

SECTION 08 11 99

METAL DOOR REPAIR AND REFURBISHMENT

PART 1 - GENERAL

1.01 SUMMARY

- A. Wood door repair work includes the following:
 - 1. Repair and re-install existing metal doors and frames 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 metal doors and frames.
 - 5. Providing a faux wood grain finish on 1st, 2nd & 8th Floor Corridors' metal doors and frames to match existing finish.
 - 6. Installing new ADA compliant lever handle hardware.

1.02 REPAIRED DOOR PERFORMANCE

- A. The work of this Section includes the restoration of existing metal doors and frames 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 and Frame Repair Schedule: Schedule for each door and frame 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. Metal Door and Frames Standards: Comply with ANSI A250.8 "Recommended Specifications Standard Steel Doors and Frames" and the specified requirements.
- B. Restoration Contractor Qualifications: All work shall be performed by skilled Restoration Contractor having not less than 5-years satisfactory experience in comparable metal door and frame repair including work on at least two projects similar in scope and scale to this Project.
- C. Field Sample of Metal Door Repair: Repair one existing metal door and frame, in location directed by the County's Representative, using materials and methods proposed to be used in the work 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 metal doors and frames.
 - 2. Protect approved field sample until completion of work.
 - 3. Approved field sample shall serve as the quality standard for all doors and frames to be restored.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. 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 dimensions 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 work. Where required, doors and frames shall be stripped of all finishes before repair work commences.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Materials to be used for repair and refurbishment of metal doors and frames shall be proposed by the Developer Design/Builder and be approved by the County's Representative.

2.02 FINISHES

- A. Existing Metal Doors and Frames: Site-finish by sanding, scraping or otherwise removing existing loose, damaged, or deteriorated finish where required. Refinish as specified in Section 09 91 00.
- B. At Corridor doors, provide a faux wood grain finish matching approved mock-up.

PART 3 – EXECUTION

3.01 GENERAL

- A. The repair of metal doors and frames 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 metal doors and frames. Determination of work is subject to approval of the County's Representative whose decision shall be final.

3.03 METAL DOOR AND FRAME REPAIR

- A. Physical Evaluation: Carefully examine the physical condition of existing metal doors and frames on a opening by opening basis. Prepare a graphic, photographic or opening schedule to record existing conditions and document the scope of any necessary repairs. Document presence and degree of corrosion, condition of paint, deterioration of the metal sections including bowing, misalignment or bent sections, conditions of the glass and glazing, presence and condition of hardware, screws, bolts, and hinges. Submit for approval prior to beginning repair.
- B. Corrosion: Corrosion may be light, medium or heavy; depending on how much the rust has penetrated the metal sections. If the rusting is merely a surface accumulation or flaking, the corrosion is light. If the rusting has penetrated the metal as indicated by a bubbling texture but has not caused structural damage, the corrosion is medium. If the rust has penetrated deep into the metal, the corrosion is heavy. A sharp probe or tool can be used to determine the extent of metal corrosion. If the probe can penetrate the surface of the metal and brittle strands can be dug out, then a high degree of corrosive deterioration is present.
- C. Routine Maintenance:
 - 1. Remove surface dirt and grease in order to ascertain the degree of deterioration. Minor cleaning may be accomplished using a brush or vacuum followed by wiping with a cloth dampened with mineral spirits or denatured alcohol.

2. If doors and frames are determined to be in a sound condition, take the following steps:
 - a. Remove light rust, flaking and excessive paint. Rust removal methods include manual and mechanical abrasion or the application of chemicals. Rust can be removed using a wire brush, aluminum oxide sandpaper, or a variety of power tools adapted for abrasive cleaning such as an electric drill with a wire brush or a rotary ship attachment. Protect adjacent wall and ceiling surfaces. Remove rust using a commercially prepared anti-corrosive acid compound. Remove remaining loose or flaking paint with a chemical paint remover or with a pneumatic needle scaler or gun.
 - b. Wipe bare metal with a cleaning solvent such as denatured alcohol and immediately dry in preparation for priming. Prime exposed metal with a rust-inhibiting primer immediately after cleaning.
 - c. Replace cracked or broken glass and glazing compound. When bedding glass, use glazing compound formulated for metal sash.
 - d. Replace missing screws and fasteners.
 - e. Clean and lubricate hardware and hinges. Clean with cleaning solvent and fine bronze wool. Lubricate with a non-greasy lubricant formulated for metals and with an anti-corrosive agent.
 - f. Repaint metal sections with two coats of finish paint compatible with the primer. Comply with requirements of Section 09 91 00.

D. In-place Repair:

1. Comply with specified requirements for routine maintenance.
2. Medium to heavy corrosion that has not done structural damage can be removed by using the chemical cleaning process or by sandblasting using low pressure and a grit size in the range of #10 to #45. Provide metal or plywood shields to protect surrounding surfaces.
3. Bare metal shall be primed as soon as possible after exposure to the air.
4. Bent or bowed metal sections shall be realigned or replaced with new matching existing.
5. Once metal sections have been cleaned of corrosion, small holes and uneven areas shall be filled with a patching material and sanded smooth.
6. Replace cracked glass, deteriorated glazing compound, and missing fasteners. When bedding glass, use glazing compound formulated for metal sash.
7. Clean and lubricate hardware and hinges. Clean with cleaning solvent and fine bronze wool. Lubricate with a non-greasy lubricant formulated for metals and with an anti-corrosive agent.
8. Repaint steel sections with two coats of finish paint compatible with the primer. Comply with requirements of Section 09 91 00.

E. Where required for repair, remove doors from frames. Label each member prior to disassembly for repair.

F. Reinstall removed existing hardware.

G. Make final adjustments and assure that doors and hardware operate properly.

3.04 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.

3.05 FINAL CLEANING

- A. Clean metal doors and frames 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. 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.

3.06 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.

3.11 PROTECTION

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

END OF SECTION