The Dalles Powerhouse Roof Replacement

The Dalles powerhouse was constructed in stages, with 14 units installed initially, followed years later with an additional 8 units. As a result, the powerhouse has an old end and a new end. The roof on the old end is comprised of a 1986 vintage rubber membrane over the original 1955 built-up roofing and insulation. The roof on the new end is comprised of the original 1968 built-up, three ply coal tar roofing over insulation. On the old end and at the expansion joints between units, the membrane is the only thing keeping rain from entering the powerhouse. Currently, the roof has large gaping holes in the membrane where the rain can penetrate into the insulation and soak through to the generators below. Buckets, trays, and plastic bins are placed on the powerhouse floor to catch as much water as possible.

In 1997, an inspection was performed by a roofing contractor. That inspection recommended extensive repairs and partial replacement. No comprehensive action was taken based on that recommendation. In 2009, a full architectural inspection of the roof was completed. That inspection determined that the roof needed to be replaced. A number of concerns were noted, including areas of exposed membrane, many membrane holes and the rock ballast used to cover the roof. Due to the heavy ballast, only obvious sources of water entry have been determined. After the 2009 inspection, a roofing contractor was hired to repair the obvious holes as a temporary fix. The temporary fix did not hold into the current year.

The project will follow the architectural recommendation and replace the entire powerhouse roof and ancillary building roofs (atop the powerhouse roof). The new roof will include new insulation, flashing, caulking, drains and seals. The roofing material will be long lasting, able to withstand heavy foot traffic (in some areas) and resistant to extreme weather conditions.