

McFee Tunnel on the Spruce Railroad Trail

Port Angeles, Washington



The Spruce Railroad Trail follows the historic railroad grade of the Spruce Railroad. The trail is part of the 134-mile long Olympic Discovery Trail which will eventually connect Port Townsend to La Push, Washington. The Spruce Railroad Trail project consisted of reopening a half-mile segment of the original trail along with refurbishing the McFee Tunnel, which runs approximately 450 feet along the trail. The Spruce Railroad Trail is a popular trail in the State of Washington which offers hikers, bicyclists, equestrians and disabled people with a safe alternative to the traffic hazards of US Highway 101 on Lake Crescent's southern shore.

In 1918, during World War I, the U.S. Army Signal Corp built the Spruce Railroad Trail to haul Sitka Spruce to mills for the manufacture of airplanes. Unfortunately, the trail was completed in 1919, a year too late for its intended purpose.

Nearly 70 years after blasting the tunnel mouth shut in the early 1950s, the Western Federal Lands Highway Division (WFLHD) began removing the debris that blocked the opening on the east end of the McFee tunnel. Additionally, work was done to stabilize the nearby rock walls and build a new entrance structure and facade for the tunnel.



In April 2017, the crew blew out the south end of the tunnel which opened the entire tunnel. The next task was to install rock bolts and dowels and install sheet drain in preparation for the shotcrete application.



Following the tunnel prep, workers used shotcrete to cover the inside tunnel walls, reinforcing the strength of the tunnel structure. Unlike concrete, shotcrete does not require shaping into forms. Workers applied shotcrete by pneumatically spraying the mix directly onto the forms followed by around-the-clock moist cure.



BEFORE SHOTCRETE



DURING SHOTCRETE APPLICATION



SHOTCRETE APPLICATION



AFTER SHOTCRETE

The northeast portal Mechanically Stabilized Earth (MSE) wall around the arch pipe was constructed in June 2017. The arch pipe will become the new entrance to the McFee Tunnel. Both the northeast and southeast portal MSE walls were mirror images of each other. Once completed, the northeast portal entrance received a facade reminiscent of the original tunnel.



<- NE Portal



SE Portal ->



On July 15, 2017, the Spruce Railroad Trail and McFee Tunnel was officially opened to the public.

Over 100 people were in attendance for the ribbon cutting, but many more will experience the trail and tunnel, both now and in the future.