

SECTION 070150.19 - PREPARATION FOR REROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Full tear-off [**of entire roof system**] [**of roof system at areas indicated on Drawings**].
2. Partial tear-off [**of entire roof area**] [**of roof areas indicated on Drawings**].
3. Re-cover preparation [**of entire roof area**] [**of roof areas indicated on Drawings**].
4. Removal of flashings and counterflashings.

B. Related Sections:

1. Section 061000 – Rough Carpentry
2. Section 061600 – Sheathing
3. Section 076200 – Sheet Metal Flashing and Trim

1.2 PREINSTALLATION MEETINGS

- ##### A. Preliminary Roofing Conference:
- Before starting removal Work, conduct conference at Project site.

1.3 INFORMATIONAL SUBMITTALS

- ##### A. Photographs or Videotape:
- Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces, that might be misconstrued as having been damaged by reroofing operations.
1. Submit before Work begins.

1.4 QUALITY ASSURANCE

- ##### A. Installer Qualifications:
- Approved by warrantor of existing roofing system to work on existing roofing.

1.5 FIELD CONDITIONS

- ##### A. Existing Roofing System:
- [**Built-up asphalt**] [**Built-up coal-tar**] [**APP-modified bituminous**] [**SBS-modified bituminous**] [**EPDM**] [**CSPE**] [**KEE**] [**PVC**] [**TPO**] [**APP-modified bituminous protected membrane**] [**SBS-modified bituminous protected membrane**] [**Fluid-applied protected membrane**] [**Coated foamed**] <Insert roof type> roofing.
- ##### B. Tenant(s)
- [**will**] [**will not**] occupy portions of building immediately below reroofing area.
1. Conduct reroofing so Owner's operations are not disrupted.

2. Provide Owner with not less than 72 hours written notice of activities that may affect Owner's operations.
3. Coordinate work activities daily with Owner so Owner has adequate advance notice to place protective dust and water-leakage covers over sensitive equipment and furnishings, shut down HVAC and fire-alarm or -detection equipment if needed, and evacuate occupants from below work area.
4. Before working over structurally impaired areas of deck, notify Owner to evacuate occupants from below affected area.
 - a. Verify that occupants below work area have been evacuated before proceeding with work over impaired deck area.
- C. Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.
- D. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
- E. Conditions existing at time of inspection for bidding will be maintained by Owner as far as practical.
 1. A roof moisture survey of existing roofing system is available for Contractor's reference.
 2. Construction Drawings [**and Project Manual**] for existing roofing system are provided for Contractor's convenience and information, but they are not a warranty of existing conditions. They are intended to supplement rather than serve in lieu of Contractor's own investigations. Contractor is responsible for conclusions derived from existing documents.
- F. Limit construction loads on existing roof areas to remain, and existing roof areas scheduled to be reroofed to **<Insert load>** for rooftop equipment wheel loads and **<Insert load>** for uniformly distributed loads.
- G. Weather Limitations: Proceed with reroofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.
 1. Remove only as much roofing in one day as can be made watertight in the same day.

1.6 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during reroofing, by methods and with materials so as not to void existing roofing system warranty issued by **<Insert name of manufacturer for existing warranted roof system>**.

PART 2 - PRODUCTS

2.1 AUXILIARY REROOFING MATERIALS

- A. General: Use auxiliary reroofing preparation materials recommended by roofing system manufacturer for intended use and compatible with components of [**existing and**] new roofing system.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Seal or isolate windows that may be exposed to airborne substances created in removal of existing materials.
- B. Shut off rooftop utilities and service piping before beginning the Work.
- C. Test existing roof drains to verify that they are not blocked or restricted.
 - 1. Immediately notify [**Design-Professional-of-Record**] [**HPD**] of any blockages or restrictions.
- D. Coordinate with Owner to shut down air-intake equipment in the vicinity of the Work.
 - 1. Cover air-intake louvers before proceeding with reroofing work that could affect indoor air quality or activate smoke detectors in the ductwork.
- E. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.
- F. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday.
 - 1. Prevent debris from entering or blocking roof drains and conductors.
 - a. Use roof-drain plugs specifically designed for this purpose.
 - b. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
 - 2. If roof drains are temporarily blocked or unserviceable due to roofing system removal or partial installation of new roofing system, provide alternative drainage method to remove water and eliminate ponding.
 - a. Do not permit water to enter into or under existing roofing system components that are to remain.

3.2 ROOF TEAR-OFF

- A. Notify Owner each day of extent of roof tear-off proposed for that day [**and obtain authorization to proceed**].
- B. Lower removed roofing materials to ground and onto lower roof levels, using dust-tight chutes or other acceptable means of removing materials from roof areas.
- C. Remove aggregate ballast from roofing. [**Store aggregate ballast for reuse in manner not to exceed structural loading limitations of roof deck.**]
- D. Remove loose aggregate from aggregate-surfaced, built-up bituminous roofing using a power broom.

- E. Remove pavers and accessories from roofing.
 - 1. Store and protect pavers and accessories for reuse in manner not to exceed structural loading limitations of roof deck.
 - 2. Discard cracked pavers.
- F. Full Roof Tear-off: **[Where indicated on Drawings, remove] [Remove]** existing roofing and other roofing system components down to the existing **[roof deck] [concrete fill]**.
 - 1. Remove **[substrate board] [vapor retarder] [roof insulation] [and] [cover board]**.
 - 2. Remove base flashings and counter flashings.
 - 3. Remove perimeter edge flashing and gravel stops.
 - 4. Remove copings.
 - 5. Remove expansion-joint covers.
 - 6. Remove flashings at pipes, curbs, mechanical equipment, and other penetrations.
 - 7. Remove roof drains indicated on Drawings to be removed.
 - 8. Remove wood blocking, curbs, and nailers.
 - 9. Bitumen and felts that are firmly bonded to concrete decks are permitted to remain if felts are dry.
 - a. Remove unadhered bitumen, unadhered felts, and wet felts.
 - 10. Remove fasteners from deck **[or cut fasteners off slightly above deck surface]**.
- G. Partial Roof Tear-off: **[Where indicated on Drawings, remove] [Remove]** existing roofing down to **[existing cover board] [existing insulation] <Insert substrate>** and immediately check for presence of moisture.
 - 1. **[Engage] [Owner will engage]** a qualified testing agency to perform the following test:
 - a. Coordinate with Owner's testing agency to schedule times for tests and inspections immediately after removal.
 - 2. **Survey exposed substrate that is to remain using infrared color thermography according to ASTM C1153.**
 - a. Prepare survey report of initial scan indicating locations of entrapped moisture, if any, and area calculations of locations of entrapped moisture.
 - 3. **Survey exposed substrate that is to remain using electrical capacitance/impedance testing according to ASTM D7954.**
 - a. Prepare survey report indicating locations of entrapped moisture, if any, and area calculations of locations of entrapped moisture.
 - 4. **Survey exposed substrate that is to remain using nuclear hydrogen detection testing according to SPRI/RCI NT-1.**
 - a. Prepare survey report indicating locations of entrapped moisture, if any, and area calculations of locations of entrapped moisture.

5. Remove wet or damp materials below existing roofing and above deck as directed by **[Design-Professional-of-Record] [HPD]**.
 - a. **[Removal is paid for by adjusting the Contract Sum according to unit prices included in the Contract Documents.]**
6. Inspect wood blocking, curbs, and nailers for deterioration and damage.
 - a. If wood blocking, curbs, or nailers have deteriorated, immediately notify Design-Professional-of-Record.
 - b. **[Removal is paid for by adjusting the Contract Sum according to unit prices included in the Contract Documents.]**
7. Bitumen and felts that are firmly bonded to concrete decks are permitted to remain if felts are dry.
 - a. Remove unadhered bitumen, unadhered felts, and wet felts.
8. Remove fasteners from deck **[or cut fasteners off slightly above deck surface]**.

3.3 DECK PREPARATION

- A. Inspect deck after tear-off of roofing system.
- B. If broken or loose fasteners that secure deck panels to one another or to structure are observed, or if deck appears or feels inadequately attached, immediately notify Design-Professional-of-Record.
 1. Do not proceed with installation until directed by **[Design-Professional-of-Record] [HPD]**.
- C. If deck surface is unsuitable for receiving new roofing or if structural integrity of deck is suspect, immediately notify **[Design-Professional-of-Record] [HPD]**.
 1. Do not proceed with installation until directed by **[Design-Professional-of-Record] [HPD]**.
- D. Provide additional deck securement as indicated on Drawings.
- E. Replace steel deck as indicated on Drawings.
- F. Replace steel deck as directed by **[Design-Professional-of-Record] [HPD]**.
 1. Deck replacement will be paid for by adjusting the Contract Sum according to unit prices included in the Contract Documents.
- G. Replace plywood roof sheathing as indicated on Drawings.
- H. Replace plywood roof sheathing as directed by **[Design-Professional-of-Record] [HPD]**.

1. Roof sheathing replacement will be paid for by adjusting the Contract Sum according to unit prices included in the Contract Documents.

3.4 ROOF RE-COVER PREPARATION

- A. Remove blisters, ridges, buckles, [**mechanically attached roofing fastener buttons projecting above roofing,**] and other substrate irregularities from existing roofing that inhibit new recover boards from conforming to substrate.
 1. Remove loose aggregate from aggregate-surfaced, built-up bituminous roofing with a power broom.
 2. Broom clean existing substrate.
 3. Verify that existing substrate is dry.
 - a. Spot check substrates with an electrical capacitance moisture-detection meter.
 4. Remove materials that are wet or damp.
- B. Remove blisters, ridges, buckles, [**mechanically attached roofing fastener buttons projecting above roofing,**] and other substrate irregularities from existing roofing that inhibit new [**recover boards**] [**roofing**] from conforming to substrate.
 1. Remove loose aggregate from aggregate-surfaced, built-up bituminous roofing with a power broom.
 2. Broom clean existing substrate.
 3. Verify that existing substrate is dry before proceeding with installation.
 - a. Spot check substrates with an electrical capacitance moisture-detection meter.
 4. Remove materials that are wet and damp.

3.5 BASE FLASHING REMOVAL

- A. Remove existing base flashings.
 1. Clean substrates of contaminants, such as asphalt, sheet materials, dirt, and debris.
- B. Do not damage metal counterflashings that are to remain.
 1. Replace metal counterflashings damaged during removal with counterflashings specified in *Section 076200 – Sheet Metal Flashing and Trim*.
- C. Inspect parapet sheathing, wood blocking, curbs, and nailers for deterioration and damage.
 1. If parapet sheathing, wood blocking, curbs, or nailers have deteriorated, immediately notify [**Design-Professional-of-Record**] [**HPD**].
- D. Remove existing parapet sheathing and replace with new parapet sheathing to comply with *Section 061600 – Sheathing*.

1. If parapet framing, wood blocking, curbs, or nailers have deteriorated, immediately notify **[Design-Professional-of-Record]** **[HPD]**.
- E. When directed by **[Design-Professional-of-Record]** **[HPD]**, replace parapet framing, wood blocking, curbs, and nailers to comply with *Section 061000 - Rough Carpentry*.

END OF SECTION 070150.19