SECTION 07 32 00

ROOF TILES

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\*\* NOTE TO SPECIFIER \*\* Eagle Roofing Products Co.; Concrete Roof Tiles and Accessories.  
.  
This section is based on the products of Eagle Roofing Products Co., which is located at:  
Corporate Office 3546 N. Riverside Ave.  
Rialto, CA 92377  
Tel: 800-400-3245  
Email: [request info (lissettep@eagleroofing.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Eagle+Roofing+Products+Co.&coid=44291&rep=&fax=&message=RE:%20Spec%20Question%20(07320erp):%20%20&mf=)  
Web: <https://eagleroofing.com>   
 [ [Click Here](https://www.arcat.com/arcatcos/cos44/arc44291.html) ] for additional information.  
Eagle is a family-owned company that has been in the tile roofing business for over 40 years and is a joint venture of USA Owned Burlingame Industries. Eagle was founded in 1989 with the goal of manufacturing quality concrete roof tile in modern, automated and high-speed plants. As one of the nation's leading manufacturers, Eagle is dedicated to servicing the new construction and remodeling industries worldwide with roof tile and accessories. Eagle also strives to innovate trend setting technologies and products that benefit the environment while helping our customers and their customers. Having earned A+ rating by the Better Business Bureau, Eagle provides customer service, design center and sales support at the local level. Eagle's entire team is dedicated to becoming the industry's tile company of choice - providing the industry with green solutions that increase curb appeal while reducing energy costs. For more information, samples or assistance from Eagle Roofing Products, please visit our website.  
Specifier should verify availability profiles/styles and colors on our website and/or literature; as products vary by region and plants where products are manufactured.  
  
See our SpecWizard: [Click Here](http://www.arcat.com/specwizard/07320erp/index.htm)

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Concrete tile roofing.
    2. Vented roof deck construction for tile roofing.
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 06 10 00 - Rough Carpentry.
    2. Section 07 22 16 - Roof Board Insulation.
    3. Section 07 60 00 - Flashing and Sheet Metal.
    4. Section 07 72 63 - Waste Containment Assemblies.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ASTM International (ASTM):
       1. ASTM A 641 - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.
       2. ASTM C 1492 - Standard Specification for Concrete Roof Tile.
       3. ASTM D 226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing; 1997a.
       4. ASTM D 249 - Standard Specification for Asphalt Roll roofing (Organic Felt) Surfaced with Mineral Granules: 1989 (reapproved 1996).
       5. ASTM D 1970 - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection.
       6. ASTM D 2626 - Standard Specification for Asphalt-Saturated and Coasted Organic Felt Base Sheet Used in Roofing; 1997b.
       7. ASTM D 4798 - Standard Practice for Accelerated Weathering Test Conditions and Procedures for Bituminous Materials (Xenon-Arc Method).
       8. ASTM D 4869 - Standard Specification for Asphalt-Saturated Organic Felt Underlayment Used in Steep Slope Roofing.
    2. CAN/CSA-A220. 1-Series-06 Concrete Roof Tiles.
    3. City of Los Angeles Research Report - LA RR 25021.
    4. FRSA/TRI - Concrete and Clay Roof Tile Installation Manual Fourth Edition (For Outside HVHZ Wind Zones).
    5. High Wind Applications: Florida Refer RAS 118, 119, 120.
    6. ICC ESR 1900 (ICC-ES) International Code Council Evaluation Services.
    7. ICC ESR 2015P Concrete and Clay Roof Tile Installation Manual for Moderate Climate Regions.
    8. ICC AC 180 - Acceptance Criteria for Clay and Concrete Roof Tiles. August 2007.
    9. ICC ER ESR 1787 Flex Seal, Flex Flash, Flex Vent.
    10. Tile Roofing Institute (TRI) - Concrete and Clay Design Criteria for Cold and Snow Regions.
  1. DESIGN REQUIREMENTS

\*\* NOTE TO SPECIFIER \*\* Roof tile conforms to the requirements listed below. Edit as required for the roof tile selected, for regional and project conditions. Consult with Eagle for additional information or assistance.

* + 1. Roofing tile materials and installation shall conform to the requirements of ICC ESR 1900 and LA RR 25021, and the 2015P Tile Roofing Institute Manual.
    2. Roofing tile materials and installation shall conform to the requirements of Miami Dade Country Notice of Acceptance.
    3. Roofing tile materials and installation shall conform to the SCBBI Standard for Hurricane Resistant Residential Construction, SSTD 10-99, the International Building code for One and Two Family Dwelling Code and the Florida Building Code 2012.
    4. Roofing tile materials and installation shall conform to the requirements of the Applicable Building Code.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data for each product to be used including:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Installation methods.
     3. Shop Drawings: Indicate metal flashing profiles, joint locations, fastening locations and installation details. Indicate tile layout with location of cut and special shaped tiles identified.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples: For each finish product specified, submit samples indicating manufacturer's full range of available colors and patterns.
    2. Verification Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
    3. Certificates of Compliance: Submit to certify compliance with referenced standards.
  1. QUALITY ASSURANCE

\*\* NOTE TO SPECIFIER \*\* Insert manufacturer's qualifications. Delete if not required.

* + 1. Manufacturer Qualifications: Member of the Tile Roofing Institute.

\*\* NOTE TO SPECIFIER \*\* Insert installer's qualifications. Delete if not required.

* + 1. Installer Qualifications: License by the local/state authority, and have the proper insurance to operate in your area.
    2. Installation: Refer to the Tile Roofing Institute Installation Manual for Moderate Climate Regions ICC-ES ESR 2015P, FRSA/TRI Concrete and Clay Roof Tile Installation Manual Fourth Edition 07-320-8-05 ICC-SSTD-11 or TAS 101 and RAS 118,119,120 for High Wind Zones (HVHZ).
    3. Compliance Reports for Eagle Roofing Products, Florida Department of Community Affairs Approved Application #FL7473, Miami Dade NOA's:
       1. ICC-ES ESR 1900.
       2. IBC 2012.
       3. IRC 2012.
       4. Fire Classifications.
       5. Weather Resistance.
       6. Wind-uplift Resistance.
       7. NOA 11-0321.01 Malibu.
       8. NOA 11-0321.03 Capistrano.
       9. NOA 12-0430.04 Flat.
       10. NOA 11-1011.05 EagleSeal.
    4. Product Requirements:
       1. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up:
       1. Provide mock-up as required to demonstrate quality of workmanship.
       2. Finish areas designated by Architect.
       3. Do not proceed with remaining work until material and workmanship are approved by Architect.
       4. Modify mock-up area as required to produce acceptable work.
  1. DELIVERY, STORAGE, AND HANDLING
     1. Deliver, handle, and store materials in accordance with manufacturer's instructions.
        1. Refer to the FRSA TRI 07320/8-05 Concrete and Clay Roof Tile Installation Manual Fourth Edition section #1.04.
        2. Refer to roof loading guide MC-09 of the Tile Roofing Institute Installation Manual for Moderate Climate Regions ICC-ES ESR 2015P.
     2. Store products in manufacturer's unopened packaging until ready for installation.
     3. Maintain dry storage area for products of this section until installation of products.
  2. PROJECT CONDITIONS
     1. Anticipate environmental conditions (temperature, humidity, and ventilation) to schedule work within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
  3. WARRANTY
     1. Manufacturer shall warrant the products against manufacturing defects and shall include material and labor to repair or replace defective materials as specified in manufacturer's warranty.
        1. Warranty Period - Concrete Roof Tile: Lifetime Transferable Limited Product Warranty for concrete roof tile.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer:
         1. Eagle Roofing Products - Rialto: 2352 N. Locust Ave., Rialto, CA 92377. ASD. Tel: (800) 400-3245. Fax: (909) 822-5940. Website: www.eagleroofing.com.
         2. Eagle Roofing Products - Stockton: 4555 S. McKinley, Stockton, CA 95206. ASD. Tel: (800) 998-3245. Fax: (209) 234-4366. Website: www.eagleroofing.com.
         3. Eagle Roofing Products - Phoenix: 4602 W. Elwood, Phoenix, AZ 85043. ASD. Tel: (800) 346-5260. Fax: (602) 442-8841. Website: www.eagleroofing.com.
         4. Eagle Roofing Products Florida LLC - Sumterville: 1575 E. C R 470, Sumterville, FL 33585. ASD. Tel: (877) 300-3245. Fax: (877) 300-3248. Website: www.eagleroofing.com.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
  1. TILE
     1. Concrete Roof Tile: As manufactured by Eagle Roofing Products.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Standard Concrete Tile:

\*\* NOTE TO SPECIFIER \*\* A selection of Eagle Cool Roof Tile is approved by the Cool Roof Rating Council (CRRC). Please visit the Eagle website for a list of colors and reflectance, emittance and SRI values. Delete if not required.

* + - 1. Malibu Low Profile Tile:

\*\* NOTE TO SPECIFIER \*\* Lightweight concrete roof tiles are not available in all areas. Delete weight not required. Boosted Cap is an available application and should be specified in addition to Malibu field tile. Delete weight not required.

* + - * 1. Weight: Standard Weight.
        2. Weight: Lightweight.
        3. Product Number/Name: \_\_\_\_\_\_.
        4. Cool Roof Color / Number: \_\_\_\_\_.
        5. Trim Tile: Barrel type.
        6. Trim Tile Color: \_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete if hip starters not required.

* + - * 1. Hip Starters: Barrel.
        2. Hip Starters Color: \_\_\_\_\_\_.
        3. Boosted Cap Color: \_\_\_\_\_\_.
      1. Capistrano High Profile Tile:

\*\* NOTE TO SPECIFIER \*\* Lightweight concrete roof tiles are not available in all areas. Delete weight not required. Boosted Cap is an available application and should be specified in addition to Capistrano field tile. Delete weight not required.

* + - * 1. Weight: Standard Weight.
        2. Weight: Lightweight
        3. Product Number/Name: \_\_\_\_\_\_.
        4. Cool Roof Color / Number: \_\_\_\_\_.
        5. Trim Tile: Barrel type.
        6. Trim Tile Color: \_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete if hip starters not required.

* + - * 1. Hip Starters: Barrel.
        2. Hip Starters Color: \_\_\_\_\_\_.
        3. Boosted Cap Color: \_\_\_\_\_\_.
      1. Bel Air Flat Profile Tile:

\*\* NOTE TO SPECIFIER \*\* Lightweight concrete roof tiles are not available in all areas. Delete weight not required.

* + - * 1. Weight: Standard Weight.
        2. Weight: Lightweight.
        3. Product Number/Name: \_\_\_\_\_\_\_\_.
        4. Cool Roof Color/Number: \_\_\_\_\_\_.
        5. Trim Tile: Flat type.
        6. Trim Tile Color: \_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete if hip starters not required.

* + - * 1. Hip Starters: Flat smooth.
        2. Hip Starters Color: \_\_\_\_\_\_
      1. Estate Flat Profile Tile:

\*\* NOTE TO SPECIFIER \*\* Lightweight concrete roof tiles are not available in all areas. Delete weight not required.

* + - * 1. Weight: Standard Weight.
        2. Weight: Lightweight.
        3. Product Number / Name: \_\_\_\_\_\_ .
        4. Cool Roof Color / Number: \_\_\_\_\_\_.
        5. Trim Tile: Rake/Ridge Type.
        6. Trim Tile Color: \_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete if hip starters not required.

* + - * 1. Hip Starters: Flat smooth
        2. Hip Starters Color: \_\_\_\_\_\_.
      1. Ponderosa Flat Profile Tile:

\*\* NOTE TO SPECIFIER \*\* Lightweight concrete roof tiles are not available in all areas. Delete weight not required.

* + - * 1. Weight: Standard Weight.
        2. Weight: Lightweight.
        3. Product Number / Name: \_\_\_\_\_\_ .
        4. Cool Roof Color / Number: \_\_\_\_\_\_.
        5. Trim Tile: Rake/Ridge Type.
        6. Trim Tile Color: \_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete if hip starters not required.

* + - * 1. Hip Starters: Flat brushed.
        2. Hip Starters Color: \_\_\_\_\_\_.
      1. Golden Eagle Flat Profile Tile:

\*\* NOTE TO SPECIFIER \*\* Lightweight concrete roof tiles are not available in all areas. Delete weight not required.

* + - * 1. Weight: Standard Weight.
        2. Weight: Lightweight.
        3. Profile Name / Number: \_\_\_\_\_\_\_\_ .
        4. Cool Roof Color / Number: \_\_\_\_\_\_.
        5. Trim Tile: Rake/Ridge Type.
        6. Trim Tile Color: \_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete if hip starters not required.

* + - * 1. Hip Starters: Flat brushed.
        2. Hip Starters Color: \_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Double Eagle Bel Air and Double Eagle Ponderosa are not available in all areas.

* + - 1. Double Eagle Bel Air Flat Profile Tile:

\*\* NOTE TO SPECIFIER \*\* Double Eagle Bel Air is not available in all areas. Double Eagle Bel Air not available in Lightweight.

* + - * 1. Weight: Standard weight.
        2. Profile Name / Number: \_\_\_\_\_\_.
        3. Cool Roof Color / Number: \_\_\_\_\_\_.
        4. Trim Tile: Flat type.
        5. Trim Tile Color: \_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete if hip starters not required.

* + - * 1. Hip Starters: Flat smooth.
        2. Hip Starters Color: \_\_\_\_\_\_.
      1. Double Eagle Ponderosa Tile:

\*\* NOTE TO SPECIFIER \*\* Double Eagle Ponderosa is not available in all areas. Lightweight concrete roof tiles are not available in all areas. Delete weight not required.

* + - * 1. Weight: Standard weight.
        2. Weight: Light weight.
        3. Shape: Flat profile.
        4. Color and Finish: \_\_\_\_\_\_.
        5. Trim Tile: Rake/Ridge Type.
        6. Trim Tile Color: \_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Delete if hip starters not required.

* + - * 1. Hip Starters: Flat brushed.
        2. Hip Starters Color: \_\_\_\_\_\_.
  1. RELATED MATERlALS

\*\* NOTE TO SPECIFIER \*\* The Energy Saving Roof is an installation method that increases air flow between the tile and the roof deck. This increased air flow helps to reduce heat transfer into the attic thereby reducing money spent on air conditioning the home/building. Delete if not required.

* + 1. Eagle Energy Saving Roof:
       1. Eave Ventilation: Eagle Roofing Products, Ventilated Bird Stop/Eave Riser.

\*\* NOTE TO SPECIFIER \*\* For low profile tiles, Malibu. White is special order. Delete color snot required.

* + - 1. Eave Riser for Low Profile Tiles:
         1. Color: Black.
         2. Color: Brown.
         3. Color: White (special order).

\*\* NOTE TO SPECIFIER \*\* For high profile tiles, Capistrano, White is special order. Delete colors not required.

* + - 1. Bird Stop for High Profile Tiles:
         1. Color: Black.
         2. Color: Terracotta.
         3. Color: White (special order).

\*\* NOTE TO SPECIFIER \*\* For flat profile tiles, Bel Air, Estate, Ponderosa, Golden Eagle, Double Eagle Bel Air, Double Eagle Ponderosa. White is special order. Delete color not required.

* + - 1. Eave Riser for Flat Profile Tiles:
         1. Color: Black.
         2. Color: Terracotta.
         3. Color: White (special order).

\*\* NOTE TO SPECIFIER \*\* Product for elevating a 1 inch by 2 inch batten off of the roof deck. Helps to improve ventilation under the tile. 1 inch by 2 inch battens must be specified separately.

* + - 1. The Riser for Raised/Elevated Battens: Eagle Roofing Products, The Riser.

\*\* NOTE TO SPECIFIER \*\* This is an elevated riser; additional 1 inch by 2 inch battens should be specified separately. Delete if not required. Not available in Florida.

* + - 1. Batten Type: 1 by 2 inch (25 by 50 mm) wood.

\*\*NOTE TO SPECIFIER\*\* Scalloped Batten: Not available in Florida.

* + - 1. Batten Type: Counter Batten System.

\*\* NOTE TO SPECIFIER \*\* Delete ridge ventilation not required.

* + - 1. Ridge Ventilation: Eagle Roofing Products, Flex Vent.
      2. Ridge Ventilation: Eagle Roofing Products, Ridge Riser. Provide 2 inches by 2 inches (51 mm by 51 mm) ridge board.
    1. Decking: Comply with FRSA/TRI 07320/8.05 Concrete and Clay Tile Installation Manual for Moderate Climate.
    2. Underlayment: Comply with FRSA/TRI Manual Fourth Edition 07320/8-05, Concrete and Clay Tile Installation for Moderate Climate.
    3. Battens:
       1. Nominal 1 inch by 2 inches (25 mm by 51 mm) complying with IBC Chapter 23, section 2302.
       2. Comply with Section #3.11 pages #16-#17 and #82 of the FRSA/TRI 07320/8-05 Concrete and Clay Roof Tile Installation Manual Fourth Edition.
       3. The Riser as manufactured for Eagle Roofing Products, Product Elevating battens off of the roof deck.

\*\* NOTE TO SPECIFIER \*\* Helps to improve ventilation under the tile. 1 by 2 nominal (25 mm by 51 mm) battens much be specified separately. Delete if not required.

* + - 1. The Scalloped Batten as manufactured by Eagle Roofing Products. Product for elevating battens off of the roof deck.
    1. Eave Closure/Riser/Bird Stop: Comply with MC 10, MC-10A, 10B, 10C & or 10D (Tile Roofing Institute Moderate Climate Installation Guide ICC-ES ESR 2015P). Refer to drawings.

\*\* NOTE TO SPECIFIER \*\* For low profile tiles, Malibu. White is special order. Delete colors not required.

* + - 1. Bird Stop for Low Profile Tiles:
         1. Color: Black.
         2. Color: Terracotta.
         3. Color: White (special order).

\*\* NOTE TO SPECIFIER \*\* For high profile tiles, Capistrano, White is special order. Delete colors not required.

* + - 1. Bird Stop for High Profile Tiles:
         1. Color: Black.
         2. Color: Terracotta.
         3. Color: White (special order).

\*\* NOTE TO SPECIFIER \*\* For flat profile tiles, Bel Air, Estate, Ponderosa, Golden Eagle, Double Eagle Bel Air, Double Eagle Ponderosa. White is special order. Delete colors not required.

* + - 1. Eave Riser for Flat Profile Tiles:
         1. Color: Black.
         2. Color: Brown.
         3. Color: White (special order).
    1. Eave Closure/Riser/Bird Stop:
       1. Comply with Section # 2.09 and #2.10 (FRSA TRI 07320/8-05 Fourth Edition installation Guide ICC-ES ESR 2015P). Refer to drawings.
       2. Eagle Roofing Products Eave Riser/Flat Profile:

\*\* NOTE TO SPECIFIER \*\* Delete colors not required.

* + - * 1. Color: Black.
        2. Color: Brown.
        3. Color: Gray.
        4. Color: Red.
        5. Color: Tan.
        6. Color: White.
      1. Eagle Roofing Products Bird Stop Malibu/Low Profile:

\*\* NOTE TO SPECIFIER \*\* Delete colors not required.

* + - * 1. Color: Black.
        2. Color: Brown.
        3. Color: Red.
        4. Color: Tan.
        5. Color: Terracotta.
        6. Color: White.
      1. Eagle Roofing Products Bird Stop Capistrano/High Profile:

\*\* NOTE TO SPECIFIER \*\* Delete colors not required.

* + - * 1. Color: Black.
        2. Color: Brown.
        3. Color: Red.
        4. Color: Tan.
        5. Color: Terracotta.
        6. Color: White.
    1. Rake and Ridge Flashing: Flashing shall be a minimum No. 26 gage Galvanized steel G90 or equal.

\*\* NOTE TO SPECIFIER \*\* For low profile tiles, Malibu. Delete rake style and colors not required.

* + - 1. Standard Metal Rake for Low Profile Tiles:
         1. Color: Black.
         2. Color: Brown.

\*\* NOTE TO SPECIFIER \*\* For flat profile tiles, Bel Air, Estate, Ponderosa, Golden Eagle, Double Eagle Bel Air, Double Eagle Ponderosa. Delete rake style and colors not required.

* + - 1. Standard Metal Rake for Flat Profile Tiles:
         1. Color: Black.
         2. Color: Brown.

\*\* NOTE TO SPECIFIER \*\* For all profiles. Delete if not required. Delete colors not required.

* + - 1. Raised Metal Rake Trim for All Profiles, 1-1/2 inches (38 mm):
         1. Color: Black.
         2. Color: Brown.

\*\* NOTE TO SPECIFIER \*\* For high profile tiles, Capistrano. Delete if not required. Delete colors not required.

* + - 1. Ridge Weather Block for High Profile Tiles:
         1. Color: Black.
         2. Color: Terracotta.
    1. Gable Treatment
       1. Underlayment Wrapped Gable:
          1. Extend underlayment beyond rake/gable end. Fold down onto fascia or barge board, minimum of 1 inch (25 mm). Secure with nails and tin tags, round cap nails or other fasteners 6 inches (152 mm) on center.
          2. Trim underlayment at fascia or barge board. Install a peel and stick underlayment extending underlayment beyond rake/gable end. Fold down and seal onto fascia or barge board.
    2. Rake/Gable Finish:
       1. Rake Gable Tile:
          1. Install first rake tile the exposed length of first course of field tile with factory finish of rake tile towards the eave.
          2. Fasten rake tile with a minimum two 10D nails and /or of sufficient length to penetrate the framing a minimum of 3/4 inch (19 mm).
          3. About each succeeding rake tile to the nose of the field tile above and maintain a constant head lap.
       2. Mortar Finish:
          1. Place mortar bed along roof edge.
          2. Point smooth to a straight edge finish.

\*\* NOTE TO SPECIFIER\*\* For closed valley detail on all flat tiles refer to TRI MC-12B.

* + 1. Valley Flashings:
       1. No. 26 Gauge (G90) Galvanized 24 inches (610 mm) Flashing.
       2. Comply with Tile Roofing Institute Moderate Climate Installation Guide MC 12B.
       3. Comply with FRSA/TRI 07320/8-05 Fourth Edition Installation Guide.
    2. Wall Trays (Pans) Flashing:
       1. No. 26 Gauge (G90) Galvanized minimum 6 inches (152 mm) trough.
       2. Comply with Tile Roofing Institute Moderate Climate Installation Guide MC 12B.
       3. Comply with FRSA/TRI 07320/8-08 Fourth Edition Installation Guide.
    3. Roof to Wall Flashing: No. 26 Gauge (G90) Galvanized or flexible flashing to provide minimum 3 inches (76 mm) coverage.
    4. Pipe Flashing:
       1. No. 26 Gauge (G90) Galvanized deck flashing installed with underlayment.

\*\* NOTE TO SPECIFIER \*\* Delete flashing profile not required.

* + - 1. Flat tile flashing - No. 26 Gauge (G90) Galvanized.
      2. High/Low profile tile flashing - 2-1/2 lb. lead, dead soft aluminum or copper.
    1. In Wall Counter Flashing:
       1. No. 26 Gauge (G90) Galvanized Z-Bar flashing recommended or surface mount ringlet (pin) flashing for reroofing applications.
    2. Tile Fasteners:
       1. Corrosive resistant fastener meeting ASTM A641 Class I or approved equal. Number 11 gauge diameter and of sufficient length to penetrate 3/4 inch (19 mm) into or through the thickness of the deck or the batten. Comply with Tile Roofing Institute Moderate Climate Installation Guide Table 1A and 1B.
       2. Comply with FRSA/TRI 07320/8-05 Fourth Edition Installation Guide.
       3. Screw Fasteners:
          1. Corrosion resistant meeting ASTM A641 Class 1 and/or corrosion resistance equal (according to ASTM B 117). Screws shall be 2-1/2 inches (64 mm) in length or penetrate a minimum 3/4 inch (19 mm) into the deck or batten. ASTM A641 Class 1 is a nail specification that can be converted to screw fasteners through performance testing (ASTM B 117). Each fastener manufacturer is responsible for supplying this support this data. Minimum #8 course thread.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. High Wind Areas:

\*\* NOTE TO SPECIFIER \*\* Please notes special wind requirements in TRI Manuals.  
\*\* NOTE TO SPECIFIER \*\* Delete wind clip style not required.

* + - * 1. Eagle Roofing Products Wind Clips - Low profile, 2-7/8 inches (73 mm).
        2. Eagle Roofing Products Wind Clips - High profile, 3-3/8 inches (86 mm).
        3. Eagle Roofing Products Wind Clips - Flat profile, 2-1/4 inches (57 mm).
        4. Eagle Roofing Products Wind Clips - Flat fascia, 3/4 inch (19 mm).

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Special Application: Boosted Capistrano Installations.

\*\* NOTE TO SPECIFIER \*\* Delete wire tie material not required.

* + - * 1. Wire Ties: Bronze.
        2. Wire Ties: Stainless Steel.
    1. Adhesive/Sealant: Tile adhesive formulated for use with concrete roof tile.
    2. Ventilation: Per local building code requirement.

1. EXECUTION
   1. EXAMINATION
      1. Examine areas to receive tile to verify conditions. Do not commence tile installation until unsatisfactory conditions are corrected.

\*\* NOTE TO SPECIFIER \*\* Delete installation applications not required.

* 1. TILE INSTALLATION
     1. Install in accordance with manufacturer's instructions and the following standards as applicable to the location of the project:
        1. Tile Roofing Institute Moderate Climate Installation Guide ICC-ES ESR 2015P (TRI Guide).
        2. TRI/WSRCA Standard Installation Guides for Concrete and Clay Tile in Cold Weather Applications.
        3. FRSA/TRI 07320/8-05 Fourth Edition Installation Guide ICC-ES ESR 2015P.
        4. Florida High Wind Applications. RAS 118, 119,120.
        5. CAN/CSA-A220. 1-Series-06 Concrete Roof Tiles.
        6. FRSA/TRI 07320/8-05 Fourth Edition Installation Guide.
     2. Roof Layout: Layout according to TRI Guide MC 07, MC 08, MC 08A, MC 09. Roof Layout: Layout according to FRSA/TRI 07320/8-05 Fourth Edition. Refer to section # (3.08, 3.12).
     3. Battens: Install according to TRI Guide Table 1, Table 2, Table 3, MC 04 or MC-05, MC 06, MC 06A. FRSA/TRI 073020/8-05 Fourth Edition. Refer to section #3.11 pages 16-17 and 82.
     4. Underlayment: Install according to TRI Guide MC 01A, MC 01B and manufacturer's instructions. FRSA/TRI 07320/8-05 Fourth Edition. Quick Reference charts on pages 2, 23, 45, 67 and manufacturer's instructions.
     5. Vent Pipes: Install according to TRI Guide MC 02. FRSA/TRI Fourth Edition. See drawings 11,12,12,14 and 11-b, 12-b, and 14-b.
     6. Eave/Gable: Install according to MC 10, MC 10A, MC 10B, MC 20, MC 20A. FRSA/TRI 07320/8-05 Fourth Edition. Refer to section 3.03 for eave and refer to sections 3.05, 3.15 and 4.09 for gable.
     7. Venting: Install according to TRI Guide MC 21, manufacturer's instructions and local code requirements.
     8. Hip and Ridge: Install according to TRI Guide MC 18, MC 18A, MC 18B. FRSA/TRI 07320/8-05 Fourth Edition.
     9. Rake: Install according to TRI Guide MC 19, MC 19A, MC 19B. FRSA/TRI 07320/8-05 Fourth Edition, refer to sections 4.09, 3.14 and 3.18.
     10. Valleys: Install according to TRI Guide MC 03, MC 03A, MC 17, MC 17A, MC 17B, MC 17C, MC 17D. FRSA/TRI 07320/8-05 Fourth Edition, refer to sections 3.05 and 3.04 drawings 3, 4, 5 and 3b, 4b, 5b.
     11. Side Wall Flashing: Install according to TRI Guide MC 12, MC 12A, MC 13, MC 13A. FRSA/TRI 07320/8-05 Fourth Edition drawing 7.
     12. Head and Apron Flashing: Install according to TRI Guide MC 11, MC 11A. FRSA/TRI 07320/8-05 Fourth Edition drawings 8, 9, and 10.
     13. Chimneys: Install according to TRI Guide MC 14, MC 14A, MC 15, MC 15A.
     14. Skylights: Install according to TRI Guide MC 16, MC 16A, MC 16B. Florida. Install in compliance with regular flashing installation procedures. For self curbing or prefabricated skylights, refer to skylight manufacturer's installation instructions.
     15. Gutters: Install according to TRI Guide MC 23. Florida install according to manufacturer's instructions and local code requirements.

\*\* NOTE TO SPECIFIER \*\* Delete application requirements not required.

* 1. SPECIAL APPLICATIONS
     1. Slope changes - Refer to TRI Guide MC 22.
     2. Pre-Engineered Roof - Metal Deck - Refer to TRI Guide MC 25, MC 25A, MC 25B, MC 25C.
     3. Pre-Engineered Roof - Concrete Deck - Refer to TRI Guide MC 26, MC 26A.
     4. Pre-Engineered Roof - Wire Attachment - Refer to TRI Guide MC 27, MC 27A, MC 27B.
     5. Spaced Sheathing - Refer to TRI Guide Appendix B.
     6. Adhesive Fastening - Refer to TRI Guide Appendix B.
     7. Adhesive Fastening Set Tile Guidelines;
        1. FRSA/TRI 07320/8-05 Fourth Edition. System four underlayment Option "A". And system Four Underlayment Option "B".
     8. Mortar Set Tile Guidelines:
        1. Refer to FRSA/TRI 07320/8-05 System Three.
     9. Design for High Wind - Refer to TRI Guide Appendix B. RAS 118, 199,120.
  2. CLEAN-UP
     1. Remove all debris, including any cut dust, from roof daily.
  3. REPAIR AND REPLACEMENT
     1. Comply with requirements of TRI Guide MC 24.
  4. PROTECTION
     1. Protect material and take precautions to prevent other trades from damaging roof materials during and after installation.

END OF SECTION