Project / Submission Name* (39/300 characters)

Route 66 Resiliency Improvement Project

Section 1. Applicant Information

Contact Information (primary)*

Jeremy

Johnson

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Mervat

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Nominating Agency Name* (46/50 characters)

San Bernardino County Transportation Authority

Nominating Agency Type* (choose from list)

Nominating Agency Information*

Country: United States

Address: 1170 W. 3rd Street, 2nd Floor

City: San Bernardino

State, Province, or Region: California

Zip or Postal Code: 92410

Implementing Agency Information*

Country: United States

Address: 825 E 3rd Street, RM143

City: San Bernardino

State, Province, or Region: California

Zip or Postal Code: 92415

[UPLOAD] Nominating and Implementing Agency Agreement

Section 2. General Overview

Is the nominated project included within the Caltrans SCRIPT unconstrained project priority list?*

The Local Transportation Climate Adaptation Program requires a 20% non-federal match.
The non-federal share for the second cycle is reduced by 3 percentage points due to the Caltrans State Climate Resiliency Improvement Plan for Transportation (SCRIPT) integration into the California Transportation Plan (C.T.P.) 2050 by addendum.
The non-federal share may be reduced by an additional 7 percentage points if, prior to nomination, the project is included in the Caltrans SCRIPT unconstrained project priority list.
The non-federal share may not be reduced by more than 10 percentage points.
The Commission will prioritize nominations that are included in the Caltrans State Climate Resiliency Improvement Plan for Transportation (SCRIPT) unconstrained project priority list.

Yes

No

[UPLOAD] Cover Letter*

[UPLOAD] Fact Sheet*

Total LTCAP Funding Request* (Number only)

Input the requested amount in whole thousands (e.g. $3,980,000).

$21 million

Project Type* (selection)

*A. **Resilience Improvements** that improve the ability of an existing surface transportation asset to withstand one or more elements of a weather event or natural disaster, or to increase the resilience of surface transportation infrastructure from the impacts of changing conditions, such as sea level rise, flooding, wildfires, extreme weather events, and other natural disasters [23 United States Code 176(d)(4)(A)].*

*B. **Community Resilience and Evacuation Route** activities that strengthen and protect evacuation routes that are essential for providing and supporting evacuations caused by emergency events, including: resilience improvements if they will improve evacuation routes, and projects to ensure the ability of the evacuation routes to provide safe passage during an evacuation and reduce the risk of damage to evacuation routes as a result of future emergency events [23 United States Code 176(d)(4)(B)].*

- Applicants must notify the Secretary of the United States Department of Transportation prior to applying to the Local Transportation Climate Adaptation Program for the construction of new or redundant evacuation routes or for the installation of communications and intelligent transportation system equipment and infrastructure, counterflow measures, or shoulders. [23 United States Code 176(d)(4)(B)(III) and (IV)].

*C. **At-Risk Coastal Infrastructure** activities that strengthen, stabilize, harden, elevate, relocate or otherwise enhance the resilience of highway and non-rail infrastructure, including: bridges, roads, pedestrian walkways, and bicycle lanes, and associated infrastructure, such as culverts and tide gates to protect highways that are subject to, current or long-term future risks from a weather event, a natural disaster, or changing conditions, including coastal flooding, coastal erosion, wave action, storm surge, or sea level rise, in order to improve transportation and public safety or reduce costs by avoiding larger future maintenance or rebuilding costs [23 United States Code 176(d)(4)(C)]. Port facilities and public transportation facilities are also eligible non-rail infrastructure [23 United States Code. 176(c)(3)(B)].*

System Resilience Elements*

Projects carried out with PROTECT Formula Program funds may seek funding for natural infrastructure or the construction or modification of storm surge, flood protection, or aquatic ecosystem elements that are functionally connected to an eligible transportation improvement project.

Yes, this project incorporates resilience elements.

No, this project does not incorporate resilience elements.

Project Priority* (number only)

Applicants submitting multiple project nominations must clearly prioritize its project nominations. The Commission may elect to only evaluate the highest priority project nomination submitted by each applicant.

For nominating agencies submitting a single project nomination, please select the highest priority (5)

5

Project Overview* (560/750 words)

Include a brief, one to three paragraph, non-technical description of the project, total project cost and requested amount. If the project includes multiple project modes, each project mode must be described.

PROJECT OVERVIEW:

The project focuses on replacing nine deteriorated timber bridges on National Trails Highway (Historic Route 66) in San Bernardino County, a route integral to California's cultural heritage and vital for local and emergency transportation. These bridges (located over the Signal, Green, Blue, Crest, Crimp, Ant, Powerline, Bloom and Blossom ditches), originally constructed in 1930, are now well beyond their intended lifespan and suffer from significant structural deficiencies due to decades of exposure to harsh environmental conditions. By modernizing these essential infrastructure components, the project aims to enhance safety, improve accessibility, and promote economic resilience in the region.

The primary goal of this project is to replace nine aging timber bridges with modern concrete structures. These bridges span various ditches created to manage surface water flow in the desert landscape, and their current condition poses a significant risk to transportation and public safety. The new concrete bridges will be designed to handle increased traffic loads and extreme weather conditions, ensuring they remain functional and safe for decades to come. This modernization effort will eliminate current weight restrictions that limit vehicle use to light trucks and passenger cars, thus allowing more substantial commercial and emergency vehicles to utilize the route.

INCREASING CLIMATE RESILIENCE

Climate change is intensifying weather patterns, leading to more frequent and severe flooding in the Mojave Desert, where these bridges are located. The new bridge designs will incorporate advanced engineering techniques to withstand a 100-year flood event and other climate-related threats, such as wildfires and seismic activity. By improving the resilience of these structures, the project will minimize disruptions caused by extreme weather, ensuring that National Trails Highway remains a reliable alternative route to I-40. This is particularly crucial during catastrophic events when I-40 will be closed, providing a vital detour that reduces congestion and travel times significantly.

PROTECTING AT-RISK TRANSPORTATION AND INFRASTRUCTURE:

The existing timber bridges have been maintained with temporary measures such as spliced beams and scaffolding, which are insufficient for long-term resilience. By replacing these outdated structures, the Route 66 Resiliency Improvement Project will protect National Trails Highway from further deterioration and potential closures. The new bridges will also support the continued safe operation of the adjacent BNSF Transcontinental Corridor, a key rail line for freight and passenger traffic. These bridges will be robust and reliable, enhancing the overall transportation network's safety and efficiency, benefiting both road and rail users.

POSITIVE IMPACT ON UNDERREPRESENTED COMMUNITIES:

The rural communities along National Trails Highway are some of the most underserved in San Bernardino County. These areas face significant socio-economic challenges, including lower median incomes and higher unemployment rates compared to the county and state averages. By improving transportation infrastructure, the project will enhance access to jobs, schools, healthcare, and other essential services for residents. Additionally, the upgrades will support local economic development by attracting tourism and facilitating the growth of small businesses along the historic route. Enhanced infrastructure will also improve emergency response times, further protecting these vulnerable communities.

PROJECT COST AND REQUESTED AMOUNT:

The total project cost is estimated at $27,000,000. This funding will cover the complete replacement of the nine timber bridges with modern concrete structures, including all associated engineering, construction, and environmental compliance activities. The requested amount for funding is $27,000,000, which will be used to supplement local investments and ensure the project is completed within the projected timeline.

Project Background* (1200/1200 words)

CONTEXT:

National Trails Highway (NTH) is designated by the State of California as "Historic Highway Route 66" and as a National Scenic Byway by the Federal Highway Administration. Hardly needing an introduction, Route 66 is a cultural cornerstone of California's history and, in San Bernardino County, it is still an important thoroughfare today.

The straightest route and shortest distance from Barstow to Needles is along I-40; however, if there is a closure or congestion on the I-40, when NTH is open it provides an alternative route for drivers. When I-40 is closed, or if NTH is not open to serve as an alternative for that section of I-40 from Ludlow to Fenner, then drivers are forced to take the I-15 and the 164 to connect from Barstow to Needles.

Nine of these bridges were constructed in 1930 with simple timber girders and a continuous cast in-place/reinforced concrete deck. The bridges span over various man-made ditches (located over the Signal, Green, Blue, Crest, Crimp, Ant, Powerline, Bloom and Blossom ditches) that were created to channel surface drainage flows throughout the desert landscape. These ditches are intermittently flooded, with surface water typically only present in direct response to rain events. The bridges are supported on closed-end backfilled timber pile extension strutted abutments and timber pile extension bents. Approximately half are held up by either additional temporary timber columns or scaffolding at mid-spans.

By the mid-1940s, the State of California denoted in its maintenance reports that all NTH timber bridges between Barstow and Mountain Springs Road were quickly approaching the end of their design and economical service life. Yet, nearly 80 years later, San Bernardino County is still maintaining the same 90-year-old bridges with stop-gap measures. These bridges were altered in the 1940s and 1950s with widening, paving, and replacement of a majority of original guardrails. The bridge decks now have asphalt overlays.

CLIMATE CHANGE:

In the recent two decades, San Bernardino County staff have noticed that the amount of flooding happening in the area has increased both in terms of frequency and intensity. This is supported by Caltrans data which show the increasing number of fatalities caused by floods on the I-40 (hitting the highest fatality rate in 2022; see graph attached), and the number of times the County has declared a state of emergency within the last decade.

Given that Route 66 is a major alternate route to I-40, the instance of both roads closing causes economic, community, and transportation harm.

PROBLEM:

Bridges, like all transportation assets, are constantly deteriorating. The 90-year-old bridges display negative impacts from years of intensifying weather, flash floods, truck traffic, erosion, seismic activity, animal life, and other factors, and are well beyond their intended lifespan. The timber bridges have restricted weight limit postings as low as three tons due to structural deficiencies, limiting vehicle use to passenger cars and light trucks.

The County's current maintenance efforts consist of splicing failed timber beams, placing

temporary scaffolding to support sagging spans, removing regular sediment aggradation under many of the bridges, and repairing damaged piling and lagging. These efforts are a stop-gap measure to maintain public safety and prolong the service life of the bridges until the County can obtain funding to replace these bridges, but it is not enough to be truly resilient against intensifying weather events.

In the case of a catastrophic closure of the nearby major highway I-40, motorists could be stranded, as NTH offers the only bypass to a 96-mile section of the Interstate. The County, Caltrans, California Highway Patrol, National Parks Service, BNSF, and many others are coordinating efforts to keep motorists informed and to work on detour solutions.

These nine bridges are part of a 128 bridge replacement program guided by the County's 2017 Bridge Management Project in order to address current and future vulnerabilities. If left unimproved, the current condition of the project bridges and continued deterioration will negatively impact the efficiency of the transportation system, mobility of goods, accessibility and mobility of people, and economic growth.

Using its own funds, the County has made several efforts to advance and expedite the replacement of bridges, including corridor-wide topographical mapping and hydrology studies. San Bernardino County has invested $4,094,133 of its own funds over the last 10 years to prepare for reconstruction of the 90-year-old short bridges on NTH between Barstow and Needles. Since then, the County has been diligently working with Caltrans to program the replacement of all bridges.

NEED:

If the bridges are not replaced, it is anticipated that additional weight limit postings will be needed. The bridges will continue to age, and future and intensifying weather events (contributing to general deterioration) would necessitate additional bridge/road closures. By reconstructing the aging bridges, the safety, vitality, historical preservation, and accessibility of one of America's greatest treasures will be reinstated.

As previously mentioned, the straightest route and shortest distance from Barstow to Needles is along I-40. If there is a closure or congestion on the I-40, when NTH is open it provides an alternative route for drivers. When I-40 is fully closed, or if NTH is not open to serve as an alternative for that section of I-40 from Ludlow to Fenner, then drivers are forced to take the I-15 and the 164 to connect from Barstow to Needles. The distance for NTH as a bypass for the I-40 section from Ludlow to Fenner, versus using the I-15 bypass route was also calculated. This calculation considers the time it takes for autos and trucks to travel that distance.

Additionally, the BNSF route from Barstow to Needles closely follows NTH. As a result, NTH is the primary access route for emergency response crews to get to the derailment site. If NTH is closed, primary responders must utilize alternate routes which increase the response time to the scene.

It is the County's priority to maintain its transportation facilities in a state of good repair and is

the primary purpose of the proposed project. The County continuously seeks to leverage local, state, and federal funds to maintain more than 2,500 miles of roads.

The considerable number of bridges along the 130-mile segment of NTH between Barstow and Needles in California is unique as it includes about ONE bridge per MILE. The engineered system of berms, dips, and 128 timber bridges are found nowhere else along the entire 2,488-mile Route 66 from Chicago to Santa Monica. This is a significant engineering feature that adapts the road to numerous washes and the topography of the Mojave Desert. All 128 timber bridges were constructed in the early 20th century and are well beyond their useful life.

The proposed project will restore and modernize nine of these smaller, nine decades old timber bridges, which are core infrastructure assets for the County.

This previously incurred work included topography and hydrological studies, bridge inspections, and developing scopes of work. Significant work is ongoing or has been completed on the other bridges along this stretch of National Trails Highway, and all of this work will be used to the greatest extent possible for the proposed project.

Project Scope* (2497/2500 words)

A concise description of the project, scope, and anticipated benefits (outcomes and outputs) proposed for funding, including type of infrastructure (e.g., road, transit, active transportation, parking structure, natural infrastructure, etc.) and improvements to be made (e.g., construction, maintenance, relocation, elevation, etc.). Outputs listed here must be consistent with the outputs submitted in the electronic Project Programming Request form.

PROJECT AND SCOPE:

The description of work includes replacing 9 bridges along the National Trails Highway. The Project Area encompasses 9 bridges crossing the Signal, Green, Blue, Crest, Crimp, Ant, Powerline, Bloom and Blossom ditches in San Bernardino County that have exceeded their design life and need replacement. The type of infrastructure will be a concrete bridge reconstruction and will incorporate considerations of climate change, resiliency, and environmental justice through incorporation of specific design elements to withstand catastrophic floods and potential wildfires. These 9 bridges address existing gaps in service in a vital rural transportation corridor which a full closure would result in impacts on interstate commerce, national security and the preservation of one of America's historical treasures. The National Trails Highway Bridges Replacement Project is located on a section of National Trails Highway, from the town of Daggett to Amboy Road through an essential section of the historic U.S. Route 66 (also known as "National Trails Highway" or "Route 66"). The total project cost to replace 9 bridges is $27 million with a local match of $12.8 million, The County is seeking $14.2 million in LTCAP grant funding.

IMPROVEMENTS TO BE MADE:

1. Restores and Modernizes Existing Core Infrastructure: The proposed project will restore and modernize nine core infrastructure assets for the County, by designing and constructing new

bridges that will improve conditions, ensuring ongoing state of good repair, and minimizing life cycle costs.

2. Improve asset conditions: In consultation with the State Historic Preservation Officer (SHPO) and Caltrans Cultural Resources, the County has agreed to replace the existing timber bridges with modern concrete bridge designs that replicate the original structure type. Since National Trails Highway is designated by the State of California as "Historic Highway Route 66," it is important to keep the historic character of the bridges.

The project consists of the demolition of one (1) pipe culvert, one (1) concrete box culvert and 25 two-lane timber bridges and replacement with American Association of State Highway and Transportation Officials (AASHTO), or equivalent, two-lane concrete bridges, guardrail (with end treatments and approaches/departures) and other appurtenant structures. The engineering design for this project will account for flooding (i.e., designed for a 100-year flood) and other weather and hazard variables, including seismic design. The bridge lengths would be extended to exceed 20 feet for purposes of eligibility under the Bridge Highway Program in the future, and also as needed to convey storm flows. The replacement bridge widths will be widened to 40 feet to accommodate two 12-foot lanes, two six-foot shoulders and two-foot railings. The vertical profile of the bridges will remain close to the existing profile except for those bridge 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 two feet or less, with the elevation gradually conforming to the existing roadway elevations. 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.

The new replacement bridges will provide a full level of performance. The new bridges' service life expectancy is 75 years. Using modern materials and other design features will significantly reduce future operation and maintenance costs throughout the asset life. Current annual maintenance costs are approximately $84,000. No maintenance costs are anticipated for the first 10 years of service for the new bridges, resulting in significant maintenance cost savings. The much-needed improvements will prevent additional road closures and remove most weight restrictions to accommodate all modes of travel and the movement of goods, allowing more commercial and large vehicles to use the route.

3. Ensure ongoing state of good repair of new assets: The State of California provides funding to cities, counties, and the State's Department of Transportation for road and bridge purposes through an excise tax on motor fuels. Recently, the Legislature passed, and the voters affirmed, an additional excise tax on motor fuels and an additional vehicle registration fee with revenue allocated to the state, cities, and counties for transportation purposes, including road and bridge maintenance. Passage of the additional excise tax provides an allocation of maintenance revenue essentially doubled over the original motor fuel tax. The County has sufficient revenue to ensure maintenance of the bridges reconstructed with 2023 INFRA or Rural Surface Transportation program funds.

4. Minimize life-cycle cost: The proposed nine bridge replacements to be funded will close the last unfunded piece of the County's larger objective to reconstruct the rural bridges and reduce annual maintenance expenditures on National Trails Highway between Barstow and Needles. Currently, the County's annual preventive maintenance budget is spent to provide temporary repairs. As the bridges age, increasing maintenance costs are necessary to maintain efficiency and safety. The point in the life cycle of the infrastructure at which it becomes more efficient to replace rather than repair, was passed long ago.

ANTICIPATED BENEFITS PROPOSED FOR FUNDING (OUTPUTS AND OUTCOMES)

ENVIRONMENTAL AND CLIMATE RESILIENCE BENEFITS:
Reduces Air Pollution and Greenhouse Gas Emissions from Transportation: Replacing the existing timber bridges with well-designed modern structures allows National Trails Highway to become a critical detour route for I-40 in the event of a catastrophic closure. Motorists could be stranded with no detour route available if current bridge weight limits remain, become more stringent, or bridge outages occur. Cars would continue to idle under this scenario, as motorists would keep their cars running in the desert climate, creating greenhouse gas emissions (GHGs). The project bridges will also provide an important north-south connection for traffic to-and-from the City of Twentynine Palms to I-15. Without this connection, the length of trips increases, generating additional vehicle emissions.

The air quality benefits (reductions) of the project for a 30-year period, and associated reduction in vehicle hours, vehicle miles, fuel consumption have been calculated: reductions from project implementation and a fully functioning National Highway Trails are significant. GHGs are estimated to be reduced by 3,146 tons CO2 and Vehicle Miles are expected to be reduced by nearly 4 million miles within 30 years.

Improves the Resiliency of At-Risk Structures to Climate Change: This project is located within an area of the Mojave Desert that is subject to extreme weather conditions including summer monsoonal moisture. Flash flooding occurs and can damage bridges causing periodic road closures. In August 2014 and July 2018, 66 bridges on the National Trails Highway were damaged by flash flooding events. Sections of National Trails Highway have been re-opening as repairs are completed or as bridges are replaced.

Climate change presents a potential to exacerbate these weather-related risks. Building resiliency into the transportation system helps protect assets against these greater risks by limiting disruptions and eliminating significant downtimes and closures. The County has completed hydrology studies for the area to estimate design flows from rains and flooding. The hydrologic data will be critical to the design for hardening these structures against climate change. The bridges will also be designed to strengthen and protect against other natural threats, such as earthquakes and wildfires. The design will be compliant with AASHTO and Caltrans codes, which have been updated to include resiliency elements.

Addresses the Disproportionate Negative Environmental Impacts of Transportation on Disadvantaged Communities: This project will benefit residents in rural communities of San Bernardino County. People in the most disadvantaged communities are least able to afford the

time and cost to travel the longer routes required due to bridge weight restrictions or closures. They should be afforded unrestricted access from their homes to jobs, schools, shopping, hospitals, and services. The median income of the study area communities is well below the median income for the County ($70,287), the State of California ($84,097), and the Nation ($70,784) (US Census Bureau, 2021).

Per the Climate and Economic Justice Screening Tool (CEJST) and CalEnviroScreen, the project is within two Census Tracts: 0607012104 and 0607010300; both of which are designated Disadvantaged Communities (DAC) by both screening tools. Census Tract 060710.104 has a population of 3,096 and is designated disadvantaged based on the following factors: low-income, climate change factors (loss of building value and population loss due to natural hazards each year), energy costs, lack of indoor plumbing, and having less than a high school education. The largest project Census Tract by area (06071010300) has a population of 3,547. Factors that contribute to this Census Tract's disadvantaged designation include, energy costs, lack of indoor plumbing, unemployment, and having less than a high school education.

Project Serves Renewable Energy Supply Lines: The Mojave Desert region has some of the best solar, wind, and geothermal resources in the nation. These renewable resources will continue to play a critical role in meeting the nation's energy needs, promoting energy independence, and reducing greenhouse gasses to address climate change over the next several decades. Several regionally significant renewable energy facilities can only be accessed from National Trails Highway.

Private and BLM land is being considered for future renewable energy projects, including large scale solar projects. National Trails Highway is the major access road to several sites being considered for these projects. The current weight limit restrictions and/or potential future closures of the aging bridges would limit access of heavy vehicles/machinery and materials transport for construction of new solar projects. The BLM has prepared the federally-funded California Historic Route 66 - Needles to Barstow Corridor Management Plan and is preparing the Desert Renewable Energy Conservation Plan, which discusses current efforts managing renewable energy projects. A key recommendation in the Route 66 Corridor Management Plan is to "Seek funding from federal and non-federal sources to provide a means of financing road modifications through partnerships with heavy users of the route (BNSF Railway, resource extraction, utilities, renewable energy developers, etc.), and develop and work with San Bernardino County to adopt design/preservation guidelines for the route addressing renewable energy projects." Given the potential for placement of renewable energy facilities along I-40, the need for ensuring an alternate east/west travel route to access these facilities is important.

SAFETY BENEFITS:

One of the County's primary goals with this project is the safe operation of National Trails Highway and restoration of accessibility for all roadway users. The replacement of National Trails Highway bridges between the town of Daggett and Amboy Road will allow the County to open this section of the roadway safely with minimal weight restrictions. The bridges will be designed to preserve the historical setting while safely accommodating legal and permit loads.

Non-Motorized Users Safety: The new bridges and roadway will provide improved safety for bicycles traveling these rural areas as a result of the bridge widening to modern standards.

Emergency Access to I-40: The National Trails Highway provides access for emergency crews to respond quickly to potential tank or truck spills on I-40 (trucks AADT is 17,138), mitigating potential risks to the community. National Trails Highway can reduce the response time for first-responders by avoiding traffic congestion on I-40. In the event of a required closure on I-40, National Trails Highway serves as an effective detour versus a regional freeway re-route via I-15 and I-95, an approximately 115-mile detour from I-40.

Emergency Access to Railroad Corridor: The project will also mitigate potential safety risks to the community associated with the stretch of the BNSF Transcontinental Corridor rail line that runs parallel with the National Trails Highway. The BNSF Transcontinental Corridor is a main artery for rail commerce between the West Coast and the Chicago interchange complex, the gateway to the Eastern United States' rail network. The majority of the freight traffic on the line consists of intermodal containers and trailers carrying products to market and providing parcel services for customers like UPS and FedEx, however, some unit trains transport hazardous materials, such as ethanol, which would create a public safety concern if there were a train accident. While this is a key rail freight corridor, it also accommodates passenger rail. National Trails Highway allows access and connections to BNSF's service roads for track inspection and maintenance, which is critical to maintain the safe operations of this line and mitigate potential derailments or collisions. In addition to access for maintenance crews, in the event of a train emergency, National Trails Highway would also be critical for emergency responders. Project bridge replacements would eliminate current weight restrictions, allowing unrestricted access for trucks, trailers, equipment, or emergency vehicles.

However, because National Trails Highway can provide an alternate route in the event of an I-40 closure, the consequences of collisions on I-40 were assessed. The County analyzed six years of TIMS collision data on I-40, from January 1, 2017 to December 31, 2022. There were 607 collisions on I-40 between Daggett and Amboy Road during this period. The collisions resulted in 117 severe injuries and 59 fatalities. In order of frequency, collision types include hitting objects (229 collisions), vehicles overturning (204 collisions), rear end (106 collisions), sideswipe (41 collisions), head-on (7 collisions), hitting pedestrians (6 collisions), broadside (6 collisions), and "other" (8 collision).

VEHICLE MILES TRAVELED BENEFITS:

California Department of Transportation (Caltrans) records indicate that I-40 has an annual average of 23 hours of closures relating to collisions or other traffic incidents along the corridor. National Trails Highway is used by emergency responders or others required to quickly resolve a problem, while permitting continued travel along I-40. Some of these closures would have benefited from a detour through National Trails Highway to manage traffic, minimize congestion, prevent stranded vehicles, and ensure continuation of goods mobility. In this rural area there are limited routes available to help manage or detour the traffic during an incident. If National Trails Highway is open to traffic without weight restrictions, motorists would only travel an additional

16 miles as a detour (using Kelbaker Road) around problems on I-40. In contrast, because National Trails Highway bridges are closed or restricted, motorists are required to use other highways that add almost 120 miles to their trip.

ECONOMIC BENEFITS:

Increased tourism/improved local economy: While the Route 66 Revitalization Project focuses on a small segment of National Trails Highway in the County, the tourism impact is broader. Two museums– the Route 66 Mother Road Museum in Barstow and the Needles Regional Museum in Needles–tell the story of Route 66 in its heyday as the ultimate road trip. The project segment offers roadside attractions, hotels, and restaurants to visitors. With the new nine bridges, additional opportunity for rural main street and tourism development will be possible for heritage tourism destinations. Roy's Motel and Café in Amboy has restored its 80-year-old historic café, and has plans to renovate and modernize the 20-room motel. The same is true for the community of Chambless, where the owner wants to revive the long shuttered "Roadrunner Café," and to establish a recreational vehicle park to attract visitors. Plans have been on hold, but would be realized with replacement of bridges in the area.

National Trails Highway is also an access point for Joshua Tree National, Mojave National Preserve, and the Amboy Crater, a dormant volcano and lava field popular with hikers. Currently, there are no restaurants, hotels, or visitor services closer than 40 miles to Mojave National Preserve. With completion of the Route 66 Revitalization Project, more traffic is expected and the rural towns, like Amboy and Daggett will be incentivized to provide restaurants, overnight stays, and gas stations for travelers who want to experience the unique beauty of the Mojave Desert and heritage tourism destinations on the National Trails Highway.

[UPLOAD] 2024 State Highway System Project Impact Assessment Form

Upload a file. No files have been attached yet.

Acceptable file types: .csv, .doc, .docx, .odt, .pdf, .rtf, .txt, .wpd, .wpf

*For projects on the state highway system, applicants **must** submit the State Highway System Project Impact Assessment Form (CTC-0002).*

https://dot.ca.gov/-/media/dot-media/programs/local-assistance/documents/atp/cy6/state-highway-system-project-impact-assessment-form-ctc-0002-modified-031022.pdf

[UPLOAD] Project Map*

Select up to 6 files to attach. No files have been attached yet. You may add 6 more files.
Acceptable file types: .csv, .doc, .docx, .odt, .pdf, .rtf, .txt, .wpd, .wpf, .gif, .jpg, .jpeg, .png, .svg, .tif, .tiff
· A map (or maps, to a maximum of six) that includes:

o The boundaries of the proposed project location(s).
· Provide neighborhood, city, or county boundaries, as applicable.
o The geographic boundaries and access points of the climate-vulnerable, underserved, or under-resourced communities within the project study area
o Destinations that the proposed project is benefitting.
o A legend.
o A scale bar.

[UPLOAD] Photos*

Select up to 10 files to attach. No files have been attached yet. You may add 10 more files.

Acceptable file types: .gif, .jpg, .jpeg, .png, .svg, .tif, .tiff

· Photos (rendering or actual) of the project location(s).

o If the project location has experienced a climate event related to the project nomination's identified climate threat, applicants are encouraged to provide a photo of the impacted transportation facility and surrounding communities.

Photo Information (optional) (79/100 Words)

Applicants may use this space to provide pertinent context about the photos uploaded, such as the date and a brief description of the photo's subject.

TIMS graph illustrating increasing rate of fatalities on I-40, which could be avoided through providing National Trails Highway as a detour. Pictures of the nine bridges, and sister bridges destroyed along the National Trails Highway. These destroyed bridges were destroyed due to intensifying weather events happening to end-of-life bridges, and are essentially identical to the nine bridges San Bernardino County is seeking funding for. For this reason, it is important to replace the current bridges before additional damage occurs.

Reversible Lanes were considered for this project.*

*Confirmation that, **for any capacity-increasing project or major street or highway realignment project,** the agency considered reversible lanes for that project pursuant to Streets and Highways Code Section 100.15*

Yes
No

3. Screening Criteria

[UPLOAD] Eligibility Verification*

Select up to 2 files to attach. No files have been attached yet. You may add 2 more files.

Acceptable file types: .csv, .doc, .docx, .odt, .pdf, .rtf, .txt, .wpd, .wpf

Provide documentation for eligibility verification.

Screening Criteria A. Identification of Climate Threat* (3/20 words)

*Identification of at least one projected climate threat that will pose a risk to transportation infrastructure using Cal-Adapt or Our Coast, Our Future web tools (**Appendix C**).*

E.g., "Flooding", "Extreme Heat", "Storm Surge", etc.

Flooding, Monsoonal Moisture

[UPLOAD] Screening Criteria A. Identification of Climate Threat (screenshot)*

Select up to 5 files to attach. No files have been attached yet. You may add 5 more files.

Acceptable file types: .csv, .doc, .docx, .odt, .pdf, .rtf, .txt, .wpd, .wpf, .gif, .jpg, .jpeg, .png, .svg, .tif, .tiff

Applicants must provide a screenshot or screen printout from Cal-Adapt or Our Coast, Our Future that clearly shows the data view screen with displayed climate threat information that supports the project nomination.

Screening Criteria B. State and Federal Thresholds for Climate-vulnerable Populations*

*Project nominations must meet federal or state thresholds to be considered a disadvantaged community or a climate vulnerable, under-resourced, or underserved community (**Appendix D**). Priority will be given to project nominations that meet both federal and state thresholds.*

This project meets a Federal threshold.

This project meets a State threshold.

Federal Tool Used*

Climate and Economic Justice Screening Tool
U.S. Department of Transportation Equitable Transportation Community Explorer

State Tool Used*

CalEnviroScreen 4.0
California Healthy Places Index 3.0
California Healthy Places Index 3.0 - Extreme Heat Edition
Climate Change & Health Vulnerability Data and Indicators
Median Household Income
Native American Tribal Lands
Regional Definition
Other

Screening Criteria C1. Consistency with State Plans.* (Checkmark)

This nomination is consistent with The Governor's Office of Emergency Services Adaptation Planning Guide (https://resilientca.org/apg/).

C2. Consistency with the California State Adaptation Strategy. * (180/200 words)

Identify which priority and associated goal the project nomination most closely aligns with (https://www.climateresilience.ca.gov/priorities/).

The project to replace nine deteriorated bridges on National Trails Highway aligns with the California State Adaptation Strategy under the priority of "Bolster Public Health and Safety Against Increasing Climate Risks." This priority aims to enhance infrastructure resilience to climate impacts, ensuring community safety.

According to this priority, the health and safety impacts of climate change are having serious effects on the lives of our state's residents, sometimes literally threatening lives. San Bernardino is no different, weather events have led to actual fatalities (refer to TIMS attachment). Additionally, road closures have led to unnecessary increased transportation, which in turn exacerbates the amount of particulate matter released into the air, infecting local communities.

Within this Priority, the project aligns with Goal B: Consider future climate impacts in governmental planning and investment decisions, particularly Action 2 (incorporate climate considerations into emergency planning) and Action 6 (prioritize investments to reduce climate risk in transportation). By incorporating robust design standards to withstand extreme weather and reducing transportation-related air pollution, the project directly supports these actions, enhancing the overall resilience and health of the community.

C3. Consistency with the Regional Transportation Plan and Sustainable Communities Strategy* (197/200 words)

· Confirmation that the proposed project is consistent with the current approved Regional Transportation Plan, and if within the boundaries of a Metropolitan Planning Organization, consistent with the Sustainable Communities Strategy.

· Include a link to the current and approved Regional Transportation Plan and Sustainable Communities Strategy. Indicate page numbers where the project nomination is identified.

This project aligns with the objectives outlined in both the SCAG 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS - "Connect SoCal") and the SBC Countywide Transportation Plan (SBC CTP) 2021 Update. Connect SoCal focuses on sustainability, climate change mitigation, and environmental justice by integrating transportation and land use to reduce GHG emissions, strengthen resilience against climate impacts and provide equitable transportation solutions for underserved groups. Similarly, the project achieves the SBC CTP's aims to provide safe, efficient, environmentally responsible transportation solutions.

According to the SBC CTP, this project addresses key regional issues such as improving air quality, reducing GHG emissions and VMT, and strengthening economic competitiveness. The California Transportation Plan (CTP) 2050 also highlights the need for collaboration among local, regional, state, and federal agencies, including private stakeholders, to optimize transportation funding and operations. This alignment with the SBC CTP, Connect SoCal, and the CTP 2050 underscores the project's commitment to sustainable and equitable development, enhancing community well-being, and promoting growth and fair access to transportation resources.

Link to Sustainable_Communities_Strategy (Page 5): chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://scag.ca.gov/sites/main/files/file-attachments/f2016rtpscs_01_introduction.pdf?1606073240

Link to Regional_Transportation_Plan (pages 14-17): https://www.gosbcta.com/plan/countywide-comprehensive-transportation-plan/

C4. Consistency with Regional Climate Resiliency and Environmental Justice Goals * (200/200 words)

· Briefly describe how the project nomination furthers regional climate resiliency and environmental justice goals, targets, or performance measures of a current and approved plan:

o Regional Transportation Plan, Sustainable Communities Strategy, General Plan, Indigenous Community Plan, Local Hazard Mitigation Plan, or Stand-alone climate action or adaptation plan.

o Include a link to the approved plan. Indicate page numbers where the regional climate resiliency and environmental justice goals, targets, or performance measures are identified.

Completed in partnership with the San Bernardino County Transportation Authority (SBCTA), the San Bernardino County Regional Greenhouse Gas Reduction Plan (SBCRGHGRP) (2021) provides a comprehensive framework that allows local governments and stakeholders to collaborate on climate action initiatives throughout the County. This program aligns with the SBCGHGRP's several "On-Road" goals, including coordinating with regional agencies and Caltrans to maintain transportation infrastructure, support GHG reductions, and provide safe and economically beneficial roadways for local residents.

Replacing nine bridges will significantly advance regional climate resiliency and environmental justice goals by creating safer, more reliable, and sustainable infrastructure. These upgraded bridges are specifically designed to withstand extreme weather events, ensuring continuous connectivity for rural communities, especially during times of emergency. The use of efficient designs and materials will help lower GHG emissions, reducing the risk of structural damage and lowers maintenance costs. Additionally, reliable infrastructure supports economic growth by creating jobs, bolstering local businesses, and improving access to essential services. Moreover, this investment in infrastructure is crucial for ensuring equitable access to opportunities and resources, and ultimately enhancing the quality of life and health outcomes for the disadvantaged communities along the National Trails Highway.

Link_to_Plan (Pages 24-26): https://www.gosbcta.com/plan/regional-greenhouse-gas-reduction-plan/

C5. Consistency with other Regional or Local climate adaptation plans or reports, if applicable. (199/200 words)

· Identify and briefly describe how the project nomination furthers goals, performance measures, or targets of, any regional or local climate adaptation plans or reports not previously mentioned.

· Include links to any plans or reports described. Indicate page numbers where the project nomination is identified.

The Desert Renewable Energy Conservation Plan (DRECP) aligns with the project's objectives by emphasizing sustainability, habitat conservation, and climate resilience. The DRECP is designed to facilitate responsible renewable energy development while preserving natural resources, which complements the project's aim of replacing aging infrastructure with more resilient designs. It also emphasizes protecting wildlife habitats and managing lands to support renewable energy and conservation goals. This includes coordinated land use planning and habitat management to ensure ecological integrity and long-term environmental health for sensitive species and ecosystems.

In alignment with these goals, the project involves replacing outdated bridges to enhance climate resilience and support renewable energy-related economic activities. Notably, a key benefit of the project is its support for essential logistics for renewable energy development, ensuring that transportation infrastructure can accommodate the needs of this growing sector. The project is backing the DRECP's framework by enhancing infrastructure to withstand extreme weather conditions and ensuring dependable access routes. Ultimately, the DRECP and the project aim to upgrade San Bernardino County's desert transportation system, fostering new economic opportunities for local communities and safeguarding the natural surrounding land.

Link_to_Fact_Sheet (Page 1): chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.energy.ca.gov/sites/default/files/2019-12/DRECP_Conservation_Fact_Sheet_ada.pdf

4. Evaluation Section

Responses to the evaluation criteria must demonstrate how the project nomination meets the Local Transportation Climate Adaptation Program policy objectives. Project applications will be evaluated, scored, and then prioritized based on how well the project nomination addresses and demonstrates each of the following criteria.

A. Climate Threat Impacts to Transportation Infrastructure and Climate-vulnerable Communities

A1. Climate Threat Impacts to Transportation Infrastructure. * (862/1000 words)

*Discuss the risks to transportation infrastructure from the climate threat identified in **Screening Criteria A**. Describe how recurring damage or asset failure may impact statewide and regional mobility, economic opportunities, goods movement, and the environment or natural resources.*

The nine project bridges on National Trails Highway, constructed in 1930 with simple timber girders and continuous cast in-place/reinforced concrete decks, are currently under significant threat from climate change.

San Bernardino County faces a two-pronged problem: the nine bridges mentioned in this proposal are well beyond their end of life, and climate change disproportionately increases their risk. This is because intensified weather patterns, such as more frequent and severe floods, exacerbate the already compromised structural integrity of these bridges. As a critically underfunded County, San Bernardino County is consequently at greater risk for climate threat impacts to their infrastructure, as limited resources hinder timely upgrades and maintenance, leaving the county more vulnerable to the effects of climate change on its critical transportation network.

These bridges span various man-made ditches created to channel surface drainage flows throughout the desert landscape. Originally, these ditches would intermittently flood, with surface water typically only present in direct response to rain events. However, due to climate change, these flooding events have become more frequent and severe, posing a significant risk to the aging infrastructure.

These climate impacts threaten the region through just a few of the following examples.

Regional Mobility:

Over the past 90 years, the bridges have suffered from intensifying weather conditions, including flash floods, increased truck traffic, erosion, seismic activity, and other factors. The structural deficiencies have led to restricted weight limit postings as low as three tons, limiting vehicle use to passenger cars and light trucks. This presents a major problem for regional mobility, especially in the event of a catastrophic closure of I-40, where National Trails Highway serves as the only

bypass for a 96-mile section of the Interstate. Without a functional alternative route, motorists could be stranded, severely impacting statewide and regional mobility.

Environment and Natural Resources:

As climate change progresses, the frequency and intensity of flooding in the area are expected to increase. This will further degrade the infrastructure, making it less reliable as an alternative route. The project site is located in a FEMA Zone D flood designation, indicating possible but undetermined flood hazards. Although no comprehensive flood hazard analysis has been conducted by FEMA, the area's history of flooding, with significant damage to bridges during storms in 2014 and 2017, underscores the urgent need for infrastructure improvements. The lack of flood maps adds to the uncertainty and risk.

Furthermore, as increased vehicle idling and detours due to road closures lead to higher emissions and particulate matter in the air, negatively impacting local communities' health and contributing to environmental degradation.

This project aligns with San Bernardino County's broader objectives of enhancing climate resilience and protecting vital transportation infrastructure. By replacing the outdated timber bridges with modern concrete structures designed to withstand a 100-year flood event, the project will significantly improve the hydraulic capacities of the watercourses beneath the bridges. This will not only reduce the risk of flooding but also ensure the continued functionality of the route during extreme weather events, thereby enhancing regional mobility and economic stability.

Economic Opportunities:

The bridges' structural vulnerabilities pose significant risks to economic opportunities and goods movement in the region. The restricted weight limits prevent larger commercial vehicles from using the route, which could disrupt supply chains and economic activities, particularly in rural areas that rely heavily on these transportation links. The economic benefits of the project extend beyond improved transportation reliability. By ensuring that National Trails Highway remains a viable alternative route, the project will support local businesses and tourism, particularly along the historic Route 66 corridor. Enhanced infrastructure will attract visitors and boost local economies, while also providing safe and reliable transportation for residents and emergency responders.

Goods Movement:

The movement of goods through the National Trails Highway is vital for the region's economy, facilitating the transport of supplies, commercial products, and agricultural outputs. However, the deteriorating condition of the 90-year-old timber bridges poses significant threats to this movement. Restricted weight limits prevent larger trucks from using the route, forcing them to take longer detours, which increases transportation costs, delays deliveries, and disrupts supply chains. Additionally, frequent flooding and potential bridge failures due to climate change further jeopardize the reliability of this crucial transportation corridor, impacting regional economic stability and efficiency.

The new bridge designs will incorporate advanced engineering techniques to address the increasing risks posed by climate change, including enhanced resilience to flash floods, seismic

activity, and other climate-related threats. These engineering tactics will ensure that the infrastructure can handle the anticipated increase in extreme weather events, reducing the likelihood of road closures and enhancing the safety and reliability of the transportation network.

Replacing the nine deteriorated bridges on National Trails Highway is therefore essential for addressing the increasing risks posed by climate change to transportation infrastructure. By enhancing the resilience of these critical assets, the project will improve regional mobility, support economic opportunities, and protect the environment and natural resources. The new bridges will provide a reliable alternative route to I-40, ensuring continued connectivity and safety for motorists in San Bernardino County and beyond. The project's alignment with state and regional climate adaptation strategies further underscores its importance in building a resilient and sustainable transportation network for the future.

A2. Climate Threat Impacts to Climate-vulnerable Communities.* (995/1000 words)

Describe the impacts to the climate-vulnerable, under-resourced, or underserved communities identified in S**creening Criteria B** from the climate threat's effects to the transportation infrastructure. Describe impacts to safety and public health and well-being, including potential displacement of communities and individuals. Describe impacts to cultural resources, including Tribal cultural resources, as applicable.

San Bernardino County is a critically underfunded County, and as a result, is home to some of California's most climate-vulnerable, under-resourced, and underserved communities (San Bernardino County, Fair Share Committee 2022). According to both the CalEnviroScreen 4.0 and the Climate and Economic Justice Screening tool, virtually all of the communities where these nine bridges are present are designated Disadvantaged Communities (DACs).

According to the California Healthy Places Index: Extreme Heat Edition, the communities in the designated project area are extremely climate vulnerable. On average, both census tracts have 168.2 projected number of days above 90 degrees. Comparatively, the median value for the state is only 79 days. The census tracts are in the 20th percentile for California Healthy Places Index, which means that 80% of California's other communities have healthier conditions. Per the Healthy Index, these communities are designated as having "less healthy conditions," meaning that currently, these communities are NOT resilient, and therefore climate vulnerable. This is due to multiple factors, such as the level of poverty in the area (making it difficult to react effectively to extreme weather events), high rates of unemployment, and some of the highest ozone levels in the state, leading to high rates of asthma and preterm births.

This project will benefit residents in rural communities of San Bernardino County. As discussed earlier, the project is located in two Census Tracts, all designated as Areas of Persistent Poverty. Two project Census Tracts are designated low-income per the Climate and Economic Justice Screening Tool (CEJST) and one project Census Tract has a transportation insecurity ranking of 99.9 % per ETC Explorer (see Appendix A.3). The median household income of the study area communities is approximately $35,000, significantly below the median household income for the

County, the State of California, and the Nation (see Table 2). The contribution of this project to the County's broader bridge replacement program will help to bring back a fully accessible highway for the disadvantaged and marginalized people living in this rural area.

Together, these communities face multiple threats to their safety, public health, and well-being as a result of the climate threat's effects to the transportation infrastructure. Below are just few of the various climate threat impacts to these climate-vulnerable communities:

Public Health:

San Bernardino County, located in the Inland Empire, is experiencing increasingly higher temperatures, exacerbating existing public health issues. Poor air quality, driven by higher GHG emissions from idling vehicles during road closures, leads to respiratory problems and other health impacts. These rural and low-income communities already suffer from limited access to quality medical care (according to the California Healthy Places Index), making them more susceptible to these health risks.

Without this project, the deteriorating bridges on National Trails Highway will continue to degrade, leading to more frequent and severe road closures and, in turn, higher GHG emissions. Motorists could be stranded without a detour route, increasing GHG emissions as cars idle in the extreme desert heat. This scenario not only worsens air quality but also poses severe health risks to stranded individuals, including heat exhaustion and respiratory issues due to prolonged exposure to high temperatures and poor air quality.

Safety:

National Trails Highway provides the only bypass to I-40 in the event of freeway closure, serves as the only access to a 73-mile segment of BNSF's rail corridor, and is a critical access route for US Marine Corps Logistics Base Barstow (MCLB) and Marine Corps Air Ground Combat Center (MCAGCC) in Twentynine Palms. As such, the project will mitigate potential safety risks to the community associated with potential accidents or closures on I-40, potential derailments or collisions on the rail line, and delays of critical equipment transport to military installations.

The National Trails Highway provides access for emergency crews to respond quickly to potential tank or truck spills on I-40 (trucks AADT is 17,138), mitigating potential risks to the community. National Trails Highway can reduce the time responders require to reach the accident by avoiding traffic congestion on I-40. In the event of a required closure on I-40, National Trails Highway serves as an effective detour versus a regional freeway re-route via I-15 and I-95, an approximately 115-mile detour from I-40.

Inaccessible routes delay emergency services, risking lives during critical situations. The lack of reliable infrastructure can lead to community displacement as residents may need to relocate to areas with better access to essential services. The economic burden of increased travel distances and vehicle maintenance also disproportionately affects these communities, further exacerbating poverty and limiting economic opportunities.

Well-being:

The proposed project will address deteriorating roadway conditions that are creating a physical barrier for residents and businesses. The bridge replacements will prevent additional road closures and minimize weight restrictions. Having the National Trails Highway operating at full service is especially important for these low-income communities.

In summary, the current state of these nine bridges are already experiencing the effects of climate change on the community, and have severe repercussions on public health, safety, and the economic stability of these climate-vulnerable communities in San Bernardino County. It will exacerbate health issues due to poor air quality and limited access to medical care, increase the risk of community displacement, and threaten the preservation of cultural resources. Addressing these infrastructure needs is critical to building a resilient and sustainable future for these underserved communities.

Conversely, the reconstruction of bridges along the historic National Trails Highway will advance both equity and improve quality of life for community members in this rural area of San Bernardino County who have been underserved by transportation infrastructure investments. The 19,500 square miles of the County's High Desert Region is likely the most underserved region in the United States' lower 48 States in terms of transportation federal funds per square mile of area. Through the California Transportation Commission, this project will positively impact these communities by improving access to emergency care, health services, and other essential services; mitigating a physical barrier, and improving overall climate resiliency.

B. Resiliency, Preservation, Enhancement, and Protection Benefits

B1. Explain how the proposed project will increase the climate resiliency of the at-risk transportation infrastructure. * (519/750 words)

*Based on the climate threat identified in **Screening Criteria A.***

The proposed project will significantly increase the climate resiliency of at-risk transportation infrastructure by addressing the primary climate threat identified: flooding and monsoonal moisture. The replacement of the nine deteriorated bridges on National Trails Highway will incorporate advanced engineering and design techniques specifically aimed at mitigating flood risks and enhancing overall infrastructure resilience.

Hydrology Studies and Flood Mitigation:

Comprehensive hydrology studies have been completed to support the bridge design, ensuring that the new structures can effectively handle the increased flood risk associated with climate change. These studies provide critical data on water flow patterns, flood frequencies, and potential impact areas, enabling the incorporation of flood-resistant features in the bridge designs. The engineering plans account for a 100-year flood event, ensuring that the bridges can withstand extreme weather conditions and prevent catastrophic failures.

Context-sensitive Design and Safety Features:

The project includes context-sensitive design elements that consider the unique environmental and climatic conditions of the region. By integrating the latest safety features, the new bridges will not only enhance flood resilience but also improve overall road safety for motorists and construction workers. The design will ensure safe passage even during severe weather events, reducing the likelihood of road closures and the associated economic and social disruptions.

Concrete Bridge Reconstruction and Climate Resilience:

The proposed bridge reconstruction will replace the existing timber bridges with modern concrete structures designed to endure catastrophic floods and potential wildfires. Concrete is chosen for its durability and resistance to water damage, making it an ideal material for flood-prone areas. The reconstruction project will also incorporate seismic design elements, ensuring that the bridges can withstand earthquakes, which are another significant hazard in the region.

Environmental Justice Considerations:

The Route 66 Resiliency Improvement Project also emphasizes environmental justice by addressing the needs of underserved and climate-vulnerable communities. Replacing these nine bridges will provide reliable access to essential services and emergency response routes for rural and low-income populations by ensuring they remain functional during extreme weather events. This focus on resilience and accessibility will help protect these communities from displacement and other negative impacts of infrastructure failure.

Ongoing Maintenance and Safety Enhancements:

In addition to the initial construction, the project will include ongoing maintenance plans to ensure the long-term resilience and safety of the bridges. This proactive approach will involve regular inspections, timely repairs, and updates to safety features as needed, keeping the infrastructure in optimal condition and ready to withstand future climate threats.

Incorporation of Latest Design Codes:

The new bridges will be designed in compliance with the latest AASHTO and Caltrans design codes, which include updated guidelines for climate resilience and safety. These standards ensure that the bridges are built to the highest possible specifications, incorporating best practices for flood resistance, seismic stability, and overall durability.

Community and Economic Benefits:

By increasing the resilience of these critical infrastructure assets, the project will enhance regional mobility, support economic opportunities, and protect the environment and natural resources. Reliable transportation infrastructure is essential for the movement of goods and services, emergency response, and daily commuting, all of which contribute to the economic stability and quality of life in San Bernardino County.

B2. Explain how the proposed project will increase the transportation system's ability to preserve, enhance, or protect each of the following at the local AND regional levels OR statewide level: 1) Mobility; 2) Accessibility, 3) Economic development and vitality, 4) Goods movement, 5) Environment and natural resources; 6) Safety of adjacent communities and all users of the transportation system; 7) Cultural resources, including Tribal cultural resources, if applicable; 8) Other critical infrastructure, if applicable.* (774/750 words)

1) Explain how the proposed project will increase the transportation system's ability to preserve, enhance, or protect each of the following at the local and regional or statewide level:
· mobility
· accessibility
· economic development and vitality
· goods movement
· environment or natural resources
· safety of adjacent communities and all users of the transportation system
· cultural resources, including Tribal cultural resources, if applicable
· other critical infrastructure, if applicable.

This proposed project will increase the transportation system's ability to preserve, enhance, or protect each of the following at the local and regional levels:

1) Mobility:

This project will benefit residents in rural communities of San Bernardino County. People in disadvantaged communities are least able to afford the time and cost to travel longer routes as a result of bridge weight restrictions or closures. They should be afforded unrestricted access from their homes to jobs, schools, shopping, hospitals, and services.

Mobility of the public is of utmost importance as well for the millions of people who travel the nearby Interstate system. Even most recently, in July of 2024 a truck fire near Baker caused a three-day closure of I-15 and I-40 could not handle the amount of traffic that was being diverted on it, with many motorists attempting to use this exact section of the NTH as an alternate route. Over 80 calls were made for stranded motorists on the I-15 and I-40 seeking emergency services and crews responded for days with pallets of drinking water, along with diesel fuel and gasoline for motorists in need. Ensuring the mobility of the region in times of emergency, as well as everyday use, is of critical importance.

2) Accessibility:

This project will improve access to emergency care, essential services, and healthcare in a Disadvantaged Community (DAC). The closest hospitals (Barstow Community Hospital and Colorado River Medical Center), and most other healthcare and essential services are located in Barstow to the west and Needles to the east of the project segment and weight restrictions of less than three tons on many of the bridges

along NTH prevent emergency vehicles (ambulances and fire trucks) from accessing the affected communities.

3) Economic Development and Vitality:

Eliminating most weight restrictions will also help to increase tourism and bring National Trails Highway back to life. Commercial and recreational vehicles of all sizes will be able travel the roadway providing business for diners/cafes, motels, RV parks, small roadside attractions, and gas stations along the roadway. Business owners will be able to invest in their properties to accommodate more visitors, such as Roy's Motel and Café in Amboy, or to break ground on long dormant projects, such as the RV park that is planned in Chambless. The increase or expansion of local businesses also creates potential job opportunities for local residents.

4) Goods movement:

Furthermore, this project will improve goods movement within a DAC. As discussed thoroughly throughout this application, NTH and I-40 are the only two east-west transportation routes between Barstow and Needles. I-40 is a primary route for freight transport across the county. Twenty-five to thirty percent of cargo from the Ports of Los Angeles and Long Beach cargo are shipped eastward along I-40. NTH is a viable detour for I-40 when in good repair, playing a critical role in supply chain reliability and goods movement in the region.

The project will also improve the movement of goods for local businesses on NTH as presented in Criterion #3, which need unrestricted access to NTH for their goods movement. With few weight restrictions, trucks will be able to receive and make deliveries without detours thereby reducing transit times and costs.

5) Environment or natural resources:

This project is located within part of the Mojave Desert and subject to extreme weather conditions like flash floods, causing periodic road and bridge closures. In August 2014 and July 2018, 66 bridges were damaged by flash flooding events. Building resiliency into the transportation system helps protect assets against these greater risks exacerbated by climate change by limiting disruptions and eliminating significant downtimes and closures. The County has completed hydrology studies to estimate design flows from rains and flooding, providing data that is critical for hardening these structures against such water-related events, as well as other natural threats like earthquakes and wildfires. Designs will be compliant with AASHTO and Caltrans codes, which have been updated to include resiliency elements.

6) Safety of Adjacent Communities and All Users of the Transportation System:

The proposed project will significantly enhance the safety of adjacent communities and all users of NTH. By completing this project, the current weight restrictions that limit access for emergency vehicles will be removed ensuring emergency responders can reach communities quickly and effectively, reducing response times during critical incidents. Additionally, the new bridges will be designed to withstand extreme weather events, reducing the likelihood of closures and ensuring continuous safe passage for all travelers. Enhanced safety features, like improved guardrails and

wider lanes, will further protect motorists, cyclists, and pedestrians. The reduction in detours will also minimize the risk of accidents and exposure to hazardous conditions, ultimately safeguarding well-being for all travelers.

C. Environmental equity for climate-vulnerable, under-resourced, and/or underserved communities

C1. Explain how the proposed project incorporates environmental equity and directly benefits climate-vulnerable, under-resourced, and underserved communities. * (902/1000 words)

Based on the federally disadvantaged/state climate-vulnerable populations identified in ***Screening Criteria B****.*

The proposed project to replace nine deteriorated bridges on National Trails Highway incorporates environmental equity and directly benefits climate-vulnerable, under-resourced, and underserved communities in several significant ways. By addressing critical transportation challenges and enhancing infrastructure resilience, the project aims to improve public health, safety, and economic opportunities for residents of San Bernardino County, particularly those in disadvantaged areas.

HOW THE PROJECT INCORPORATES ENVIRONMENTAL EQUITY

San Bernardino County is an underserved area with significant climate-vulnerable populations. These communities face higher exposure to environmental hazards, limited economic opportunities, and poor access to reliable transportation. By replacing deteriorated bridges with modern, resilient structures, the project addresses these critical issues directly. The project aims to reduce GHG emissions and improve air quality, thereby mitigating health impacts such as respiratory illnesses that are prevalent in these communities due to poor air quality.

The project incorporates environmental equity by prioritizing community engagement from the outset. By involving the community early in the planning process, the project ensures that the needs and desires of local residents are at the forefront of decision-making. This proactive engagement means that the project is built based on the expressed needs of the community, rather than imposing solutions after the fact. This approach is especially important for underserved communities in San Bernardino County, who have disproportionately suffered in terms of environmental degradation, economic hardship, and inadequate transportation infrastructure.

Throughout the project development, extensive public outreach and stakeholder engagement activities were conducted to ensure that the needs and concerns of local residents were addressed. Public meetings, community workshops, and consultations with local businesses and civic organizations were held to gather input and feedback. This collaborative approach ensures that the project aligns with the community's priorities and promotes environmental justice by addressing the specific challenges faced by climate-vulnerable populations.

HOW THE PROJECT DIRECTLY BENEFITS THE COMMUNITY:

Reduction of Greenhouse Gas Emissions and Air Quality Improvements

One of the key benefits of the project is the significant reduction in GHG emissions and criteria pollutants. By replacing the existing timber bridges with modern concrete structures, the project will prevent motorists from being stranded and reduce the need for long detours. This will minimize vehicle idling and shorten travel distances, leading to substantial decreases in fuel consumption and associated emissions.

Over a 30-year period, the project is estimated to reduce GHG emissions by 3,146 tons of CO2. This reduction is based on a significant decrease in vehicle hours and miles traveled. Specifically, vehicle hours are expected to decrease from 313,299 to 249,908, resulting in a reduction of 63,391 hours. Similarly, vehicle miles traveled are anticipated to drop from 18,797,947 to 14,994,442, yielding a reduction of 3,803,505 miles. This decrease in travel time and distance will also lead to a reduction in fuel consumption by 346,189 gallons. Additionally, the project will lower NOX emissions by 6,047 kg and particulate matter by 123 kg, contributing to improved air quality in the region. These reductions are crucial for improving air quality, directly benefiting the health of residents, especially those in climate-vulnerable and under-resourced communities who already suffer from higher rates of respiratory illnesses due to poor air quality.

Enhanced Safety and Resilience

The project will significantly enhance the safety and resilience of the transportation infrastructure. The new bridges will be designed to withstand catastrophic floods, wildfires, and earthquakes, providing a reliable escape route during emergencies. The current timber bridges are at risk of failure during such events, potentially leaving residents stranded. By ensuring that the bridges can handle extreme weather conditions and seismic activity, the project will protect the community and reduce the likelihood of displacement due to infrastructure failure.

Addressing Mobility Barriers

Many of the existing bridges within the project scope have significant weight restrictions, preventing large vehicles, including emergency services and commercial trucks, from using this route. This impacts goods movement and services to the area, which are critical for the local economy and access to essential services. The project will remove these weight restrictions, enhancing mobility for all vehicle types and ensuring that emergency services can reach residents in need. This is particularly important for those living in disadvantaged communities, where access to healthcare and emergency services is already limited.

Economic Development and Vitality

The proposed bridge replacements will also stimulate economic development and vitality in the region. By improving the transportation infrastructure, the project will support the movement of goods and services, attract tourism, and enable local businesses to thrive. This is particularly beneficial for under-resourced communities, as improved infrastructure can lead to job creation and increased economic opportunities.

Improved Access to Essential Services

The replacement of the deteriorated bridges will improve access to essential services such as healthcare, education, and emergency response. Currently, the weight restrictions on the bridges

prevent ambulances and other emergency vehicles from crossing, delaying critical care for residents. By providing safe and reliable infrastructure, the project will ensure that residents have timely access to these vital services, enhancing their quality of life and overall well-being.

Protection of Cultural Resources

The project also emphasizes the protection of cultural resources, including potential Tribal cultural resources. By collaborating with the State Historic Preservation Officer (SHPO) and other relevant bodies, the project ensures that the historical significance of National Trails Highway is preserved while incorporating modern safety features. This approach balances the need for infrastructure improvements with the preservation of the region's rich cultural heritage.

C2. Describe how anti-displacement policies (Appendix B) and actions are being implemented to discourage project-induced impacts. If indirect displacement is not an issue, applicants must explain why it is not a concern.* (90/500 words)

*Based on the federally disadvantaged/state climate-vulnerable populations identified in **Screening Criteria B**.*

Indirect displacement is not a concern for this project as it is located in a very rural area of San Bernardino County, where there are no residents who need to be displaced to complete the project. The project involves the replacement of existing bridges on National Trails Highway with improved structures, without altering the existing footprint or requiring land acquisition that could displace people. The bridges currently exist, and the project focuses solely on upgrading them to enhance safety and resilience. Therefore, no anti-displacement policies are necessary for this project.

D. Community Engagement

D1. Describe the public stakeholders who were engaged in the development of the project nomination. * (499/500 words)

*Based on the federally disadvantaged/state climate-vulnerable populations identified in **Screening Criteria B**.*

The development of the California Historic Route 66 Needles to Barstow Corridor Management Plan (CPM) was a comprehensive effort involving diverse public stakeholders as well as civic organizations and other parties.

The *Bureau of Land Management (BLM)* managed 58.6% of the corridor's lands. They coordinated interagency efforts, managed field operations, and ensured compliance with federal guidelines under the Federal Land Policy and Management Act (FLPMA) of 1976. Additionally, the BLM's California Desert District leads the "Connecting People to the Desert" program and the "Discover the Desert" campaign, which promotes tourism and highlights resources of public lands, focusing on Route 66.

The *California Historic Route 66 Association (CHR66A)* spearheaded public outreach, information transparency, and advocacy. This volunteer-driven, nonprofit organization facilitated community engagement through public meetings, bus tours, collecting public input, and advocating for the preservation of Route 66. Their efforts represented the community's voice as a central component of the planning process.

San Bernardino County provided technical and logistical support. County representatives offered data and insights into local land use policies, environmental assessments, and public works projects. They coordinated with county agencies to ensure the plan aligned with regional development goals and addressed local concerns regarding land use and infrastructure. The county is responsible for maintaining Route 66 within unincorporated areas, including many aging timber trestle bridges.

The *City of Barstow* coordinated the integration of the city's needs and perspectives into the plan, in consideration of local development and tourism initiatives. The city hosts several museums, an operating Route 66-themed motel, and an extensive mural program. Additionally, Barstow updated its General Plan in 2015, identifying opportunities for heritage tourism and preservation, while initiating a planning process for the Route 66 business corridor.

The *City of Needles* represented the city's interests, facilitating community engagement, and supporting tourism efforts to preserve Route 66's historical significance. Needles, its Chamber of Commerce, and various civic groups have increased awareness of Route 66 through historic preservation projects, murals, and tourism efforts, notably rehabilitating the Harvey House and preserving vintage gas stations.

The *National Park Service (NPS)* provided expertise in historic preservation, preservation strategies and securing funding for various projects. The NPS Route 66 Corridor Preservation Program collaborates with property owners, organizations, and government entities to address preservation needs and offers cost-share grants for restoration efforts. Additionally, the NPS played a significant role in the Mojave National Preserve's management. This helped preserve Route 66's historical and cultural significance.

Other stakeholders integral to the creation of the CMP included the following:

Virtual Tours West
Conservation Lands Foundation
Mojave Desert Heritage and Cultural Association (MDHCA)
Friends of El Garces, Needles
Mother Road Enterprises
United Way/Barstow Chamber
Needles Best Western
Western America Railroad Museum
Needles Downtown Business Alliance & Needles Economic Development Corporation
California Preservation Foundation
Rt. 66 Mother Road Museum
Southern California Edison
Zachnews
Needles Desert Star
Wildlands Conservancy
Calico Ghost Town
CalTrans, Built Environment Preservation Services Branch
Rt. 66 Motel, Barstow
CalTrans, Architectural Historian

Link_to_Plan: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://route66ca.org/wp-content/uploads/2016/03/Complete-CMP-Document.pdf

D2. Describe the process used to identify the community's mobility needs and explain how the proposed project will address those mobility needs. * (500/500 words)

The community's mobility needs were identified through extensive public outreach and stakeholder engagement activities, including public meetings, community workshops, and stakeholder consultations, ensuring a comprehensive understanding of the transportation challenges faced by residents, especially those in disadvantaged and underserved communities.
Initial public outreach was conducted as part of the development of the California Historic Route 66 Corridor Master Plan from Needles to Barstow. During this period, public meetings were held in Barstow, Needles, and Newberry Springs, attracting approximately 80 community members at each meeting. These meetings provided a platform for residents to voice their concerns and suggestions regarding transportation and mobility issues. Smaller group meetings with stakeholders also supplemented larger gatherings to ensure a wide range of perspectives were considered.

Addressing Mobility Barriers:

The existing bridges in question have significant weight restrictions, preventing almost all large vehicles from using this route. This restriction severely impacts goods movement and services to the area and surrounding regions dependent on this road. By replacing these deteriorated bridges with modern, resilient structures, the project aims to eliminate these weight restrictions, thereby enhancing mobility for all vehicle types, including heavy trucks essential for goods movement and emergency services.

Operational Benefits and Efficiency:

Operational benefits are derived using estimation methodologies consistent with the US-DOT "Benefit Cost Guidance" publication. These benefits include calculating the number of hours for autos and trucks to travel the normal and detour routes, assuming a constant travel speed of 60 miles per hour. The project significantly reduces travel time and distance, as shown in the reduction of vehicle hours and miles traveled. This reduction translates into substantial savings in delay costs, including crew costs, locomotive ownership, operating costs, fuel, and intermodal lading costs.

The new bridges will restore the functionality of NTH as a viable alternative route, particularly during I-40 closures, preventing motorists from being stranded and reduce the need for long detours, thereby minimizing vehicle miles traveled and maximizing person throughput. The enhanced mobility will benefit residents by providing unrestricted access to jobs, schools, shopping, hospitals, and essential services, particularly in disadvantaged communities where mobility barriers currently exist.

Public Engagement and Ongoing Collaboration:

The engagement process will continue throughout the project's implementation phase. Three more public meetings will be organized in Barstow, Needles, and Newberry Springs to gather updated input from residents and stakeholders. These meetings will emphasize the participation of vulnerable communities impacted by the project. To maximize attendance and accessibility, the meetings will be scheduled on different dates and advertised through various channels, including the County's website, social media platforms, mailings, and local newspapers. Feedback from these meetings will be documented and incorporated into the project plans as relevant.

Support for Local Economy and DBEs:

Additionally, the County will provide information regarding opportunities for Disadvantaged Business Enterprises (DBEs) to participate in and compete for project contracts, ensuring fair opportunities for small businesses owned and controlled by socially and economically disadvantaged individuals. The County's public works contracts have a required DBE participation goal, averaging about 10%, to support this initiative.

D3. Describe and provide documentation of the public outreach, engagement, and collaboration activities performed during the

project development. Explain how stakeholder engagement will continue during project implementation.* (499/500 words)

Throughout the project development for the replacement of nine deteriorated bridges on NTH, extensive public outreach and stakeholder engagement have been conducted to ensure community involvement and transparency. Full documentation of the public outreach, engagement, and collaboration activities can be found in the "California Historic Route 66: Needles to Barstow Corridor Management Plan."

Initial outreach included public meetings, workshops, and consultations with local residents, businesses, and civic organizations. The planning phase began as a collaboration with the California Historic Route 66 Association, local historical societies, and environmental groups to incorporate their insights and address concerns about the project.

Public meetings were held in Barstow, Needles, and Newberry Springs, with approximately 80 community members in attendance at each meeting.

The proposed project will include three new public meetings in Barstow, Needles, and Newberry Springs. Community groups will coordinate logistics, when possible, for these meetings. The meetings will be planned on different dates to provide an opportunity for the greatest number of people to attend and will provide accessibility to persons regardless of race, color, national origin, disability, age, and sex. The meetings will be advertised through various methods, including the County's website and social media platforms, mailings, and postings in local newspapers. Feedback will be incorporated into project plans as relevant. Information will also be provided regarding opportunities for DBEs to compete for project contracts with the County. County public works contracts have a required DBE participation goal, which has averaged about 10%, to provide fair opportunities for small businesses owned and controlled by socially and economically disadvantaged individuals.

To foster continuous engagement, the project team has maintained open lines of communication with stakeholders through newsletters, social media updates, and a dedicated project website. Regular updates and feedback sessions have been scheduled to keep the public informed about project milestones. This ongoing dialogue has helped in refining the project plans to better meet community needs and ensure that the historical and cultural significance of Route 66 is preserved.

During the implementation phase, the project will continue to prioritize stakeholder engagement by organizing periodic public meetings and providing updates through various communication channels. Collaboration with local agencies, such as the County of San Bernardino, Caltrans, and the Bureau of Land Management, will be essential to address any emerging issues and maintain project transparency. The engagement strategy includes ensuring that feedback from the public is considered in the decision-making process, thus fostering a sense of ownership and support for the project.

Additionally, the project team will work closely with local schools, community groups, and environmental organizations to promote educational initiatives about the importance of infrastructure resilience and historical preservation. By involving these groups, the project aims to create long-term benefits for the community as well.

Documentation of all public outreach and engagement activities will be maintained and shared with stakeholders to ensure accountability and continuous improvement in the engagement process. This comprehensive approach to public outreach and stakeholder engagement is designed to build trust, ensure community support, and achieve the project's goals.

D4. Explain how community input was received and incorporated into the project.* (481/500 words)

The development of the bridge replacement project on NTH involved extensive community outreach and stakeholder engagement to ensure that the voices of local residents and other stakeholders were heard and incorporated into the project planning and implementation process.

Initial Community Outreach Efforts:

Initial outreach efforts were conducted as part of the development of the California Historic Route 66 Corridor Management Plan (CMP) from Needles to Barstow. In 2013, public meetings were held in Barstow, Needles, and Newberry Springs, each with approximately 80 community members in attendance. Smaller group meetings were also held with stakeholders and provided an opportunity for community members to express concerns, suggestions, and expectations regarding the preservation and enhancement of Route 66. The input from these meetings was instrumental in shaping the project's initial design and approach.

Public Meetings and Stakeholder Engagement:

As the project progressed, three public meetings were planned to gather updated input from residents and stakeholders, with an emphasis on the vulnerable communities impacted by the project. These meetings were scheduled in Barstow, Needles, and Newberry Springs, ensuring that the maximum number of people could attend and participate. The meetings were advertised through various channels, including the County's website, social media platforms, mailings, and local newspapers, ensuring broad awareness and accessibility.

Documentation and Feedback Incorporation:

During these meetings, comments and questions from the public were documented and made available on the County's website, along with the meeting presentations. This transparency allowed for public engagement and provided a record of community feedback. The project team reviewed and incorporated feedback into the project plans, ensuring that the community's needs and concerns were addressed.

Collaboration with Agencies and Organizations:

The project team also collaborated with various agencies and organizations, including Caltrans, the State Historic Preservation Officer (SHPO), and the U.S. Department of Forestry, to align the project with broader state and federal guidelines. This collaboration ensured that the project not

only met local needs but also adhered to higher standards of safety, resilience, and historical preservation.

Future Stakeholder Engagement:

Stakeholder engagement will continue throughout the project implementation phase. Periodic public meetings will be organized to provide updates on project progress and gather ongoing feedback. These sessions will ensure that any emerging issues are addressed and that the community remains informed and involved. The project team will also use newsletters, social media updates, and a dedicated project website to keep the public informed about milestones and opportunities for input.

Documentation of Outreach Efforts:

Finally, all outreach and engagement activities will be thoroughly documented and shared with relevant stakeholders to ensure accountability and continuous improvement in the engagement process. This comprehensive approach to public outreach and stakeholder engagement is designed to build trust, ensure community support, and achieve the project's goals effectively.

By integrating community input and maintaining ongoing dialogue with stakeholders, the project aims to create a resilient, safe, and historically preserved transportation infrastructure that meets residents' needs.

D5. Identify strategies included in the project scope that seek to avoid or minimize impacts, as determined through collaboration with community members.* (471/500 words)

The project to replace nine deteriorated bridges on National Trails Highway includes several strategies to avoid or minimize impacts, developed through collaboration with community members and stakeholders. These strategies aim to preserve the historical significance, ensure environmental sustainability, and address community concerns effectively.

Historic Preservation and Visual Impact Mitigation:
The project will maintain the historical character of National Trails Highway by incorporating context-sensitive designs that reflect the original timber bridge aesthetics. This approach was formulated in collaboration with the State Historic Preservation Officer (SHPO), Caltrans Cultural Resources, and the U.S. Department of Forestry. The new bridges will replicate the historical appearance while meeting modern safety standards. To minimize visual impacts, the project adheres to the Bureau of Land Management (BLM) Visual Resource Management objectives, ensuring that new structures blend with the surrounding landscape and do not detract from the scenic quality of the historic route .

Environmental Protection and Resilience to Climate Change:

To address environmental concerns, the Route 66 Resiliency Improvement Project will enhance climate resilience by incorporating hydrology studies to mitigate flood risks and ensuring that the new bridges can withstand a 100-year flood event. Additionally, this project will use sustainable materials and construction practices that minimize the environmental footprint. These strategies were developed with input from local environmental groups and community members who emphasized the importance of preserving natural resources and protecting the area from climate-related impacts .

Public Engagement and Ongoing Collaboration:
Public outreach has been a critical component of the project development. Initial outreach was conducted in 2013 as part of the California Historic Route 66 Corridor Master Plan, with public meetings held in Barstow, Needles, and Newberry Springs. Approximately 80 community members attended each meeting, providing valuable feedback on the project. The proposed project will include additional public meetings in these locations to gather updated input, particularly focusing on vulnerable communities affected by the project. These meetings will be accessible to all community members, with logistics coordinated by local groups to maximize participation. Feedback from these sessions will be documented and incorporated into the project plans to ensure community needs and concerns are addressed effectively .

Minimizing Construction Impacts:
To reduce the impact of construction activities, the project scope includes strategies such as minimizing ground disturbance and repairing affected areas with native vegetation and topsoil. Construction zones will be managed to ensure the safety of workers and minimize disruption to the local community. These measures were developed in consultation with local residents and stakeholders to balance project needs with community well-being .

Cultural Resource Protection:
The project also emphasizes the protection of cultural resources, including potential Tribal cultural resources. The County will work closely with relevant cultural and historical preservation bodies to ensure that the project does not adversely impact significant cultural sites. This strategy aligns with community priorities for preserving the rich cultural heritage of the region .

Section 5. Additional Evaluation Criteria

A. Reduction of Greenhouse Gases – Describe how the proposed project will reduce greenhouse gas emissions and criteria pollutants and advance California's air quality and climate goals, including the proposed use of natural infrastructure elements. * (235/250 words)

The proposed project to replace the existing timber bridges on National Trails Highway with modern, well-designed structures will significantly reduce greenhouse gas (GHG) emissions and criteria pollutants, advancing California's air quality and climate goals. By providing a reliable detour route for I-40, the new bridges will prevent motorists from being stranded and reduce the

need for long detours, which currently increase vehicle idling and emissions. The reduction in idling and shorter travel distances will lead to substantial decreases in fuel consumption and associated emissions.

Over a 30-year period, the project is estimated to reduce GHG emissions by 3,146 tons of CO2. This reduction is a result of the decrease in vehicle hours and miles traveled, as well as improved traffic flow. Specifically, vehicle hours are expected to be reduced by 63,391 hours, and vehicle miles by 3,803,505 miles. This will lead to a reduction in fuel consumption by 346,189 gallons. The project will also decrease NOX emissions by 6,047 kg and particulate matter by 123 kg, contributing to improved air quality in the region.

The modern bridges will also provide a crucial north-south connection for traffic between the City of Twentynine Palms and I-15, further reducing travel distances and emissions. The use of natural infrastructure elements, such as incorporating designs that enhance flood resilience and reduce maintenance needs, will also contribute to the long-term sustainability of the transportation infrastructure.

B. Reduction of Vehicle Miles Traveled – The project nomination should demonstrate how the project will minimize vehicle miles traveled while maximizing person throughput.* (243/250 words)

The proposed project will significantly reduce Vehicle Miles Traveled (VMT) while maximizing person throughput by replacing the deteriorated bridges on National Trails Highway. According to a Caltrans 2023 report, the bridges' current conditions lead to significant detours, forcing vehicles to take longer routes via I-15 and SR 247, increasing travel distance and time.

The number of vehicles per hour was calculated by dividing the daily vehicle count by twenty-four (24) to determine hourly traffic. Travel times for autos and trucks on both the normal and detour routes were calculated assuming a constant speed of 60 miles per hour. By comparing the vehicle hours and miles for the existing route versus the new, improved route with the replaced bridges, the reductions in VMT and vehicle hours were determined, highlighting the significant operational and environmental benefits of the project. The operational benefits over a 30-year period are substantial, with an estimated reduction of 3,803,505 vehicle miles. This reduction will not only decrease fuel consumption and emissions but also lower travel time for all vehicle types.

Vehicle hours will be reduced by 63,391 hours over the same period, further demonstrating the project's impact on improving traffic flow and reducing congestion. These improvements will enhance person throughput by ensuring smoother and more direct travel routes, benefiting both local residents and regional traffic.

By replacing the existing timber bridges with modern, resilient structures, the Route 66 Resiliency Improvement Project will restore the functionality of NTH.

C1. Transportation, Land Use, and Housing Goals (Regional) – The project nomination should explain how the project will advance transportation, land use, and housing goals within the region as identified in the region's Regional Transportation Plan, Sustainable Communities Strategy (where applicable), and Regional Housing Needs Allocation. * (349/500)

This may include demonstrating how the project will support or align with the region's Regional Early Action Planning (REAP) grant investments or other regional planning or implementation efforts.

The Southern California Association of Governments (SCAG) Regional Comprehensive Plan Report includes a Regional Transportation Plan (RTP). The RTP was created to guide policies and funding to ensure that they reflect the long term vision and goals of SCAG and align with the Regional Comprehensive Plan. The RTP goals are: "1) establish a more efficient transportation system that reduces and better manages vehicle activity, and 2) build a cleaner transportation system that minimizes air quality impacts and is energy efficient" (SCAG Regional Comprehensive Plan Report). Both of these goals support the proposed project to replace the existing timber bridges on National Trails Highway because it is "demonstrated to be both regionally beneficial relative to the performance in the regional transportation system and reflective of … community needs throughout the region".

The Regional Comprehensive Plan states that transportation policies can benefit and impact land use and housing by focusing transportation investments to serve the region's community needs for housing and jobs thereby guiding land use planning. In doing so, transportation investments can increase property values and demand for subsequent development and have a positive impact on the local economic landscape of the affected communities.

The quality of life in any region depends in large part on travel - how easy it is to get from home to work and back, the amount of time spent commuting, and the types and degree of choices available for getting around. Closely related to that are the choices about how land should be used and what kinds of buildings should be constructed. The types and appearances of buildings, how they function, and where they are located all have an effect on transportation use.

Sustainably planning for land use and housing in Southern California will maximize the efficiency of the existing transportation network, provide the necessary amount and mix of housing for the region's growing population, enable a diverse and growing economy and protect important natural resources. Replacing these nine bridges along National Trails Highway aligns with all of these aims of SCAG and will help to achieve their goals for the larger Regional Comprehensive Plan.

C2. Transportation, Land Use, and Housing Goals (Local) – The project nomination should explain how the project will advance local transportation, land use, and housing goals. * (220/500)

This narrative may include:

1) Demonstrating, at the time of project nomination, the local jurisdiction has submitted its Housing Element annual progress report to the State of California for the current and prior year; or

2) Demonstrating the local jurisdiction applied to the Department of Housing and Community Development's Prohousing Designation Program and meets Prohousing criteria that support efficient land use. Applicants are encouraged to apply for the California Department of Housing and Community Development's (HCD) Prohousing Designation Program and to describe how local policies align with prohousing (https://www.hcd.ca.gov/community-development/prohousing/index.html).

a. The project nomination must include a commitment by the local jurisdiction to continue pursuing full Prohousing Designation after receiving Local Transportation Climate Adaptation Program funding.

If housing is not an issue for the local jurisdiction, provide a detailed explanation, including an accounting of the jurisdiction's assigned local share of the Regional Housing Needs Allocation and the jurisdiction's progress toward meeting those needs documented in the jurisdiction's Housing Element annual progress report for the current and prior years.

The County of San Bernardino's vision statement calls them to create a sustainable system of high-quality education, community health, public safety, housing, retail, recreation, arts and culture, and transportation infrastructure, in which development complements the natural resources and environment for the residents of the expansive county. They then created a Countywide Plan to guide future decisions, investments, and improvements which affect both the incorporated and unincorporated areas within its jurisdiction in light of their vision. The replacement of the nine bridges along National Trails Highway aligns with and supports all of the following Countywide goals:

- Accommodation of growth in the unincorporated county when it benefits existing communities and supports the regional economy.
- Support growth through the balance of jobs and housing to reduce vehicle miles traveled, increase job opportunities and household income, and improve quality of life.
- Intend that new commercial development in the unincorporated areas serve unincorporated residential areas, tourists, and/or freeway travelers.
- Encourage new commercial development to be concentrated to enhance pedestrian circulation and reduce vehicular congestion and vehicle miles traveled.

By taking into consideration the goals of the County of San Bernardino, replacing the nine bridges along the National Trails Highway would play a significant role in helping achieve all of these objectives at the intersection of transportation, land use and housing for the impacted communities.

D. Cost Effectiveness – Consideration will be given to projects that provide positive benefits in relationship to the project costs. * (102/250)

The Commission will consider measurable benefits using the California Life-Cycle Benefit/Cost Analysis (https://dot.ca.gov/programs/transportation-planning/division-of-transportation-planning/data-analytics-services/transportation-economics) or an alternative proposed by the applicant.

By the mid-1940s, the State of California denoted in its maintenance reports that all National Trails Highway timber bridges between Barstow and Mountain Springs Road were quickly approaching the end of their design and economical service life. Yet, nearly 80 years later, San Bernardino County is still maintaining the same 90-year-old bridges with stop-gap measures, resulting in very high annual maintenance costs.

Such maintenance efforts patch issues as they occur, but a more comprehensive repair program would be more effective. In fact, this project achieves a benefit cost ratio of 5.80, driven in part by benefits resulting from reduced maintenance costs.

[UPLOAD] Cost Effectiveness Screenshot (optional)*

Section 6. Funding and Project Delivery

Delivery Method: Specify what delivery method is being used for the project. If a delivery method other than design-bid-build is used for the project, identify the delivery method used. If the delivery method is unknown at the time of nomination, it should be reported as soon as it is known. * (185/250)

This can be a one sentence statement, but no more than one paragraph.

The project to replace nine deteriorated bridges on National Trails Highway will utilize the traditional design-bid-build (DBB) delivery method. This method involves three phases: the design phase, where detailed plans and specifications are developed; the bid phase, where contractors submit competitive bids; and the build phase, where the selected contractor constructs the project. An innovative aspect of this project is the bridge design, which incorporates modern techniques while preserving historic features. Given National Trails Highway's designation as "Historic Highway Route 66" and a National Scenic Byway, the design will replicate the original timber elements using a state-of-the-art concrete bridge replacement system. This approach satisfies the State Historic Preservation Office (SHPO) concerns and adheres to the latest AASHTO and Caltrans design codes, including seismic requirements. The County has collaborated with Caltrans Structures, Caltrans Cultural Resources, SHPO, and the U.S. Department of Forestry to ensure that the design respects the historic fabric while providing a resilient modern structure. This innovative design is being replicated for all rural bridges along

the National Trails Highway. If an alternative delivery method is determined later, it will be reported promptly.

Contracts: If more than one contract is needed for the construction phase and separate allocations are needed, explain in this section. (11/250 Words)

This corridor has no other contracts needed for the construction phase.

Schedule Threats: In narrative format, list any potential schedule threats and proposed mitigation strategies to keep the project on schedule. Examples of schedule threats include geotechnical analysis needs or concerns, complicated utility relocations, or land acquisition needs. * (585/750)

The Route 66 Revitalization Project involves several potential schedule threats that could impact the timeline from inception to construction. The following narrative outlines these potential challenges and the proposed mitigation strategies to ensure that the project remains on schedule and meets its objectives within the planned three-year timeframe from receiving funding to proceeding with design and environmental work.

1. Geotechnical Analysis Needs:
One of the primary schedule threats is the need for comprehensive geotechnical analysis. The existing bridges, constructed in 1930, may require extensive soil and foundation studies to assess the ground conditions and ensure that the new structures can withstand modern load requirements and environmental stressors. The complexity of these analyses could potentially delay the design phase.

Mitigation Strategy: To mitigate this risk, the project team will engage a qualified geotechnical engineering firm early in the planning phase. This proactive approach will allow for preliminary investigations to be conducted before finalizing the project scope. Additionally, sufficient time will be allocated in the project schedule for unexpected findings and necessary adjustments. Close coordination with the geotechnical team and regular progress updates will be maintained to ensure timely completion of this critical task.

2. Complicated Utility Relocations:
The project area may involve utility lines, including water, electricity, gas, and communication infrastructure, which could require relocation or modification. The complexity of coordinating with multiple utility companies and the technical challenges of relocating utilities in a timely manner could pose significant schedule risks.

Mitigation Strategy: Early identification and mapping of all existing utilities will be conducted in collaboration with utility providers. This will include consultations to understand the specific requirements and timelines for relocation. A comprehensive utility relocation plan will be developed, outlining the sequencing of utility work in alignment with the overall construction schedule. Additionally, agreements with utility companies will be established to expedite the relocation process and ensure alignment on the project timeline.

3. Coordination with Multiple Stakeholders:
The project involves coordination with multiple stakeholders, including federal, state, and local agencies, as well as community groups and private entities. Misalignment or communication breakdowns could lead to delays in decision-making and project approvals.

Mitigation Strategy: A comprehensive stakeholder engagement plan will be established, including regular meetings, clear communication channels, and defined roles and responsibilities. A project management team will oversee stakeholder coordination, ensuring that all parties are informed and involved throughout the project lifecycle. A centralized project management system will also be implemented to track progress, manage documentation, and facilitate efficient decision-making.

4. Environmental Permitting and Compliance: Obtaining necessary environmental permits and ensuring compliance with environmental regulations, such as the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA), can be time-consuming. Delays in securing permits or addressing compliance issues could impact the project schedule.

Mitigation Strategy: To mitigate this threat, the project team will leverage a successful template developed from identically similar previous bridge replacement projects (the Dola and Lanzit Ditches on the National Trails Highway). This template includes proven strategies for navigating the environmental review process efficiently. By initiating the process as early as possible, the team can anticipate potential challenges and streamline permit applications. A dedicated environmental team, experienced in similar projects, will oversee the process, conducting necessary studies and coordinating with relevant regulatory agencies. The established template ensures that regular communication with permitting authorities is maintained, enabling the team to track the status of applications and address any concerns promptly. Additionally, buffer periods will be incorporated into the schedule to account for potential delays, ensuring that the project remains on track.

Other Potential Threats: A description of other potential threats considered.(403/500)

This may include, but is not limited to, threats associated with deliverability and engineering issues, and funding commitments.

FUNDING COMMITMENTS:

A major potential threat to the project is securing adequate funding commitments, particularly because the nine identified bridges are under 20 feet in length and therefore ineligible for funding

under the federal highway bridge funding program (HBPF). This restriction limits access to a critical source of replacement funding typically available for bridge projects.

Mitigation Strategies: To address this funding gap, the project team will actively seek grant funding from alternative sources to ensure the necessary financial resources are available. This includes applying for state and federal grants specifically designed for infrastructure improvements and transportation projects that may not meet the criteria for traditional highway bridge funding. Additionally, the team will explore partnerships with local agencies, private sector contributions, and other innovative funding mechanisms to secure the required funds. By diversifying the funding portfolio and leveraging multiple sources, the project aims to mitigate the risk of financial shortfalls and ensure the successful completion of the bridge replacements.

DELIVERABILITY:

Coordination with multiple stakeholders can be complex and time-consuming. Any delays in obtaining necessary approvals or aligning stakeholder priorities could impact the project timeline.

Mitigation Strategy: To mitigate these risks, it is crucial to maintain robust project management practices, including regular stakeholder meetings, clear communication channels, and a detailed project timeline with built-in contingencies. Assigning a dedicated project manager to oversee coordination efforts and ensure timely decision-making will also help streamline the process.

ENGINEERING:

Groundwater
Groundwater depth is a critical factor in assessing liquefaction potential and foundation design. Preliminary designs have conservatively placed the groundwater table at the riverbed elevation for initial screening. However, using an abnormally high groundwater level without clear evidence can lead to costly overdesigns.

Mitigation Strategy: To mitigate potential delays, site-specific field investigations will be prioritized and scheduled immediately after type selection approval. Close coordination with geotechnical experts will ensure accurate data collection and analysis.

Corrosion
The potential for soil corrosion at the project site poses another engineering threat. The preliminary analysis suggests the presence of clayey soils, which are typically corrosive. However, the exact corrosion potential will be evaluated during the final design phase using site-specific soil borings and laboratory tests.

Mitigation Strategy: If the soils are found to be corrosive, appropriate mitigation measures, such as using corrosion-resistant materials or protective coatings, will be implemented in the bridge design to prevent long-term damage and ensure structural integrity. Regular monitoring and testing during construction will ensure these measures are effective.

Will this project require Rail Company Coordination?*

Yes

No

California Environmental Quality Act and National Environmental Policy Act Status* (413/1000 words)

A one to two paragraph description of where the applicant is in the process of securing approval for California Environmental Quality Act and, if necessary, National Environmental Policy Act.

i. If the California Environmental Quality Act documents are not complete, in a one or two paragraph description, explain how the applicant will ensure the completion of required environmental documentation within six months of program adoption as required in the guidelines as outlined in ***Section 19****.*

ii. A one to two paragraph description of the environmental and community impacts as identified in the environmental document and if applicable the proposed mitigations. This can also be presented in a table format.

iii. A link to the final environmental document(s), or the draft environmental document(s), must be included for all project segments.

Currently, this project is in the beginning stages of securing approval for the California Environmental Quality Act and of the National Environmental Policy Act. The County intends to prepare a joint NEPA/CEQA document that is designed to meet the requirements of both NEPA and the California Environmental Quality Act (CEQA).

The County will also utilize an earlier (to be updated) draft Environmental Impact Report/Environmental Assessment (EIR/EA) that was completed for the smaller timber bridges.

Accelerated Design and Environmental Clearance:

Both design and environmental project components will build on complex processes and documents that have already been completed. The County has developed a base design on other long and short bridges along this stretch of National Trails Highway, and the design for the proposed project will be accelerated with the use of those base designs to the greatest extent possible.

In 2016, the County drafted an Environmental Impact Report/Environmental Assessment (EIR/EA) for the nine short bridges on National Trails Highway (including this project's bridges) between Barstow and Needles. As noted previously, the County is currently working on other bridge projects on National Trails Highway, and the environmental documents for those projects

are underway or are complete and have been approved by Caltrans. These documents will inform and help to accelerate the update of the environmental document for this project. To further accelerate the environmental review, the County intends to update the draft EIR/EA and prepare a joint National Environmental Protection Act/California Environmental Quality Act document that is designed to meet the requirements of both laws. This process will improve the efficiency and effectiveness of environmental permitting and review to accelerate project delivery.

To mitigate the threat of delays in environmental permitting and compliance, the project team will leverage a successful template developed from identically similar previous bridge replacement projects (the Dola and Lanzit Ditches on the National Trails Highway). This template includes proven strategies for navigating the environmental review process efficiently. By initiating the process as early as possible, the team can anticipate potential challenges and streamline permit applications. A dedicated environmental team, experienced in similar projects, will oversee the process, conducting necessary studies and coordinating with relevant regulatory agencies. The established template ensures that regular communication with permitting authorities is maintained, enabling the team to track the status of applications and address any concerns promptly. Additionally, buffer periods will be incorporated into the schedule to account for potential delays, ensuring that the project remains on track.

Section 7. Funding

Funding Table: Provide the table below for all project phases. This table must be consistent with the electronic Project Programming Request form submitted with the project nomination.*

	A	B	C	D	E
1	Phase	Fiscal Year of Allocation	Amount	Funding Source	Committed or Uncommitted
2	PAED				
3	PSE				
4	ROW				
5	ROW SUP				
6	CON				
7	CON SUP				

· ***ROW SUP & CON SUP:*** *Only for Caltrans implemented projects.*

· ***Required Match****: Project funding must include the required funding match.*

· ***Cost Overruns****: A description that demonstrates the ability to absorb any cost overruns and deliver the project nomination with no additional funding from this program.*

· ***Federal Discretionary Grant Funds****: Identify any discretionary federal grant funds that have been committed as of the project nomination due date, or those discretionary federal grant funds that have been applied for and not yet committed. Proof of the commitment should be provided in the form of a letter or public announcement issued by the authorizing federal agency.*

[UPLOAD] Project Programming Request*

Upload a file. No files have been attached yet.

Acceptable file types: .csv, .doc, .docx, .odt, .pdf, .rtf, .txt, .wpd, .wpf

Each project nomination must include an electronic Project Programming Request form. The electronic Project Programming Request form must list federal, state, local, and private funding categories by project phase and fiscal year. If the project nomination includes multiple project modes to be delivered under separate contracts, each project mode must have its own electronic Project Programming Request form. The scope, benefits, schedule, and funding plan of the electronic Project Programming Request form must be consistent with the information in the project nomination. Access to the electronic Project Programming Request form may be found on the Caltrans website, which may be accessed here: https://dot.ca.gov/programs/financial-programming/office-of-capital-improvement-programming-ocip.