
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

TURRET TILE STYLE 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 if 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

- A. Where indicated on the Drawings, provide Turret Tile Style 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 “_____.”
- 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 IAPMO ER Number #356 and Tile Roof Institute Manual.

Notes to Specifier

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

2.2 OTHER MATERIALS

A. Membrane:

1. Under all Turret Tile Style roofing tile on roof pitches of less 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.
2. Where roof pitches fall between 3:12 and under 4:12, provide underlayment as described above, or provide a single layer of type 90 granular-surfaced asphalt roll roofing, or provide two layers of ASTM D226 Type II (no. 30 felt) (ASTM D4869 Type IV) installed shingle fashion. Other underlayments as approved by local building officials will be permitted.
3. At roof pitches of 4:12 and steeper, provide a minimum of one layer of Type 30 membrane complying with ASTM D226, Type II, or one layer of Type 40 membrane complying with ASTM D2626, Type I, placed with 4” (102mm) headlap and a 6” (152mm) sidelap, or provide better materials approved in advance by the Architect.
4. Provide in strict accordance with pertinent requirements of governmental and/or other agencies having jurisdiction.

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

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PART 2 - PRODUCTS continued

B. Fasteners:

1. For tiles and cleats, use copper or other corrosion-resistant nails not less than No. 11 gage, no less than 5/16" (7.9 mm) head complying with ASTM F1667.
 - a. Comply with requirements of IRC Section R905.3.6, IBC Section 1507.3.6 and UBC Section 1507.3.
 - b. Provide fasteners of sufficient length to either penetrate into the sheathing 3/4" (19mm) or through the thickness of the sheathing whichever is less.
 - c. Attaching wire for the tile shall not be smaller than 0.083" (2.11mm) (no. 14 B.W. gage).
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.

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

2. For all hip, ridge, and first row of field tile at gable roll, set in cement mortar and fasten with non-corrosive nails.

D. Flashing:

1. Flash at roof valleys in strict accordance with Chapter 15 of UBC, or IBC, or required by local governmental agencies having jurisdiction.

a. Where turret is not a full circle, and where turret roof is joined to another roof, valley flashing is required.

b. For valley flashing use not lighter than 26 gage (0.55 mm thick) G90 corrosion-resistant metal, extending at least 11" (279 mm) away from the centerline of the valley each way;

c. Provide splash diverter rib not less than 1" (25mm) high at the flow line, formed as part of the flashing;

d. Provide flashing overlap of not less than 4" (102 mm).

2. Other flashing:

a. Where turret roof is designed from eave to wall, wall flashing and counterflashing are required.

b. For all other flashing use not lighter than 26 gage (.55mm thick) corrosion-resistant metal.

E. Mortar, plastic cement, and sealant:

1. Cut valley tiles and remove loose pieces.

2. To prevent lift up of tiles at hip, ridge, and gable, provide plastic cement at headlap portion of those tiles.

3. 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.

4. 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 of stainless steel or galvanized wire may be used where approved by the governmental agencies having jurisdiction.

Delete Article 2.3 if not needed.

1. At coastal areas, use only stainless steel.
2. At snow areas, use "Wind Locks" with straw nails.

B. If roof is poured concrete:

1. As part of the work of another Section of these Specifications, provide embedded in the concrete roof deck 1" X 2" (25mm X 50mm) beveled wood nailer strips extending from eave to ridge, spaced at 20" (500 mm) centers.
2. Finish the concrete roof deck smooth and flush with the tops of the wood nailer strips.
3. As part of the work of this Section, and in lieu of the membrane described in Paragraph 2.2-A above, provide a membrane over the concrete deck consisting of asphalt-saturated felt weighing not less than 50 lbs per 100 sq ft (23kg per 9.3 m²), fastening with wood lath nailed into the embedded wood nailer strips.

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.

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3.2 INSTALLATION continued

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.

C. Chalk Lines:

1. Preparation of chalk lines is essential prior to installing turret tile; take sufficient time and properly prepare chalk lines for each vertical and horizontal course.
2. As a starting point, pick the section of turret roof which is most visible from ground level.
 - a. Make clear chalk lines on all eave, ridge, and wall lines at the specified dimensions on centers around the circumference.
 - b. If the circumference is not evenly divided by specified dimensions on center, adjust the horizontal courses for the specified dimension at locations not visible from ground level.
 - c. Do not stretch or squeeze more than 1/4” (6mm) on each section.
 - d. Use enough horizontal courses to adjust evenly.

D. Installing Turret Tile Style roofing tiles:

1. Birdstops, Boosters and Starters:

- a. At the first course, between vertical chalk lines, install clay bird-stop and then place pan tile on top of vertical chalk line.
- b. Fasten each pan tile with copper or other non-corrosive 11 gage (3mm diameter) large headed nail, or use “Tile-Tye” system; if the job site is located in a high wind area, use mastic or other sealant to secure pan tile.
- c. Once the birdstop and pan tiles are in place, install the booster and starter tile, securing with copper wire or other non-corrosive nails; if the job site is located in a high wind area, use a “Wind Lock”, mastic, or other sealant to secure the tile.

2. For the rest of the courses, lay 16” (406mm) to the weather.

- a. When the tile becomes crowded, adjust to the next smaller size and continue up to the top of the roof.
- b. It is very important to follow the chalk line and to use the “Turret Worksheet” provided.

3. Require Installers to use judgement on the last four to five courses below the top.

- a. Some tiles normally need to be nipped or cut to achieve proper fit.
- b. When installing the last two to three courses, some tops and pans may need to be adjusted for correct fit of the turret radius.

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

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3.2 INSTALLATION continued

- c. The D702 (smallest size) may need to be secured with roofing mastic due to the tight fit.
 - d. Do not stain the exposed surface of the tile with the adhesive.
4. Prior to installing the last two to three courses, lay a mock-up.
- a. To assure proper fit, do not use adhesives or nails to secure the tiles until after the mock-up is complete and satisfactory.
 - b. Note that the final two to three courses will normally lose one or two lines, or more, close to the top.
 - c. Start installing the final two to three courses from top down, securing each tile.
 - d. Do not walk on Turret Tile; do not permit damage.
 - e. Roof area to be installed last should, if possible, be the area which is least visible from ground level.
5. To avoid color patterning, checkerboarding, spotting, and stairstepping:
- a. After the installation of each 40 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.
6. 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