

LIST OF BID ITEMS

ROOF SHINGLES

ITEM 1 Fiberglass mat asphalt shingle: a 20-year warranty shingle shall meet fire and wind test conducted by UL with a Class A label.

ITEM 2 Fiberglass mat asphalt shingle: a 25-year warranty shingle shall meet fire and wind test conducted by UL with a Class A label.

ITEM 3 Fiberglass mat asphalt shingle: a 30-year warranty shingle shall meet fire and wind test conducted by UL with a Class A label.

SPECIFICATIONS FOR ROOF SHINGLES

ITEMS 1 THROUGH 3

PART I - GENERAL

1.1 SCOPE

This specification covers the installation and material requirements for the re-roofing of public housing units. Contracting to accomplish this work shall be the responsibility of the public housing agency (PHA) involved.

1.2 SCOPE OF WORK

Provide all labor, materials and equipment required to install new roofing shingles on existing roofs. Optional work includes the removal of existing shingles and other roofing material, replacement of rotted wood, installation of ridge vents and ventilating soffits, flashing metal drip edges along the eave and rake edges.

1.3 QUALITY ASSURANCE

Manufacturer shall have a minimum of five years experience in the manufacture of fiberglass and/or organic felt asphalt shingles.

- A. Roofing Contractor shall have a minimum of one-year experience in the application of asphalt shingles.
- B. All shingles shall be certified by an approved independent third party testing and labeling agency and labeled for Class A fire resistance and wind resistance.
- C. Installation of shingles and substrate preparation must meet the requirement of the manufacturer's published instructions or the Asphalt Roofing Manufacturers Association (ARMA) "**RESIDENTIAL ASPHALT ROOFING MANUAL**".

1.4 SUBMITTALS

Manufacturer's Literature: Material description and recommended installation instructions, or wrapper showing installation instructions.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials with manufacturer's labels intact and legible.
- B. Deliver materials in sealed packages at least three bundles per square, with labels from a certified independent third party testing and labeling agency (UL).
- C. Store materials on raised platform or pallets and protect with coverings if stored in the weather. **KEEP DRY!**
- D. Store rolled goods on end. **KEEP DRY!**

1.6 JOB CONDITIONS

- A. Do not install underlayment or shingles on wet surfaces.
- B. Special procedures may need to be taken in applying shingles when air temperature is below 40 degrees F. These procedures may include hand sealing or additional nailing to insure positive adhesion of the tabs.

1.7 WARRANTY

- A. Materials: Manufacturer's Limited Material Warranty terms and conditions to apply.
- B. Workmanship: Bids shall include applicators'/contractors' full coverage warranty (100%) against defects in labor for two years, from the date of completion of the job. Manufacturer shall be responsible for 100% of defects in labor and materials for 1 year from date of completed and PHA accepted roof, and prorate thereafter for the limited warranty.
- C. Bid Procedures: The bid shall include a Limited Warranty for a period of 20 years, 25 years, and 30 years, as well as the full coverage workmanship warranty.

1.8 TEAR-OFF VS SUPERIMPOSITION

The PHA shall make the decision regarding tear-off of the existing roof or superimposition of the new roof over the existing roof. The major considerations in making this decision are as follows:

- A. The load carrying capacity of the roof structure to support the existing roof(s), workman, equipment and the new roofing material.
- B. The condition of the existing roofing.
- C. Meeting the local building code. Usually a maximum of two roofs (original and one re-roof) may be installed before tear-off becomes mandatory.
- D. In general, roofs covered with asphalt shingles can remain in place and be re-roofed. Tile, slate or cedar shake roofs shall be removed because of the irregular surface and difficulty of nailing. Interlocking type shingles can cause an unevenness of the new re-roofed surface.

PART 2 - PRODUCT SELECTION

2.1 FIBER GLASS MAT ASPHALT - SPECIFICATION COMPLIANCE

- A. ASTM D-3018-82 Type 1, ASTM D-3462-83, and ASTM-E-108-83.
- B. Square Tab Butt with three tabs.
- D. Approximate Size - 36" wide X 12" long, 5" exposure (For 12 - 1/4" wide shingles exposure may be 5 - 1/8"). Metric or other sizes can be negotiated with the PHA.

- E. Weight indicate as discussed in Paragraph 1.7c.
- F. Self-sealing - Certified by an independent third party testing and labeling for wind resistance.
- G. Fire Resistant - Certified by an independent third party testing and labeling agency for Class A.

2.2 ASPHALT SATURATED ROOFING FELT UNDERLAYMENT

- A. ASTM-D - 226-68 Weight classification shall be No. 15 or No. 30, organic, unperforated, 36" wide.
- B. Reinforced lightweight underlayment shall conform to various HUD Material Releases for acceptance of this type of underlayment.

2.3 HIP RIDGE SHINGLES: Shall be pre-cut manufacturer's standard or job cut.

2.4 FASTENERS

- A. **Nails.** Hot galvanized or aluminum 11 or 12 gauge barbed shank, 3/8" head, sharp pointed conventional, of sufficient length to penetrate at least 3/4" into solid wood decking or penetrate through plywood sheathing. Nails may be hand or air driven.
- B. **Staples.** To be in compliance with ARMA specification and HUD UM-25d. All staples are to be zinc-coated, 16-gauge minimum crown width of 15/16" and sufficient length to penetrate at least 3/4" into solid wood decking or through plywood sheathing.

2.5 BITUMINOUS PLASTIC CEMENT: Comply with FS SS-C153b Type 1.

2.6 RIDGE VENT

- A. Shall be installed in accordance with manufacturer's instructions.
- B. Comply with HUD Minimum Property Standard (MPS) or local code for ventilation rated. HUD MPS 4910.1-1984 requires 1/150 of the ceiling area for future (free) ventilation.
- C. Vent shall be similarly constructed and be of similar materials as manufactured by H. D. Products Company, Princeville, IL. or AIR Vent Inc., Peoria, IL. or equal.

2.7 SOFFIT VENT

- A. Shall be installed in accordance with manufacturer's instructions.
- B. Comply with HUD Minimum Property Standards for ventilation rate.
- C. Vent shall be as similarly constructed and be of similar materials as H. C. Products Company, Vent - A - Strip with Soffit Louvers.

2.8 DRIP EDGE

The drip edge shall be similar to product number F9S as manufactured by Alcoa Building Products Company.

2.9 GUTTERS

Gutters shall be fabricated of 0.027 inch thick aluminum roll. Gutters shall be hung with high points equidistant from down spout. Lap joint, except for expansion joints shall be at least one inch thick in the direction of flow. Secure aluminum gutter to the fascia with nails (7") and sparrows of aluminum brackets at intervals not exceeding 32 inches.

2.10 DOWNSPOUTS

Downspouts shall be fabricated of 0.027 inch thick aluminum roll. Wall anchors shall be formed from two inch wide 0.027 inch thick aluminum. Downspouts shall be set plumb and clear of wall. Each section of downspout shall be anchored to wall at top and bottom shall be slotted to allow not less than ½ inch movement for each 10 feet of down spout. Elbows, offsets and shores are to be provided where required.

2.11 FINISH: Aluminum gutter and down spouts shall be baked enamel.

2.12 FLASHING AS REQUIRED

Roof penetrations, such as vent pipes, shall be flashed with standard 3 lb lead boots or neoprene flashing. Roof intersections, such as walls or chimneys, shall be flashed with 26 gauge galvanized meeting F.S. QQ-S-775E Class IV standards. Use .024 inch counter flashing as required.

PART 3 - DESCRIPTION OF WORK

3.0 REMOVAL OF EXISTING ROOF

- A. Remove existing shingles, felts, metal drip edging, roofing nails, flashings and any other covering required to accomplish all of the roof work specified. Removal and the preparation of substrate shall be in accordance with the ARMA Residential Asphalt Roofing Manual. New felt underlayment shall be installed and shall be included with the removal bid price. (See 2.2)

- B. Replace all rotted or deteriorated wood as required by the PHA and replace with similar new wood all in connection with the roof work as a unit price item.
- C. Re-nail all loose sheathing or decking.
- D. Remove old worn drip edges, gutters and down spouts as required by the PHA and replace (furnish and installed) with new corrosion resistant metal drip edging, gutter and down spouts as a unit price item (remove, furnish and install).
- E. Rework existing flashing and install new flashing where directed by the PHA as a unit price item.
- F. Furnish and install new felt (underlayment) meeting spec. paragraph 2.2 as an additive.
- G. Furnish and install new fiberglass mat asphalt shingles meeting specification in paragraph 2.1.

3.1 SUBSTRATE PREPARATION AFTER REMOVAL OF OLD ROOF AND LIAISON WITH PHA

- A. After removal of the old roofing, metal work, and related items have been completed and before any new work is installed, the contractor shall notify the PHA so it may have its technical representative inspect the roof decking and structural members. The contractor shall assist the PHA representative in thoroughly inspecting the roof structures to determine if any deteriorated wood members or sheathing need replacing. The removal and replacement of any structural members or sheathing shall be done by the contractor as an addition to the base price. It shall be the responsibility of the contractor to protect the buildings completely (exterior surfaces, interior surface, and all equipment) at all times from the weather and at his expense while the roof contract work is in progress. It shall be the responsibility of the technical inspector to be available so the contractor's schedule will not be impeded.
- B. Roof surfaces shall be firm, sound, dry, and broom-cleaned before any roofing is applied.
- C. If required, install metal drip strips at eaves and rakes and other flashings before installation of shingles.
- E. At roof rakes, no shingle tab shall be cut less than three inches.
- F. If required, metal drip edges shall be installed under the roofing felt at eaves and over the felt at rakes.
- G. The contractor shall remove debris from the project site as the work progresses. All removed debris shall become the property of the contractor or by the PHA if so directed by the PHA.
- H. Contractor shall be responsible for picking up all nails by whatever means to assure a complete job

**BID/SUMMARY PRICE SHEET FOR
ROOFING – ASPHALT SHINGLES**

CPC Bid Number: _____ **Bid Date:** _____
(Available on Invitation to Bid)

Name of Firm: _____ **Contact:** _____

Address: _____

Email: _____ **Phone:** _____

Manufacturer: _____ **Model No. / Name:** _____

Item No. 1 – (20) Year Warranty (Per Square): _____

Item No. 2 – (25) Year Warranty (Per Square): _____

Item No. 3 – (30) Year Warranty (Per Square): _____

Remove Existing Shingles – One (1) Layer
Including Price for Installing Underlayment (See 2.2): _____

Remove Existing Shingles – Two (2) Layers
Including Price for Installing Underlayment (See 2.2): _____

Add Items (Installed):

Remove & Replace Gutters (LF) _____

Remove & Replace Downspouts (LF) _____

Step Flashing (LF) _____

Counter Flashing (LF) _____

Drip Edge (Standard Size) (LF) _____

Aluminum Ridge Vent (LF) _____

Nail-Over PVC w/ Cap Shingle to Match Roof (LF) _____

Soffit Vent (LF) _____

Bath (Or Range Hood) Exhaust Cap (EA) _____

Replace 3 Lb. Lead Boot Flashing (EA) _____

Neoprene 3-In-1 Pipe Boot (EA) _____

Replace Base Flashing for HWH/Furnace Vent Stack (EA) _____

Ice & Water Shield 36" (LF) _____

Replace Rotten Roof Deck Sheathing w/ New Sheathing
To Match Thickness of Existing (SF) _____

Go Over Existing Sheathing w/ New OSB Board (SF) _____

Replace Other Rotten Wood: Rakes (LF) / Rafters (LF) _____ / _____

Replace Other Rotten Wood: Fascia (LF) / Soffit (SF) _____ / _____

Delivery: _____ **Terms:** _____