This project consisted primarily of replacing a large culvert with pre-cast, post-tensioned deck planks and curbs. The project is located approximately 0.48 mile east of Bakerstown Rd. in Poland. Ultraseal 3750 MTO was selected for the deck's waterproofing membrane.

Ultraseal 3750 MTO Bridge Deck Membrane is a hot applied waterproofing compound specially formulated to protect and waterproof bridge decks and parking decks. It is composed of synthetic rubber polymers and inert mineral stabilizers. It may contain reclaimed tire rubber and specifically selected compatible asphalt cement and resins. These materials are homogeneously blended to produce a compound that has excellent low temperature flexibility, elongation, resilience, and adhesion, which will accommodate the movements of thermal cycling and create a waterproof membrane. –Crafco Inc: http://ultrasealproducts.com/waterproofing-system/

The first application of Ultraseal 3750 MTO applied to the deck.

Ultraseal Protection Board is a semi-flexible core board, composed of mineral fortified asphaltic core between two outside layers consisting of an asphalt impregnated fiberglass mat.

Material is heated in a thermostatically controlled melter that uses oil as a heat transfer medium and is equipped with a mechanically operated agitator. The melter should also be equipped with devices for measuring and controlling the temperatures of the heat transfer oil and the waterproofing material. Recommended application temperature is 380-400°F.
Material is packaged in cardboard boxes sized to accommodate a maximum of 40 lbs. Material contained in each box is wrapped in a quick melt liner which is dissolved and incorporated into the melted product. Standard packaging is a 30 lb. box, palletized, 75 boxes per pallet with an approximate net weight of 2,250 lbs.

Hot product is applied by spreading material with a rubber squeegee to obtain the required thickness.

Ultraseal Reinforcing Fabric is a spun bonded polyester fabric designed to be used as a standard reinforcing material for the Ultraseal 3750 MTO waterproofing membrane. It is used over cracks, construction joints and changes-in-place. It is also used between layers of membrane and over the entire area as a reinforced assembly.
Working the sealer into the deck/curb joint.

Placing the protection boards.

MaineDOT Maintenance forces provided the labor for construction of the membrane system.

After the membrane was applied, a 4” (appx.) hot mix asphalt paving course was applied to the deck.

The deck will be inspected in the spring of 2017 as this will mark the end of the second winter of this installation. Special attention will be paid to any signs of blistering and/or cracking of the pavement surface.

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