

## SECTION 08 14 99

### WOOD DOOR REPAIR AND REFURBISHMENT

#### PART 1 - GENERAL

##### 1.01 SUMMARY

- A. Wood door repair work includes the following:
  - 1. Repair and re-install existing wood doors that are stored on the site.
  - 2. Replication of deteriorated or missing components.
  - 3. Cleaning and replacement of deteriorated or missing operating hardware.
  - 4. Cleaning and refinishing existing wood doors.
  - 5. Installing new ADA compliant lever handle hardware.

##### 1.02 REPAIRED DOOR PERFORMANCE

- A. The work of this Section includes the restoration of existing wood doors to an acceptable level of structural soundness, operation, and visual appearance.

##### 1.03 SUBMITTALS

- A. Product Data: Manufacturer's product literature for each product used.
- B. Samples: Full size samples of each component profile required for each type of replicated door and frame component.
- C. Door Repair Schedule: Schedule for each door to be repaired outlining in detail proposed repair work to be performed on each door, frame, and hardware.
- D. Qualification data for firms and persons specified in Quality Assurance article to demonstrate their capabilities and experience. Include name of contact person and telephone number for the two submitted similar projects.

##### 1.04 QUALITY ASSURANCE

- A. Wood Door Standards: Architectural Woodwork Institute (AWI) and Woodwork Institute (WI) quality standards apply to the work of this Section. Except as otherwise indicated, provide Premium Grade work as defined. Where conflicts occur between these standards and this Section, the more stringent requirement governs.
- B. Restoration Contractor Qualifications: All work shall be performed by skilled Restoration Contractor having not less than 5-years satisfactory experience in comparable wood door repair including work on at least two projects similar in scope and scale to this Project.
  - 1. Only skilled journeymen carpenters who are thoroughly trained and experienced in wood door repair work and the skills required and completely familiar with the materials and methods specified shall be used for wood door repair work.
  - 2. One skilled journeymen carpenter shall be present at all times during execution of the work and shall personally direct the wood door repair work.
- C. Field Sample of Wood Door Repair: Repair one existing door, in location directed by the County's Representative, using materials and methods specified in this Section to demonstrate materials and methods intended to be used in the finished work.
  - 1. Obtain County Representative's approval of field sample before proceeding with repair and refurbishment of remaining wood doors.
  - 2. Protect approved field sample until completion of work.
  - 3. Approved field sample shall serve as the quality standard for all doors to be restored.

## 1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Wood Door Components: Keep materials and fabricated items dry and protected from damage, soiling, and deterioration.
- B. Protect glass and glazing materials during delivery, storage and handling to comply with manufacturer's directions. Prevent edge damage to glass and damage to glass and glazing materials from effects of moisture including condensation, temperature changes, direct exposure to sun, and from other causes.

## 1.06 JOB CONDITIONS

- A. Field Measurements: The Developer Design/Builder shall be responsible for field measuring all dimension for any required replacement parts, treatments or repairs.
- B. Coordination: Coordinate work of this Section with work specified in other Sections to ensure proper completion of all work. Where required, doors and frames shall be stripped of all finishes before repair work commences.
- C. Do not nail or fasten infill to door frame or trim. The Developer Design/Builder shall be responsible for providing temporary protection in openings where doors are removed, as required.

## PART 2 – PRODUCTS

### 2.01 CONSOLIDATION MATERIALS

- A. Liquid Epoxy Consolidant: Abatron "LiquidWood", Astro Chemical Company "Astro Special 1101 and 2958", Gougeon Brothers, Inc. "105 Epoxy Resin mixed with 205 Fast Hardner" or approved equal two-part epoxy consolidant.
- B. Structural Adhesive Putty: Abatron, Inc. "WoodEpox", Conservation Services "Flexible Epoxy Patch 200", Astro Chemical Company "Astro Special 3388" or approved equal two-component epoxy paste for filling, patching and building-up damaged wood.

### 2.02 FUNGICIDE TREATMENT MATERIALS

- A. Fungicide: PPG/Olympic Paints and Stain "Mildew Check" or approved equal de-ionized water-based mildewcide/algicide for cleaning and prevention of regrowth of mildew and algae.

### 2.03 REPAIR AND REPLACEMENT MATERIALS

- A. Wood for Replacement Members: Preservative treated wood components of species, cut, grade to match existing door to be repaired and refurbished.
  - 1. Wood shall bear the grade and trademark of the association under whose rules it is produced and a mark of mill identification.
  - 2. Lumber and finished woodwork throughout shall be of sound stock thoroughly seasoned, kiln-dried to a moisture content not exceeding 12-percent.
  - 3. Work shall be free from defects or blemishes that will show on surfaces exposed after the finish coat is applied. Any material which is in any way defective or fails to meet specifications for quality and grade, or is otherwise not in proper condition, will be rejected.
- B. Wood Filler: Benjamin Moore "Benwood Paste Wood Filler (238)" or approved equal solvent-based, air-drying, past-type wood filler. Color to match color of wood being patched.
- C. Adhesive: Aliphatic resin, non-staining, heat and water resistant, glue for repair.

### 2.04 OTHER MATERIALS

- A. Water-Repellent Preservative: Thompson & Formby "Wood Protector-Clear Wood Preservative", DAP, Inc. "Woodlife Classic Wood Preservative" or NWWDA tested and approved preservative and water-repellent formulation containing 3-iodo-2-propynyl butyl carbamate (IPBC) as its active ingredient.
- B. All other materials required for work of this Section shall be selected by the Developer Design/Builder.

## 2.05 FINISHES

- A. Existing Wood Doors: Site-finish by sanding, scraping or otherwise removing existing loose, damaged, or deteriorated finish where required. Refinish as specified in Section 09 91 00.

## PART 3 – EXECUTION

### 3.01 GENERAL

- A. The repair of wood doors shall be executed in accordance with the requirements of this Section.

### 3.02 EXAMINATION

- A. Take necessary field measurements and verify existing conditions prior to ordering and fabrication of material.
- B. Examine each door opening carefully to determine work required to repair and refinish wood doors. Determination of work is subject to approval of the County's Representative whose decision shall be final.

### 3.03 WOOD DOOR REPAIR SEQUENCE

- A. Where required for repair, remove doors from frames.
- B. Remove dirt and debris and extraneous nails, staples, bolts, hooks, etc. from doors and frames.
- C. Label each member prior to disassembly for repair.
- D. Proceed with required repair work.
- E. Sand and refinish surfaces to a uniform and smooth finish. Refinish as specified in Section 09 91 00.
- F. Reinstall doors in original locations.
- G. Make final adjustments and assure that doors and hardware operate properly.

### 3.04 WOOD CONSOLIDATION

- A. General:
  - 1. Remove existing deteriorated, damaged, or loose trim, components, and sections of millwork as required to accommodate new work.
  - 2. Replace existing members that are completely deteriorated.
  - 3. Close existing open joints with approved adhesive.
- B. Patching:
  - 1. Mix, use and cure structural adhesive putty following manufacturer's directions.
  - 2. Form exact, sharp and accurate profiles to match existing.
  - 3. File and sand to match desired profile and to produce uniformly smooth surface. No coarse-grained sandpaper mark or other imperfections will be permitted.
- C. Consolidation:
  - 1. Mix, use and cure epoxy consolidants following manufacturer's directions.
  - 2. Drill holes in areas of deteriorated wood as required for complete penetration of consolidant into deteriorated portions of member.
  - 3. Flow consolidant onto wood with a brush until wood is saturated.
- D. At completion of work, wood door and frame members shall match original in profile and shall be sound and true.

### 3.05 DOOR REPAIR

- A. Strip paint and loose finishes from doors using approved stripping chemicals. Paint removal may take place off site. No dip stripping is permitted.
- B. Inspect door components for condition. If repairs other than filler are required, carefully remove glass from door, disassemble door and remove deteriorated components and replace with replicated components.
- C. Replace muntins, rails, and stiles that are missing or deteriorated.
- D. Dutchman Repairs: Where practicable, repair deteriorated, split, or missing wood with Dutchman repairs following procedure described above.
  - 1. For Dutchman repairs of stiles and rails, join Dutchman to existing wood using interlocking diagonal scarf joints and/or interlocking joints (such as open mortise and tenon joints) to increase the bonding surface of the joint and the structural strength of the completed assembly.
- E. Tighten loose and open joints by disassembling door, and reassembling using waterproof glue and replacement hardwood pins. Clamp until glue sets.
- F. Fill miscellaneous holes, cracks, and gouges with epoxy wood filler.
- G. Sand to smooth surface.
- H. Treat unpainted wood surfaces with wood preservative. Liberally apply two coats to all surfaces. Allow 24-hours between coats and 3-days prior to painting.
- I. Reinstall existing sound glass, if removed, and install new glass to replace missing glass.
- J. Reinstall removed existing hardware and install new to replace missing or broken pieces as required.
- K. New finish is specified in Section 09 91 00.

### 3.06 INSTALLATION OF REPAIRED DOORS

- A. Install repaired doors level and plumb, without warp or rack of frames or doors. Properly support, anchor, or secure components.
- B. Adjust operating hardware to provide smooth operation. Lubricate hardware and moving parts.
- C. Doors shall be in excellent operating condition at the conclusion of work.

### 3.07 CLEANING

- A. Clean interior and exterior surfaces promptly after installation. Take care to avoid damage to protective coatings and finishes. Remove excess glazing and sealants, dirt, and other substances.
- B. Clean glass promptly after installation of sashes. Wash and polish glass on both faces before Substantial Completion. Comply with manufacturer's recommendations for final cleaning and maintenance. Remove non-permanent labels from glass surfaces.
- C. Remove and replace glass that has been broken, chipped, cracked, abraded or damaged during the construction period.

### 3.08 ADJUSTMENTS

- A. Repair or replace defective work to the satisfaction of the County's Representative at no additional cost to the County.
- B. Adjust doors and operating hardware to provide a tight fit at contact points and weatherstripping, and to provide smooth operation and a weathertight closure. Lubricate hardware and moving parts.

3.09 PROTECTION

- A. Protect doors and frames from damage or deterioration until time of Substantial Completion.

END OF SECTION