

Memorandum

To: Aaron P. Burton
Senior Environmental Planner
Local Assistance – Environmental Support
Department of Transportation, District 8

Date: March 28, 2020
File No: (Riv-Chuckwalla Valley Rd-Local)
(Dist. 8 – FPN BRLO-
5956[239][227][226][225])
Chuckwalla Valley Road Bridges Replacement
Project

From: Theresa Dickerson
Supervising Environmental Planner
WSP USA
(714) 564-2760

Subject: Scenic Resources Evaluation and Visual Impact Assessment

The purpose of this memorandum is to document the evaluation conducted to assess the visual and aesthetic effects of the Chuckwalla Valley Road Bridge Replacement Project (Project) on the existing visual environment. The analysis follows the guidance provided by Caltrans' Standard Environmental Reference Chapter 27 – Visual and Aesthetics Review, as well as the guidance outlined in the publication *Visual Impact Assessment for Highway Projects* published by the Federal Highway Administration in January 2015¹. The analysis considers the site-specific visual context and aesthetic character of the affected area, existing visual and aesthetic resources, visibility of project elements, changes to existing visual resources and to site aesthetics and the sensitivity of identified viewers to determine the extent to which the project may affect the visual environment. The Project is not within an officially designated State Scenic Highway; therefore, a Scenic Resource Evaluation was not conducted. However, the analysis does consider the effects of the Project on scenic and aesthetic resources where they exist within the project corridor.

Caltrans Visual Impact Assessment (VIA) Questionnaire was completed in February 2019 as part of the Preliminary Environmental Study for the project to determine the appropriate level of VIA documentation. The VIA score for the Project was 14. Based on the VIA Questionnaire scoring metric, a brief memorandum is the appropriate level of VIA documentation for the Project (projects scoring between 10 to 14 are considered to have the potential for negligible visual changes).

¹ https://www.environment.fhwa.dot.gov/env_topics/other_topics/VIA_Guidelines_for_Highway_Projects.aspx#chap53

Project Location

The Project is in Chuckwalla Valley in Eastern Riverside County, located on Chuckwalla Valley Road between Desert Center and Blythe (**Figure 1. Location Map**). The western end of Chuckwalla Valley Road begins as an exit off of the Interstate 10 (I-10) freeway approximately 10 miles west of the I-10 and California State Route 177 interchange and approximately 17 miles south of the Desert Center Airport and Chuckwalla Valley Raceway if travelling by highway. The segment of Chuckwalla Valley Road that is the subject of the proposed project is situated south of I-10 between Corn Springs Road and Ford Dry Lake Road and runs nearly perpendicular to I-10.

Project Description

The County of Riverside (County), in cooperation with California Department of Transportation (Caltrans), proposes to replace the following four (4) existing structurally deficient timber bridges along Chuckwalla Valley Road near Desert Center in Riverside County, California:

- Chuckwalla Valley Road Bridge over Aztec Ditch (Br. No. 56C0102) (Federal Aid Project No. BRLO-5956(239))
- Chuckwalla Valley Road Bridge over Tarantula Ditch (Br. No. 56C0103) (Federal Aid Project No. BRLO-5956(227))
- Chuckwalla Valley Road Bridge over Sutro Ditch (Br. No. 56C0104) (Federal Aid Project No. BRLO-5956(226))
- Chuckwalla Valley Road Bridge over Acari Ditch (Br. No. 56C0108) (Federal Aid Project No. BRLO-5956(225))

Chuckwalla Valley Road is an approximately 16-mile stretch of frontage road that runs parallel to Interstate 10 (I-10). It connects Corn Springs Road and I-10 at the west end and Ford Dry Lake Road and I-10 at the east end. Classified as a Local Rural Road, it mostly serves vehicles accessing local utilities and off-road recreation. The average daily traffic (ADT) volume is approximately 40 vehicles. Periodically, the road carries detoured traffic from the heavily traveled I-10 when the freeway is temporarily closed for construction or emergency incidents. Therefore, it is important to maintain this frontage road in sound condition at all times.

The existing timber bridges carry two lanes (one lane in each direction) of traffic over the Aztec, Tarantula, Sutro and Acari ditches. The timber bridges range from 41 feet to 60 feet in length and are approximately 24 feet and 8 inches wide from curb-to-curb. Currently, load restrictions posted on the four bridges limit the vehicular load-carrying capacity below normal standards.

The bridges are listed in the federal Eligible Bridge List (EBL) as "Structurally Deficient (SD)" with a low Sufficiency Rating (SR) between 39.3 and 49.2. A sufficiency rating is essentially an overall rating of a functional/geometric obsolescence, and its essentiality to the public. A low sufficiency rating may be due to structural defects, narrow lanes, low vertical clearance, or any of many possible issues. A bridge is healthy when its SR is more than 80.0. Bridges with SR equal to or less than 80.0 and more than 50.0 require rehabilitation or widening. When the SR falls below 50.0, bridge replacement shall be considered for public safety.

Figure 1. Location Map



The proposed project will replace the existing 2-lane timber bridges with new 2-lane modern bridges with a curb-to-curb roadway width of 32 feet at the same locations. The proposed road width would consist of two 12-foot-wide travel lanes, one lane in each direction, and a 4-foot-wide shoulder on each side. Modern traffic barriers/railings meeting current CALTRANS safety design standards would be constructed. The proposed bridges would be approximately 60 to 80 feet long depending on the channel hydraulic capacity and water surface freeboard requirements. Raising the elevation of the bridges is not anticipated. However, if raising the bridge elevation is found to be necessary to meet freeboard requirements, the total vertical increase is not anticipated to exceed one foot. Additionally, approach roadway improvements would be provided and channel improvements would be administered to avoid future scour problems. It is envisioned that the channel bottom will remain earthen.

The existing bridges do not carry any utilities and the proposed bridge construction is not expected to include new utilities. A telephone line runs along the north side of the project area and may conflict with the bridge wing walls at Aztec and Sutro ditches. Further coordination with the utility provider will determine whether relocation will be required.

All construction activities would be conducted within the existing roadway right of way with construction staging and material laydown areas on the roadway itself. Chuckwalla Valley Road between the Corn Springs Road intersection to 6.3 miles east of the intersection would be closed during construction. The duration of construction is anticipated to be about 18 months. It is envisioned that all four bridges will be either constructed at the same time or staged in sequence depending on the finding of available access to adjacent utilities and properties. A Traffic Management Plan (TMP) would be prepared to address closure of the road and access to local utilities and properties.

Project Setting

Chuckwalla Valley is a large desert valley bound by the distinctive ridgelines of the Chuckwalla and Palen Mountains. The project corridor is characterized by rural, relatively undisturbed natural open space, encompassing ephemeral sandy channels and desert vegetative communities. Due to high winds within the project corridor, most vegetation across the landscape is low lying scrub. The low-lying scrub tends to grow in clusters among the rocky, slightly sloped edges of the alluvial channels. Small trees, such as palo verde, are scattered closest to the edges of Chuckwalla Valley Road. The channel bottoms are composed of coarse sandy soil splays from past rain events. The channel bottoms have no vegetation or are sparsely vegetated with species from the adjacent creosote bush scrub.

Land use within the project corridor is primarily rural open space. The built setting is comprised of transportation and utility infrastructure, such as Chuckwalla Valley Road, I-10, utility poles and solar panels. From Chuckwalla Valley Road, locally recognized and visually prominent natural and built features, such as the Little Chuckwalla and Palen Mountains (background views), utility poles and power lines (mid-ground views) and low-lying desert scrub (foreground views) are visible. Views from the bridges include the distant skyline, large utility poles running parallel to the roadway, local mountain ranges, and large-scale vegetation clustered alongside the channel edges. Chuckwalla Valley Road is classified as a local rural road and has no streetlights or sidewalk improvements. The roadway is unstriped with weathered asphalt paving.

Views of the bridge structures themselves are limited as they are not elevated and essentially can only be seen from the floor of the ditches. Barriers consisting of both rusted metal and paint-chipped wood are

visible along the roadway edges at the bridge structures, which are the only features that identify the bridge structures as such from Chuckwalla Valley Road.

Aztec Ditch Bridge is situated approximately 3 feet above the wash floor, supported by log piles treated with tar or creosote that are arranged against concrete abutments. The superstructure consists of a concrete deck covered with asphalt with timber posts lining the sides of the deck which support the metal guardrails. The structure appears to be in good condition. (See Figure 2. View from Bridge over Aztec Ditch).

Tarantula Ditch Bridge is situated approximately 3 feet above the wash floor, supported by log piles treated with tar or creosote arranged against timber abutments. The superstructure consists of a laminated wood and concrete deck, with timber posts lining the deck that support timber guardrails. The structure appears to be in good condition with some checks and staining in the wood. (See Figure 3. View from Bridge over Tarantula Ditch).

Sutro Ditch Bridge is situated approximately 3 feet above the wash floor, supported by log piles treated with tar or creosote arranged against timber abutments. The superstructure consists of a laminated wood and concrete deck, with timber posts lining the deck that support timber guardrails. Metal guardrails on wooden posts also lead to the bridge at the road approaches. The structure appears to be in good condition with some checks and staining in the wood. (See Figure 4. View from Bridge over Sutro Ditch).

Acari Ditch Bridge is situated approximately 7 feet above the wash floor, supported by redwood log piles treated with tar or creosote arranged against concrete abutments. The superstructure consists of a concrete deck covered with asphalt, with timber posts lining the deck that supports metal guardrails. Metal guardrails on wooden posts also lead to the bridge at the road approaches. The structure appears to be in good condition. (See Figure 5. View from Bridge over Acari Ditch).

The bridges' substructure materials and construction style are characteristic of the time at which they were built (1931). Likewise, the wooden barriers/railings along the bridge deck portray a character reminiscent of past eras. As seen from the channel washes, the bridges add to the rural character and unique past of the area. From the roadway itself, the bridges are less notable.

Visual Resources

Chuckwalla Valley Road is an orphaned segment of an early transcontinental highway through Chuckwalla Valley, originally signed as U.S. Highway 60/70. Segments of the roadway have been previously recorded and designated eligible for listing in the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR) as an important transcontinental route with a period of significance from 1931 (construction) to 1967 when I-10 was constructed and orphaned the road. The Bureau of Land Management and State Historic Preservation Officer concurred with the findings under Criterion A. The roadway, including associated 'C' monuments (concrete right-of-way markers) and diversion dikes, mark a similar road alignment that was in use since at least 1926. The present alignment has been in use since at least 1936. Chuckwalla Valley Road was severed from the original highway alignment sometime between 1955 and 1978 when I-10 was completed leaving this original segment of 60/70 in use as a frontage road. In 2015, the primary historic record for Chuckwalla Valley Road was updated to reflect the road, as well as road-related infrastructure (bridges, culverts, and dikes), as a historic district.

Figure 2. View from Bridge over Aztec Ditch

View Approaching Aztec Bridge



View from Aztec Ditch



Source: CNS, November 2018

Figure 3. View from Bridge over Tarantula Ditch

View from Tarantula Bridge



View from Tarantula Ditch



Source: CNS, November 2018

Figure 4. View from Bridge over Sutro Ditch

View from Sutro Bridge



View from Sutro Ditch



Source: CNS, November 2018

Figure 5. View from Bridge over Acari Ditch

View from Acari Bridge



View from Acari Ditch



Source: CNS, November 2018

Chuckwalla Valley Road is not an officially designated State Scenic Highway. The I-10 freeway is eligible for inclusion in the State Scenic Highway System but is not officially designated as a State Scenic Highway. No officially designated scenic vistas have been identified for the Project. However, the following features are notable visual elements within the project corridor.

Chuckwalla Valley, named after a large lizard found in the arid Southwestern United States, supports a diverse range of plants, animals and landforms. Notable for its sand dunes, intermittent dry or saline lakes and broad alluvial slopes known as bajadas, Chuckwalla Valley is home to blooming wildflowers and a variety of wildlife including bobcats and tortoises. The Upper Chuckwalla Valley is home to Joshua Tree National Park, Desert Lily Sanctuary and Desert Center, a tiny desert town that still maintains its old-time charm. The rolling sand dunes of the valley are punctuated by the stark Eagle, Coxcomb and Chuckwalla mountains².

Within the project corridor, Chuckwalla Valley displays a huge vista of open desert dotted with the occasional utility tower or large-scale shrub that lines the many alluvial washes. The Chuckwalla, Little Chuckwalla and Palen Mountains are visually prominent features within the project corridor and are visible in background views from the roadway. These local mountain ranges surround the project corridor and provide a distinct backdrop to the flat, open valley floor.

Viewers

Viewers within the project corridor consist of travelers on Chuckwalla Valley Road, which include utility crews working in or traveling through the project corridor, recreationists, and occasionally I-10 traffic. The roadway is not visible from I-10 and there are no ‘neighbors’ (residents, commercial or office complexes) adjacent to the roadway. Viewers are considered to have various levels of sensitivity to visual changes based on their relationship to the project and visual preferences. For example, residents are usually considered to have a high level of sensitivity to visual changes due to their proximity to the changes, duration in which they view the changes (every day) and visual expectations (sense of ownership of views and desire for aesthetically pleasant surroundings). Travelers are considered to have low to moderate sensitivity to visual changes based on the duration in which they can see the changes (speed of travel), familiarity with existing conditions (commuter who sees the same stretch of roadway every day would be more familiar with existing views) and visual preference (expectations for visual order, harmony and coherence). Visual sensitivity is typically expressed as a scale from low to high with the mid-range being moderate-low, moderate and moderate-high.

Travelers on Chuckwalla Valley Road consist of motorists with slightly differing purposes – working, recreating, commuting, touring. Considering these varied purposes and anticipated familiarity with the roadway and area this viewer group was considered to have a low to moderate sensitivity to visual changes.

² County of Riverside. General Plan: Desert Center Area Plan. October 2011.

Project Impacts

The proposed project will remove the existing bridges in their entirety and replace them with modern concrete structures. Work will include improvements to the bridge approaches, upgrades to the existing barriers/railings to meet current Caltrans standards and installation of new bridge footings and riprap within the channel. Riprap is proposed to be installed along the downstream channel slopes and in a portion of the wash bed to address erosion and scour issues. The riprap would be composed of a type of stone material native to the Chuckwalla Valley area. The new bridge structures would be located at the same locations and would have similar horizontal and vertical profiles as the existing bridges. The bridge decks would have a slightly wider profile to accommodate standard lane and shoulder widths (current width is 24 feet 8 inches, new width would be 32 feet standard). Raising the bridge elevations to meet freeboard requirements is not anticipated. However, if raised elevations are found to be necessary, the total vertical increase is not anticipated to exceed one foot for any of the bridges. It is expected that some vegetation adjacent to the bridges and/or within the channel washes may be removed in the process of demolishing the existing bridges and constructing the proposed improvements where it conflicts with these activities. Post-construction disturbed areas within undeveloped, upland areas would be hydroseeded with native seed mix.

None of the proposed changes would block existing views of the local mountain ranges or horizon or affect the quality and vividness of views within the project corridor. The proposed project would replace the existing timber bridges with concrete elements, upgrade the barriers/railings to meet current Caltrans safety design standards and resurface the roadway approaches with new asphalt; however, the roadway would not be realigned and the bridges would maintain a similar height, width and length. The upgrades would not affect the overall setting of a remote desert landscape devoid of significant urban or residential development. To assist in maintaining the historic appearance of the bridge structures, Caltrans Modified Type 85 Barrier that includes openings, vertical supporting posts, and horizontal beams would be used for the bridge barriers/guardrails. The concrete surfaces of the barriers/guardrails would receive form-liner wood texture and be painted white to resemble the existing condition. The metal guardrail at each bridge corner of the road approaches would also be painted in white.

Chuckwalla Valley Road between Corn Springs Road intersection to 6.3 miles east of the intersection would be closed for approximately 18 months (duration of construction). During construction, equipment, workers, material stockpiles and other construction related elements would be present within the project corridor. Directional and informational signs would be visible at Corn Springs Road and Dupont Road for motorists approaching the closed roadway segment for access to campsites, utilities or other facilities within the project area. Motorists would not have access to the project corridor during construction as the roadway would be closed, therefore views of construction activities would be limited.

Utility crews and recreationists may have some exposure to construction activities should they access the surrounding area during the 18-month construction period. These travelers are expected to have a low to moderate response to construction activities since exposure would be limited and short-term, and their focus is expected to be on navigating the desert terrain and locating their primary destination. I-10 motorists would not be exposed to construction activities as the roadway would be closed for use as a bypass during construction. Nighttime construction is not anticipated; therefore, night lighting and glare would not be an issue for viewers.

Once construction is completed, the existing 2-lane timber bridges would be replaced with new 2-lane modern bridges. The bridges would appear newer and modern, particularly because the current roadway conditions show aging and weathering from the extreme desert conditions. Immediately following construction, travelers may notice the change due to the contrast between the weathered and aged materials and newer materials and are anticipated to have a moderate reaction. However, over time this reaction is expected to be reduced as the roadway and bridge elements begin to age. Travelers may also notice the vegetation removal, particularly if the relatively large-scale vegetation immediately adjacent to the bridges is removed. However, the limited vegetation removal is not expected to greatly affect the overall visual quality or integrity of the desert landscape. Once the proposed project is completed, upland areas that were disturbed during construction would be hydroseeded with native seed mix.

Avoidance and Minimization Measures

During construction the project would implement standard best management practices (BMPs) to address general housekeeping and practices for reducing the visual effects of construction activities to the extent feasible. These include:

- Preserving existing vegetation where feasible,
- Using existing roadway right-of-way for storage and laydown areas,
- Limiting construction to daylight hours, and
- Minimizing the use of lighting to only what is required for directional and safety purposes.

Once construction is completed the general character and aesthetic quality of the roadway and bridge structures are expected to be compatible with the existing visual character of the landscape. The impact to sensitive viewers within the corridor would be low and over time is not expected to result in a negative reaction from viewers as the improvements weather and age. Therefore, no avoidance or minimization measures are recommended.

Conclusion

The project would not affect scenic resources (views of the valley landscape, mountains, distant horizon) within the project corridor or impact officially designated scenic vistas, resources or highways as none exist within the corridor. Modification of the bridge structures would not affect the overall aesthetic rural, desert setting of Chuckwalla Valley Road or change the location, elevation or length of the roadway.

As the new modern bridges would be similar in size, alignment and elevation to the existing timber bridges they are not expected to affect the overall visual quality of the existing corridor, block existing views or negatively affect viewers. Viewers would have low to moderate responses to the proposed changes with those responses being reduced over time as the newer materials age and blend into the desert landscape.

James Lu

From: Tolentino, Cesar <CTolenti@RIVCO.ORG>
Sent: Tuesday, April 7, 2020 10:11 AM
To: James Lu; Ahmed, Umer
Subject: FW: RCTD - 5956(225...)/Chuckwalla - VIA Memo Approved
Attachments: Re: RCTD - 5956(225) - VIA Memo Review Request (16.2 KB)

Follow Up Flag: Follow up
Flag Status: Flagged

Fyi.

Cesar Tolentino, P.E.
Engineering Project Manager
(951) 955-1520
ctolenti@rivco.org

How are we doing? [Ctrl + Click the link to tell us](#)

From: Burton, Aaron P@DOT [mailto:aaron.burton@dot.ca.gov]
Sent: Tuesday, April 7, 2020 9:00 AM
To: Tolentino, Cesar <CTolenti@RIVCO.ORG>; Dickerson, Theresa <Theresa.Dickerson@wsp.com>; Segovia, Frances <FSEGOVIA@RIVCO.ORG>
Subject: RCTD - 5956(225...)/Chuckwalla - VIA Memo Approved

CAUTION: This email originated externally from the **Riverside County** email system.
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Good morning All,

Caltrans reviewed and approved the VIA Memo for Chuckwalla. Please see attached. Thanks!

Aaron P. Burton
Senior Environmental Planner
Local Assistance – Environmental Support
Department of Transportation, District 8
464 West Fourth Street, 6th Floor, MS 760
San Bernardino, CA 92401-1400
(909) 383-2841

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[County of Riverside California](#)

James Lu

From: Anderson, Jared@DOT <Jared.Anderson@dot.ca.gov>
Sent: Tuesday, April 7, 2020 8:50 AM
To: Burton, Aaron P@DOT
Subject: Re: RCTD - 5956(225) - VIA Memo Review Request

Alrighty then. Thanks.

Review of revised VIA complete.

-Jared

From: Burton, Aaron P@DOT <aaron.burton@dot.ca.gov>
Sent: Tuesday, April 7, 2020 8:46 AM
To: Anderson, Jared@DOT <Jared.Anderson@dot.ca.gov>
Subject: RE: RCTD - 5956(225) - VIA Memo Review Request

Hi Jared,

You nailed it...historic feature. This bridge was built at the same time as the bridges along Route 66 (1930-33) and have similar design features. Since the original bridge has white railing, they would like to maintain this feature with the new bridge.

Sincerely,

Aaron P. Burton
Senior Environmental Planner
Local Assistance – Environmental Support
Department of Transportation, District 8
464 West Fourth Street, 6th Floor, MS 760
San Bernardino, CA 92401-1400
(909) 383-2841

From: Anderson, Jared@DOT <Jared.Anderson@dot.ca.gov>
Sent: Tuesday, April 7, 2020 8:37 AM
To: Burton, Aaron P@DOT <aaron.burton@dot.ca.gov>
Subject: Fw: RCTD - 5956(225) - VIA Memo Review Request

Hi Aaron,

I reviewed the revised VIA. I had a comment on the first review regarding the painting of the bridge white, asking if there was a need for white painted top rails. I understand the existing ones are painted white, but don't think this is a safety requirement for new bridges.

Do you know of a reason why these would have to be painted white? Historical elements? We would prefer if the rails were just stained brown to look like wood and blend in with the natural environment. The white paint may at one time in the past been a visibility/ safety issue, but would be outdated now. White paint would create a recurring maintenance issue having to repaint for upkeep.

-Jared

From: Ahmed, Borhan@DOT <Borhan.Ahmed@dot.ca.gov> on behalf of LandArch D8@DOT <LandArch_D8@dot.ca.gov>
Sent: Thursday, April 2, 2020 10:37 AM
To: Anderson, Jared@DOT <Jared.Anderson@dot.ca.gov>
Subject: FW: RCTD - 5956(225) - VIA Memo Review Request

FYI
Due by 4/23/20

Thank you

From: Burton, Aaron P@DOT <aaron.burton@dot.ca.gov>
Sent: Wednesday, April 1, 2020 9:50 AM
To: LandArch D8@DOT <LandArch_D8@dot.ca.gov>
Subject: RCTD - 5956(225) - VIA Memo Review Request

Good morning,

We are seeking Landscape's review of the revised attached VIA memo for the County of Riverside's Local Assistance project under Federal Project Number 5956(225) to reconstruct bridges on Chuckwalla Road. We are seeking Landscape's comments or concurrence by 5/1/2020.

Please charge your time to the following:
Project: 0000020015
Phase: N
Reporting Code: 5956225
Sub Object: 041

Please let me know if you have any questions.

Aaron P. Burton
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