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ARCHITECTS | ENGINEERS

450 N STREET EXTERIOR ENVELOPE REMEDIATION

OUTLINE SPECIFICATION

1.00 GENERAL

1.01 SUMMARY

- A. This section includes concrete patching at the precast concrete panel system.
- B. Reference Standard: ASTM C882 Bond Strength of Epoxy Resin Systems Used With Concrete.

1.02 SUBMITTALS

- A. Product Data.
- B. Manufacturer's instructions.
- C. Qualification Data of firms and persons specified.
- D. Product Certificates.
- E. Maintenance Data.
- F. Certification that products comply with regulations of volatile organic compounds (VOCs).
- G. Compatibility and Adhesion Test Reports.
- H. Preconstruction Field-Adhesion Test Reports.
- I. Rehabilitation program/process.
- J. Concrete Rehabilitation Report.

1.03 QUALITY ASSURANCE

- A. Perform work in accordance with ASTM and sealant manufacturer's requirements.
- B. Manufacturer and workers specializing in the Products.
- C. Obtain materials through one source from a single manufacturer.
- D. Compatibility and Adhesion Testing.
- E. Preconstruction Field-Adhesion Testing.
- F. Mock-up for each joint sealant and pre-formed silicone extrusions.

1.04 DELIVERY, STORAGE, AND HANDLING

1.05 REGULATORY REQUIREMENTS

1.06 PROJECT CONDITIONS

1.07 WARRANTY

- A. General Warranty.

- B. Special Manufacturer's Warranty: Provide written warranty from the manufacturer against defects of materials for a period of Five (5) years.
- C. Special Installer's Warranty: Provide written Installer's warranty from the Installer for a period of Three (3) years.

2.00 PRODUCTS

2.01 PRODUCTS

- A. Low Modulus Epoxy Injection at Structural and Cold Joint Cracks.

3.00 EXECUTION

3.01 EXAMINATION

3.02 PREPARATION

3.03 CONCRETE RESTORATION:

A. Concrete Spalls Without Exposed Rebar:

1. Mechanically prepare spalled area to remove loose and deteriorated concrete and chip a new fractured aggregate surface.
2. Install dowels if the patch is deeper than 2 inches for vertical surface and horizontal surface.
3. Use clean water to saturate the concrete surface and flush away dust and loose material. Mix and place the patching material. Fill the entire area, force material against the saw cut perimeter edge, consolidate, and screed flush with perimeter surfaces.
4. Install the repair material in multiple lifts.
5. Provide new concrete patch to match original profiles.

3.04 FIELD QUALITY CONTROL

3.05 CLEANING

3.06 PROTECTION

END OF SECTION 03930

1.00 GENERAL

1.01 SUMMARY

- A. This Section includes concealed building insulation at locations behind the spandrel glass.

1.02 SUBMITTALS

- A. Product Data.
- B. Manufacturer's instructions.
- C. Samples for Verification.
- D. Qualification Data of firms and persons specified.
- E. Product Certificates.
- F. Maintenance Data.
- G. Product Test Reports.

1.03 QUALITY ASSURANCE

- A. Perform work in accordance with ASTM and sealant manufacturer's requirements.
- B. Manufacturer and workers specializing in the Products.
- C. Obtain materials through one source from a single manufacturer.
- D. Compatibility and Adhesion Testing.
- E. Preconstruction Field-Adhesion Testing.
- F. Fire-Test-Response Characteristics
- G. Mock-up for each insulation condition indicated.

1.04 DELIVERY, STORAGE, AND HANDLING

1.05 REGULATORY REQUIREMENTS

1.06 WARRANTY

- A. General Warranty.
- B. Special Installer's Warranty Period: One (1) year from date of Substantial Completion.
- C. Special Manufacturer's Warranty Period: Three (3) years from date of Substantial Completion.

2.00 PRODUCTS

2.01 MANUFACTURERS

2.02 INSULATING MATERIALS

- A. 3" R-19 rigid foam.
- B. Vapor-Retarder Tape.

3.00 EXECUTION

3.01 EXAMINATION

- A. Survey areas for salvageable insulation.

3.02 PREPARATION

- A. Remove unsalvageable insulation.
- B. Relocate insulation in conflict with the horizontal drainage channels.

3.03 INSTALLATION

- A. Comply with insulation manufacturer's written instructions applicable to products and application indicated. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.
- B. Install insulation that is undamaged, dry, and unsoiled.
- C. Seal joints between closed-cell insulation units.
- D. Set vapor retarder to warm side of construction.

3.04 PROTECTION

3.05 FIELD QUALITY CONTROL

3.06 CLEANING

END OF SECTION 07210

1.00 GENERAL

1.01 SUMMARY

- A. This Section includes joint sealants for the following applications:
 - 1. Sealant joints at precast concrete panels, windows, and curtainwall.
 - 2. Pre-formed Silicone extrusions at punched windows and curtain wall windows.
 - a. Silicone extrusion tape.
 - b. Silicone extrusion window gaskets for operable windows.
 - c. Silicone extrusion weather-strip for operable windows.
 - d. Silicone extrusion headless wedge gasket for spandrels.
 - e. Silicone extrusion at splice joints.
 - f. Silicone extrusion at splice joints.
 - g. Silicone extrusion at jamb splice joints.
 - h. Silicone extrusion at weep hole baffles.

1.02 PERFORMANCE REQUIREMENTS

- A. Provide joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.

1.03 SUBMITTALS

- A. Product Data.
- B. Manufacturer's instructions.
- C. Samples for Verification.
- D. Qualification Data of firms and persons specified.
- E. Product Certificates.
- F. Maintenance Data.
- G. Certification that products comply with regulations of volatile organic compounds (VOCs).
- H. Compatibility and Adhesion Test Reports.
- I. Preconstruction Field-Adhesion Test Reports.

1.04 QUALITY ASSURANCE

- A. Perform work in accordance with ASTM and sealant manufacturer's requirements.
- B. Manufacturer and workers specializing in the Products.
- C. Obtain materials through one source from a single manufacturer.
- D. Compatibility and Adhesion Testing.
- E. Preconstruction Field-Adhesion Testing.

F. Mock-up for each joint sealant and pre-formed silicone extrusions.

1.05 WARRANTY

A. General Warranty.

B. Special Installer's Warranty Period: Five (5) years from date of Substantial Completion.

C. Special Manufacturer's Warranty Period for silicone sealant: Twenty (20) years from date of Substantial Completion. Warranty Period for Pre-formed Silicone Extrusions: Twenty (20) years from date of Substantial Completion.

1.06 DELIVERY, STORAGE, AND HANDLING

1.07 REGULATORY REQUIREMENTS

1.08 PROJECT CONDITIONS

1.09 EXTRA MATERIALS

A. Furnish 5.0 percent of total materials for extra materials from the same production run as the materials applied.

2.00 PRODUCTS

2.01 JOINT SEALANTS

A. Glazing Sealant: Spectrem 2 by Tremco or equal.

B. Precast Concrete Joints: Spectrem 3 by Tremco or equal.

2.02 PRE-FORMED SILICONE EXTRUSIONS

A. Silicone Dense Rubber Extrusions by Tremco or equal.

2.03 SILICONE ADHESION TAPE

A. Self-adhesive tape by Tremco or equal.

2.04 JOINT-SEALANT BACKING

A. Cylindrical Sealant Backings.

B. Bond-Breaker Tape.

2.05 MISCELLANEOUS MATERIALS

A. Primer.

B. Cleaners for Nonporous.

C. Masking Tape.

3.00 EXECUTION

3.01 EXAMINATION

3.02 PREPARATION

3.03 INSTALLATION OF JOINT SEALANTS

- A. Comply with recommendations in ASTM C 1193.
- B. Install sealant backings.
- C. Install bond-breaker tape behind sealants where sealant backings are not used.
- D. Tooling of Nonsag Sealants.

3.04 INSTALLATION OF PRE-FORMED SILICONE EXTRUSIONS

- A. Mask along the length of the joint with tape as necessary to achieve uniform line.
- B. Install silicone sealant adhesive on either side of the joint.
- C. Embed silicone extrusions/molds/tapes.
- D. Remove excess sealant adhesive while wet, and tool neat against silicone extrusions/molds/tapes.

3.05 FIELD QUALITY CONTROL

3.06 CLEANING

3.07 PROTECTION

END OF SECTION 07920

1.00 GENERAL

1.01 SUMMARY

- A. This Section includes curtainwall glazing.
 - 1. Insulated vision glazing.
 - 2. Sprandrel glazing.

1.02 PERFORMANCE REQUIREMENTS

- A. General: Glazing systems capable of withstanding normal thermal movement and wind and impact loads without failure, including loss or glass breakage attributable to installation; deterioration of glazing materials; or other defects in construction.

1.03 QUALITY ASSURANCE

- A. Perform Work in accordance with ASTM requirements for preparation, de-glazing, and installation.
- B. Contractor's Qualifications.
- C. Installer's Qualifications:
 - 1. Workers thoroughly skilled and certified under the National Glass Association Glazier Certification Program as Level 2 (Senior Glaziers) or Level 3 (Master Glaziers). Approved Installers shall be able to demonstrate acceptable level of skill for review and approval by the Architect.
 - 2. Additional or replacement Installers shall obtain approval from the Architect.
 - 3. The work crew shall consist of only approved Installers. Maintain a list of approved Installers' names for Project Record.
- D. Mock-up for each type of glazing installation.

1.04 HANDLING

- A. Protect glazing products according to Manufacturer's written instructions.

1.05 PROJECT CONDITIONS

- A. Environmental Limitations.

1.06 COORDINATION

- A. Coordinate the Work of this Section with interfacing and adjoining work for proper sequencing of each installation.
- B. Protect building interiors and assemblies from damage throughout the Work.
- C. Protect existing utility lines and services, whether indicated or not.
- D. Provide barriers against unauthorized foot traffic into the work area.

- E. Provide warning signs indicating construction areas.

1.07 WARRANTY

- A. Special Installer's Warranty Period: Five (5) years from date of Substantial Completion.

2.00 PRODUCTS

2.01 GLAZING GASKETS

- A. Soft Compression Gaskets: Tremco or equal.
- B. Headless Wedge: Tremco or equal.
- C. Dense Silicone Gaskets: Tremco or equal.

2.02 MISCELLANEOUS MATERIALS

- A. Cleaners, Primers, and Sealers: Types recommended by glass Manufacturers.
- B. Perimeter Insulation for Fire-Resistive Glazing: Identical to product used in test assembly to obtain fire-resistance rating as required.

3.00 EXECUTION

3.01 EXAMINATION

3.02 PREPARATION

- A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings not firmly bonded to substrates.

3.03 GLAZING

- A. Glazing channel dimensions, as indicated on Drawings, provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thickness, with reasonable tolerances. Adjust as required by Project conditions during installation.
- B. Protect glass edges from damage during handling and installation.
- C. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant-substrate testing.
- D. Do not exceed edge pressures stipulated by glass Manufacturers for installing glass lites.
- E. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel.
- F. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.
- G. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage so gasket cannot walk out when installation is subjected to movement.

- H. Square cut wedge-shaped gaskets at corners and install gaskets in a manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended by gasket manufacturer.
- I. Comply with ASTM C716 and gasket Manufacturer's written instructions.

3.04 GASKET GLAZING (DRY)

- A. Fabricate compression gaskets in lengths recommended by gasket manufacturer to fit openings exactly, with stretch allowance during installation.
- B. Insert soft compression gasket between glass and frame or fixed stop so it is securely in place with joints miter cut and bonded together at corners.
- C. Center glass lites in openings on setting blocks and press firmly against soft compression gasket by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.
- D. Install gaskets so they protrude past face of glazing stops.

3.05 SEALANT GLAZING (WET)

- A. Install continuous spacers.
- B. Force sealants into glazing channels to eliminate voids.
- C. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

3.06 FIELD QUALITY CONTROL

3.07 PROTECTION

3.08 CLEANING

END OF SECTION 08800

1.00 GENERAL

1.01 SUMMARY

- A. This Section includes acoustical tiles for ceilings.

1.02 SUBMITTALS

- A. Product Data.
- B. Manufacturer's instructions.
- C. Samples for Verification.
- D. Qualification Data of firms and persons specified.
- E. Product Certificates.
- F. Maintenance Data.
- G. Product Test Reports.

1.03 QUALITY ASSURANCE

- A. Perform work in accordance with ASTM and sealant manufacturer's requirements.
- B. Manufacturer and workers specializing in the Products.
- C. Obtain materials through one source from a single manufacturer.
- D. Compatibility and Adhesion Testing.
- E. Acoustical Testing Agency Qualifications.
- F. Fire-Test-Response Characteristics.
- G. Seismic Standards.
- H. Mockup to demonstrate aesthetic effects and qualities of materials and execution.

1.04 DELIVERY, STORAGE, AND HANDLING

1.05 PROJECT CONDITIONS

- A. Environmental Limitations.

1.06 COORDINATION

- A. Coordinate layout and installation of acoustical tiles and suspension system with other construction that penetrates ceilings or is supported by them.
- B. Coordinate the Work of this Section with interfacing and adjoining work for proper sequencing of each installation.

1.07 EXTRA MATERIALS

- A. Acoustical Ceiling: Full-size units equal to 2.0 percent of quantity installed.

1.08 WARRANTY

- A. Manufacturer's Product Warranty: Ten (10) years from date of Project Substantial Completion.
- B. Contractor's Warranty: Five (5) years from the date of Project Substantial Completion.

2.00 PRODUCTS

2.01 PRODUCTS AND MANUFACTURERS

- A. Acoustical Tile Standard: Match appearance characteristics of existing acoustic tile.
- B. Tile-Based Antimicrobial Treatment.

3.00 EXECUTION

3.01 EXAMINATION

3.02 PREPARATION

- A. Testing Substrates.

3.03 INSTALLATION

- A. Install acoustical tile ceilings to comply with ASTM C 636, UBC Standard 25-2 and seismic design requirements indicated, per manufacturer's written instructions and CISCA's "Ceiling Systems Handbook."
- B. Install acoustical tiles in coordination with suspension system.

3.04 PROTECTION

- A. Protect finished installation.
- B. Protect acoustic tiles from contact with contaminating substances and from damage resulting from construction operations.

3.05 CLEANING

END OF SECTION 09512