
M.C.A. Superior Clay Roof Tile

This Guide Specification is intended to be used in preparation of specifications for a particular project, or as the basis for an office master specification. In either case, the Guide Specification must be edited to fit the condition of use. Pay particular attention to deletion of inapplicable portions.

Section 07320

Notes to Specifier

ONE PIECE "S" MISSION ROOFING TILE

PART 1 - GENERAL

1.1 SUMMARY

A. Provide roofing tile where indicated on the Drawings, as specified herein, and as needed for a complete and proper installation.

B. Related work:

1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division One of these Specifications.

1.2 SUBMITTALS

A. Comply with pertinent provisions of Section 01340.

B. In accordance with the approved submittal schedule, submit a material list of items proposed to be provided under this Section, proving compliance with the specified requirements.

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work in this Section.

B. For conditions not covered in this Section, comply with the pertinent "Installation Manual" published by the Tile Roofing Institute.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Comply with pertinent provisions of Section 01620.

This Guide is written to cover routine installation of the indicated roofing tiles. However, local codes and special local requirements in the area of your construction may vary from the practices described. It is essential that you verify local precedents and local materials if you wish to keep construction cost in line.

Throughout Part 1 of this Section, use the standard phrasing and references used elsewhere in your specs.

45 calendar days may be too long a delay in fast track work, but receipt of this data helps assure you get the specified materials on the job.

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PART 2 - PRODUCTS

2.1 ROOFING TILE

Notes to Specifier

A. Where indicated on the Drawings, provide One Piece “S” Mission roofing tile manufactured by M.C.A. Superior Clay Roof Tile located at 1985 Sampson Ave., Corona, CA 92879, phone (800) 736-6221, fax (951) 736-6052, in color “_____.”

Select color from the current catalog and state here by name and number

B. The manufacturer may also be reached at its website: www.mca-tile.com, and by e-mail at sales@mca-tile.com.

C. Comply with pertinent provisions of ASTM C1167, Grade I, and with ICC Research Number ESR2144 and Tile Roof Institute Manual.

2.2 OTHER MATERIALS

A. Membrane:

1. Under all One Piece” S” Mission Style roofing tile on roof pitches greater than 3:12, except where heavier membrane is required by governmental agencies having jurisdiction, provide not less than two layers of 30 lb (14 kg) asphalt-saturated felt placed at right angles to roof pitch, mopped solidly between layers with 25 lbs (10 kg) of hot asphalt and mopped solidly on top of layers with hot asphalt.

Verify membrane design used as standard practice in the area of your construction; edit as required.

2. At roof pitches of 3:12 and steeper, provide a minimum of one layer of membrane complying with ASTM D226, Type II, or one layer of membrane complying with ASTM D4869, Type IV, or upgrade material placed with minimum 2” (51mm) headlap and 6” (152 mm) sidelap.

3. Provide in strict accordance with pertinent requirements of governmental and/or other agencies having jurisdiction.

B. Fasteners:

1. Fasteners shall comply with IRC section R905.3.6 and IBC section 1507.3.6 and UBC Section 1507.3. Corrosion resistant meeting ASTM A641 Class I or approved equal, number 11 gauge diameter and of sufficient length to properly penetrate 3/4” into or through the thickness of the deck or batten, whichever is less. The head of the nail used for tile fastening shall not be less than 5/16” and shall comply with ASTM F1667 for dimensional tolerances. Other fastening systems such as screws, wire, or adhesive based systems as approved by code or local building officials will be allowed.

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PART 2 - PRODUCTS continued

2. In areas designated by the building official as being subject to winds that exceed 80 mph, or where roof height exceeds 40 feet (12 m) above grade, attach all tiles in strict accordance with Chapter 15 of UBC (or IBC Table 15=D=1, footnote 2), or as required by governmental agencies having jurisdiction.

- a. Nail the heads of all ties;
- b. Fasten the noses of all eave course tiles with approved clips;
- c. Nail rake tiles with two nails;
- d. Set noses of all ridge, hip, and rake tiles in a bead of mastic approved by the Architect.

3. On slopes over 24:12, securely fasten the noses of all tiles.

4. Provide "Wind Locks" where directed by the Architect.

5. Tile-tie systems of stainless steel or galvanized wire may be used where approved by governmental agencies having jurisdiction.

6. At snow areas, use "Wind Locks: with straw nails or, in lieu of straw nails, install vertical 2" x 4" nailer boards full length from ridge to eave for all top tiles.

C. Nailing Strips:

1. Where indicated on the Drawings, or otherwise required for proper nailing provide:

- a. 2" x 6" (50mm x 152mm) nailing strips at all hips and ridges;
- b. 2" x 3" (50mm x 76 mm) nailing strips under first row of cover tile after gable roll, with adjacent 2" x 2" (50mm x 50mm) nailing strip along the rake side.
- c. 2" x 4" (36mm X 102mm) nailing board full length from ridge to eave for all top tile where architect specifies 2" x 4" nailing system.

Notes to Specifier

Verify fastening requirements in the area of your construction, and edit as required. Delete non-applicable requirements.

Metric conversion of lumber is to actual dimensions of the lumber; use lumber of the closest dimensions available.

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PART 2 - PRODUCTS continued

D. Flashing:

1. Flash at roof valleys in strict accordance with IBC, or required by local governmental agencies having jurisdiction.
 - a. For valley flashing use not less than 0.019" (G90) (No. 26 gage) (0.48 mm thick) corrosion-resistant metal, extending at least 11" (279 mm) away from the centerline of the valley each way;
 - b. Provide splash diverter rib not less than 1" (25mm) high at the flow line, formed as part of the flashing;
 - c. Provide flashing overlap of not less than 4" (102 mm).
2. For other flashing use not less than 0.19" (G90) (No. 26 gage) (0.48mm thick) corrosion resistant metal; at sides of dormers, chimneys, and other walls, extend flashing at least 6" (152 mm) up the vertical surface.
 - a. Thoroughly counterflash;
 - b. Extend flashing under tile at least 4" (102 mm), and turn the side edge up 1 1/2" (31.75 mm).
3. At lower side of dormers, chimneys, and other walls, extend flashing at least 3" (76 mm) up the wall and 4" (102 mm) over the tile, and then thoroughly counterflash.
4. At wood saddles and returns, line with not less than 0.019" (G90) (No. 26 gage) (.48 mm thick) corrosion resistant metal or 16 oz (45 g) copper extending up sloping roofs not less than 12" (305 mm), and more where necessary, and up vertical walls not less than 6" (152 mm), thoroughly counterflashed.
5. Make all counterflashing plugged, pointed and secure.
6. Extend gutter metal up the roof to a point higher than the outer edge of the gutter.

E. Mortar, plastic cement, and sealant:

1. To prevent lift up of tiles at hip, ridge, and gable, provide plastic cement at headlap portion of those tiles.
2. For gable rakes, hip rolls, ridges, stringers, and other conditions, provide a non-running, heavy body, plastic cement composed of asphalt and other mineral ingredients complying with ASTM D4586 and Fed Spec SSC-153 Type I.
3. When using sealant in lieu of the plastic cement, provide a silicone sealant complying with ASTM D1002 or ASTM E42.

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PART 2 - PRODUCTS continued

2.3 FOR METAL OR POURED CONCRETE ROOF DECKS

Notes to Specifier

A. Where design indicates concrete roof deck or metal roof deck, Tile-Tie system or Polypro AH160 roof tile adhesive may be used where approved by the governmental agencies having jurisdiction.

Delete Article 2.3 if not needed.

1. If Twisted Tile-Tie system is used, comply with the M.C.A. Tile-Tie system detail.

- a. At Coastal areas, use only stainless steel;
- b. At high wind and snow areas, use "Wind Locks";
- c. Do not exceed 4 feet anchor span for twisted wire.

2. If "Polypro AH160" roof tile adhesive is used, apply large paddy placement as shown in the Polypro application details.

2.4 OTHER MATERIALS

1. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.

This Paragraph covers other items such as nails, etc.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Membrane:

1. Verify that deck surfaces are clean and dry prior to installation of membrane.
2. Remove all foreign particles from substrate to assure proper seating and prevent water damage.
3. Install the specified membrane in strict accordance with pertinent requirements of governmental agencies having jurisdiction.

B. On vertical applications, and on extremely steep pitches where wind currents may cause lift:

1. Set the butt of each tile in a bead of the specified plastic cement or sealant, or provide stainless steel "Wind Locks" at intervals;
2. Use plastic cement and sealant carefully, and avoid smearing the exposed tile surface.

Delete Paragraph B if not needed, and revise the Paragraph numbers that come after it.

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3.2 INSTALLATION continued

C. Chalk Lines:

1. Chalk horizontal and vertical guide lines on the membrane to assure watertightness and proper appearance.
2. Space the chalk lines by measuring the delivered tiles for average length and width exposures.
3. Do not exceed an exposure length of 1/4" (6 mm) beyond the average.

D. Installing One Piece "S" Mission roofing tiles:

1. Wood strips and battens:

- a. Install the specified clay or metal birdstops full length of all eaves.
- b. If birdstops are not used, provide 1" x 2" (25 mm x 50mm) wood strips or raise the fascia 1" (25 mm) above the sheathing to boost first row of tile.
- c. Install first row 13" (330 mm) from the eave, leaving a 3" (76 mm) overhang; exposure length shall not exceed 16" (406 mm) centers, and width exposure shall not exceed 12" (305 mm) centers.
- d. Install the specified nailers at ridges, rakes, and gables.

2. Install the tile in rows from left to right, beginning at lower left corner of the roof.

- a. Start at the lower left corner with a gable tile;
- b. Install ridge, hip, and valley tiles in accordance with pertinent requirements of governmental agencies having jurisdiction.

(1) Provide cement mortar Type M complying with ASTM C270 at all ridges and hips to completely seal the area under ridge and hip tiles;

(2) Install a thin coat of rich cement mortar (one part Type I portland cement complying with ASTM C150 to three parts sand complying with ASTM C144) along exposed edges of all ridge and hip tiles;

(3) Completely and neatly fill and point up all voids.

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3.2 INSTALLATION continued

3. To avoid color patterning, checkerboarding, spotting, and stairstepping:
 - a. After the installation of each 80 roofing tiles, make a visual inspection from the ground level and at a distance from the building of about 40 feet (12 m);
 - b. Verify that tile courses follow straight and true lines;
 - c. Verify that color range is smooth with no abrupt changes.
4. Make necessary corrections before proceeding with further installation.

3.3 CLEANING UP

A. Upon completion of the work of this Section, and as a condition of its acceptance, completely remove from the job site all tools, equipment, debris, and surplus materials pertaining to this portion of the work.

END OF SECTION