DIVISION 07–THERMAL & MOISTURE PROTECTION

1 ROOF DETAILS

1.1 All roofing details shall conform to the NRCA (National Roofing Contractors Association) Roofing and Waterproofing Manual.

2 SHEET METAL DETAILS

2.1 All sheet metal details shall conform to the SMACNA (Sheet Metal and Air Conditioning Contractors National Association) Architectural Sheet Metal Manual.

3 ROOF SCHEDULE

3.1 Provide for all roofing to be installed such that any area started shall be completed through installation of aggregate the same day. Water-stops conforming to the NRCA Roofing Manual shall be installed at the end of each day's work to ensure maintenance of the waterproof integrity of the roof membrane.

4 ROOF SERVICE AGREEMENT

4.1 Roof work shall be covered by the Membrane Roofing Service Guarantee described in these standards.

5 INSULATION

5.1 Batt insulation is preferred to blown insulation. Where insulation is installed in roof areas, chicken wire will be used to support the batts within the roof rafters.

5.2 Exterior wall insulation shall be a minimum R-19 and ceiling/roof insulation R-30.

6 CLAY TILE ROOFS

6.1 New roofs shall be sloped Ludowici - 'S' Tile – 13 1/4" tile (9 3/4" x 13 1/4"). Larger size Ludowici 18 3/8" tile (9 ¾" x 18 3/8") may be substituted and approved upon review depending on the mass and scale of the structure.

6.2 Color pattern to match existing roofs (65% Summer Rose, 15% Impressionist Fireflash, and 10% Desert Sand, 10% Clay Red).

6.2.1 Color pattern mix to be approved via mockup by LSU Planning, Design & Construction.

6.2.2 Coordinate with LSU Facility Services to incorporate attic stock tile materials prior to mockup and installation

6.3 Hurricane clips, copper or stainless steel shall be used on all perimeter tiles. Fasten each tile with 2 or 3 nails. Fasten tiles overlapping sheet metal with copper wire and plastic cement.

6.4 Stainless steel hurricane clips shall be used on all tile within 36" of all perimeters. Cut valley tiles shall be notched and wired using 16 gauge solid copper wire without insulation and wired to a fastener driven into the deck beyond the flashing and adhered to adjacent tiles using a polyurethane sealant that is suitable for bonding with clay tiles.

6.5 Nails for tile and cleats shall be copper, 11 gauge, ring shanked, 3/8" headed and proper length to allow minimum ¾" penetration. No penetration is allowed on exposed eaves. Screws for tile shall be stainless steel or brass #8 or #9 and proper length to allow minimum ¾" penetration. Fasten each tile with fastener in each provided hole.

6.6 Hip and ridge tile to have a clear silicone sealant (Dow 790) applied over the nail heads so that the adjacent tile is well adhered to minimize wind uplift. Accessory pieces to include end bands, beveled eaves, flat tops, detached gable rakes, rolled rakes, #102 hip rolls, #206 ridge, #152 LSU hip starter, #206 High Bump Closed Ridge End, #102/#206 High Bump Terminals.

6.7 Flat Interlocking LudoSlate -This tile may be used as an alternative to the Spanish tile above, upon written approval by the University, for reroofing projects and new sloped roof projects whereby design justifies its use. The size shall be 10.

6.8 ¾” x 16” with the exception that the Desert Sand shall be 7” wide. Color pattern shall be same as per above requirements with noted exception for 7” wide tile. Fastening shall be per above requirements. Accessory hip and ridge pieces shall be same as per above requirements.

6.9 Both tile above shall be per ASTM 1167, have a durability of Grade 1, a warranty of 75 years, have a moisture absorption rate of less than 3%, and supplied by a factory that references ISO 9000 certification standards.

6.10 Equal products of other manufacturers submitted shall match Ludowici tile in colors, shapes, textures, sizes and include all accessory pieces as Ludowici products listed. Failure to meet these exact requirements shall be reason for rejection.

7 ROOF SLOPE

7.1 Minimum slope on flat roof re-roofing shall be 1/8” for coal tar pitch and 1/4” for asphalt pitch.

7.2 Underlayment for sloped roofs shall be a Modified Bituminous Self-Adhering Sheet not less than 60 mils thick equal to W.R. Grace and Co, Ice and Water Shield, W.R. Meadows SealTight Mel-Rol, or Pecora Duramem 700-SM.

7.3 Install a 30# asphalt saturated organic felt, un-perforated, over the self-adhering sheet. Underlayment for use under copper and other metals shall be Grace Ultra or equal which is used for high temperatures.

8 METAL ROOFING

8.1 All roof metal work shall be minimum 16 oz. copper, unless otherwise noted. Standing seam metal roofing and accessories shall be installed in accordance with the manufacturer’s specifications and shall be 16” wide by 2” high, 24 gauge baked enamel galvalume steel with a double lock seam capable of withstanding 100 MPH sustained winds.

9 LEAK REPAIRS

9.1 Roofing contractor shall respond within 24 hours to leak repair requests by the University.

10 UNDERGROUND EQUIPMENT PITS

10.1 Underground equipment pits shall have bentonite waterproofing applied to the exterior of the walls.

11 ROOF FEATURES

11.1 The University discourages the use of skylights, sloped glazing and glass atriums.

12 EXTERIOR MASONRY

12.1 Exterior masonry (stucco) shall be finished to conform to STO 10610, Sea Shell, Fine Sand Finish and all caulking shall be a high performance gun-grade polyurethane sealant successfully tested for joint movement of ± 50%. It is to match existing color of masonry being caulked.

13 ROOF HATCHES

13.1 Roof hatches shall be a minimum 3'0" X 3'0", aluminum metal with 1" rigid insulation. Provide hold open arm and one point spring latch with pad locking provisions.

14 ASBESTOS

14.1 All materials, including fireproofing, shall be asbestos-free.

15 ROOF ACCESS

15.1 Buildings with multiple roof levels shall have roof access provided via 1) operable windows, 2) roof hatch, 3) door from attic or stair, or 4) wall mounted hot dipped galvanized steel ladder.