

SECTION 07 31 00
ASPHALT SHINGLES

BURBANK UNIFIED SCHOOL DISTRICT
SUMMER 2025 ROOFING PROJECTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Removal of existing roofing.
- B. Asphalt roofing shingles.
- C. Leak barrier and moisture shedding roof deck protection.
- D. Underlayments.

1.2 SCOPE OF WORK

- A. Provide all labor, equipment, and miscellaneous materials to install District purchased and furnished roofing materials over the properly prepared substrate.

- B. DISTRICT SUPPLIED MATERIAL

Note that this project includes the installation of owner-supplied material; the District has acquired roofing material through the CMAS (California Multiple Award Schedules) program.

- C. All products listed in 2.1, D will be furnished by the District. All products not listed in 2.1, D are to be furnished by the Contractor. All products listed in 2.1, D will be manufactured by The Garland Company and purchased by Burbank Unified School District. Any material or accessories required for the installation of the roof system in excess of the district provided material must be supplied by the Contractor. It is up to the Contractor to determine the precise amount of material required for the completion of this project; and to provide excess material, as required.
- D. Contractor to comply with Roof Site Maps to determine scopes of work for each building. Contractor responsible to determine deck type. Color-coded site map for reference only.
- E. Shingle Replacement Scope of Work (Buildings highlighted in purple)
 - 1. Remove the existing roof system to the structural deck.
 - 2. Repair any damaged decking as required. Contractor to include 7% deck replacement in the base bid. If the amount of deck replacement exceeds 7%, the contractor is to receive a change order equal to the unit price for deck replacement per sq ft multiplied by the sq ft in excess of the amount included in the base bid amount. If the amount of deck replacement is less than 7%, the contractor is to provide a credit.
 - 3. Apply HPR SA FR Base Sheet to entire field and flashings.
 - 4. Apply SBS modified, self-adhering – RMer Seal to entire field and flashings.
 - 5. Flashings:
 - a. Vents: Re-use the existing vent crickets.

- b. Metal Edge: Install 22 gauge, kynar edge metal over the HPR SA FR Base Sheet. Set in mastic. Fasten every 2" o.c. Edge metal to have a 4" face. District to determine color.
 - c. Gutter: Replace all existing gutters. Install 22 gauge, kynar gutters – fabricated from RMER SS Flat Stock. All gutters to be 5"x5"x5" box gutters.
 - d. Ridge Vent: Tape all vent seams with Unibond ST 4" tape. Caulk any fastener. Paint the vents to District determined color.
6. Install 30 year, asphalt, Class A, ANSI/UL790 shingle – GAF Timberline or equal. Install per manufacturer guidelines.

1.3 REFERENCES

- A. AC438-1011-R1 - New Acceptance Criteria for Alternative Asphalt Roofing Shingles
- B. American Society of Civil Engineers (ASCE): ASCE 7 - Minimum Design Loads for Buildings and Other Structures.
- C. Asphalt Roofing Manufacturers Association (ARMA).
- D. ASTM International (ASTM):
 - 1. ASTM D 3018 - Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules.
 - 2. ASTM D 3161 - Standard Test Method for Wind-Resistance of Asphalt Shingles (Fan-Induced Method).
 - 3. ASTM D 3462 - Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules.
 - 4. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - 5. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
 - 6. ASTM B 370 - Standard Specification for Copper Sheet and Strip for Building Construction.
 - 7. ASTM C 1549 - Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer.
 - 8. ASTM D 4586 - Standard Specification for Asphalt Roof Cement, Asbestos-Free.
 - 9. ASTM E 903 - Standard Test Method for Solar Absorption, Reflectance and Transmission of Materials Using Integrating Spheres.
- E. California Title 24 Energy Efficient Standards.
- F. Cool Roof Rating Council (CRRRC).
- G. National Roofing Contractors Association (NRCA).
- H. Sheet Metal and Air Conditioning Contractors National Association, 1nc. (SMACNA) - Architectural Sheet Metal Manual.
- I. Underwriters Laboratory (UL)
 - 1. UL 790 - Tests for Fire Resistance of Roof Covering Materials.
 - 2. UL 997 - Wind Resistance of Prepared Roof Covering Materials.

1.4 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D1079 and the glossary of the National Roofing Contractors Association (NRCA) Roofing and Waterproofing Manual for definitions of roofing terms related to this section.

1.5 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, showing compliance with requirements.
- B. Installation Instructions: Manufacturer's installation instructions, showing required preparation and installation procedures.

1.6 QUALITY ASSURANCE

- A. Perform Work in accordance with NRCA Roofing and Waterproofing Manual.
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified with documented ISO 9001 certification and minimum of twelve years of documented experience and must not have been in Chapter 11 bankruptcy during the last five years.
- C. Installer Qualifications: Company specializing in performing Work of this section with minimum five years documented experience and a certified Pre-Approved Garland Contractor. Installer must submit a Certified Pre-approval letter from Garland with bid form.
- D. Installer's Field Supervision: Maintain a full-time Supervisor/Foreman on job site during all phases of roofing work while roofing work is in progress.
- E. Product Certification: Provide manufacturer's certification that materials are manufactured in the United States and conform to requirements specified herein, are chemically and physically compatible with each other, and are suitable for inclusion within the total roof system specified herein.
- F. Source Limitations: Obtain all components of roof system from a single manufacturer. Secondary products that are required shall be recommended and approved in writing by the roofing system Manufacturer. Upon request of the Architect or Owner, submit Manufacturer's written approval of secondary components in list form, signed by an authorized agent of the Manufacturer.

1.7 REGULATORY REQUIREMENTS

- A. Provide a roofing system achieving an Underwriters Laboratories (UL) Class A fire classification.
- B. Install all roofing products in accordance with all federal, state and local building codes.
- C. All work shall be performed in a manner consistent with current OSHA guidelines.

1.8 PRE-INSTALLATION MEETINGS

- A. Convene a pre-installation meeting a minimum two weeks prior to starting work of this section.
 - 1. Contractor shall schedule and arrange meeting and meeting place and notify attendees.
 - 2. Mandatory Attendees: Roofing installer and manufacturer's representative
 - 3. Review all pertinent requirements for achieving the warranty specified below and set schedule for final warranty inspection.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened labeled packaging until ready for installation.
- B. Store products in a covered, ventilated area, at temperature not more than 110 degrees F

(43 degrees C); do not store near steam pipes, radiators, or in sunlight.

- C. Store bundles on flat surface to maximum height recommended by manufacturer; store rolls on end.
- D. Store and dispose of solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.10 WEATHER CONDITIONS

- A. Proceed with work only when existing and forecasted weather conditions will permit work to be performed in accordance with roofing shingle manufacturer's recommendations.

1.11 WARRANTY

- A. Provide shingle manufacturer's standard limited warranty:
- B. Provide underlayment Manufacturer's warranty
 - 1. Warranty Duration: 10 years
- C. Contractor warranty
 - 1. Provide contractor labor and material 5-year warranty

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Shingles and Underlayment
 - 1. Basis of Design (Shingles):

GAF, Residential Roofing Products
Toll Free Tel: 800 ROOF-411; Tel: 800-766-3411; Fax: 973-628-3451; Email:
TechnicalQuestionsGAF@gaf.com; Web: www.gaf.com.
 - 2. Underlayments:

Garland Company, Inc. (The); 3800 E. 91st St., Cleveland, OH 44105. Web Site:
www.garlandco.com.
Tony DeMartinis
(818) 900-3000
tdemartinis@garlandco.com
- B. Roofing Contractor to be responsible for all Garland materials in excess of District purchased and furnished amount. District to provide material quantities matching the specified amount below. Any additional Garland material required to complete the project is the responsibility of the roofing contractor. Roofing Contractor responsible for purchasing additional materials required, including all freight and tax charges.
- C. Roofing contractor to be at delivery of District purchased roof materials. The District has no responsibility to provide any equipment for handling and / or loading the materials to the Contractor's trucks. Upon signature of delivery, the roofing contractor assumes full responsibility for all District purchased roof materials. Any materials lost or stolen are the responsibility of the roofing contractor to replace. Roofing Contractor responsible for freight and tax on the replaced materials.
- D. Listed in the tables below are quantities of district provided material. Any material or accessories required for the installation of the roof system in excess of the district provided material must be supplied by the Contractor. It is up to the Contractor to determine the

precise amount of material required for the completion of this project; and to provide excess material, as required. Maximum quantity of the OFCI materials to be provided for all roofing which will be provided to the Contractor is as follows:

Joaquin Miller Elementary School

Material	Amount	Unit Size
RMer Seal	45	200 sf Roll
HPR SA FR Base Sheet	60	150 sf Roll

Thomas Jefferson Elementary School

Material	Amount	Unit Size
RMer Seal	16	200 sf Roll
HPR SA FR Base Sheet	21	150 sf Roll

2.2 SHINGLES

- A. Timberline Cool Series Lifetime Shingles, by GAF or CertainTeed Equivalent:
 1. Granule surfaced, high reflectance, self-sealing asphalt shingle with a strong fiberglass reinforced Micro Weave core and a mineral granule surfacing.
 2. Architectural laminate styling provides a wood shake appearance with a 5 5/8in. exposure. Features highly reflective roofing granules that bounce back the sun's rays and more effectively release absorbed heat.
 3. Rated by the Cool Roof Rating Council (CRRC), Title 24 compliant and meets initial Energy Star performance levels.
 4. UL 790 Class A rated with UL 997 Wind Resistance Label; ASTM D 7158, Class H; ASTM D 3161, Type 1; ASTM D 3018, Type 1; ASTM D 3462; AC438 compliant; CSA 123.5-98; Dade County Approved, Florida Building Code Approved, Texas Dept of Insurance Approved, ICC Report Approval.

2.3 HIP AND RIDGE SHINGLES

- A. Distinctive impact resistant self-sealing hip and ridge cap shingle complementing the color of selected roof shingle. Each bundle covers approx. 25 lineal feet (7.62m) with a 6 2/3 inch (169mm) exposure. Seal-A-Ridge ArmorShield Ridge Cap Shingles by GAF.

2.4 STARTER STRIPS

- A. Self-sealing starter shingle designed for all roof shingles. Each bundle covers approx. 120 lineal feet (36.58m). ProStart Starter Strip by GAF.

2.5 BASE SHEET

- A. Garland HPR SA FR Self-adhering base sheet.

2.6 UNDERLAYMENT

- A. Garland R-MER SEAL SBS-Modified Self-adhering, self-sealing, bituminous leak barrier

2.7 ROOFING CEMENT

- A. KEE-Loc zero VOC polyether Mastic

2.8 ROOF ACCESSORIES

- A. Urethane Sealant: Tuff-Stuff Sealant
- B. Roofing mastic: KEE-Loc polyether trowel-grade mastic

2.9 NAILS

- A. Nails: Standard round wire, zinc-coated steel or aluminum; 10 to 12 gauge, smooth, barbed or deformed shank, with heads 3/8 inch (9mm) to 7/16 inch (11mm) in diameter. Length must be sufficient to penetrate into solid wood at least 3/4 inch (19mm) or through plywood or oriented strand board by at least 1/8 inch (3.18mm).

2.10 METAL FLASHING

- A. R-Mer SS Flat Stock Pre-Finished Kynar Coated Galvanized Steel: 22 gauge hot-dip galvanized steel sheet, installed in compliance with ANSI/SPRI ES-1
 - 1. Drip edge to cover 4" on fascia

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until roof deck has been properly prepared.
- B. If roof deck preparation is the responsibility of another installer, notify Architect or building owner of unsatisfactory preparation before proceeding.

3.2 REMOVAL OF EXISTING ROOFING

- A. Remove all existing roofing down to the roof deck.
- B. Verify that deck is dry, sound, clean and smooth, free of depressions, waves and projections.
- C. Cover with sheet metal all holes over 1 inch (25 mm) diameter, cracks over 1/2 inch (12 mm) in width, loose knots and excessively resinous areas.
- D. Replace damaged deck with new materials.
- E. Clean deck surfaces thoroughly prior to installation of eaves protection membrane and underlayment.

3.3 PREPARATION OF SUBSTRATE

- A. Clean deck surfaces thoroughly prior to installation of leak barrier and roof deck protection.
- B. At areas to receive leak barrier, fill knot holes and cracks with latex filler.
- C. Chimneys: Install crickets on the upslope side of any chimney located in the north, on a roof steeper than 6:12, or wider than 24 inches (610 mm).

3.4 INSTALLATION OF UNDERLAYMENT

- A. Install using methods recommended by manufacturer in accordance with local building code. When local codes and application instructions are in conflict, the more stringent requirements shall take precedence.
- B. Install HPR SA FR Base Sheet and R-MER SEAL on entire roof area.

- C. Eaves:
 1. Place eave edge metal flashing tight with fascia boards; lap joints 2 inches (50 mm) and seal with KEE-Loc Mastic; nail at top of flange.
 2. On roofs with slope between 2:12 and 4:12, and on all roofs in the north, install leak barrier up the slope from eave edge to 36 inches from the edge or at least 24 inches (610 mm) beyond the interior face of the warm exterior wall, whichever is greater; lap ends 6 inches (150 mm) and bond.

- D. Valleys:
 1. Install R-MER SEAL leak barrier at least 36 inches wide centered on valley; lap ends 6 inches (150 mm) and seal.
 2. Where valleys are indicated to be "open valleys", install metal flashing over leak barrier before roof deck protection is installed; DO NOT NAIL THROUGH metal flashing; secure by nailing at 18 inches (457 mm) on center just beyond edge of flashing so that nail heads hold down edge.

- E. Hips and Ridges:
 1. Install R-MER SEAL leak barrier along entire lengths.

- F. Roof Deck:
 1. Install one layer of roof deck protection over entire area not protected by eave or valley membrane; run sheets horizontally lapped so water sheds; nail in place.
 2. On roofs sloped at more than 4 in 12, lap horizontal edges at least 2 inches (50 mm) and at least 2 inches (50 mm) over eave protection membrane.
 3. On roofs sloped between 2 in 12 and 4 in 12, lap horizontal edges at least 19 inches (480 mm) and at least 19 inches (485 mm) over eave protection membrane.
 4. Lap ends at least 4 inches (100 mm); stagger end laps of each layer at least 36 inches (915 mm).
 5. Lap roof deck protection over valley protection at least 6 inches (152 mm).

- G. Penetrations:
 1. At vent pipes, install a 24 inch (610 mm) square piece of R-MER SEAL leak barrier lapping over roof deck protection; seal tightly to pipe.
 2. At vertical walls, install leak barrier extending at least 6 inches (150 mm) up the wall and 12 inches (305 mm) on to the roof surface lapping over roof deck protection.
 3. At skylights and roof hatches, install leak barrier up the sides of the frame and 12 inches (305 mm) on to the roof surface on all sides, lapping over roof deck protection.
 4. At chimneys, install leak barrier around entire chimney extending at least 6 inches (152 mm) up the wall and 12 inches (305 mm) on to the roof surface lapping over roof deck protection.
 5. At rake edges, install metal edge flashing over leak barrier and roof deck protection; set tight to rake boards; lap joints at least 2 inches (50 mm) and seal with KEE-Loc Mastic; secure with nails.
 6. At hips and ridges, install leak barrier along entire lengths. If ridge vents are to be installed, position the leak barrier so that the ridge slots are not covered.

3.5 INSTALLATION OF SHINGLES

- A. Install in accordance with manufacturer's instructions and requirements of local building code.
 1. Avoid breakage of shingles by avoiding dropping bundles on edge, by separating shingles carefully (not by "breaking" over ridge or bundles), and by taking extra precautions in temperatures below 40 degrees F (4 degrees C).
 2. Handle carefully in hot weather to avoid damaging shingle edges.
 3. Secure with 4 to 6 nails per shingle; use number of nails required by manufacturer or by code, whichever is greater. Nails must be long enough to penetrate through plywood or OSB, or 3/4 inch (19 mm) into dimensional lumber.

- B. Install hip and ridge shingles as required by the manufacturer. At ridges, install hip and ridge shingles over ridge or ridge vent material.
- C. Make valleys using "closed cut valley" technique:
 - 1. Run the first, and only the first, course of shingles from the higher roof slope across the valley at least 12 inches (305 mm).
 - 2. Run all courses of shingles from the lower roof slope across the valley at least 12 inches (305 mm) and nail not closer than 6 inches (150 mm) to center of valley.
 - 3. Run shingles from the upper roof slope into valley and trim 2 inches (50 mm) from center of valley.
- D. All penetrations are to be flashed according to NRCA application instructions and construction details.
- E. For skylights, consult the manufacturer of the skylight or roof hatch for specific installation recommendations. Skylights and roof hatches shall be installed with prefabricated metal flashings specifically designed for the application of the unit.

3.6 PROTECTION

- A. Stage work progress so that traffic is minimized over completed roofing.
- B. Protect installed products until completion of project

3.7 FIELD QUALITY CONTROL

- A. Inspection: Provide manufacturer's field observations at start-up and at intervals of 3 days per working week. Provide a final inspection upon completion of the Work.
 - 1. Warranty shall be issued upon manufacturer's acceptance of the installation.
 - 2. Field observations shall be performed by a Sales Representative employed full-time by the manufacturer and whose primary job description is to assist, inspect and approve membrane installations for the manufacturer.
 - 3. Provide observation reports from the Sales Representative indicating procedures followed, weather conditions and any discrepancies found during inspection.
 - 4. Provide a final report from the Sales Representative, certifying that the roofing system has been satisfactorily installed according to the project specifications, approved details and good general roofing practice.
- B. Correct defects or irregularities discovered during field inspection.

END OF SECTION