

NTH 10 Bridge Project Description

The County of San Bernardino (County), in coordination with the California Department of Transportation (Caltrans), is proposing to replace 10 bridges on the National Trails Highway (NTH), also known as U.S. Route 66. The project is located in the unincorporated communities of Amboy and Essex in the County of San Bernardino. A summary of the existing 10 bridges including their length, width, spans and locations is listed below.

Bridge Name	Bridge Number	Existing Bridge Length	Existing Bridge Width	Original Number of Spans (Current Spans)	Location
Bristol Ditch	54C0272	40 feet	28 feet	2(2)	26.7 miles east of Crucero Rd
Cerro Ditch	54C0275	40 feet	28 feet	2(4)	1.3 miles east of Amboy Rd
Gordo Ditch	54C0276	40 feet	28 feet	2(4)	1.8 miles east of Amboy Rd
Cerulia Ditch	54C0277	40 feet	28 feet	2(4)	2.2 miles east of Amboy Rd
Leith Ditch	54C0279	40 feet	28 feet	2(4)	3.1 miles east of Amboy Rd
Terra Ditch	54C0280	40 feet	28 feet	2(4)	3.6 miles east of Amboy Rd
Sombra Ditch	54C0281	78 feet	28 feet	4(8)	4.1 miles east of Amboy Rd
Beacon Ditch	54C0282	40 feet	28 feet	2(4)	6.2 miles east of Amboy Rd
Larissa Ditch	54C0284	40 feet	27 feet	2(4)	1.1 miles east of Kelbaker Rd
Adena Ditch	54C0315	59 feet	28 feet	3(3)	21.9 miles east of Kelbaker Rd

The existing bridges were constructed in 1930 with simple timber girders and a continuous cast-in-place/reinforced concrete deck. The bridges span over various manmade ditches that were created to channel surface drainage flows. The bridges are supported on closed-end backfilled timber pile extension strutted abutments and timber pile extension bents. They now have asphalt overlays. At Cerro, Gordo, Cerulia, Leith, Terra, Sombra, Beacon and Larissa supplemental timber bents and columns were installed at the midspan doubling the number of supports and spans at these bridges. All ten existing bridges are classified Structurally Deficient and have sufficiency ratings from 22.2 to 61.2. All but Bristol Ditch has a sufficiency rating below 50.

The existing bridges are proposed to be replaced with reinforced concrete bridges. The existing soil is sandy and susceptible to scour, so pile extensions would be utilized at the piers and the abutment foundation would be supported on piles. The bridge barrier would be steel California ST-75 Bridge Rail painted white which is Manual for Assessing Safety Hardware (MASH)

approved and best matches the existing railing. The bridge lengths would match the existing lengths if possible, but would be lengthened as needed to convey the storm flows. The width of each replacement bridge would be 40 feet to accommodate two 12-foot lanes, two 6-foot shoulders and the 2-foot railing. The vertical profile of the bridges will remain close to the existing profile except for those bridges locations in which it is determined that additional vertical clearance is required to provide sufficient water conveyance beneath the bridge. It is anticipated that any such necessary changes in vertical profiles would be 2 feet or less, with the elevation gradually conforming to the existing roadway elevations.

The National Trails Highway is posted at a speed limit of 55 miles per hour, with all the bridges located on straight segments of the road. The alignment would remain unchanged; however, approach road work, up to 800 feet, on either side of each bridge may be needed to conform to the existing roadway vertical profile. Grading along the approaches and around the bridges may be needed to ensure storm conveyance and drainage of the area.

Temporary low-water crossing detours would be constructed to accommodate through-traffic during construction. Construction of each bridge replacement is expected to be completed in one season, limiting the time the detour would be in place to one season as well.

Permanent acquisition of right-of-way is not anticipated to be needed; however, temporary construction easements may be needed to accommodate construction of the temporary detour routes.

The existing utilities include a fiber optic telecommunication line and a solar powered local utility line. Both of these utilities may require relocation as part of this project. All utility relocations would be included within the defined limits of the 10 Bridges project area.

Typical equipment for roadway construction would include heavy construction earthmoving equipment, dump trucks and pavers. Typical bridge construction equipment would include cranes, pile drivers, excavators, and concrete pumps.

Purpose

The purpose of the National Trails Highway 10 Bridge Replacement Project is to replace structurally deficient bridges in order to:

- Enhance safety on National Trails Highway by providing new vehicular crossings for 10 bridges;
- Provide a transportation facility consistent with County and Caltrans Standards, as well as local and regional plans.

Need

The existing National Trails Highway Bridges are rated “Structurally Deficient” by Caltrans under Federal Highway Administration prescribed inspection criteria. Full replacement of the bridges is needed because the current structures do not meet structural design standards.