

Central Pacific Transcontinental Railroad, Tunnel 34
Southern Pacific Donner Pass Route Tunnels
Milepost 145.4
Colfax vicinity
Placer County
California

HAER No. CA-206

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Western Region
Department of the Interior
San Francisco, CA 94107

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HISTORIC AMERICAN ENGINEERING RECORD

CENTRAL PACIFIC TRANSCONTINENTAL RAILROAD, TUNNEL 34

HAER No. CA-206

Location: Southern Pacific Donner Pass Route Tunnels
Milepost 145.4, Colfax vicinity, Placer County, California

UTM: 10-678980-4331310
Quad: Colfax, Calif. 7.5', 1949 (photorevised 1973)
(west portal)

UTM: 10-678995-4331440
Quad: Colfax, Calif. 7.5', 1949 (photorevised 1973)
(east portal)

Date of Construction: 1913.

Engineer: Southern Pacific Railroad Engineering Department.

Present Owner: Union Pacific Railroad, 1416 Dodge Street, Omaha NE 68101.

Present Use: Railroad Tunnel.

Significance: The Central Pacific First Transcontinental Railroad is a segment of the western half of the first transcontinental railroad, built from Sacramento, California to Promontory Summit, Utah between 1863 and 1869, where it joined the Union Pacific Railroad which had built west from Omaha. For the purpose of the current project, the first transcontinental railroad was found likely to be eligible for the National Register of Historic Places at the national level of significance under Criterion A for its significance in transportation history, in uniting the East and the West, and in the development of the West. The railroad's period of significance is 1869 to 1945, from the line's completion in 1869, through the years of its role in the settlement and development of the West, to the conclusion of the railroad's achievements in World War II. Tunnel 34 is a contributive element of this historic property.

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I. DESCRIPTION

Tunnel 34 is a 410-foot, double track railroad tunnel, with reinforced concrete portal faces, and granite ashlar voussoirs, belt courses and coping, and wingwalls. As-built, the tunnel carried both eastbound and westbound mainlines; in 1929 the tunnel was single-tracked to carry only westbound traffic. The tunnel is on a six degree, fifteen minute left curve, and carries the westbound tracks of the Union Pacific Railroad's (formerly Southern Pacific) Donner Pass line.

II. HISTORICAL INFORMATION

When the Central Pacific built the first transcontinental rail line over the Sierra Nevada in 1863-1869, expediency stemming from time considerations and from the hand labor used to build the line forced a circuitous route that, wherever possible, hugged the outside slopes of hills to maintain reasonable grades in the climb over the mountain rampart. The builders were able to avoid tunneling until they had nearly reached Blue Cañon, more than seventy miles from Sacramento. There they built Tunnel 1 (HAER CA-207), and sequentially numbered the tunnels following to the east as they pushed the tracks toward Promontory Summit and the May 1869 meeting with the Union Pacific.

Well west of original Tunnel 1, the Southern Pacific built Tunnel 34 as an element of the reconstruction and double-tracking of the original Central Pacific line between Colfax and Blue Cañon. [For a full history of this line and of this undertaking, see the documentation set for the Central Pacific Transcontinental Railroad (Southern Pacific Overland Route) (Southern Pacific Donner Pass Route), Southern Pacific Donner Pass Route Tunnels, HAER No. CA-196.] After assuming control of the Southern Pacific/Central Pacific and merging them with the Union Pacific in 1901, Edward H. Harriman had embarked on a series of huge reconstruction projects system-wide. One of these was the double-tracking of the original Central Pacific line over Donner Pass, the first segment of which was from Rocklin to Colfax, with the second segment east from Colfax to Blue Cañon.

When Central Pacific's construction crews pushed east beyond Colfax in 1865, they soon reached Cape Horn, a south-facing rocky promontory looking down nearly 2,000 vertical feet into the canyon of the American River. Chinese construction workers, lowered down the face of the cliff in baskets, carved the roadbed from the point to carry the tracks first along the west slope, then around the south end where they continued along the east slope. When regular train service began in 1869, and for years thereafter, the railroad stopped every passenger train for ten minutes at Cape Horn so that patrons could marvel at the vista, and wonder at the accomplishment of having built a railroad there. Nearly half a century later, the construction crews building the second track east from Colfax had far different tools available. When they reached Cape Horn, they bored two double-track tunnels through the promontory, Tunnel 33 at 1,331 feet through the end of Cape Horn, and Tunnel 34 a short distance further on. The railroad had designed the new alignment to carry both east- and westbound traffic. In the event, the grade of the new line proved too steep for eastbound trains, even with the heavy locomotives of the day, and so in 1929 the railroad bowed to the reality of gravity and removed one track. Eastbound trains instead used the old Central Pacific alignment around Cape Horn, and westbound trains drifted down a single-track through tunnels big enough for two tracks.

III. SOURCES

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"The Days When The Central Pacific Was Young," *Southern Pacific Bulletin*, 9:5, May 1920.

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United States Geological Survey. Topographic map. Colfax, Calif. quadrangle, 7.5' series, 1949 (photorevised 1973).

IV. PROJECT INFORMATION

As a result of the 1996 merger of the Union Pacific and Southern Pacific Railroads, a federal undertaking under the jurisdiction of the Surface Transportation Board of the U.S. Department of Transportation, and in order to accommodate freight trains utilizing longer and taller cars and loads--tri-level auto rack ears and cars carrying double-stacked containers, the Union Pacific will need to increase tunnel clearances on the former Southern Pacific Donner Pass Route. The tunnels, built between 1868 and 1925, are contributing elements of the National Register-eligible Southern Pacific Donner Pass Route Tunnels Historic District. All tunnels have been laser-

measured and the railroad will determine clearance needs on a tunnel-by-tunnel basis. Some, because of curved alignment, will require interior work to allow for longer cars such as tri-level auto rack cars; others will require both interior and portal work to provide sufficient vertical clearance for "double-stack" container cars. The latter work may impact the character-defining tunnel portals if crown mining of the tunnels (as opposed to lowering the tunnel floors) is selected. Inasmuch as this would cause an adverse effect to the tunnels, Union Pacific has elected to record the tunnels for the Historic American Engineering Record. Documentation was carried out by P.S. Preservation Services, John Snyder Field Director and Historian, and Ed Andersen, Photographer. Photos were made in August 1997, and research was carried out from August 1997 through March 1998.