, make watertight by seating and sealing fastener heads to sill flashing.
- H. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
- I. Set thresholds in bed of sealant and secure.
- J. Touch-up minor damage to factory applied finish; replace components that cannot be satisfactorily repaired.

3.03 TOLERANCES

- A. Maximum Variation from Plumb: 0.06 inch per 3 feet non-cumulative or 0.06 inch per 10 feet, whichever is less.
- B. Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32 inch.

3.04 ADJUSTING

- A. Adjust operating hardware for smooth operation.

3.05 CLEANING

- A. Remove protective material from pre-finished aluminum surfaces.
- B. Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths, and take care to remove dirt from corners and to wipe surfaces clean.
- C. Upon completion of installation, thoroughly clean aluminum surfaces in accordance with AAMA 609 & 610.

3.06 PROTECTION

- A. Protect installed products from damage until Date of Substantial Completion.

END OF SECTION

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SECTION 08-8000 GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Glass.
- B. Glazing compounds and accessories.

1.02 REFERENCE STANDARDS

- A. ASTM C1036 - Standard Specification for Flat Glass; 2016.
- B. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2018.
- C. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings; 2016.
- D. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation; 2010.
- E. GANA (GM) - GANA Glazing Manual; 2009.

1.03 QUALITY ASSURANCE

- A. Perform Work in accordance with GANA Glazing Manual for glazing installation methods.

1.04 FIELD CONDITIONS

- A. Do not install glazing when ambient temperature is less than 50 degrees F.

1.05 WARRANTY

- A. See Section 01-7800 - Closeout Submittals, for additional warranty requirements.
- B. Sealed Insulating Glass Units: Provide a five (5) year warranty to include coverage for seal failure, interpane dusting or misting, including replacement of failed units.

PART 2 PRODUCTS

2.01 INSULATING GLASS UNITS

- A. Type IG-1 - Sealed Insulating Glass Units: Vision tempered glass, double glazed.
 - 1. Application: All exterior glazing unless otherwise indicated.
 - 2. Outboard Lite: Fully tempered float glass, 1/4 inch thick, minimum.
 - a. Tint: Clear.
 - b. Coating: Low-E (passive type), on #2 surface.
 - c. U-value: 0.35 max.
 - d. Solar Heat Gain Coefficient (SHGC): .40 max.
 - 3. Inboard Lite: Fully tempered float glass, 1/4 inch thick, minimum.
 - a. Tint: Clear.
 - 4. Total Thickness: 1 inch.
 - a. Argon filled.
 - b. 1/2 inch air space.

2.02 EXTERIOR GLAZING ASSEMBLIES

- A. Performance Criteria: Select type and thickness of glass to withstand dead and live loads caused by positive and negative wind pressure acting normal to plane of glass.
 - 1. Use the procedure specified in ASTM E1300 to determine glass type and thickness.
 - 2. Limit glass deflection to 1/200 or flexure limit of glass, whichever is less, with full recovery of glazing materials.
 - 3. Glass thicknesses listed are minimum.

2.03 GLASS MATERIALS

- A. Float Glass Manufacturers:

24.012 Coos County Airport
District - Concourse Capital
Improvement Project

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February 2025

Glazing
ADDENDUM #2

1. PPG Industries, Inc: www.ppgideascales.com.
 2. American-Saint Gobain Corp.
 3. Libbey-Owens-Ford Glass Co.
 4. Pittsburgh Plate Glass Co.
 5. Viracon.
 6. Cardinal Glass Industries.
 7. Technical Glass Products.
 8. Substitutions: Refer to Section 01-6000 - Product Requirements.
- B. Float Glass: Provide float glass based glazing unless noted otherwise.
1. Heat-Strengthened and Fully Tempered Types: ASTM C1048, Kind HS and Kind FT.
 2. Tinted Types: ASTM C1036, Class 2 - Tinted, color and performance characteristics as indicated.
 3. Thicknesses: As indicated; for exterior glazing comply with requirements indicated for wind load design regardless of thickness indicated.

2.04 SEALED INSULATING GLASS UNITS

- A. Sealed Insulating Glass Units: Types as indicated.
1. Durability: Certified by an independent testing agency to comply with ASTM E2190.
 2. Edge Spacers: Aluminum, bent and soldered corners.
 3. Edge Seal: Glass to elastomer.
 4. Purge interpane space with dry hermetic air.

2.05 GLAZING COMPOUNDS

- A. Butyl Sealant: Single component; ASTM C920, Grade NS, Class 12-1/2, Uses M and A, Shore A hardness of 10 to 20; black color.
- B. Silicone Sealant: Single component; chemical curing; capable of water immersion without loss of properties; non-bleeding, non-staining; ASTM C920, Type S, Grade NS, Class 25, Uses M, A, and G; with cured Shore A hardness range of 15 to 25; color as selected.

2.06 GLAZING ACCESSORIES

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

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that openings for glazing are correctly sized and within tolerance.
- B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and ready to receive glazing.

3.02 PREPARATION

- A. Clean contact surfaces with solvent and wipe dry.
- B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.
- C. Prime surfaces scheduled to receive sealant.
- D. Install sealants in accordance with ASTM C1193 and GANA Sealant Manual.
- E. Install sealants in accordance with manufacturer's instructions.

3.03 INSTALLATION - EXTERIOR WET METHOD (SEALANT AND SEALANT)

- A. Place setting blocks at 1/4 points and install glazing pane or unit.
- B. Install removable stops with glazing centered in space by inserting spacer shims both sides at 24 inch intervals, 1/4 inch below sight line.

- C. Fill gaps between glazing and stops with glazing sealant to depth of bite on glazing, but not more than 3/8 inch below sight line to ensure full contact with glazing and continue the air and vapor seal.
- D. Apply sealant to uniform line, flush with sight line. Tool or wipe sealant surface smooth.

3.04 CLEANING

- A. Remove glazing materials from finish surfaces.
- B. Remove labels after Work is complete.
- C. Clean glass and adjacent surfaces.

3.05 PROTECTION

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

END OF SECTION

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SECTION 21-1300
FIRE SUPPRESSION SPRINKLER SYSTEM

PART 1 GENERAL

1.01 DESCRIPTION

- A. The provisions of the General Requirements, Supplementary Requirements, and Division 1 apply to the plumbing work specified in this Division.
- B. The requirements of this section apply to the fire suppression system for the new building. Fire protection is not being added to the existing buildings.
- C. Provide all items, articles, materials, equipment, operations and/or methods listed, mentioned, shown and/or scheduled on the Drawings and/or in these Specifications, including all design, labor, supervision, services, permits, fees, and incidentals necessary and required to provide a complete and operable facility with complete systems as shown, specified, and required by applicable codes. Provide all labor and material and perform such other services necessary and reasonably incidental to the design and installation of an automatic sprinkler and standpipe system for all areas indicated on the Drawings and as required by the Governing Agency.

1.02 QUALITY ASSURANCE

- A. Contractor Qualifications:
 - 1. Established fire protection contractor regularly engaged in the design and installation of automatic fire sprinkler systems.
 - 2. Employ workers experienced and skilled in this trade.
 - 3. System Designer: Qualified and certified for the design of fire protection sprinkler systems. NICET level III or IV technician or Professional Engineer experienced in the design of sprinkler systems.
 - 4. Drawings shall be sealed by a licensed Professional Engineer experienced in fire protection.
- B. Governing Agency: All work in accordance with and accepted by the following hereafter referred to Governing Agencies:
 - 1. Fire Marshal State of Oregon.
 - 2. Fire Marshal for City of North Bend.
- C. Design Requirements:
 - 1. Comply with the latest issue of NFPA Standard 13.
 - 2. Design, lay out and install a hydraulically calculated wet and dry pipe system utilizing code approved automatic devices designed particularly for use in this type of system.
 - 3. Provide hydraulic calculation methods design data information in accordance with Chapter 8, NFPA 13. Include a 10 percent margin of safety for available water pressure and flow rate. Include all friction losses from point of flow test to remote sprinkler area.
 - 4. Fire Sprinkler Coverage: New Elevator Enclosure as required by the Governing Agency.
 - 5. Occupancy Hazard is Light Hazard: Final Occupancy Hazard designation in accordance with the Governing Agency requirements.
 - 6. Seismic Restraint: Include load calculations for seismic restraints on drawings.
 - 7. Revisions to the Contractor's design required by the Governing Agency shall be at the Contractor's expense.
- D. Acceptable Manufacturers: All sprinkler specialty material Grinnell/Gem, Central, Reliable, Globe, Star, Viking, Automatic Sprinkler Corp. of America with UL or FM approval for use in automatic sprinkler systems. All materials and equipment suitable for 175 psi working pressure.

- E. Field Wiring: It is the intent of these specifications that all systems shall be complete and operable. Refer to all drawings and specifications, especially the electrical drawings, to determine voltage, phase, circuit ampacity and number of connections provided. Provide all necessary field wiring and devices from the point of connection indicated on the electrical drawings. All equipment shall be installed in compliance with the Electrical Code and the equipment's UL listing. Bring to the attention of the Architect in writing, all conflicts, incompatibilities, and/or discrepancies prior to bid or as soon as discovered.

1.03 WORK OF OTHER CONTRACTS

- A. Work under this contract shall be conducted in a manner to allow for the future installations of such equipment or items listed in other sections of this Specification.

1.04 WORK OF OTHER DIVISIONS

- A. Work under this Division shall be conducted in a manner to cooperate with the installation of such equipment or items as specified in other Divisions.
- B. Consult all Drawings and Specifications in this project and become familiar with all equipment to be installed. Coordinate all aspects of the construction with the other trades on the job to ensure that all work and materials required to provide a complete and operational facility are included in the bid.
- C. Provide AutoCAD drawings and files to other trades for coordination. Prepare accurate shop drawings showing the actual physical dimensions required for the installation. Submit prior to purchase/fabrication/installation of any of the elements involved in the coordination.
- D. Coordination of piping and heads is particularly critical in auditorium. Review all auditorium Drawings in preparation of design.

1.05 SUBMITTALS

- A. Working Drawings:
 - 1. Prepare fire protection system working drawing showing locations and types of heads or outlets, alarm valves and devices, pipe sizes and cutting lengths, test tees and valves, drain valves, and other related items. Plans shall comply with the requirements of Chapter 8, 2013 NFPA 13, irregardless of the edition adopted by the Governing Agencies and used for design. Plans shall be stamped and signed by the licensed Professional Engineer responsible for the design.
 - 2. Provide 3 sets of drawings showing sprinkler head locations and layout coordinated with architectural ceiling details to the Architect for review prior to submitting details to the Governing Agencies.
 - 3. Provide 6 sets of drawings to the Architect to be provided to Insurance Underwriter for approval.
 - 4. Provide 6 sets of Drawings to designated representatives of the Fire Marshal for approval.
 - 5. Then provide 6 sets of approved Drawings to the Architect for final review.
- B. Submittals: Provide following, where applicable.
 - 1. Sprinkler Heads: Product data for each type of head.
 - 2. Alarm flow or pressure switches.
 - 3. Fire department connection.
 - 4. Backflow prevention valve assembly.
 - 5. System control valves.
 - 6. Piping materials.
 - 7. Alarm bell.
 - 8. Miscellaneous equipment.
 - 9. Dry valve and compressor.
- C. Test Reports: Submit certificates of completion of tests and inspections.

1.06 EXTRA STOCK

- A. Additional Heads: Provide number, type and temperature rating installed as required to meet NFPA 13 requirements.
- B. Storage Cabinet: Provide as required to receive reserve sprinkler heads and special installation tools required.
- C. Index Label: Provide for each head indicating manufacturer, model, orifice, size or K-factor, and temperature rating. Also provide inside cabinet a list of heads stored within and brief description of where installed.

1.07 WARRANTY

- A. Furnish, prior to application for final payment, three copies of written and signed guarantee effective a period of one year from date of completion and acceptance of entire project; agree to correct, repair and/or replace defective materials and/or equipment or the results of defective workmanship without additional expense to the Owner. Where no response satisfactory to the Owner has occurred within three working days from the written report of a warranty covered defect, the Contractor shall agree to pay for the cost of repair of the reported defect by a Contractor of the Owner's choice.
- B. Where the manufacturer's guarantee exceeds one year, the longer guarantee shall govern and include the Contractor's labor.
- C. Warranty period shall start when all phases of construction are complete.

PART 2 PRODUCTS

2.01 MATERIALS AND EQUIPMENT

- A. Miscellaneous Sprinkler Specialties: Complete system including all items required by the Governing Agency including but not limited to:
 - 1. Electric alarm switch and indoor and outdoor 120 V alarm bell or water motor gong.
 - 2. Valve monitoring switches with two outputs (one to fire alarm & one to sprinkler alarm bell).
 - 3. Fire department hose connections.
 - 4. Wiring from the alarm switches to the point of connection in the Fire Alarm Control Panel. Coordinate with the Electrical Work specified in Division 28.
- B. Sprinkler Heads: Approved heads with temperature ratings required for service indicated. All shall be quick response early suppression type and rated heads.
 - 1. Unfinished Areas: Upright, pendant or sidewall spray type, plain bronze.
 - 2. Finished Areas: Chrome plated recessed and sidewall heads in finished ceilings, and where piping is exposed use chrome plated upright heads.
 - 3. Dry pendant or dry sidewall heads for small areas subject to freezing. Chrome plated at interior finished locations and plain bronze in unfinished areas and exterior locations.
 - 4. At Contractor's option, flexible sprinkler head drops may be used in lieu of rigid piping. Hose assembly shall be UL 2443 listed and FM 1637 approved. Devices shall approved per be IBC 1621 or ASCE 7 as an alternative to seismic escutcheons. Ceiling attachment bracket shall be seismically certified. Hose assembly constructed of fully welded corrugated 304 stainless steel hose with stainless steel overbraid with threaded stainless steel pipe fittings. Device shall be listed for 175 PSI working pressure. Hose and 304 stainless steel threaded ends shall be welded per AHSI / AWS B2.1-00. No gaskets, O-rings, flares, or similar mechanical joints permitted. FlexHead Industries or equal.
- C. Escutcheons: Provide polished chrome escutcheons on pipe extending through finished walls and ceilings. Provide oversized escutcheon to comply with current code.

- D. Underground Water Piping: Materials and installation methods shall comply with NFPA 24. Ductile cast iron water pipe; ANSI A-21.51; with mechanical joints, ANSI A-21.10 and ANSI A21.11; and with concrete thrust blocks as detailed on the Drawings. Where acceptable to the serving utility, PVC pipe and fittings, Class 200, AWWA C900, may be installed 5 feet outside of the building line.
- E. Above Ground Water Piping: Use standard weight (schedule 40) black or galvanized steel pipe ASTM A53, A135, or A795, and cast iron screwed or mechanical joint fittings especially adapted and approved for sprinkler work. Use reducing fittings where changes in pipe size occur. Bushings are prohibited. Galvanized pipe required for dry system.
- F. Valves: UL and/or FM listed for fire protection service.
 - 1. Iron body OS&Y pattern, bronze mounted double disc, parallel seat.
 - 2. Iron body butterfly style with EPDM liner, bronze disc with lever or indicating type gear operator.
 - 3. Bronze body ball valve, three-piece design, with approved operator.
 - 4. Where required by Governing Agency, provide wall or post style indicating valves.
 - 5. Standpipe Valves: Angle or straight pattern rough brass gate valve with cap and retaining chain.
- G. Guards: Standard manufacture.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Connect to existing water supply source. Check adequacy, and call any deficiency to attention of Architect. Coordinate with work in Division 22 and 23.
- B. Install all piping in a true and even manner with lines pitched for drainage and system arranged so that it can be entirely emptied of water. Install hangers at all branch line connections to cross mains and at all other points as required in hereinbefore specified Underwriters Laboratories, Inc. and NFPA standards.
- C. Support all pipe work from building construction with mild steel hangers spaced not more than 12 feet on centers. Support mains independently of branches, and in no case shall branch hangers assume any portion of the weight of mains. Provide seismic restraints and flexible connections in accordance with building code requirements.
- D. Locate sprinkler heads in repeating, modular pattern, centered and accurately coordinated with ceiling grid as indicated. Conceal all piping unless indicated otherwise. Coordinate design with lighting and exposed HVAC duct layout in areas without ceilings.
- E. Locate and install the required fire sprinkler alarm, flow, and test and drain valves where required by the Governing Agency.
- F. Where sprinkler lines penetrate fire rated partitions, provide fire stopping system in accordance with Section 22 0500.
- G. Where sprinkler lines penetrate classroom or auditorium walls, provide acoustic seal. See Section 22 0500 for more information.

3.02 TEST

- A. Test all pipes to a hydrostatic pressure of 200 psi and maintain for four hours minimum. Perform other tests as directed by Governing Agency.
- B. Test to be performed on all new and existing systems in the building.

3.03 PAINT

- A. Paint all exposed piping and hangers in accordance with Section 09 9100. Do not paint heads.

3.04 CERTIFICATE OF COMPLETION

- A. Obtain and deliver to Owner a certificate, in duplicate, stating that system as installed has been inspected and accepted by authorities and/or agencies having jurisdiction, and that all regulations affecting work have been satisfied. Submit an acceptable certificate to the Owner before final payment is requested.
- B. Certificate: Minimum NFPA Figure 16-1 information per NFPA 13.

END OF SECTION

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