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DAVE CORTESE, CHAIR  
 Santa Clara County

September 24, 2015

JAKE MACKENZIE, VICE CHAIR  
 Sonoma County and Cities

**Addendum No. 3**

AJICIA C. AGUIRRE  
 Cities of San Mateo County

to

**INVITATION FOR BID**

TOM AZUMBRADO  
 U.S. Department of Housing  
 and Urban Development

**for the Bridge Yard (IERBYS) Seismic and Renovation Project**

Dated August 28, 2015 as Amended

JASON BAKER  
 Cities of Santa Clara County

by Addendum No. 1 on September 11, 2015

and Addendum No. 2 on September 18, 2015

TOM BATES  
 Cities of Alameda County

Dear Bidder:

DAVID CAMPOS  
 City and County of San Francisco

This letter is Addendum No. 3 to the Invitation for Bid for the Bridge Yard (IERBYS) Seismic and Renovation Project dated August 28, 2015, as amended by Addendum No. 1 on September 11, 2015 and Addendum No. 2 on September 18, 2015. Where text is revised, deleted text is shown in strike-through format; added text is *italicized*. The IFB is revised as follows:

DORENE M. GIACOPINI  
 U.S. Department of Transportation

FEDERAL D. GLOVER  
 Contra Costa County

SCOTT HAGGERTY  
 Alameda County

Addendum Item	Reference	Change(s)
1.	IFB, Part 10, Construction Details, Division 08 - Openings	Section 99-088000, <u>Glazing</u> , is deleted in its entirety and replaced with the attached below.
2.	IFB, Part 10, Construction Details, Division 09 - Finishes	Section 99-099601, <u>Fiber Encapsulating Coating</u> , is deleted in its entirety and replaced with the attached below.
3.	Contract Drawings/Plans	The following Project Plan Sheets have been revised: A301, A302, A310, A312 and A603

ANNE W. HALSTED  
 San Francisco Bay Conservation  
 and Development Commission

STEVE KINSEY  
 Marin County and Cities

SAM UCCARDO  
 San Jose Mayor's Appointee

MARK LUCE  
 Napa County and Cities

JULIE PIERCE  
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ADRIENNE J. TISSIER  
 San Mateo County

SCOTT WIENER  
 San Francisco Mayor's Appointee

AMY REIN WORTH  
 Cities of Contra Costa County

The remaining provisions of the IFB, dated August 28, 2015, as amended by Addendum No. 1 on September 11, 2015 and Addendum No. 2 on September 18, 2015, remain unchanged. In the event of a conflict between this Addendum and the previous version(s), this Addendum shall take precedence.

Any questions concerning this Addendum to the IFB should be directed to Alice Truong, Contract Specialist, at (510) 817-5749 or [atruong@mtc.ca.gov](mailto:atruong@mtc.ca.gov).

STEVE HEMINGER  
 Executive Director

ANDREW B. FREMIER  
 Deputy Executive Director

Sincerely,

Andrew B. Fremier

Deputy Executive Director

ABF:at

## SECTION 99-088000

### GLAZING

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. Section Includes:
  - 1. Replacement glass in existing windows.
  - 2. Glass for hollow metal doors.
  - 3. Glass for aluminum curtain walls.
  - 4. Re-putty of existing glass within steel frames.
  - 5. Water test of existing windows to verify watertightness.
  - 6. Glazing film for seismic performance.
  - 7. Associated glazing sealants and accessories.
- B. Related Sections:
  - 1. Section 99-084126 – All-Glass Entrance Doors.
  - 2. Section 99-084413 - Glazed Aluminum Curtain Walls.

##### 1.2 SYSTEM REQUIREMENTS

- A. General: In addition to requirements shown or specified, comply with design requirements of Section 99-084413.
- B. Design Requirements:
  - 1. Provide continuity of building enclosure to maintain continuous air and vapor barrier throughout glazed assembly from glass pane to heel bead of sealant.
  - 2. Employ registered professional engineer, licensed to practice structural engineering, to engineer each component of glass and glazing system.
  - 3. Site survey existing windows to determine quantity of broken and cracked glass pieces. All broken and cracked glass shall be replaced as part of the base bid.
  - 4. Re-putty all existing glass in steel frames prior to water test as part of base bid.
  - 5. Provide water test on all existing glazed elements.
  - 6. Existing glazing putty may contain asbestos fibers and painted window frames may contain lead paint. Refer to Section 99-024119 – Selective Demolition for procedures for handling hazardous materials.
  - 7. Water test and replacement of broken glass is part of base bid.
  - 8. Provide unit prices for removal, cleaning, and reglazing of all broken glass lites as part of the Schedule of Values submittal.
- C. Performance Requirements: Provide thickness of glass units to withstand specified wind loads.
- D. Glazing Requirements:
  - 1. Comply with CPSC 16 CFR 1201 and ANSI Z97.1 for safety requirements of glazing materials.
  - 2. Glass thickness, where indicated, are minimum requirements and are to be confirmed by glass manufacturer.
  - 3. Provide glass of thickness and heat treatment (annealed, heat strengthened or fully tempered) as necessary to prevent temperature stress breakage.
  - 4. Use 2.5 safety factor of glass to statistical probability of failure (8 lites/1000).
  - 5. Provide glass complying with ASTM E1300.
  - 6. Obtain safety glazing products permanently marked with certification label of the Safety Glazing Certification Council or another certification agency acceptable to authorities having jurisdiction.

##### 1.3 SUBMITTALS

- A. Product Data: Manufacturer's product data for each type of glass and glazing material specified, including glazing accessories and glazing sealants.

- B. Shop Drawings:
  - 1. Sections and details of glass and glazing materials installation at framing members including head, mullions, transoms, jambs and sills.
  - 2. Stamp shop drawings with seal and signature of professional engineer responsible for design for glass in curtain walls.
- C. Samples:
  - 1. 12 inches by 12 inches in size illustrating color of insulating glass units.
  - 2. Glazing film mounted on 12 inch square clear glass. Leave 1 inch border all around.
  - 3. Two full size signage letters on glazing film **W2** mounted to glass per architectural drawing for owners' review and approval.
- D. Submit following Informational Submittals:
  - 1. Test Reports:
    - a. Glazing sealant indicating substrate adhesion.
    - b. Glazing sealant compatibility.
    - c. Glazing sealant manufacturer's recommendations.
  - 2. Certifications specified in Quality Assurance article.
  - 3. Qualification Data: Engineer's and installer's qualification data.
  - 4. Manufacturer's instructions.
- E. Closeout Submittals:
  - 1. Submit under provisions of Section 99-017800.
  - 2. Warranty: Submit specified warranty.

#### **1.4 QUALITY ASSURANCE**

- A. Single Source Responsibility: Glass of each type to be produced by same manufacturer.
- B. Engineer Qualifications: Registered professional engineer licensed to practice structural engineering, with minimum of 5 years experience in design of glass and glazing.
- C. Installer Qualifications: Acceptable to manufacturer with documented experience on at least 5 projects of similar nature in past 5 years.
- D. Regulatory Requirements:
  - 1. Fabricate glass to comply with ASTM C1036, ASTM C1048, and ANSI Z97.1.
  - 2. Perform work in accordance with GANA Glazing Manual and GANA Sealant Manual for glazing installation methods.
- E. Certifications:
  - 1. Manufacturer's letter certifying glass and glazing materials compatibility.
  - 2. Manufacturer's letter certifying that sealed insulating glass units meet or exceed specification.
  - 3. Engineering certifications.

#### **1.5 PRE-INSTALLATION CONFERENCE**

- A. Coordinate with curtain wall.

#### **1.6 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver, store, and handle products in accordance manufacturer's instructions.

#### **1.7 PROJECT CONDITIONS**

- A. Environmental Requirements:
  - 1. Perform glazing when ambient temperature is above 40 degrees F.
  - 2. Perform glazing on dry surfaces only.

#### **1.8 WARRANTY**

- A. Manufacturer's standard 10 year warranty on hermetically sealed insulating glass units.

### **PART 2 - PRODUCTS**

## 2.1 GLASS MATERIALS

- A. Clear Annealed Replacement Glass:
  - 1. Quality: Glazing select, float, complying with ASTM C1036, Type I, Class 1, Quality q3.
  - 2. Type: Annealed.
  - 3. Thickness: Match existing for replacement for broken and cracked glass in existing windows.
- B. Tempered Clear Glass:
  - 1. Quality: Glazing select, float, complying with ASTM C1036, Type I, Class 1, Quality q3.
  - 2. Type: Tempered, complying with ASTM C1048, Kind FT fully tempered.
  - 3. Thickness: 1/4 inch.
- C. Uncoated Insulating Curtain Wall Glass Units:
  - 1. Quality: Double glazed, hermetically sealed around perimeter with continuous metal spacer filled with moisture absorbing desiccant per ASTM E2190, adhered to glass lights with:
    - a. Primary Seal: Polyisobutylene.
    - b. Secondary Seal: Silicone two-part.
  - 2. Total thickness: 1 inch.
    - a. Outer Light:
      - 1) Quality: Glazing select, float, complying with ASTM C1036.
      - 2) Type: Annealed; Heat-strengthened, complying with ASTM C1048, Kind HS, heat strengthened where required by heat load; tempered, complying with ASTM C1048, Kind FT fully tempered where required by code for safety glazing.
      - 3) Thickness: 1/4 inch.
      - 4) Color: Ultra-clear, low iron type.
    - b. Inner Light:
      - 1) Quality: Glazing select, float, complying with ASTM C1036.
      - 2) Type: Annealed; Heat-strengthened, complying with ASTM C1048, Kind HS, heat strengthened where required by heat load; tempered, complying with ASTM C1048, Kind FT fully tempered where required by code for safety glazing.
      - 3) Thickness: 1/4 inch.
      - 4) Color: Ultra-clear, low iron type.
    - c. Air Space: 1/2 inch dehydrated air space.
  - 3. Provide glass capable of being in contact with silicone sealants to ensure tenacious glass to silicone to aluminum bond.
  - 4. Furnish insulating glass with edge sealant which is compatible with silicone.
  - 5. Performance Criteria:
    - a. Visible Light Transmittance: 84 percent.
    - b. Shading Coefficient: 0.94
    - c. Winter U-Value : 0.47
    - d. Summer U-Value : 0.47
    - e. Visible Outdoor Reflectance: 15%
    - f. Visible Indoor Reflectance: 15%
  - 6. Product: Viracon Uncoated Insulating Glass with Starphire.

## 2.2 GLAZING ACCESSORIES

- A. Glazing Tapes for Doors:
  - 1. Material: Preformed butyl or closed cell PVC foam with integral spacing device and containing paper release.
  - 2. Hardness: 10-15 Shore A durometer.
  - 3. Size: Continuous corner to corner.
  - 4. Acceptable Products:
    - a. CRL Norton Brand Glazing Tapes.
    - b. Pre-Shimmed 440 Tape, Tremco, Inc., Beachwood, OH.
    - c. Norseal V-980, Saint Gobain Performance Plastics, Granville, NY.
- B. Glazing Film:

1. Appearance:
  - a. **W1** - clear seismic film.
    - 1) Film Thickness: 4 mil.
    - 2) Acceptable Product:
      - a) 3M Safety & Security Window Films.
      - b) SunTek Safety & Security Window Films.
      - c) Or Approved Equal.
  - b. **W2** - signage film.
    - 1) Light Transmission: 60%.
    - 2) Applications: LED backlit applications.
    - 3) Reference Drawing: A312.
  - c. **W3** - translucent privacy film.
    - 1) Acceptable Product:
      - a) 3M White Matte Translucent Privacy Window Films.
      - b) SunTek White Out Specialty Window Films.
      - c) Or Approved Equal.
2. Durable, dimensionally stable, translucent film.
3. Uniform color and appearance.
4. Non-yellowing, UV resistant for use with exterior glazing.
5. Acceptable Manufacturer:
  - a. 3M Commercial Graphics Division, St. Paul, MN.
  - b. SunTek Window Films.
  - c. Or Approved Equal.

### 2.3 GLAZING SEALANTS

- A. Silicone Sealant: Refer to Section 99-084413.
- B. Adhesives and sealants shall meet or exceed the VOC and chemical component limits of SCAQMD Rule 1168, Cal-GREEN Table 5.504.4.1 Adhesive VOC Limit, and Cal-GREEN Table 5.504.4.2 Sealant VOC Limit requirements.

### 2.4 GLASS FABRICATION

- A. Accurately size glass to fit openings allowing clearances following recommendations of "Glazing Manual" published by Glass Association of North America (GANA).
- B. Cut glass clean and carefully. Nicks and damaged edges will not be accepted. Replace glass with damaged edges.
- C. Heat Treatment:
  1. Ensure heat-strengthened and tempered glass is examined by glass manufacturer to detect and discard lights which exceed GANA and industry standard tolerances for bow.
  2. Where strengthening process results in essentially parallel ripples or waves, maximum allowable deviation from flatness at any peak-to-valley is 0.003 inch.
  3. Where bow tolerance and wave tolerance differ, stricter requirement governs.
- D. Insulating Glass:
  1. Fabricate insulated glass with double edge seals.
  2. Provide continuous (including corners) primary seal between glass and desiccant filled spacer fabricated from extruded polyisobutylene.
  3. Provide secondary seals completely covering spacer without voids or gaps and continuously bonded to both panes of glass.
  4. Provide General Electric IGS 3204 or Dow Corning 982 secondary seals for units which will be attached to frames with silicone sealant.
  5. Verify thickness of secondary seal for silicone supported units for structural adequacy by testing.
  6. Ensure edge seal is capable of transferring at least 3 times force per linear inch produced by design pressure acting on outdoor glass alone or on indoor glass alone.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Examine conditions and proceed with work when substrates are ready.
- B. Verify that openings for glazing are correctly sized and within tolerances.
- C. Verify that glazing channel surfaces or recesses are clear, free of burrs, obstructions, irregularities, and glass is free of edge damage or imperfections.
- D. Examine existing windows and replace cracked and broken glass.

### **3.2 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, if required by sealant manufacturer.
- D. Verify that materials used for cleaning edges of sealed insulating units are compatible with sealants and components and will not damage or cause deterioration of the integrity of the sealed insulating unit.

### **3.3 INSTALLATION**

- A. Install glass units in accordance with manufacturer's instructions. Ensure weep and drainage holes are not blocked by sealants or setting blocks.
- B. Glazing Film:
  - 1. Remove existing letter from interior of building glazing prior to beginning work.
  - 2. Install glazing film in accordance with manufacturer's instructions.
  - 3. Install to achieve appearance as indicated on Drawings.
  - 4. Install to ensure film is free from air bubbles, wrinkles, curled edges, and other installation deformities.
  - 5. Neatly trim to frames.
- C. Dry Method (Tape and Tape):
  - 1. Cut glazing tape to length and install against permanent stop, projecting 1/16 inch above sight line.
  - 2. Place setting blocks at 1/4 points with edge blocks no more than 6 inches from corners.
  - 3. Rest glass on setting blocks and push for full contact and adhesion at perimeter.
  - 4. Place glazing tape on free perimeter of glass in same manner described above.
  - 5. Install removable stop, avoid tape displacement, exert pressure on tape for full contact.
  - 6. Knife trim excess or protruding tape.
- D. Tempered Glass:
  - 1. Do not cut, seam, nip or abrade tempered glass.
  - 2. Install in windows and sidelights where required by code.
- E. Replace broken, loose, and cracked glass in existing windows using clear glass and glazing methods to match existing.

### **3.4 FIELD QUALITY CONTROL**

- A. Hose Test: Perform field check for water leakage on all existing windows, including sawtooth clerestory windows using AAMA 501.2 test method.
  - 1. No water leakage allowed, as defined in this Section.
  - 2. Test all lites in all existing windows to verify watertightness.
  - 3. Provide scaffold, hose, and water supply to perform tests, plus repeat unsuccessful tests after remedial work.
  - 4. Ensure remedial measures maintain standards of quality and durability of original design. Remedial measures are subject to approval of Architect.
  - 5. Remove, clean, and reglaze glass openings exhibiting leaks; retest with water to verify no leaks exists.

**3.5 PROTECTION**

- A. Protect finished Work.
- B. After installation, mark glass pane with an "X" by using removable plastic tape or paste.

**3.6 CLEANING**

- A. Remove excess glazing materials from finished surfaces.
- B. Remove labels after work is completed.
- C. Wash and polish both faces not more than 7 days prior to Owner's acceptance of work.
- D. Comply with glass manufacturer's recommendations for final cleaning.

**END OF SECTION**

**SECTION 99-099601**  
**FIBER ENCAPSULATING COATING**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Section Includes: Interior and Exterior Coatings for encapsulating asbestos containing industrial fiber cement board (Transite).

**1.2 DEFINITIONS**

- A. DFT: Dry film thickness.

**1.3 SYSTEM REQUIREMENTS**

- A. Application Requirements: Apply scheduled coatings to exposed surfaces of items scheduled and otherwise indicated unless specifically noted otherwise.
- B. Interface with Adjacent Systems: Upon request from other trades, furnish information on characteristics of materials proposed for use to ensure compatibility of top coatings.
- C. Design Requirements: Site survey existing transite panels above 6'-0" height to determine quantity of cracks, voids and holes. All cracks, voids and holes above 6'-0" height shall be repaired and patched as part of base bid.

**1.4 SUBMITTALS**

- A. Product Data:
1. Submit product data including label analysis for each product proposed for use.
  2. Specifically include percent solids-by-volume, volatile organic compound (VOC) content g/L, and lead content (percent of weight of dried film).
  3. Schedule:
    - a. List each material proposed for use. Cross-reference to specific coating system and substrate application.
    - b. Identify each material by manufacturer's catalog number, product name, and generic classification.
- B. Coating System Samples:
1. Prepare 1 sample of each coating system scheduled on actual substrate materials proposed for use.
  2. Provide sample with top coat scheduled in painting section.
  3. Step back each coat at least one inch to show bare substrate and each coat in system build-up.
  4. Minimum sample size of 24 by 36 inches on cement board substrate.
  5. Label each sample to indicate materials, color, sheen, DFT of each coat applied, and total system DFT.
- C. Submit following Informational Submittals:
1. Test Reports: Indicate compliance with specified performance requirements.
  2. Certifications specified in Quality Assurance article.
  3. Qualification Data: Manufacturer's and applicator's qualification data.
  4. Manufacturer's Instructions: Include mixing, thinning, and curing requirements; application temperature ranges; and required surface preparation.

**1.5 QUALITY ASSURANCE**

- A. Single Source Responsibility: Provide products of single manufacturer for use in each coating system. Do not mix products of different manufacturers without approval of Architect and manufacturers involved.
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified in this Section with minimum 5 years documented experience.

- C. Applicator Qualifications: Company specializing in application of coatings scheduled with 3 years documented experience; licensed or approved by coating manufacturer.
- D. Certifications: Submit certification from manufacturer that materials furnished for use on this Project meet or exceed specified requirements and comply with applicable federal, state, and local requirements regarding lead and VOC content.

#### **1.6 PREINSTALLATION CONFERENCE**

- A. Conduct preinstallation conference.
- B. Agenda: Discuss at minimum following Items:
  - 1. Existing substrates to be encapsulated.
  - 2. Preparation and precaution procedures including protection of adjacent work.
  - 3. Weather conditions under which work will be done.
  - 4. Access to elevated substrates.
  - 5. Application procedures.
  - 6. Conditions of installation, such as substrates, existing and surrounding conditions, and environmental conditions.
  - 7. Conditions detrimental to installation.
  - 8. Review submittals, installation procedures, and sequence.
  - 9. Cleaning up and waste disposal.

#### **1.7 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver, store, and handle products in accordance manufacturer's instructions.
- B. Deliver products to site in manufacturer's sealed and labeled containers; inspect to verify compliance with specified requirements.
- C. Label containers to indicate manufacturer's name, product name and type of coating, brand code or stock number, date of manufacture, coverage, surface preparation, drying time, cleanup, color designation, and instructions for mixing and reducing.
- D. Store coating materials in tightly covered containers in well ventilated area at ambient temperatures of 45 degrees F minimum and 90 degrees F maximum, unless required otherwise by manufacturer. Maintain containers in clean condition, free of harmful materials and residue with labels in legible condition.
- E. Take precautionary measures to prevent fire hazards and spontaneous combustion.

#### **1.8 PROJECT CONDITIONS**

- A. Environmental Conditions: Comply with more restrictive conditions under which coatings may be applied; following requirements or manufacturer's requirements.
  - 1. Provide continuous ventilation during application of coatings to exhaust hazardous fumes.
  - 2. Provide heating necessary to maintain surface and ambient temperatures within specified limits.
  - 3. Maintain temperature and humidity conditions for minimum 24 hours before, during, and 48 hours after application of finishes.
  - 4. Do not permit wide variations in ambient temperatures which might result in condensation on freshly coated surfaces.
  - 5. Provide illumination of not less than 80 footcandles measured mid-height at substrate surface during application of coatings.
  - 6. Apply coatings only when ambient and surface temperatures are between 55 degrees F and 90 degrees F.
  - 7. Do not apply coatings under following conditions:
    - a. When surfaces are damp and wet.
    - b. During rain, fog, and mist.
    - c. When relative humidity is less than 20 percent or exceeds 85 percent.
    - d. When temperature is less than 5 degrees F above dew point.
    - e. When dust may be generated before coatings have dried.
    - f. In direct sunlight.

- g. When wind velocity is above 20 mph.
- 8. Application of coatings may continue during inclement weather provided work areas and surfaces to be coated are enclosed and specified environmental conditions are maintained.

## **PART 2 - PRODUCTS**

### **2.1 COATING MATERIALS - GENERAL**

- A. Coatings:
  - 1. Furnish coatings with uniform, homogeneous mixture.
  - 2. Provide cured coating free of streaks and sags, and yielding specified finish.
- B. Paint Maximum Product Emissions Limits: Top coat and primer interior paints must meet or not exceed the VOC (Volatile Organic Compounds) limits of the current requirements of Cal-GREEN Table 5.504.4.3 for VOC Content Limits for Architectural Coatings.
- C. Cal-GREEN Requirements for typical high performance coatings:
  - 1. Primers, Sealers, and Undercoaters: 100 grams per liter of product minus water
  - 2. Industrial Maintenance Coatings: 250 grams per liter of product minus water

### **2.2 COATINGS**

- A. Material: Elastomeric thermoplastic water based copolymer, blended specifically to seal asbestos containing Industrial Fiber Cement Board (Transite®).
  - 1. Locations: Interior and exterior surfaces of Transite as indicated on Drawings.
  - 2. Manufacturers and Products:
    - a. Fiberlock Technologies: TBC Encasement Coating for Exterior Transite; 6497 White.
  - 3. Physical Requirements:
    - a. Solids Content by Weight  $\pm$  2%: 45.0%.
    - b. Solids by Volume  $\pm$  2%: 45.0%
    - c. Viscosity at 70°F: 95-120 Kneb Units
    - d. Specular Gloss:  $5.5^{\circ} \pm 1$  @  $60^{\circ}$
    - e. Flash Point: Non-combustible
    - f. Shelf Life: 24 Months Min.
    - g. Calculated VOC: 88 grams/liter
    - h. Coverage on Transite: 50 – 100 sq. ft./gallon

### **2.3 ACCESSORY MATERIALS**

- A. Cleaners:
  - 1. Acceptable to coating manufacturer.
  - 2. Refer to Manufacturer's warnings about scraping asbestos containing material.
- B. Fillers:
  - 1. Material: Fiberglass Resin Filler for repairs to existing Transite Panels.
  - 2. Two-part resin and hardener filler, putty grade.
  - 3. Sandable after curing.
  - 4. Cures within 2 hours
  - 5. Shrinkage: Less than 1 percent.
  - 6. Manufacturers and Products:
    - a. Dynatron Polyester Fiberglass Resin
    - b. Evercoat Fiberglass Resin
    - c. Or Approved Equal.

### **2.4 MIXING**

- A. Use factory prepared coatings. Site tinting will not be permitted.
- B. Thoroughly mix and stir coating components before use to ensure homogeneous dispersion of ingredients. Prior to application, blend multiple containers of same material and color by pouring from one container to another several times to ensure uniform consistency, color, and smoothness.

- C. Mix in clean pails of material recommended by manufacturer to avoid contamination.
- D. Remove film which may form on surface of material in containers and strain material before using. Stir frequently during use to maintain pigments in suspension. Do not stir film into material.
- E. Apply coatings of consistency instructed by manufacturer.
- F. Thinning:
  - 1. Provide thinners approved by coating manufacturer.
  - 2. Add thinners within manufacturer recommended limits.

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Examine conditions and proceed with Work when substrates and environmental conditions are acceptable.
- B. Measure moisture content of surfaces using recently calibrated electronic moisture meter. Do not apply coatings if moisture content of surfaces exceeds lesser of percentages listed below or those required by coating manufacturer. If excess moisture content exists and cannot be reduced, obtain written approval of coating manufacturer before application of coatings.
  - 1. Transite: 17 percent.

#### **3.2 PREPARATION**

- A. Protect completed construction from damage. Furnish drop cloths, shields, and protective methods to prevent spray, splatter or droppings from disfiguring other surfaces.
- B. Remove surface hardware, mechanical diffusers, escutcheons, registers, electrical plates, light fixture trim, fittings, fastenings and similar items prior to preparing surfaces for finishing. Provide surface-applied protective masking for non-removable items. Carefully store removed items for reinstallation.
- C. Prepare transite panels in strict compliance with EPA and manufacturer's instructions for asbestos containing materials.
- D. Prepare panels at pipe penetrations with fillers and sealants in accordance with manufacturer's instructions as detailed on Drawing Sheet A603; allow to cure 72-hours prior to coating application of fiber encapsulating coating to encapsulate panel.
- E. Before beginning application of coatings, ensure surfaces are clean, dry, and free of dirt, dust, rust, and rust scale, oil, grease, mold, mildew, algae, efflorescence, release agents and other harmful materials which could adversely affect coating adhesion and finished appearance.

#### **3.3 APPLICATION**

- A. General:
  - 1. Coat surfaces specified, scheduled, illustrated, and otherwise identified unless specifically noted otherwise.
  - 2. Apply products in accordance with manufacturer's instructions. Use application materials, equipment, and techniques as instructed by coating manufacturer and best suited for substrate and type of material being applied.
  - 3. Apply liberally and uniformly.
  - 4. Multiple coats may be necessary to achieve desired dry thickness. Allow coating to dry before applying additional coats.
  - 5. The necessary dry film thickness of a bridging encapsulant for asbestos containing materials (ACM) will vary from project to project as ACM can have a wide range of characteristics, including density, porosity, and surface profile.
  - 6. Follow EPA's Guidance for Controlling Asbestos-Containing Materials in Buildings (EPA 560 / 5-84024, June 1985):
    - a. Primary instruction regarding dry film thickness states that when encapsulating ACM, the coating is to be applied "considerably thicker than recommended for painting.

- b. Coverage should be no more than 100 sq. ft. per gallon and should create a continuous, unbroken coating" (Section 5.1.3, page 5-8).
- 7. Ensure that edges, corners, crevices, welds, and exposed fasteners, receive dry film thickness equivalent of flat surfaces.
- 8. Finish edges of coatings adjoining other materials and colors sharp and clean manner, without overlapping.

### **3.4 FIELD QUALITY CONTROL**

- A. Periodically test film thickness of each coat with wet film gage to ensure coatings are being applied to proper thickness and entire surface is encapsulating the transite panels.
- B. Testing: Owner reserves right to employ independent testing agency to verify acceptability of substrates and conformance of coating materials to specified requirements; and to test coating quality and dry mil thickness.

### **3.5 CLEANING**

- A. Promptly remove spilled, splashed, and spattered coatings. Clean spots, oil, and other soiling from finished surfaces using cleaning agents and methods which will not damage materials.
- B. If completed construction is damaged beyond normal cleaning and repair by coating operations, replace damaged items at no additional cost to Owner.
- C. Maintain premises and storage areas free of unnecessary accumulation of tools, equipment, surplus materials, and debris.
- D. Collect waste, cloths, and material which may constitute fire hazards and place in closed metal containers; remove from site daily along with empty containers.

### **3.6 PROTECTION**

- A. Protect work of other trades against damage from coating activities. Correct damage by cleaning, repairing, replacing, and recoating as acceptable to Architect.
- B. Provide "Wet Paint" signs and other methods to protect newly coated surfaces. Remove when directed or when no longer needed.

**END OF SECTION**