
Oakhurst Dairy – New Milk Cooler**SECTION 08411 – CURTAIN WALL SYSTEMS****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes Kawneer outside glazed, captured curtain wall system, glass and glazing, and components.

1. Types of Kawneer exterior curtain wall framing system include:
a) 1600 Wall System¹ Framing System.

1.3 SYSTEM DESCRIPTION

- A. Curtain Wall System 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/ft² at a static air pressure differential of 6.24 psf.
 2. Water Resistance: The test specimen shall be tested in accordance with ASTM E 331. There shall be no leakage at a minimum static 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 a structural test load equal to 1.5 times the specified design load, no glass breakage or permanent sets in the framing members in excess of 0.2% of their clear spans shall occur.
 4. Thermal Transmittance (U-factor): When tested to AAMA Specification 1503, the thermal transmittance (U-factor) shall not be more than: 0.48 (low-e) or 0.66 (clear).
 5. Condensation Resistance (CRF): When tested to AAMA Specification 1503, the condensation resistance factor shall not be less than 73frame and 68glass (low-e) or 66frame and 60glass (clear), Condensation Index (I): when tested to CSA-A440-00, the condensation index shall not be less than 68frame and 54glass (clear).
 6. Seismic: When tested to AAMA 501.4, system must meet design displacement of 0.010 x the story height and ultimate displacement of 1.5 x the design displacement.

1.4 WARRANTY

- A. Project Warranty: Refer to "Conditions of the Contract" for project warranty provisions.
- B. Manufacturer's Product Warranty: Submit, for Owner's acceptance, manufacturer's warranty for fixed exterior framing system as follows:

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1. Warranty Period: Two (2) years from Date of Substantial Completion of the project provided however that the Limited Warranty shall begin in no event later than six months from date of shipment by Kawneer. In addition, welded door corner construction shall be supported with a limited lifetime warranty for the life of the door under normal use.

1.5 QUALITY ASSURANCE

- A. Qualifications:
 1. Installer Qualifications: Installer experienced (as determined by contractor) to perform work of this section who has specialized in the installation of work similar to that required for this project and who is acceptable to product manufacturer.
 2. Manufacturer Qualifications: Manufacturer capable of providing field service representation during construction, approving acceptable installer and approving application method.
- B. Pre-Installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions, and manufacturer's warranty requirements.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Ordering: Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.
- B. Packing, Shipping, Handling, and Unloading: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Storage and Protection: Store materials protected from exposure to harmful weather conditions.

PART 2 - PRODUCTS**2.1 ACCEPTABLE MANUFACTURER OR APPROVED EQUAL**

- A. Kawneer Company, Inc. (or equal, approved by Engineer)
555 Guthridge Court
Technology Park/Atlanta
Norcross, GA 30092
Telephone: 770-449-5555
Fax: 770-734-1560
- B. Proprietary Products/System(s): Kawneer 1600 Wall System¹:
 1. Framing Member Profile: 4" wide x 1 1/2" deep and 5" wide x 1 1/2" deep, outside glazed pressure plate format.
 2. Curtain wall Framing System Field applied in exterior precast concrete panel wall, see building drawing for details.
 3. Finish/Color: By Owner from manufacturers standard colors.

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- A. Aluminum (Curtain Wall and Components):
 - 1. Material Standard: Extruded Aluminum, ASTM B 221; 6063-T5 or 6063-T6 alloy and temper.
 - 2. Member Wall Thickness: Each framing member shall provide structural strength to meet specified performance requirements.
 - 3. Tolerances: Reference to tolerances for wall thickness and other cross-sectional dimensions of storefront members are nominal and in compliance with AA Aluminum Standards and Data.

2.3 ACCESSORIES

- A. Fasteners: Where exposed, shall be stainless steel.
- B. Perimeter Anchors: Aluminum. When steel anchors are used, provide insulation between steel material and aluminum material to prevent galvanic action.
- C. Thermal Barrier: Thermal separator shall be extruded of a silicone compatible elastomer that provides for silicone adhesion.
- D. Tabs: Provide frame fastening tabs where required to keep fasteners a minimum 4" from a concrete panel joint. Tab material to be aluminum. When steel tabs are used, provide insulation between steel material and aluminum material to prevent galvanic action.

2.4 RELATED MATERIALS

- A. Sealants: Refer to Joint Treatment (Sealants) Section.
- B. Glass: Refer to Glass and Glazing Section

2.5 FABRICATION

- A. General:
 - 1. Fabricate components per manufacturer's installation instructions and with minimum clearances and shim spacing around perimeter of assembly, yet enabling installation and dynamic movement of perimeter seal.
 - 2. Accurately fit and secure joints and corners. Make joints flush, hairline and weathertight.
 - 3. Prepare components to receive anchor devices. Fabricate anchors.

2.6 SOURCE QUALITY CONTROL

- A. Source Quality: Provide aluminum fixed exterior framing system specified herein from a single source.
 - 1. Building Enclosure System: When aluminum storefront framing systems and related products, provide building enclosure system products from a single source manufacturer.
 - 2. Fabrication Tolerances: Fabricate aluminum framing system in accordance with framing system manufacturer's prescribed tolerances.

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- A. Site Verification of Conditions: Verify substrate conditions (which have been previously installed under other sections) are acceptable for product installation in accordance with manufacturer's instructions. Verify openings are sized to receive framing system and sill is level in accordance with manufacturer's acceptable tolerances.
 - 1. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements, fabrication schedule with construction progress to avoid construction delays.

3.2 INSTALLATION

- A. General: Install fixed framing systems in accordance with manufacturer's instructions and AAMA storefront guide specifications manual.
 - 1. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.
 - 2. Provide alignment attachments and shims to permanently fasten system to building structure.
 - 3. Align assembly plumb and level, free of warp and twist. Maintain assembly dimensional tolerances aligning with adjacent work.
- B. Related Products Installation Requirements:
 - 1. Sealants (Perimeter): Refer to Section 7920 Sealants.
 - 2. Glass: Refer to Section 8 Glass and Glazing.
 - a) Reference: ANSI Z97.1, CPSC 16 CFR 1201 and GANA Glazing Manual.

3.3 CLEANING AND PROTECTION

- A. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to owner's acceptance. Remove construction debris from project site and legally dispose of debris.
- B. Protection: Protect installed product's finish surfaces from damage during construction. Remove and replace damaged aluminum fixed framing systems at no extra cost.

END OF SECTION 08410