
Oakhurst Dairy – New Milk Cooler**SECTION 07720 - ROOF ACCESSORIES****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 the following:
 - 1. Roof curbs.
 - 2. Roof hatches.
- B. Related Sections include the following:
 - 1. Division 5 Section "Metal Fabrications" for ladders and miscellaneous metal framing and supports.
 - 2. Division 6 Section "Rough Carpentry" for roof sheathing, wood cants, and wood nailers.
 - 3. Division 7 Section "Sheet Metal Flashing and Trim" for shop- and field-fabricated metal flashing and counterflashing, scuppers, gutters and downspouts, fasciae, roof expansion-joint covers, valleys, and miscellaneous sheet metal trim and accessories.
 - 4. Division 7 Section "Manufactured Roof Specialties" for fasciae, copings, gravel stops, and roof expansion-joint covers.
 - 5. Division 7 Section "Roof Expansion Assemblies" for roof expansion-joint covers.
 - 6. Division 7 Sections for roofing accessories included as part of roofing Work.
 - 7. Division 9 Section "Painting" for shop primers and field painting.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, materials, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: Show fabrication and installation details. Indicate dimensions, weights, loadings, required clearances, method of field assembly, and components. Include plans, elevations, sections, details, and attachments to other Work.
- C. Coordination Drawings: Roof plans drawn to scale and coordinating penetrations and roof-mounted items. Show the following:
 - 1. Size and location of roof accessories specified in this Section.
 - 2. Method of attaching roof accessories to roof or building structure.
 - 3. Other roof-mounted items including mechanical and electrical equipment, ductwork, piping, and conduit.
- D. Samples for Initial Selection: Manufacturer's color charts showing the full range of colors available for roof accessories with factory-applied color finishes.

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- E. Samples for Verification: For each type of exposed finish required, prepared on Samples in manufacturer's standard sizes, and of same thickness and material indicated for the Work. If finishes involve normal color or shade variations, include sample sets showing the full range of variations expected.

1.4 QUALITY ASSURANCE

- A. Standards: Comply with the following:
1. SMACNA's "Architectural Sheet Metal Manual" details for fabrication of units, including flanges and cap flashing to coordinate with type of roofing indicated.
 2. NRCA's "Roofing and Waterproofing Manual" details for installing units.

PART 2 - PRODUCTS**2.1 MANUFACTURERS**

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Roof Curbs and Equipment Supports:
 - a) AES Industries, Inc.
 - b) Colony Custom Curbs.
 - c) Commodity Products Company, Inc.
 - d) Conn-Fab Sales, Inc.
 - e) Curbs Plus, Inc.
 - f) Custom Curb, Inc.
 - g) Gieske Custom Metal Fabricators.
 - h) Goeller Enterprises.
 - i) LMCurbs.
 - j) Loren Cook Company.
 - k) Metallic Products Corporation.
 - l) Pate Co.(The).
 - m) Roof Products & Systems Corp.
 - n) ThyCurb, Inc.
 - o) Uni-Curb, Inc.
 - p) Vent Products Co., Inc.
 2. Roof Hatches:
 - a) Babcock-Davis Hatchways, Inc.
 - b) Bilco Company.
 - c) Bristolite Skylights.
 - d) Custom Curb, Inc.
 - e) Dur-Red Products, Inc.
 - f) Goeller Enterprises.
 - g) Hi Pro International, Inc.
 - h) J. L. Industries, Inc.
 - i) Metallic Products Corporation.
 - j) Milcor, Inc.

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- k) Nystrom Products Co.
- l) O’Keeffe’s Inc.
- m) Precision Stair Corporation.
- n) Roof Products & Systems Corp.
- o) ThyCurb, Inc,
- p) Trimco, Inc.
- q) Wasco Products, Inc.

2.2 MATERIALS, GENERAL

- A. Aluminum Sheet: ASTM B 209 for alclad alloy 3005H25 or alloy and temper required to suit forming operations, with mill finish, unless otherwise indicated.
- B. Extruded Aluminum: ASTM B 221 alloy 6063-T52 or alloy and temper required to suit structural and finish requirements, with mill finish, unless otherwise indicated.
- C. Galvanized Steel Sheet: ASTM A 653/A 653M with G90 coating designation; commercial quality, unless otherwise indicated.
 - 1. Structural Quality: Grade 40, where indicated or as required for strength.
- D. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M with Class AZ-50 coating, structural quality, Grade 40, or as required for strength.
- E. Wood Nailers: Softwood lumber, pressure treated with waterborne preservatives for aboveground use, complying with AWWPA C2; not less than 1-1/2 inches thick.
- F. Fasteners: Same metal as metals being fastened, or nonmagnetic stainless steel or other noncorrosive metal as recommended by manufacturer. Match finish of exposed fasteners with finish of material being fastened.
 - 1. Where removing exterior exposed fasteners affords access to building, provide nonremovable fastener heads.
- G. Gaskets: Manufacturer’s standard tubular or fingered design of neoprene, EPDM, or PVC; or flat design of foam rubber, sponge neoprene, or cork.
- H. Bituminous Coating: SSPC-Paint 12, solvent-type bituminous mastic, nominally free of sulfur and containing no asbestos fibers, compounded for 15-mil dry film thickness per coating.
- I. Mastic Sealant: Polyisobutylene; nonhardening, nonskinning, nondrying, nonmigrating sealant.
- J. Elastomeric Sealant: Generic type recommended by unit manufacturer that is compatible with joint surfaces; ASTM C 920, Type S, Grade NS, Class 25, and Uses NT, G, A, and, as applicable to joint substrates indicated, O.
- K. Roofing Cement: ASTM D 4586, nonasbestos, fibrated asphalt cement designed for trowel application or other adhesive compatible with roofing system.

Oakhurst Dairy – New Milk Cooler**2.3 ROOF CURBS**

- A. Fabrication: Unless otherwise indicated or required for strength, fabricate units from minimum 0.0747-inch-thick, structural-quality, hot-dip galvanized or aluminum-zinc alloy-coated steel sheet; factory primed and prepared for painting with welded or sealed mechanical corner joints.
- B. Fabrication: Unless otherwise indicated or required for strength, fabricate units from minimum 0.063-inch-thick, sheet aluminum with welded corner joints.
 - 1. Provide preservative-treated wood nailers at tops of curbs and formed flange at perimeter bottom for mounting to roof.
 - 2. Provide manufacturer's standard rigid or semirigid insulation where indicated.
 - 3. Provide formed cants and base profile coordinated with roof insulation thickness.
 - 4. Fabricate units to minimum height of 8 inches, unless otherwise indicated.
 - 5. Sloping Roofs: Where slope of roof deck exceeds 1/4 inch per foot, fabricate curb units with water diverter or cricket and with height tapered to match slope to level tops of units.

2.4 EQUIPMENT SUPPORTS

- A. General: Provide equipment supports capable of supporting superimposed live and dead loads, including equipment loads and other construction to be supported. Coordinate dimensions with rough-in information or Shop Drawings of equipment to be supported.
- B. Fabrication: Unless otherwise indicated or required for strength, fabricate units from minimum 0.0747-inch-thick, structural-quality, hot-dip galvanized or aluminum-zinc alloy-coated steel sheet; factory primed and prepared for painting with welded or sealed mechanical corner joints.
- C. Fabrication: Unless otherwise indicated or required for strength, fabricate units from minimum 0.063-inch-thick, sheet aluminum with welded corner joints.
 - 1. Provide preservative-treated wood nailers at tops of curbs and formed flange at perimeter bottom for mounting to roof.
 - 2. Fabricate units to minimum height of 8 inches, unless otherwise indicated.
 - 3. Sloping Roofs: Where slope of roof deck exceeds 1/4 inch per foot, fabricate support units with height tapered to match slope to level tops of units.

2.5 ROOF HATCHES

- A. General: Fabricate units to withstand 40-lbf/sq. ft. external and 20-lbf/sq. ft. internal loading pressure. Frame with minimum 9-inch-high, integral-curb, double-wall construction with 1-1/2-inch insulation, formed cants and cap flashing (roofing counterflashing), with welded or sealed mechanical corner joints. Provide double-wall cover (lid) construction with 1-inch-thick insulation core. Provide gasketing and equip with corrosion-resistant or hot-dip galvanized hardware including pintle hinges, hold-open devices, interior padlock hasps, and both interior and exterior latch handles.
- B. Type: Single-leaf personnel access.
 - 1. For Ladder Access: 30 by 36 inches.

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- 2. For Ship's Ladder Access: 30 by 54 inches.
- C. Material: Aluminum, sheets and extrusions.
 - 1. Finish: Clear anodic.
- D. Sloping Roofs: Where slope or roof deck exceeds 1/4 inch per foot, fabricate hatch curbs with height tapered to match slope to level tops of units.

2.6 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.7 ALUMINUM FINISHES

- A. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
- B. Conversion-Coated and Factory-Primed Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid-chromate-fluoride-phosphate conversion coating; Organic Coating: as specified below).
 - 1. Organic Coating: Air-dried primer of not less than 2.0-mil dry film thickness.
- C. Class I, Clear Anodic Finish: AA-M12C22A41 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, clear coating 0.018 mm or thicker) complying with AAMA 607.1.

2.8 GALVANIZED STEEL SHEET FINISHES

- A. Surface Preparation: Clean surfaces with nonpetroleum solvent so surfaces are free of oil and other contaminants. After cleaning, apply a conversion coating suited to the organic coating to be applied over it. Clean welds, mechanical connections, and abraded areas, and apply galvanizing repair paint specified below to comply with ASTM A 780.
 - 1. Galvanizing Repair Paint: High-zinc-dust-content paint for regalvanizing welds in steel, complying with SSPC-Paint 20.
- B. Factory Priming for Field-Painted Finish: Where field painting after installation is indicated, apply the air-dried primer specified below immediately after cleaning and pretreating.
 - 1. Shop Primer: Exterior galvanized metal primer per Division 9 Section "Painting."

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Comply with manufacturer's written instructions. Coordinate installation of roof accessories with installation of roof deck, roof insulation, flashing, roofing membranes, penetrations, equipment, and other construction involving roof accessories to ensure that each element of the Work performs properly and that combined elements are waterproof and weathertight. Anchor roof accessories securely to supporting structural substrates so they are capable of withstanding lateral and thermal stresses, and inward and outward loading pressures.
- B. Install roof accessory items according to construction details of NRCA's "Roofing and Waterproofing Manual," unless otherwise indicated,
- C. Separation: Separate metal from incompatible metal or corrosive substrates, including wood, by coating concealed surfaces, at locations of contact, with bituminous coating or providing other permanent separation.
- D. Flange Seals: Unless otherwise indicated, set flanges of accessory units in a thick bed of roofing cement to form a seal.
- E. Cap Flashing: Where required as component of accessory, install cap flashing to provide waterproof overlap with roofing or roof flashing (as counterflashing). Seal overlap with thick bead of mastic sealant.
- F. Operational Units: Test-operate units with operable components. Clean and lubricate joints and hardware. Adjust for proper operation.

3.2 CLEANING AND PROTECTION

- A. Clean exposed surfaces according to manufacturer's written instructions. Touch up damaged metal coatings.

END SECTION 07720