

The Nebraska State Capitol Exterior Masonry Project Copper Roof Restoration

The final phase of the Exterior Masonry Project, the restoration of the copper roof is the first holistic project on the roof since Capitol construction began in 1922. The first modification of the copper roof was done during construction as architects reduced the size of the flat lock copper sheets to increase stability. The original upper roof was copper batten, the outer roof was copper flat lock. Through the years the copper roofs have been changed and reworked. The 1980's saw the application of an asphalt hot roof over the Law Library. In 2002 the southeast quadrant copper roof blew off as a result of high wind and turbulence. When planning the roof restoration phase of the project, contractors and Capitol architects reviewed past experience with copper and other roofing materials and developed the most cost effective plan. The original copper roofing material was 16 oz. and 20 oz. copper; the new roof is all 20 oz. copper sheet copper. The current Copper Roof project, when completed, should serve the citizens of Nebraska and protect the Capitol for 100 years.

The old copper roof was stripped down to the original structural deck and the copper salvaged. Then new 2" X 4" sleepers (1) were screwed to the deck and insulation (2) placed between them. Next a plywood deck (3) which supports and holds the copper roofing as it is nailed down was applied. An ice and water shield, Gracie Fabric (4), was rolled out to cover the plywood.

Rosin paper (5) is placed on top of the waterproofing and the new copper roof is nailed on. The copper batten roof is a series of wooden battens (6) with copper pans (7) nailed in between using special cleats. (8) The wooden battens are capped with copper which is crimped into special slots for stability. Vertical areas (9) on the roof are flashed. Finally all joints are sealed with solder.

