## ADDENDUM 2

- TO: City of Coos Bay Randy Dixon, City of Coos Bay.
- FROM: KPFF Consulting Engineers 111 SW 5<sup>th</sup> Avenue, suite 2500 Portland, Oregon 97204
- PROJECT: Egyptian Theater
- DATE: April 25, 2014
- RE: Addendum No. 2

The following items are hereby made a part of the Bidding and Contract Documents effective this date:

## Drawing Clarifications:

- Item 1: Drawing A1.1-Plans, Elevations and Sections replace Sheet A1.1 with Addendum 2, 4.25.14 Sheet. In general revisions include changes to General Notes and drawing notes and added Door and Hardware Schedule.
- Item 2: Drawing A5.1-Details, replace Sheet A5.1 with Addendum 2, 4.25.14 Sheet. In general details and notes have been revised to clarify design intent for sheet metal cladding.
- Item 3: Drawing A5.2-Details, replace Sheet A5.2 with Addendum 2, 4.25.14 Sheet. In general details and notes have been revised to clarify design intent for sheet metal cladding and marble tile.

**Specification Clarifications:** 

- Item 4: Revise Table of Contents Section 085200-Wood Windows to read Wood Doors and Windows
- Item 5: Replace Section 076200-Sheet Metal Flashing and Trim with revised Section 076200- Sheet Metal Flashing and Trim.
- Item 6: Replace Section 085200-Wood Windows with revised Section 085200-Wood Doors and Windows.
- Item 7: Replace Section 099000-Paintings and Coatings with revised Section 099000-Paintings and Coatings.

# Responses to Questions:

- Item 8: Response to RFI 100:
  - No specification section on black marble base and no detail how it matches up with new plaster? Response: Marble base basis of design DalTile St. Laurent Oriental (Polished) 12"x12"x3/8". Final tile color is subject to owner review and approval. Marble base is intended to be surface mounted on new plaster wall. Refer to details on A5.2.
  - Decorative sheet metal ceiling? NIC ? No specification information. Response: Sheet metal canopy ceiling and all sheet metal canopy cladding/trim is included in contract. Refer to revised details on A5.1 and A5.2 and revised specification Section 076200 Sheet Metal Flashing and Trim.
- Item 9: Response to RFI 101:
  - What is the thickness gauge and type of material for the following items: Hats, Dentals Cladding/flashing around the marquee, Pans under the marquee?
     Response: Sheet metal is to be galvanized and painted. Design intent for galvanized sheet metal gauge is 22 gauge. Refer to revised details on A5.1 and A5.2 and revised specification Section 076200 Sheet Metal Flashing and Trim.

# Item 10: Response to RFI 102:

- Plans designate door #'s. no size, doors nic, but sheet note refers to contractor providing code approved exit hardware, panic hardware? Center mullion?
   Response: Refer to revised A1.1 for Door and Hardware Schedule.
- Transom windows usually refers to winnows that open inward at top is this correct? or are windows to be fixed, specifications indicate hardware for windows? Response: Transom windows are upper windows, in this case they are not operable and therefore no hardware is required.
- Cannot locate door schedule or specification or hardware schedule? No window schedule or hardware requirements?
  Response: Refer to revised A1.1 for Door and Hardware Schedule.
- Detail A 1.1/2 shows 8 windows? Detail A 1.1/4 shows 10 windows? Which detail is correct? Response: Detail/Drawing 2/A1.1 is correct, there are 8 fixed transom windows. Refer to revised A1.1.

End of Addendum

## SECTION 076200 - SHEET METAL FLASHING AND TRIM

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

## 1.2 SUMMARY

- A. Section Includes:
  - 1. Manufactured reglets with counterflashing.
  - 2. Formed roof-drainage sheet metal fabrications.
  - 3. Formed wall sheet metal fabrications.
  - 4. Formed sheet metal for decorative architectural details.
- B. Related Requirements:
  - 1. Section 061000 "Rough Carpentry" for wood nailers, curbs, and blocking.

## 1.3 COORDINATION

- A. Coordinate sheet metal flashing and trim layout and seams with sizes and locations of penetrations to be flashed, and joints and seams in adjacent materials.
- B. Coordinate sheet metal flashing and trim installation with adjoining roofing and wall materials, joints, and seams to provide leakproof, secure, and noncorrosive installation.

## 1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
  - 1. Review construction schedule. Verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 2. Review special roof details, roof drainage, roof-penetration flashing, equipment curbs, and condition of other construction that affect sheet metal flashing and trim.
  - 3. Review requirements for insurance and certificates if applicable.
  - 4. Review sheet metal flashing observation and repair procedures after flashing installation.

## 1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

#### SHEET METAL FLASHING AND TRIM

- 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each manufactured product and accessory.
- B. Sustainability Submittals:
  - 1. Product For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content. Include statement indicating cost for each product having recycled content.
- C. Shop Drawings: For sheet metal flashing and trim.
  - 1. Include plans, elevations, sections, and attachment details.
  - 2. Detail fabrication and installation layouts, expansion-joint locations, and keyed details. Distinguish between shop- and field-assembled work.
  - 3. Include identification of material, thickness, weight, and finish for each item and location in Project.
  - 4. Include details for forming, including profiles, shapes, seams, and dimensions.
  - 5. Include details for joining, supporting, and securing, including layout and spacing of fasteners, cleats, clips, and other attachments. Include pattern of seams.
  - 6. Include details of termination points and assemblies.
  - 7. Include details of expansion joints and expansion-joint covers, including showing direction of expansion and contraction from fixed points.
  - 8. Include details of roof-penetration flashing.
  - 9. Include details of edge conditions, including eaves, ridges, valleys, rakes, crickets, and counterflashings as applicable.
  - 10. Include details of special conditions.
  - 11. Include details of connections to adjoining work.
  - 12. Detail formed flashing and trim at scale of not less than 3 inches per 12 inches (1:5).
- D. Samples for Verification: For each type of exposed finish.
  - 1. Sheet Metal Flashing: 12 inches (300 mm) long by actual width of unit, including finished seam and in required profile. Include fasteners, cleats, clips, closures, and other attachments.
  - 2. Trim, Metal Closures, Expansion Joints, Joint Intersections, and Miscellaneous Fabrications: 12 inches (300 mm) long and in required profile. Include fasteners and other exposed accessories.
  - 3. Unit-Type Accessories and Miscellaneous Materials: Full-size Sample.
  - 4. Anodized Aluminum Samples: Samples to show full range to be expected for each color required.

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For fabricator.
- B. Product Certificates: For each type of coping and roof edge flashing that is SPRI ES-1 tested and FM Approvals approved.
- C. Product Test Reports: For each product, for tests performed by a qualified testing agency.

D. Sample Warranty: For special warranty.

## 1.7 CLOSEOUT SUBMITTALS

A. Maintenance Data: For sheet metal flashing and trim, and its accessories, to include in maintenance manuals.

#### 1.8 QUALITY ASSURANCE

A. Fabricator Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.

## 1.9 DELIVERY, STORAGE, AND HANDLING

- A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage. Store sheet metal flashing and trim materials away from uncured concrete and masonry.
- B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to extent necessary for period of sheet metal flashing and trim installation.

# PART 2 - PRODUCTS

## 2.1 PERFORMANCE REQUIREMENTS

- A. General: Sheet metal flashing and trim assemblies shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.
- B. Sheet Metal Standard for Flashing and Trim: Comply with NRCA's "The NRCA Roofing Manual" and SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.
- C. FM Approvals Listing: Manufacture and install roof edge flashings that are listed in FM Approvals' "RoofNav" and approved for windstorm classification. Identify materials with name of fabricator and design approved by FM Approvals.
- D. SPRI Wind Design Standard: Manufacture and install roof edge flashings tested according to SPRI ES-1 and capable of resisting the following design pressure:
  - 1. Design Pressure: As indicated on Drawings.
- E. Recycled Content of Steel-Sheet Flashing and Trim: Postconsumer recycled content plus onehalf of preconsumer recycled content not less than 25 percent.

- F. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

# 2.2 SHEET METALS

- A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.
- B. Stainless-Steel Sheet: ASTM A 240/A 240M or ASTM A 666, Type 316, dead soft, fully annealed; with smooth, flat surface.
  - 1. Finish: 2B (bright, cold rolled).

# C. <u>Galvanized Steel Sheet Metal: Provide zinc-coated (galvanized) steel sheet according to</u> <u>ASTM A 653/A 653M, G90 coating designation.</u>

- 1. <u>Surface: Smooth, flat and mill phosphatized for field painting.</u>
- 2. Finish: Field painted.
- 3. <u>Color: Coordinate with owner.</u>
- 4. <u>Gauge: Min 22 Gauge.</u>

# 2.3 UNDERLAYMENT MATERIALS

- A. Self-Adhering, High-Temperature Sheet: Minimum 30 mils (0.76 mm) thick, consisting of a slip-resistant polyethylene- or polypropylene-film top surface laminated to a layer of butyl- or SBS-modified asphalt adhesive, with release-paper backing; specifically designed to withstand high metal temperatures beneath metal roofing. Provide primer according to written recommendations of underlayment manufacturer.
  - 1. <u>Products</u>: Subject to compliance with requirements, provide one of the following:
    - a. <u>Carlisle Residential, a division of Carlisle Construction Materials</u>; WIP 300HT.
    - b. <u>Grace Construction Products, a unit of W. R. Grace & Co.-Conn</u>.; Grace Ice and Water Shield HT.
    - c. <u>Henry Company</u>; Blueskin PE200 HT.
    - d. <u>Kirsch Building Products, LLC</u>; Sharkskin Ultra SA.
    - e. <u>Metal-Fab Manufacturing, LLC;</u> MetShield.
    - f. <u>Owens Corning</u>; WeatherLock Specialty Tile & Metal Underlayment.
    - g. Polyguard Products, Inc.; Deck Guard HT.
    - h. Protecto Wrap Company; Protecto Jiffy Seal Ice & Water Guard HT.
    - i. <u>SDP Advanced Polymer Products Inc</u>; Palisade SA-HT.
    - j.
  - 2. Thermal Stability: ASTM D 1970; stable after testing at 240 deg F (116 deg C) or higher.

3. Low-Temperature Flexibility: ASTM D 1970; passes after testing at minus 20 deg F (29 deg C) or lower.

# 2.4 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal or manufactured item unless otherwise indicated.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.
  - 1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
    - a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating. Provide metal-backed EPDM or PVC sealing washers under heads of exposed fasteners bearing on weather side of metal.
    - b. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.
    - c. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.
  - 2. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.
- C. Solder:
  - 1. For Stainless Steel: ASTM B 32, Grade Sn60 with acid flux of type recommended by stainless-steel sheet manufacturer.
- D. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.

#### 2.5 MANUFACTURED SHEET METAL FLASHING AND TRIM

- A. Reglets: Units of type, material, and profile required, formed to provide secure interlocking of separate reglet and counterflashing pieces, and compatible with flashing indicated.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. <u>Cheney Flashing Company</u>.
    - b. Fry Reglet Corporation.
    - c. <u>Heckmann Building Products, Inc</u>.
    - d. <u>Hickman, W. P. Company</u>.
    - e. <u>Hohmann & Barnard, Inc</u>.
    - f. <u>Keystone Flashing Company, Inc</u>.
    - g. <u>National Sheet Metal Systems, Inc</u>.
    - h. <u>Sandell Manufacturing</u>.

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- 2. Material: Stainless steel, 0.019 inch (0.48 mm) thick.
- 3. Surface-Mounted Type: Provide with slotted holes for fastening to substrate, with neoprene or other suitable weatherproofing washers, and with channel for sealant at top edge.
- 4. Accessories:
  - a. Flexible-Flashing Retainer: Provide resilient plastic or rubber accessory to secure flexible flashing in reglet where clearance does not permit use of standard metal counterflashing or where Drawings show reglet without metal counterflashing.
  - b. Counterflashing Wind-Restraint Clips: Provide clips to be installed before counterflashing to prevent wind uplift of counterflashing's lower edge.
- 5. Finish: Mill.

#### 2.6 FABRICATION, GENERAL

- A. General: Custom fabricate sheet metal flashing and trim to comply with details shown and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required. Fabricate sheet metal flashing and trim in shop to greatest extent possible.
  - 1. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
  - 2. Obtain field measurements for accurate fit before shop fabrication.
  - 3. Form sheet metal flashing and trim to fit substrates without excessive oil canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
  - 4. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.
- B. Fabrication Tolerances: Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines indicated on Drawings and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.
- C. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal to provide for proper installation of elastomeric sealant according to cited sheet metal standard.
- D. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.
- E. Fabricate cleats and attachment devices of sizes as recommended by cited sheet metal standard for application, but not less than thickness of metal being secured.
- F. Seams: Fabricate nonmoving seams with flat-lock seams. Tin edges to be seamed, form seams, and solder.

## 2.7 ROOF-DRAINAGE SHEET METAL FABRICATIONS

- A. Built-in Gutters: Fabricate to cross section required, with riveted and soldered joints, complete with end pieces, outlet tubes, and other special accessories as required. Fabricate in minimum 96-inch- (2400-mm-) long sections. Fabricate expansion joints and accessories from same metal as gutters unless otherwise indicated.
  - 1. Fabricate gutters with built-in expansion joints and gutter-end expansion joints at walls.
  - 2. Accessories: Wire-ball downspout strainer.
  - 3. Fabricate from the Following Materials:
    - a. Stainless Steel: 0.016 inch (0.40 mm) thick.
- B. Downspouts: Fabricate round downspouts to dimensions indicated, complete with mitered elbows. Furnish with metal hangers from same material as downspouts and anchors. Shop fabricate elbows.
  - 1. Fabricated Hanger Style: Fig 1-35D according to SMACNA's "Architectural Sheet Metal Manual."
  - 2. Fabricate from the following materials:
    - a. Stainless Steel: 0.016 inch (0.40 mm) thick.

#### 2.8 WALL SHEET METAL FABRICATIONS

- A. Opening Flashings in Frame Construction: Fabricate head, sill, and similar flashings to extend 4 inches (100 mm) beyond wall openings. Form head and sill flashing with 2-inch- (50-mm-) high, end dams. Fabricate from the following materials:
  - 1. Stainless Steel: 0.016 inch (0.40 mm) thick.

# PART 3 - EXECUTION

## 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, substrate, and other conditions affecting performance of the Work.
  - 1. Verify compliance with requirements for installation tolerances of substrates.
  - 2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

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## 3.2 UNDERLAYMENT INSTALLATION

A. Self-Adhering Sheet Underlayment: Install self-adhering sheet underlayment, wrinkle free. Prime substrate if recommended by underlayment manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation; use primer for installing underlayment at low temperatures. Apply in shingle fashion to shed water, with end laps of not less than 6 inches (150 mm) staggered 24 inches (600 mm) between courses. Overlap side edges not less than 3-1/2 inches (90 mm). Roll laps and edges with roller. Cover underlayment within 14 days.

## 3.3 INSTALLATION, GENERAL

- A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
  - 1. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
  - 2. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
  - 3. Space cleats not more than 12 inches (300 mm) apart. Attach each cleat with at least two fasteners. Bend tabs over fasteners.
  - 4. Install exposed sheet metal flashing and trim with limited oil canning, and free of buckling and tool marks.
  - 5. Torch cutting of sheet metal flashing and trim is not permitted.
  - 6. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressuretreated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.
  - 1. Coat concealed side of uncoated-aluminum and stainless-steel sheet metal flashing and trim with bituminous coating where flashing and trim contact wood, ferrous metal, or cementitious construction.
  - 2. Underlayment: Where installing sheet metal flashing and trim directly on cementitious or wood substrates, install underlayment and cover with slip sheet.
- C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at maximum of 10 feet (3 m) with no joints within 24 inches (600 mm) of corner or intersection.
  - 1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with sealant concealed within joints.
  - 2. Use lapped expansion joints only where indicated on Drawings.
- D. Fasteners: Use fastener sizes that penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.

- E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.
- F. Seal joints as required for watertight construction.
  - 1. Use sealant-filled joints unless otherwise indicated. Embed hooked flanges of joint members not less than 1 inch (25 mm) into sealant. Form joints to completely conceal sealant. When ambient temperature at time of installation is between 40 and 70 deg F (4 and 21 deg C), set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant-type joints at temperatures below 40 deg F (4 deg C).
  - 2. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."
- G. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets with solder to width of 1-1/2 inches (38 mm); however, reduce pre-tinning where pre-tinned surface would show in completed Work.
  - 1. Do not use torches for soldering.
  - 2. Heat surfaces to receive solder, and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.
  - 3. Stainless-Steel Soldering: Tin edges of uncoated sheets, using solder for stainless steel and acid flux. Promptly remove acid flux residue from metal after tinning and soldering. Comply with solder manufacturer's recommended methods for cleaning and neutralization.

# 3.4 ROOF-DRAINAGE SYSTEM INSTALLATION

- A. General: Install sheet metal roof-drainage items to produce complete roof-drainage system according to cited sheet metal standard unless otherwise indicated. Coordinate installation of roof perimeter flashing with installation of roof-drainage system.
- B. Built-in Gutters: Join sections with riveted and soldered joints or joints sealed with sealant. Provide for thermal expansion. Slope to downspouts. Provide end closures and seal watertight with sealant.
  - 1. Install gutter with expansion joints to exceed 50 feet (15.24 m) apart. Install expansionjoint caps.
- C. Downspouts: Join sections with 1-1/2-inch (38-mm) telescoping joints.
  - 1. Provide hangers with fasteners designed to hold downspouts securely to walls. Locate hangers at top and bottom and at approximately 60 inches (1500 mm) o.c.
  - 2. Connect downspouts to underground drainage system.

# 3.5 ROOF FLASHING INSTALLATION

A. General: Install sheet metal flashing and trim to comply with performance requirements and cited sheet metal standard. Provide concealed fasteners where possible, and set units true to line,

levels, and slopes. Install work with laps, joints, and seams that are permanently watertight and weather resistant.

- B. Roof Edge Flashing: Anchor to resist uplift and outward forces according to recommendations in cited sheet metal standard unless otherwise indicated. Interlock bottom edge of roof edge flashing with continuous cleat anchored to substrate at staggered 3-inch (75-mm) centers.
- C. Roof Edge Flashing: Anchor to resist uplift and outward forces according to recommendations in FM Global Property Loss Prevention Data Sheet 1-49 for FM Approvals' listing for required windstorm classification.
- D. Pipe or Post Counterflashing: Install counterflashing umbrella with close-fitting collar with top edge flared for elastomeric sealant, extending minimum of 4 inches (100 mm) over base flashing. Install stainless-steel draw band and tighten.
- E. Counterflashing: Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing. Extend counterflashing 4 inches (100 mm) over base flashing. Lap counterflashing joints minimum of 4 inches (100 mm). Secure in waterproof manner by means of snap-in installation and sealant or lead wedges and sealant unless otherwise indicated.
- F. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Seal with elastomeric sealant and clamp flashing to pipes that penetrate roof.

# 3.6 WALL FLASHING INSTALLATION

- A. General: Install sheet metal wall flashing to intercept and exclude penetrating moisture according to cited sheet metal standard unless otherwise indicated. Coordinate installation of wall flashing with installation of wall-opening components such as windows, doors, and louvers.
- B. Opening Flashings in Frame Construction: Install continuous head, sill and similar flashings to extend 4 inches (100 mm) beyond wall openings.

# 3.7 MISCELLANEOUS FLASHING INSTALLATION

- A. Equipment Support Flashing: Coordinate installation of equipment support flashing with installation of roofing and equipment. Weld or seal flashing with elastomeric sealant to equipment support member.
- B. Overhead-Piping Safety Pans: Suspend pans from structure above, independent of other overhead items such as equipment, piping, and conduit, unless otherwise indicated on Drawings. Pipe and install drain line to plumbing waste or drainage system.

## 3.8 ERECTION TOLERANCES

- A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines indicated on Drawings and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.
- B. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerances specified in MCA's "Guide Specification for Residential Metal Roofing."

## 3.9 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder.
- C. Clean off excess sealants.
- D. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of sheet metal flashing and trim installation, remove unused materials and clean finished surfaces as recommended by sheet metal flashing and trim manufacturer. Maintain sheet metal flashing and trim in clean condition during construction.
- E. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 076200

# SECTION 085200 - WOOD DOORS AND WINDOWS

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

## A. <u>Section includes</u>

- **1.** Exterior stile and rail wood doors.
- 2. Wood windows.
- 3. <u>Priming of exterior doors and windows.</u>

## 1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
  - 1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 2. Review, discuss, and coordinate the interrelationship of wood windows with other exterior wall components. Include provisions for anchoring, flashing, weeping, sealing perimeters, and protecting finishes.
  - 3. Review and discuss the sequence of work required to construct a watertight and weathertight exterior building envelope.
  - 4. Inspect and discuss the condition of substrate and other preparatory work performed by other trades.

## 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include construction details, material descriptions, glazing and fabrication methods, dimensions of individual components and profiles, hardware, and finishes for <u>wood</u> <u>doors</u> and wood windows.
- B. Shop Drawings: Include plans, elevations, sections, hardware, accessories, operational clearances, and details of installation, including anchor, flashing, and sealant installation.
- C. Samples for Verification: For wood <u>doors and</u> windows include each component required, prepared on samples of size indicated below:
  - 1. Exposed Finishes: 2 by 4 inches (50 by 100 mm).

- 2. Exposed Hardware: Full-size units.
- D. Product Schedule: For wood windows.

# 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For manufacturer and Installer.
- B. Product Test Reports: For each type of wood window, for tests performed by a qualified testing agency.
- C. Field quality-control reports.
- D. Sample Warranties: For manufacturer's warranties.

## 1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A manufacturer capable of fabricating wood windows that meet or exceed performance requirements indicated and of documenting this performance by test reports, and calculations.
- B. Installer Qualifications: An installer acceptable to wood window manufacturer for installation of units required for this Project.

## 1.7 WARRANTY

- A. Manufacturer's Warranty: Manufacturer agrees to repair or replace wood windows that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Failure to meet performance requirements.
    - b. Structural failures including excessive deflection, water leakage, and air infiltration.
    - c. Faulty operation of movable sash and hardware.
    - d. Deterioration of materials and finishes beyond normal weathering.
    - e. Failure of insulating glass.
  - 2. Warranty Period:
    - a. Doors: Ten (10) years from date of Substantial Completion
    - b. Window: <u>Twenty (20)</u> years from date of Substantial Completion.
    - c. Glazing Units: Five (20) years from date of Substantial Completion.

# PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

# B. <u>Source Limitations: Obtain Exterior Stile and rail wood doors and wood windows form</u> single manufacturer.

C. Basis-of-Design Product Wood and Windows Doors: Subject to compliance with requirements, provide Marvin Windows and Doors or comparable product by one of the following:

## 1. Wood Doors:

- a. <u>JELD-WEN, Inc.</u>
- b. Anderson Windows Door.
- c. <u>Versatile Wood Products.</u>
- 2. Wood Windows:
  - a. <u>JELD-WEN, Inc.</u>
  - b. <u>Anderson Windows Door.</u>
  - c. <u>Versatile Wood Products.</u>
- D. Source Limitations: Obtain wood windows from single source from single manufacturer.

# 2.2 WINDOW PERFORMANCE REQUIREMENTS

- A. Product Standard: Comply with AAMA/WDMA/CSA 101/I.S.2/A440 for definitions and minimum standards of performance, materials, components, accessories, and fabrication unless more stringent requirements are indicated.
  - 1. Window Certification: WDMA certified with label attached to each window.
- B. Performance Class and Grade: AAMA/WDMA/CSA 101/I.S.2/A440 as follows:
  - 1. Minimum Performance Class: CW.
  - 2. Minimum Performance Grade: 30 psf.
- C. Thermal Transmittance: NFRC 100 maximum whole-window U-factor of 0.32 Btu/sq. ft. x h x deg F (1.83 W/sq. m x K).
- D. Solar Heat-Gain Coefficient (SHGC): NFRC 200 maximum whole-window SHGC of 0.40.

E. Windborne-Debris Resistance: Capable of resisting impact from windborne debris based on testing glazed windows identical to those specified, according to ASTM E 1886 and testing information in ASTM E 1996 and requirements of authorities having jurisdiction.

# 2.3 WOOD WINDOWS

- A. Operating Types: Provide the following operating types in locations indicated on Drawings:
  1. Fixed.
- B. Frames and Sashes: Fine-grained wood lumber complying with AAMA/WDMA/CSA 101/I.S.2/A440; kiln dried to a moisture content of not more than 12 percent at time of fabrication; free of visible finger joints, blue stain, knots, pitch pockets, and surface checks larger than 1/32 inch (0.8 mm) deep by 2 inches (51 mm) wide; water-repellent preservative treated.
  - Exterior Finish: Manufacturer's standard factory-prime coat wood.
    a. Color: As selected by Owner from manufacturer's full range.
  - Interior Finish: Manufacturer's standard factory-prime coat.
    a. Color: As selected by Architect from manufacturer's full range.
- C. Glass: Clear annealed glass, ASTM C 1036, Type 1, Class 1, q3.
  - 1. Kind: Fully tempered where indicated on Drawings.
- D. Insulating-Glass Units: ASTM E 2190, certified through IGCC as complying with requirements of IGCC.
  - 1. Glass: ASTM C 1036, Type 1, Class 1, q3.
    - a. Tint: Clear.
    - b. Kind: Fully tempered where indicated on Drawings.
  - 2. Lites: <u>One.</u>
  - 3. Filling: Fill space between glass lites with air.
  - 4. Low-E Coating: Per manufacturer's standard.
- E. Glazing System: Manufacturer's standard factory-glazing system that produces weathertight seal.
- F. Hardware, General: Provide manufacturer's standard hardware fabricated from aluminum, stainless steel, carbon steel complying with AAMA 907, or other corrosion-resistant material compatible with adjacent materials; designed to smoothly operate, tightly close, and securely lock windows, and sized to accommodate sash weight and dimensions.
  - 1. Exposed Hardware Color and Finish: As selected by Owner from manufacturer's full range.

- G. Weather Stripping: Provide full-perimeter weather stripping for each operable sash unless otherwise indicated.
- H. Fasteners: Noncorrosive and compatible with window members, trim, hardware, anchors, and other components.
  - 1. Exposed Fasteners: Do not use exposed fasteners to the greatest extent possible. For application of hardware, use fasteners that match finish hardware being fastened.

## 2.4 FABRICATION

- A. Fabricate wood windows in sizes indicated. Include a complete system for installing and anchoring windows.
- B. Glaze wood windows in the factory.
- C. Weather strip each operable sash to provide weathertight installation.
- D. Mullions: Provide mullions and cover plates, matching window units, complete with anchors for support to structure and installation of window units. Allow for erection tolerances and provide for movement of window units due to thermal expansion and building deflections. Provide mullions and cover plates capable of withstanding design wind loads of window units.
- E. Complete fabrication, assembly, finishing, hardware application, and other work in the factory to greatest extent possible. Disassemble components only as necessary for shipment and installation. Allow for scribing, trimming, and fitting at Project site.

# 2.5 EXTERIOR STILE AND RAIL WOOD DOORS

# A. <u>Thermal Transmittance: Maximum whole fenestration product U-factor of 0.40 (2.27)</u> according to AAMA 1503, ASTM E 1423, or NFRC 100.

- B. <u>Exterior Stile and Rail Wood Doors: Exterior doors complying with WDMA I.S.6, " the AWI's, AWMAC's, and WI's "Architectural Woodwork Standards," and with other requirements specified.</u>
  - 1. Grade: Premium.
  - 2. Finish: Opaque.
  - 3. <u>Wood Species and Cut for Coastal Environment and Opaque Finish: Douglas fir or</u> western hemlock, quarter sawed/sliced (vertical grain)
  - 4. Stile and Rail Width not less than the following:
    - a. <u>Stiles minimum of 5/12"</u>
    - b. <u>Bottom Rails minimum of 11 3/8"</u>
  - 5. <u>Glass: Uncoated, clear, Insulating-glass units made from two lites of 3.0-mm-thick,</u> <u>fully tempered glass with 1/4-inch (6.4-mm) interspace</u>

# 2.6 STILE AND RAIL WOOD DOOR FABRICATION

- A. <u>Fabricate stile and rail wood doors in sizes indicated for field fitting.</u>
- B. <u>Factory machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3. Comply with final hardware schedules, door frame Shop Drawings, BHMA-156.115-W, and hardware templates.</u>
  - 1. <u>Coordinate measurements of hardware mortises in metal frames to verify</u> dimensions and alignment before factory machining.
- C. <u>Glazed Openings: Trim openings indicated for glazing with solid wood moldings, with one</u> side removable. Miter wood moldings at corner joints.
- D. <u>Glazed Openings: Install glass using manufacturer's standard elastomeric glazing sealant</u> complying with ASTM C 920. Secure glass in place with removable wood moldings. Miter wood moldings at corner joints.
- E. <u>Transom Panels: Fabricate panels to match adjoining doors in materials, finish, and</u> <u>quality of construction.</u>

## 2.7 <u>SHOP PRIMING</u>

A. <u>Doors for Opaque Finish: Shop prime faces, all four edges, edges of cutouts, and mortises</u> with one coat of wood primer.

## PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Verify rough opening dimensions, levelness of sill plate, and operational clearances.
- C. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure weathertight window installation.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

# 3.2 INSTALLATION

A. Comply with manufacturer's written instructions for installing windows, hardware, accessories, and other components. For installation procedures and requirements not addressed in manufacturer's written instructions, comply with installation requirements in ASTM E 2112.

B. Install windows level, plumb, square, true to line, without distortion, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction to produce weathertight construction.

# 3.3 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
  - 1. Testing and inspecting agency will interpret tests and state in each report whether tested work complies with or deviates from requirements.
- B. Remove and replace noncomplying windows and retest as specified above.
- C. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- D. Prepare test and inspection reports.

# 3.4 ADJUSTING, CLEANING, AND PROTECTION

- A. Adjust operating sashes and hardware for a tight fit at contact points and weather stripping for smooth operation and weathertight closure.
- B. Clean exposed surfaces immediately after installing windows. Remove excess sealants, glazing materials, dirt, and other substances.
  - 1. Keep protective films and coverings in place until final cleaning.
- C. Remove and replace sashes if glass has been broken, chipped, cracked, abraded, or damaged during construction period.
- D. Protect window surfaces from contact with contaminating substances resulting from construction operations. If contaminating substances do contact window surfaces, remove contaminants immediately according to manufacturer's written instructions.

END OF SECTION 085200

# SECTION 09 9000 - PAINTS AND COATINGS

## PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints and other coatings, exterior.

#### 1.02 RELATED SECTIONS

A. Section 01 2500 – Substitution Procedures.

## **B.** Section 07 6200 – Sheet Metal Flashing and Trim.

- C. Section 09 2116 Gypsum Board Assemblies
- **D.** Section 09 2423 Portland Cement Plastering.

#### 1.03 REFERENCES

- A. ASTM D 4442 Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials; 1992 (Reapproved 2003).
- B. SSPC (PM1) Good Painting Practice: SSPC Painting Manual, Vol. 1; Society for Protective Coatings; Fourth Edition.

#### 1.04 SUBMITTALS

- A. Refer to Section 01 3300 Submittals, for submittal procedures.
- B. Product Data: Provide data on each type of product indicated, including VOC content.
- C. Samples: Submit two paper chip samples, 8-1/25 x 11 inches in size illustrating range of colors and textures available for each surface finishing product scheduled.
- D. Certification: By manufacturer that all paints and coatings do not contain any of the prohibited chemicals specified; GreenSeal GS-11 certification is not required but if provided shall constitute acceptable certification.
- F. Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces.
- G. Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces. Include draw-downs of each type and/or color of finish paint.

- H. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. Extra Paint Materials: 1 gallon of each type and/or color of finish paint.
  - 2. Label each container with color and type (P-#) in addition to the manufacturer's label.

## 1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
- B. Applicator Qualifications: Company specializing in performing the work of this section with minimum five years' experience.

## 1.06 REGULATORY REQUIREMENTS

A. Conform to applicable code for flame and smoke rating requirements for products and finishes.

## 1.07 DELIVERY, STORAGE, AND PROTECTION

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

#### 1.08 ENVIRONMENTAL REQUIREMENTS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Do not apply exterior coatings during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer.
- C. Minimum Application Temperatures for Latex Paints: 45 degrees F for interiors; 50 degrees F for exterior; unless required otherwise by manufacturer's instructions.
- D. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

# PART 2 PRODUCTS

## 2.01 MANUFACTURERS

- A. Paints, General:
  - 1. Basis-of-Design manufacturers:
    - a. ICI Paints North America, Div. of Akzo Nobel Paints LLC: www.icipaints.com.
    - b. Rodda Paint Company: <u>www.roddapaint.com</u>.
    - c. Miller Paint, Inc.: www.millerpaint.com.
  - 2. Other acceptable manufacturers:
    - a. Benjamin Moore & Co: www.benjaminmoore.com.
    - b. Parker Paint: www.parkerpaint.com.
    - c. Pittsburgh Paints: www.ppgpittsburghpaints.com.
    - d. Sherwin Williams: www.sherwin-williams.com.
  - 3. Substitutions: Refer to Section 01 2500 Substitution Procedures.

## 2.02 PAINTS AND COATINGS - GENERAL

- A. Paints and Coatings: Ready mixed, except field-catalyzed coatings. Prepare pigments:
  - 1. To a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating.
  - 2. For good flow and brushing properties.
  - 3. Capable of drying or curing free of streaks or sags.
- B. Material Compatibility: Provide block fillers, primers, and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
- C. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint-material containers not displaying manufacturer's product identification will not be acceptable.
- D. Chemical Content: The following compounds are prohibited:
  - 1. Aromatic Compounds: In excess of 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
  - 2. Acrolein, acrylonitrile, antimony, benzene, butyl benzyl phthalate, cadmium, di (2-ethylhexyl) phthalate, di-n-butyl phthalate, di-n-octyl phthalate, 1,2-dichlorobenzene, diethyl phthalate, dimethyl phthalate, ethylbenzene, formaldehyde, hexavalent chromium, isophorone, lead, mercury, methyl ethyl ketone, methyl isobutyl ketone, methylene chloride, naphthalene, toluene (methylbenzene), 1,1,1-trichloroethane, vinyl chloride.

# 2.03 PAINT SYSTEMS - NOMENCLATURE

- A. Key: Painting system identification below as follows: (1, 2)-(3)-(4, 5); i.e. WE-OP-3A = Wood, Exterior Opaque 3-coats, Alkyd.
  - 1. Substrate:
    - a. C = Concrete/masonry/cement plaster.
    - b. F = Fabric.
    - c. G = Gypsum board.
    - d. M = Metal.
    - e. Ma = Metal, aluminum.
    - f. Mg = Metal, galvanized.
    - g. W = Wood.
  - 2. Location:
    - a. E = Exterior.
    - b. I = Interior.
  - 3. Finish:
    - a. OP = OPaque.
    - b. P = Primer.
    - c. TR = TRansparent.
  - 4. Number of Coats: Two or three, including primers, as indicated.
  - 5. Paint Type:
    - a. A = Alkyd.
    - b. El = Epoxy.
    - c. Ep = Epoxy.
    - d. F = Fire-retardant, intumescent.
    - e. L = Latex.
    - f. S = Sealer
    - g. V = Varnish, no stain.
    - h. VS = Varnish, Stain

# 2.04 PAINT SYSTEMS - EXTERIOR

- A. Paint CE-OP-3A Concrete/masonry/cement plaster, Opaque, Elastomeric (Water Based), 2 or 3 Coat:
  - 1. One coat of primer.

- a. Product: ICI Hydrosealer 6001 acrylic primer; or approved equal.
- b. Product: Rodda 512301 Phlex-tite Acrylic Elastomeric Primer/ Finish, 48 g/L VOC; or approved equal.
- 2. Flat: One or two coats of elastomeric coating as required.
  - a. Product: ICI Decra-Flex 300 elastomeric waterborne coating, #2260 Smooth, 70 g/l VOC; or approved equal.
  - b. Product: Rodda 512301 pHlex-tite Acrylic Elastomeric Primer/ Finish, 48 g/L VOC; or approved equal.
- B. Paint WE-OP-3A Wood Windows and Doors, Opaque, Elastomeric (Water Based), 2 or 3 Coat:
  - 1. One coat of primer. For Wood Windows and doors, primer applied at factory.
    - a. Product: ICI Hydrosealer 6001 acrylic primer; or approved equal.
    - b. Product: Rodda 512301 Phlex-tite Acrylic Elastomeric Primer/ Finish, 48 g/L VOC; or approved equal.
  - 2. Flat: One or two coats of elastomeric coating as required.
    - a. Product: ICI Decra-Flex 300 elastomeric waterborne coating, #2260 Smooth, 70 g/l VOC; or approved equal.
    - b. Product: Rodda 512301 pHlex-tite Acrylic Elastomeric Primer/ Finish, 48 g/L VOC; or approved equal.

#### C. Paint MgE-OP-3A – Galvanized Steel Sheet Metal, Acrylic, 3 Coat:

#### 1. One coat of primer.

- a. Product: Acrimetal DTM Primer/Finish Velvet Finish 5000, or approved equal.
- 2. Two coats semi-gloss top coat.

# a. Product: Acrimetal Semigloss DTM 5200, or approved equal.

#### 2.05 PAINT SYSTEMS - INTERIOR

- A. Paint GI-OP-3L Gypsum Board/Plaster, Latex, 3 Coat:
  - 1. One coat of alkyd primer sealer.
    - a. Product: ICI Dulux 1000 Prep and Prime, 92 g/l VOC, or approved equal.
  - 2. Gloss: Two coats of latex enamel.
    - a. Product: Miller Speed Hide 100% Acrylic Gloss 99 g/l VOC, or approved equal.
  - 3. Semi-gloss: Two coats of latex enamel.
    - a. Product: Miller Speed Hide Semi Gloss 49 g/l VOC, or approved equal.
    - b. Satin: Two coats of latex enamel.

# PART 3 EXECUTION

#### 3.01 EXAMINATION

- A. Verify that surfaces are ready to receive Work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- C. Test shop-applied primer for compatibility with subsequent cover materials.
- D. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums, or as required by manufacturer:
  - 1. Cement Plaster: 12 percent.

#### 3.02 PREPARATION

- A. Surface Appurtenances: Remove or mask electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.
- B. Surfaces: Correct defects and clean surfaces which affect work of this section. Remove or repair existing coatings that exhibit surface defects.
- C. Marks: Seal with shellac those which may bleed through surface finishes.
- E. Cement Plaster Surfaces to be Painted: Remove dirt, loose mortar, scale, salt or alkali powder, and other foreign matter. Remove oil and grease with a solution of tri-sodium phosphate (TSP); rinse well and allow to dry. Remove stains caused by weathering of corroding metals with a solution of sodium metasilicate after thoroughly wetting with water. Allow to dry.
- D. Galanized Metal Surfaces to be Painted: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints. Remove any remaining grease or residue with painting manufacturer's recommended cleaning solution, such as Galvaprep or equal.

#### 3.03 APPLICATION

- A. Apply products in accordance with manufacturer's instructions.
- B. Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.
- C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- D. Apply each coat to uniform appearance. Apply each coat of paint slightly darker than preceding coat unless otherwise approved.

- E. Sand wood surfaces lightly between coats to achieve required finish.
- F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- G. Where clear finishes are required, tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.

## 3.05 FIELD QUALITY CONTROL

- A. See Division 1 Sections for general requirements for field inspection see 3.06 Cleaning.
  - 1. Collect waste material which may constitute a fire hazard, place in closed metal containers, and remove daily from site.

## 3.06 SCHEDULE - SURFACES TO BE FINISHED

- A. Do Not Paint or Finish the Following Items:
  - 1. Items fully factory-finished unless specifically noted.
  - 2. Fire rating labels, equipment serial number and capacity labels.
  - 3. Stainless steel items.
- B. Paint the surfaces described below under Schedule Paint Systems.

# 3.07 SCHEDULE - PAINT SYSTEMS

- A. Cement Plastering:
  - 1. Exterior: CEl-OP-3A, flat.
- B. Wood Windows:
  - 1. Exterior: WE-OP-3A, flat.
- C. Gypsum Board:
  - 1. Interior: GI-OP-3L, flat.

# **D.** Galvanized Steel Sheet Metal:

#### 1. Exterior: MgE-OP-3A, semi-gloss.

## 3.08 SCHEDULE - COLORS

A. Colors to be selected by owner.

# END OF SECTION

PAINTS AND COATINGS





# - WINDOW FRAME NOTE: VERTICAL WINDOW FRAMES ABOVE DOORS SHALL BE CONTINUOUS WITH DOOR FRAMES AND RUN FROM BASE TO UNDERSIDE OF EXISTING STRUCTURE. $\sim \sim \sim$ NEW SUPPORT CHAIN - NEW CHAIN SHACKLE - MFR RECOMMENDED SEALANT - FITTED FLEXIBLE FLASHING - MFR RECOMMENDED SEALANT - TPO ROOFING MEMBRANE SUPPORT FOR METAL PIPE BETWEEN STRUCTURE, SEE STRUCTURAL'S



- WOOD DOOR HEAD

- INSULATED GLAZING - PAINTED WOOD WINDOW

SASH

- WOOD CASING

- INSULATED GLAZING

– PAINTED WOOD WINDOW SASH

- PAINTED WOOD CASING











