

BUILD 2019 Project Information - Please complete all fields.
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Field Name	Response	Instructions
Project Name	Interstate 5 North Redding Six-Lane Project	Enter a concise descriptive title for the project. This should be the same title used in the Grants.gov SF-424 submission and the application narrative.
Project Description	The Interstate 5 North Redding Six-Lane Project will add an additional northbound and southbound travel lane to I-5 in North Redding, between the Route 299 East and Route 299 West/Route 44 East interchanges. The design will include safety enhancements that address three collision clusters.	Describe the project in plain English terms generally understood by the public, using no more than 100 words . For example, "The project will replace the existing bridge over the W river on Interstate-X between the cities of Y and Z" or "the BUILD Grant will fund construction activities for streetcar service from location X to location Y." Please do not describe the project's benefits, background, or alignment with the selection criteria in this description field.
Urban/Rural	Rural	Identify whether the project is located in a rural or urban area , using the drop-down menu. For BUILD 19, a project is designated as urban if it is located within (or on the boundary of) a Census-designated urbanized area that had a population greater than 200,000 in the 2010 Census. If a project is located outside a Census-designated urbanized area with a population greater than 200,000, it is designated as a rural project.
Urbanized Area		If you have identified the project as "urban," please select the associated 2010 Census-designated urbanized area (UA) from the drop-down. If you identified the project as "rural" but it is located in an UA with a population under 200,000, please select the UA from the drop-down. If you have identified the project as "rural" and it is not located in a non-urbanized area, please select "Not located in an urbanized area" from the drop-down.
Capital or Planning	Capital	Identify the project as capital or planning . The " capital " designation should be used for projects that are requesting funding primarily for the physical development, acquisition, or improvement of surface transportation capital infrastructure. The " planning " designation should be used for projects that are requesting funding primarily for aspects of planning, preparation, or design.
Project Type	Road - New Capacity	Identify the Primary and Secondary project type combination that most closely aligns with your project from the choices in the drop-down menu. See the "Project Types" tab in this file for further information and project type definitions.
Primary Project Location Zip Code	96003	Identify the 5-digit zip code of the project location . If the project is located in multiple zip codes, please identify the most centrally located zip code.
Project Previously Submitted?	No	Identify whether the project was submitted in a prior BUILD/TIGER or INFRA round , using the drop-down menu.

BUILD 2019 Project Information - Please complete all fields.
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Field Name	Response	Instructions
Prior BUILD/TIGER Funds Awarded to Project?	No	Identify <u>whether the project has previously received BUILD/TIGER funding</u> , and if so, whether that funding was through a planning or capital grant, using the drop-down menu.
FY19 INFRA Application?	No	Select "Yes" from the drop-down menu if this project is <u>also being submitted to the Nationally Significant Freight and Highway Projects Program</u> (also known as INFRA) for Fiscal Year 2019.
Amount Requested	\$25,000,000	Enter the <u>total amount of BUILD funds requested</u> for this project in this application. <i>[For capital projects, the minimum urban entry is \$5,000,000 and the minimum rural entry is \$1,000,000. For planning projects, the minimum entry is \$1. The maximum entry for both types is \$25,000,000].</i>
Total Project Cost	\$28,800,000	Enter the <u>total cost of the project</u> . This should equal the sum of Total Federal Funding and Total Non-Federal Funding. <i>This value may not be less than the amount requested.</i>
Total Federal Funding	\$25,000,000	Enter the <u>amount of funds committed to the project from ALL Federal sources including the proposed BUILD amount</u> . For BUILD projects designated as urban, Federal funding cannot exceed 80% of total project cost as outlined in section C.2 of the BUILD NOFO.
Total Non-Federal Funding	\$3,800,000	Enter the <u>amount of funds committed to the project from non-Federal sources</u> . For BUILD projects designated as urban, the total non-Federal funding amount must be greater than or equal to 20% of the project cost.
Tribal Government?	No	Select "Yes" from the drop-down menu if the applicant is a <u>Federally recognized tribal government</u> .
Tribal Benefits?	N/A	<u>If the applicant is not a Federally recognized tribal government</u> , is the project located on tribal land? And if not, does it have direct tribal benefits? Answer using the drop-down menu.
Private Corporation Involvement	No	Does this project <u>involve (a) private entity(ies) that will receive a direct and predictable financial benefit</u> if the project is selected for award? This includes, but is not limited to, private owners of infrastructure facilities being improved and private freight shippers or carriers directly benefitting from completion of the proposed project.
Private Corporation Name(s)	No	<u>If this project directly involves or benefits a specific private corporation</u> , please list the corporation(s).
TIFIA/RRIF?	No	Is the project currently, or does this project anticipate applying for Transportation Infrastructure Finance and Innovation Act (<u>TIFIA</u>) or Railroad Rehabilitation & Improvement Financing (<u>RRIF</u>) <u>loans</u> ?
Department Financing Program?	No	If your application is unsuccessful, would you like to be contacted about the <u>Department's financing program</u> ?



1255 East Street, Suite 202 • Redding, CA 96001 • (530) 262-6190 • Fax: (530) 262-6189

E-mail: srta@srta.ca.gov • Website: www.srta.ca.gov

Daniel S. Little, Executive Director

July 15, 2019

U.S. Department of Transportation

Subject: Application for 2019 BUILD Program – Interstate 5 North Redding Six-Lane Project

To Whom It May Concern:

The Shasta Regional Transportation Agency (Metropolitan Planning Organization), in coordination with the California Department of Transportation (Caltrans) and local agency partners, is pleased to present the 'Interstate 5 North Redding Six-Lane Project' (NR6) for consideration under the 2019 BUILD Program.

Spanning nearly 800 miles from Mexico to Canada, Interstate 5 (I-5) is critical to national, state, regional, and local economies. It serves three west coast states, seven deep-water container ports, and two international borders. The Shasta Region is located at the midpoint of this corridor where the Sacramento River Valley meets the Cascade Mountain Range. Due to the surrounding topography, no practical alternative routes exist for freight and other through traffic. Completed in 1966 as a four-lane facility (two northbound, two southbound), the corridor has been upgraded to six lanes across the Redding Urbanized Area. One short segment between two interchanges (Route 44/299 West and Route 299 East) needs to be improved to finish the corridor and address safety issues that are being worsened by increased traffic volumes and congestion.

If selected for funding, the NR6 Project will be the capstone to a decades-long, multi-agency effort to: 1) preserve mobility at the most congested segment of I-5 for 465 miles between Eugene, OR and Sacramento, CA (*source: 2015 California Interregional Strategic Transportation Plan*); and 2) remedy the documented causes of three collision clusters. More specifically, the NR6 Project will accomplish the following:

- **Long-term level of service** – From 2010 and 2040, along the I-5 corridor in far-northern California (i.e. between Sacramento and the Oregon border), the population is forecast to grow by 25 percent; vehicle miles traveled is forecast to increase by 66.8%; freight is forecast to increase by 1.6 billion kilogram tons; and the share of truck traffic will jump to 37.5% (source: 2015 California Interregional Transportation Strategic Plan). Although capacity has been increased across the Redding Urbanized Area, one bottleneck remains in North Redding between Route 299 East and Route 299 West/Route 44 East interchanges.



The NR6 Project will strategically increase capacity in the most heavily-traveled area to ensure efficient and reliable travel for vehicles and freight trucks through 2040 and beyond (source: ShastaSIM 2018 Regional Travel Demand Model).

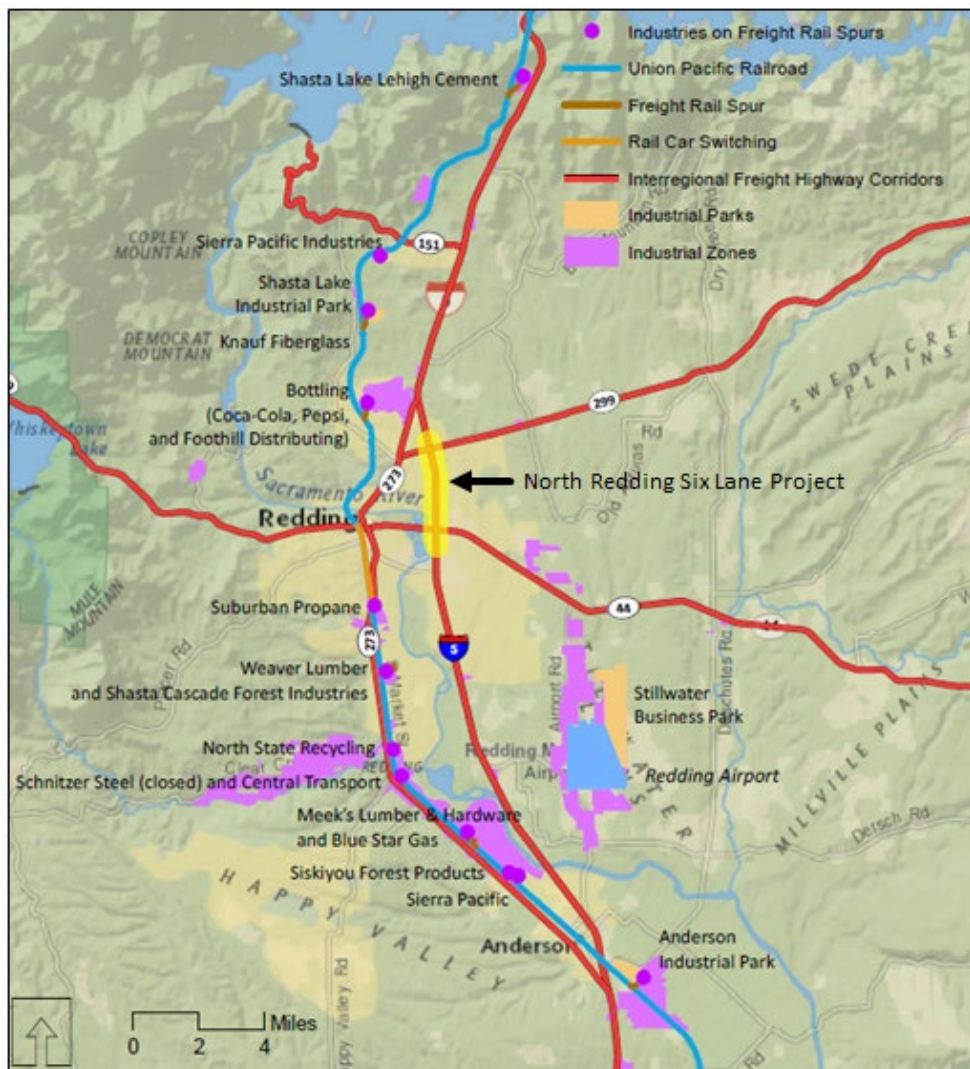
- **Safety** - The NR6 Project is located at the confluence of I-5 and two state routes. Increasing traffic congestion levels, when combined with a reduction in travel lanes and multiple freeway entrances and exits over a short distance, require several lane changes in short succession for trucks and vehicles travelling through the region. As a result, there has been a steady increase in the number and severity of collisions.



The NR6 Project includes a suite of improvements designed to address these issues (see Section 4 of this application for statistical summary and collision clusters). Caltrans Office of Traffic Investigations projects that these improvements will result in a 25% decrease in collisions related to merging, lane changing, and stop-and-go traffic.

- **Economic development and opportunity** – I-5 connects regional industry and various destinations of opportunity. The current bottleneck on I-5 threatens timely and reliable access to centers of freight, commerce, education, and employment.

The NR6 Project provides enhanced access to three Opportunity Zones, three higher-education facilities, and several regional industrial parks. The NR6 Project also removes obstacles to local economic development by increasing transportation system capacity to/from Downtown Redding and regional commercial centers.



Thank you for your consideration of the NR6 Project under the 2019 BUILD Program funding. For clarification on any aspect of the project or the enclosed grant application, you may reach out directly via email (dlittle@srta.ca.gov) or telephone (530-262-6190).

Sincerely,

A handwritten signature in blue ink, appearing to read 'D. Little', is positioned above a horizontal line.

Daniel S. Little, AICP, Executive Director
Shasta Regional Transportation Agency (MPO)

California State Senate

SENATOR
BRIAN DAHLE
FIRST SENATE DISTRICT

July 1, 2019

Daniel Little, Executive Director
Shasta Regional Transportation Agency
1255 East Street, Suite 202
Redding, CA 96001

Re: **BUILD Program Funding for the Interstate 5 North Redding Six-Lane Project**

Dear Mr. Little:

I write to share my strong support for the North Redding Six-Lane Project and its application for funding under the Better Utilizing Investments to Leverage Development (BUILD) program. If funded, the project will widen Interstate 5 between State Route 299 and 44, including two bridge structures.

These proposed improvements would extend a larger legacy project with a long history of coordinated local, regional, state, and federal investment. Building upon previously completed and currently underway improvements, the end result will be six contiguous travel lanes (three northbound and three southbound) through the Redding metropolitan area.

The project has both economic and safety benefits. It would preserve the level of service to support regional economic growth, including enhanced access to Opportunity Zones, industrial parks, and three institutions of higher education. It would also reduce lane weave-related collisions by providing freight trucks additional time to merge from inside lanes (as a result of vehicles entering I-5 at three locations near the Route 44 junction) to the Route 299 offramp.

This is a key long-term priority for the state of California in the region, and I fully support the efforts to fund and build it.

Sincerely,



BRIAN DAHLE
Senator, 1st District

DOUG LAMALFA

1ST DISTRICT, CALIFORNIA

COMMITTEE ON
NATURAL RESOURCES

COMMITTEE ON AGRICULTURE

COMMITTEE ON
TRANSPORTATION AND INFRASTRUCTURE

Congress of the United States
House of Representatives
Washington, DC 20515-0501

July 1, 2019

Daniel Little
Executive Director
Shasta Regional Transportation Agency
1255 East Street, Suite 202
Redding, CA 96001

RE: Support for Interstate 5 North Redding Six-Lane Project application through the BUILD Grant Program

Mr. Little,

I am writing you today to issue my strong support for the North Redding Six-Lane Project application for the Better Utilizing Investments to Leverage Development (BUILD) program to widen Interstate 5 (I-5) between State Route 299 and State Route 44, including two bridge structures. These proposed improvements are the continuation of a larger legacy project with a long history of coordinated local, regional, State and federal investment. Building upon previously completed and currently underway improvements, the end result will be six contiguous travel lanes spanning the entire Redding metropolitan area.

This project is important both for the immediate economic benefits it will provide, and for its long-term impact on preserving the growth of the regional economy. This project also serves to amplify the existing efforts of economic development in Opportunity Zones designated from Public Law 115-97, otherwise known as the Tax Cuts and Jobs Act, existing industrial parks, and the three institutions of higher education in the entire region. Importantly, there are also tremendous safety benefits that can be attained as freight traffic has increased along this section of I-5. In particular, we hope widening provides adequate space to reduce weave-related collisions near the Route 44 junction, where several additional on-ramps are.

Again, I would like to reinforce my strong support for this project. If you have any questions, please contact John Veale in my Washington, D.C. office at john.veale@mail.house.gov.

Sincerely,



Doug LaMalfa
Member of Congress

WASHINGTON OFFICE:
322 CANNON HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
TEL: (202) 225-3076
FAX: (202) 226-0852

OROVILLE DISTRICT OFFICE:
2862 OLIVE HIGHWAY
SUITE D
OROVILLE, CA 95966
TEL: (530) 534-7100
FAX: (530) 534-7800

REDDING DISTRICT OFFICE:
2885 CHURN CREEK ROAD
SUITE C
REDDING, CA 96002
TEL: (530) 223-5898
FAX: (530) 223-5897

AUBURN DISTRICT OFFICE:
2399 RICKENBACKER WAY
AUBURN, CA, 95602
TEL: (530) 878-5035
FAX: (530) 878-5037

<http://lamalfa.house.gov>



North State Super Region

1255 East Street, Suite 202, Redding, CA 96001

(530) 265-3202 nssr16@gmail.com

www.superregion.org

Mike Woodman, Chair

Jon Clark

Butte County Assn. of Governments

Scott Lanphier

Colusa County Transportation Comm.

Tamera Leighton

Del Norte Local Transportation Comm.

Mohammad Qureshi

Glenn County Transportation Comm.

Marcella Clem

Humboldt Co Assn of Governments

Lisa Davey-Bates

Lake Co City/Area Planning Comm.

John Clerici

Lassen County Transportation Comm.

Nephele Barrett

Mendocino County Council of Govts

Debbie Pedersen

Modoc County Transportation Comm.

Daniel Landon

Nevada County Transportation Comm.

Daniel S. Little

Shasta County SRTA/MPO

Tim Beals

Sierra County Transportation Comm.

Melissa Cummins

Siskiyou County Local Trans. Comm.

Tim McSorely

Tehama County Transportation Comm.

Richard Tippet

Trinity County Transportation Comm.

Robert Perreault

Plumas County Transportation Comm.

July 2, 2019

Daniel Little, Executive Director

1255 East Street, Suite 202

Redding, CA 96001

**Subject: Recommend BUILD Program Funding for the
Interstate 5 North Redding Six-Lane Project**

Dear Mr. Little:

The North State Super Region (NSSR) representing the collaborative partnership between the sixteen northern California Regional Transportation Planning Agencies is pleased to support the North Redding Six-Lane Project application for funding under the Better Utilizing Investments to Leverage Development (BUILD) program.

If funded, the project will widen Interstate 5 (I-5) between State Route 299 and 44, including two bridge structures. These proposed improvements are the continuation of a larger legacy project with a long history of coordinated local, regional, state, and federal investment. Building upon previously completed and currently underway improvements, the end result will be six contiguous travel lanes (three northbound and three southbound) spanning the entire Redding metropolitan area. This portion of I-5 is included in the Sacramento - Oregon Strategic Interregional Corridor identified in the Caltrans 2015 Interregional Transportation Strategic Plan (ITSP). The ITSP identifies 11 Strategic Interregional Corridors that have been identified as the most significant interregional travel corridors in California.

Key project benefits include:

- Long-term preservation of traffic operations and level of service needed to support regional economy growth, including enhanced access to designated Opportunity Zones, industrial parks, and three institutions of higher education;
- Reduce lane weave-related collisions by providing southbound freight trucks additional time to merge from inside lanes (as a result of vehicles entering I-5 at three locations near the Route 44 junction) to the Route 299 off-ramp.

The proposed improvements align with the unified goal of the NSSR to support transportation investments that improve the economy of the region, the efficiency of the movement of goods and people, and safety. Investment in this segment of I-5 will also enhance operations, connections for emergency response, and aid resiliency for the region.

Sincerely,



Mike Woodman, Deputy Executive Director
Nevada County Transportation Commission
Chair, North State Super Region



CITY OF REDDING

777 CYPRESS AVENUE, REDDING, CA 96001

P.O. Box 496071, REDDING, CA 96049-6071

June 28, 2019

Daniel Little, Executive Director
Shasta Regional Transportation Agency
1255 East Street, Suite 202
Redding, CA 96001

Subject: Recommend BUILD Program Funding for the Interstate 5 North Redding Six-Lane Project

Dear Mr. Little:

The City of Redding is pleased to support the North Redding Six-Lane Project application for funding under the Better Utilizing Investments to Leverage Development (BUILD) program. If funded, the project will widen Interstate 5 (I-5) between State Route 299 and 44, including two bridge structures. These proposed improvements are the continuation of a larger legacy project with a long history of coordinated local, regional, state, and federal investment. Building upon previously completed and currently underway improvements, the end result will be six contiguous travel lanes (three northbound and three southbound) spanning the entire Redding metropolitan area.

Key project benefits include:

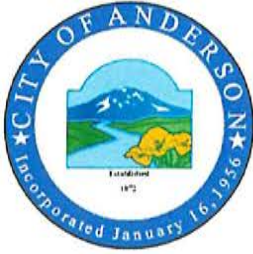
- Long-term preservation of traffic operations and level of service needed to support regional economy growth, including enhanced access to designated Opportunity Zones, industrial parks, and three institutions of higher education;
- Reduce lane weave-related collisions by providing southbound freight trucks additional time to merge from inside lanes (as a result of vehicles entering I-5 at three locations near the Route 44 junction) to the Route 299 off-ramp.

The proposed project would complement already planned improvements in the City of Redding. The City is undergoing significant redevelopment in its core with new mixed-use projects downtown, redevelopment of the regional mall adjacent to I-5, and entirely new shopping centers on the southern edge of Redding along the I-5 frontage. With economic growth, comes a need to manage the associated additional traffic and transportation needs. The North Redding Six-Lane Project would provide a much needed solution to improve the safety and efficiency of traffic generated by this new development on Interstate 5 through the City.

Sincerely,

A handwritten signature in black ink, appearing to read "Chuck Aukland", written over a light blue horizontal line.

Chuck Aukland
Director of Public Works



July 2, 2019

Daniel Little, Executive Director
1255 East Street, Suite 202
Redding, CA 96001

Subject: Recommend BUILD Program Funding for the Interstate 5 North Redding Six-Lane Project

Dear Mr. Little:

The City of Anderson is pleased to support the North Redding Six-Lane Project application for funding under the Better Utilizing Investments to Leverage Development (BUILD) program. If funded, the project will widen Interstate 5 (I-5) between State Route 299 and 44, including two bridge structures. These proposed improvements are the continuation of a larger legacy project with a long history of coordinated local, regional, state, and federal investment. Building upon previously completed and currently underway improvements, the end result will be six contiguous travel lanes (three northbound and three southbound) spanning the entire Redding metropolitan area.

Key project benefits include:

- Long-term preservation of traffic operations and level of service needed to support regional economy growth, including enhanced access to designated Opportunity Zones, industrial parks, and three institutions of higher education;
- Reduce lane weave-related collisions by providing southbound freight trucks additional time to merge from inside lanes (as a result of vehicles entering I-5 at three locations near the Route 44 junction) to the Route 299 offramp.

Sincerely,



Stan Neutze, Mayor



Shasta County

DEPARTMENT OF PUBLIC WORKS

1855 PLACER STREET
REDDING, CA 96001-1759
530.225.5661 530.225.5667 FAX
800.479.8022 California Relay Service at 700 or 800.735.2922

PATRICK J. MINTURN, DIRECTOR
C. TROY BARTOLOMEI, DEPUTY
KEN D. CRISTOBAL, DEPUTY
SCOTT G. WAHL, DEPUTY

FSH 090003

June 21, 2019

Daniel Little, Executive Director
Shasta Regional Transportation Agency
1255 East Street, Suite 202
Redding, CA 96001

Subject: Recommend BUILD Program Funding for the Interstate 5 North Redding Six-Lane Project

Dear Mr. Little:

The county of Shasta is pleased to support the North Redding Six-Lane Project application for funding under the Better Utilizing Investments to Leverage Development (BUILD) program. If funded, the project will widen Interstate 5 (I-5) between State Route 299 and 44, including two bridge structures. These proposed improvements are the continuation of a larger legacy project with a long history of coordinated local, regional, state, and federal investment. Building upon previously completed and currently underway improvements, the end result will be six contiguous travel lanes (three northbound and three southbound) spanning the entire Redding metropolitan area.

Key project benefits include:

- Long-term preservation of traffic operations and level of service needed to support regional economy growth, including enhanced access to designated Opportunity Zones, industrial parks, and three institutions of higher education; and
- Reduce lane weave-related collisions by providing southbound freight trucks additional time to merge from inside lanes (as a result of vehicles entering I-5 at three locations near the Route 44 junction) to the Route 299 off-ramp.

The proposed project is of great national and regional importance. Shasta County looks forward to seeing the expansion of the final segment of the I-5 corridor through the Redding metropolitan area brought to fruition.

Sincerely,

Patrick J. Minturn, Director

PJM/ldr



P.O. Box 492794, Redding, CA 96049

June 20, 2019

Daniel Little, Executive Director
1255 East Street, Suite 202
Redding, CA 96001

Subject: Recommend BUILD Program Funding for the Interstate 5 North Redding Six-Lane Project

Dear Mr. Little:

Shasta VOICES, a Redding non-profit organization representing over 1,300 local supporters with a focus on providing economic sustainability in the Shasta County area, is pleased to support the North Redding Six-Lane Project application for funding under the Better Utilizing Investments to Leverage Development (BUILD) program.

If funded, the project will widen Interstate 5 (I-5) between State Route 299 and 44, including two bridge structures. These proposed improvements are the continuation of a larger legacy project with a long history of coordinated local, regional, state, and federal investment, which we have also strongly supported. Building upon previously completed and currently underway improvements, the end result will be six contiguous travel lanes (three northbound and three southbound) spanning the entire Redding metropolitan area.

Key project benefits include:

- Long-term preservation of traffic operations and level of service needed to **support regional economic growth**, including enhanced access to designated Opportunity Zones, industrial parks, and three institutions of higher education;
- Reduce lane weave-related collisions by providing southbound freight trucks additional time to merge from inside lanes (as a result of vehicles entering I-5 at three locations near the Route 44 junction) to the Route 299 offramp.

This project would create a long-term, significant benefit to our community and those who travel through it on Interstate 5. There is support for this project locally and regionally by all sectors of construction, real estate, service and retail business, and especially people who need stable employment.

Please do not hesitate to contact us if we can do anything to further support this effort.

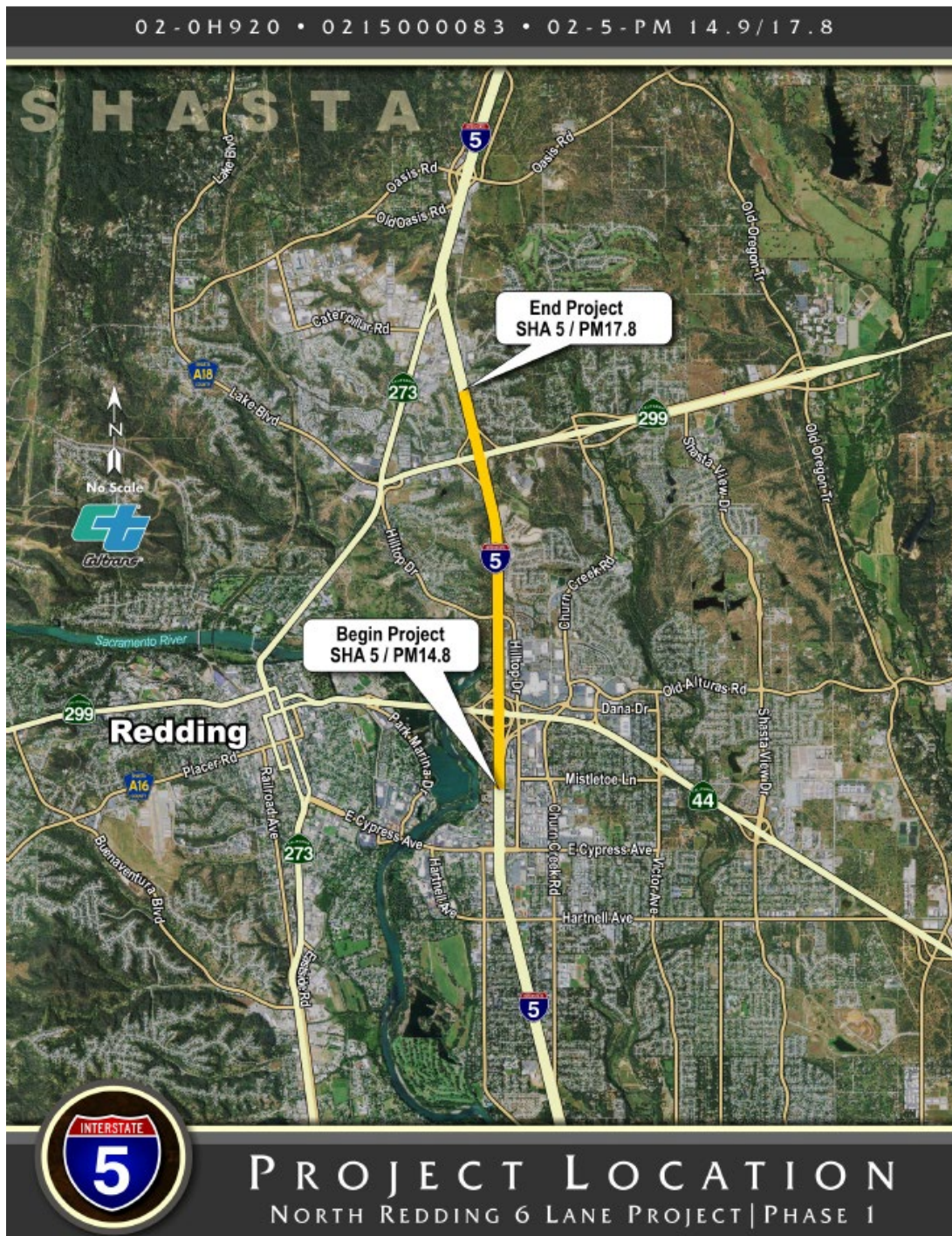
Sincerely,

Mary B. Machado
Executive Director, Shasta VOICES
(530) 222-5251; mary@shastavoices.com

I. PROJECT DESCRIPTION

Project Scope of Work - The NR6 Project will add an additional northbound and southbound lane on Interstate 5 for 2.6 miles in each direction between the Route 299 West/44 East and Route 299 East interchanges.

The new northbound lane will connect to the Route 299 East off-ramp. The new southbound lane will connect to an enhanced Route 299 West/Route 44 East interchange. Ten-foot shoulder lanes will be included to the inside and outside of existing travel lanes.



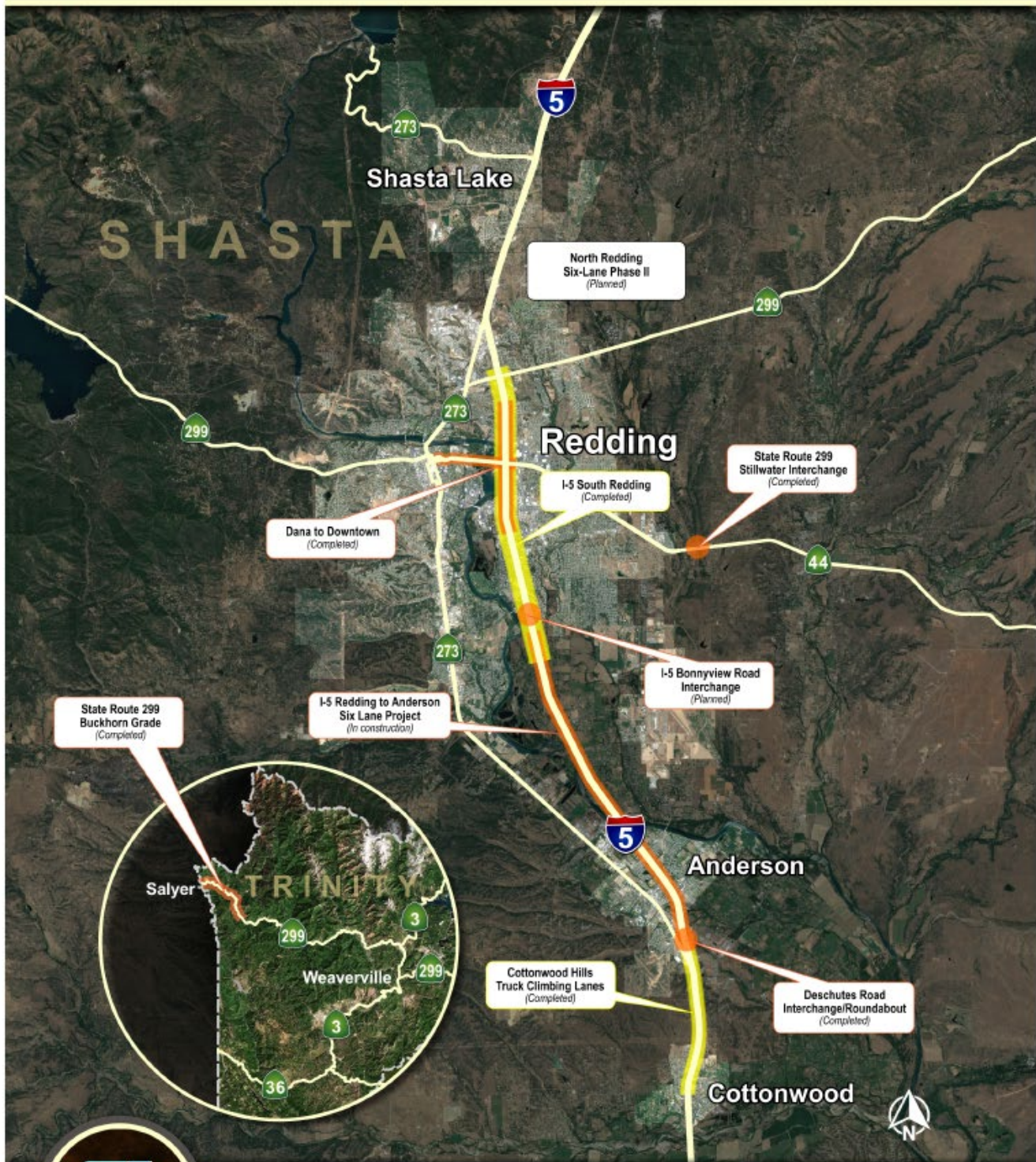
In addition to the extra travel lanes, the NR6 Project includes the following improvements:

- Seven bridges will be widened, overlaid with polyester concrete, and upgraded with new railings to ensure long-term state of good repair and safety;
- The on ramp from Route 299/Lake Boulevard to southbound I-5 will be extended to address the two main causes of collisions at this location: 1) differential in speed (the on ramp is uphill and curved); and 2) lane weaving (southbound I-5 traffic is simultaneously vying to merge right in preparation for Route 299 West/Route 44 East off ramps);
- Southbound I-5 at the Route 299 West/Route 44 East interchange will receive a buffered exit/entry lane with a reduced speed limit to address the two main causes of collisions at this location: 1) differential in speed (on and off ramps have a tight 25 mph radius) and lane weaving (the transition zone between Route 299 West/Route 44 East on and off ramps is less than 500 feet);
- Overhead and on-pavement signage will replace ground signage for more predictable driver behavior and safer traffic operations near the Route 299 West/Route 44 East interchange;
- A pavement edge-to-edge overlay of open graded rubber asphalt surface course, and maintenance plan will ensure long-term state of good repair;
- Culverts and drainage retention/detention facilities will be added to address the increased impervious area and safeguard the facility against more frequent and severe weather events;
- Cable barrier will be installed in unpaved depressed areas where the median width is less than 60 foot to prevent errant vehicles from crossing over the median; and
- Traffic controls and ITS elements, including census loops on ramps and traffic monitoring stations, will be replaced or added for enhanced traffic management.

The North Redding Six Lane (NR6) Project is the capstone in a decades-long regional commitment to I-5. It is the region's current top priority due to multiple safety issues within a small distance, and the growing number and severity of collisions as traffic volumes continue to rise. Should the NR6 Project be selected for funding, I-5 will meet forecast travel demand through the year 2040 and the number of relevant accidents (i.e. those related to merging, lane change, and stop-and-go) is forecast to be reduced by 25% (source: Caltrans Office of Traffic Investigations).

Project Background & Legacy of Local/Regional/State Commitment - I-5 through California's North State was completed in the 1960s. Local growth, increased through traffic, and a higher proportion of heavy freight trucks require more capacity than the original four-lane facility is able to provide. According to the I-5 Transportation Concept Report, the I-5 corridor through the Shasta Region has the highest traffic volumes in the Sacramento Valley; largest population centers (including the only urban area); greatest traffic congestion; highest concentration of interchanges; and greatest potential for future growth. Traffic volumes are projected to nearly double, resulting in reduced level of service, a doubling of travel times, unreliable travel times, and peak hour speeds as low as 20 mph (source: *2015 California Interregional Transportation Strategic Plan*).

Over the past decade, SRTA, Caltrans, and local agency partners have worked together to systematically plan, design, and construct 17.2 additional lane miles on I-5 through the Redding Urbanized Area, as illustrated in the following map and table of recently completed and active projects.



RECENT MAINLINE I-5 AND SURROUNDING NETWORK IMPROVEMENTS

Summary of Recent Complementary Mainline I-5 Improvements			
Project		Cost	Local/Regional/State Share
1	I-5 Redding to Anderson Six Lane Project (in construction)	\$132,859,000	\$24,000,000 Regional TCEP \$19,311,567 STIP \$50,044,600 SHOPP \$39,177,833 STATE TCEP \$325,000 Co-Op
2	I-5 South Redding (completed 2012)	\$24,255,000	\$1,419,000 RIP \$336,000 IIP \$22,500,000 CMIA
3	Dana to Downtown (completed 2013)	\$78,943,000	\$35,561,000 RIP \$1,500,000 RIP TE \$36,560,000 IIP
4	Cottonwood Hills Truck Climbing Lanes (completed 2011)	\$18,203,000	\$13,662,000 CMIA \$4,541,000 IIP
TCEP = California Trade Corridor Enhancement Program STIP = State Transportation Improvement Program SHOPP = State Highway Operations and Protection Program			RIP = Regional Improvement Program IIP = Interregional Improvement Program CMIA = California Corridor Mobility Improvement Account

In addition to mainline I-5 improvements, the following recent improvements to the surrounding interregional network extend the benefits of the NR6 Project to surrounding regions and destinations.

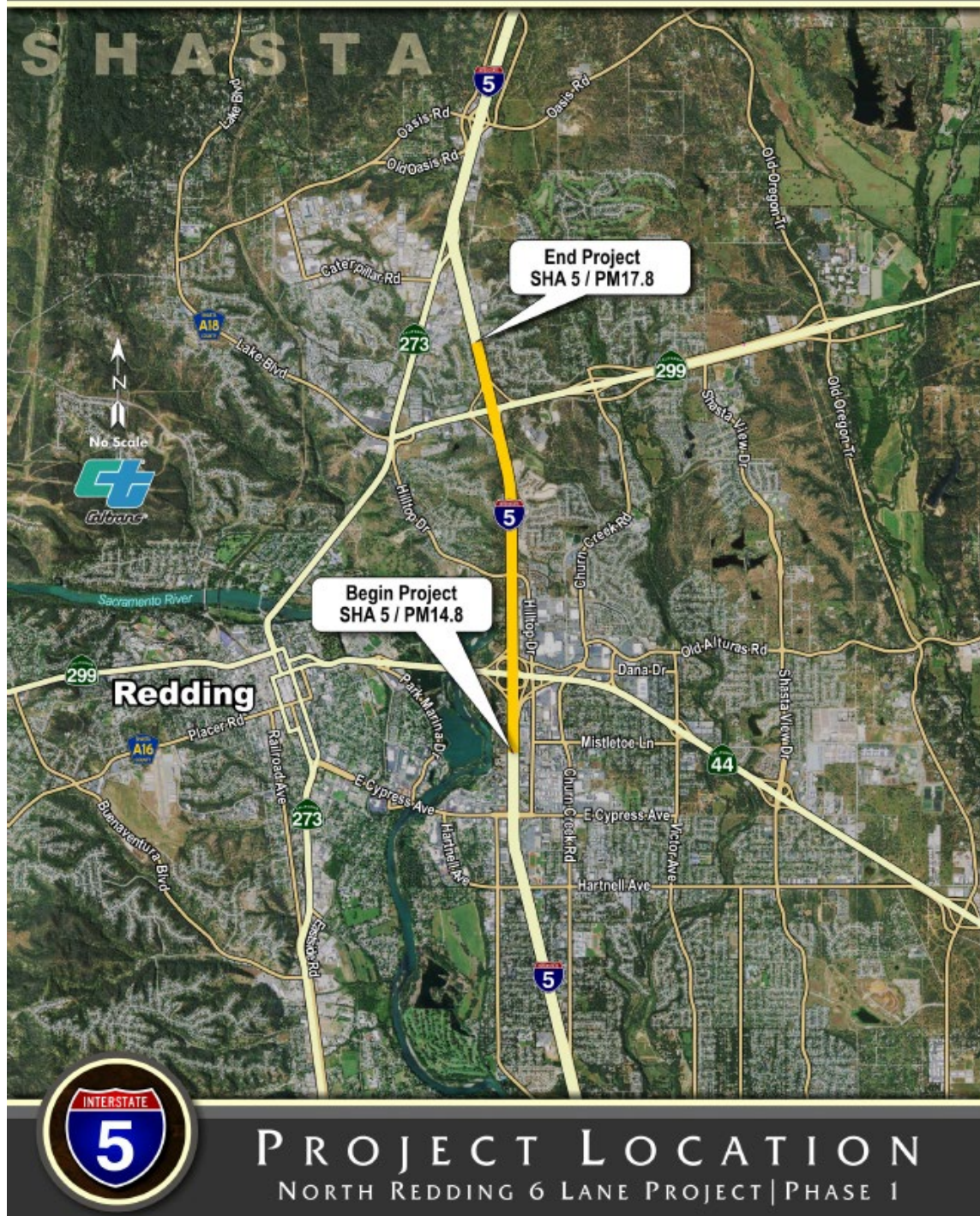
Relevant Non-I-5 Network Improvements		
Project (w/ map reference #)		Project Benefit
5	Deschutes Road Interchange/Roundabout (completed 2013)	New northbound off ramp from I-5 to Deschutes Road and new roundabout. Provides enhanced access to industrial land at project site.
6	State Route 299 Buckhorn Grade (completed 2016)	Provides enhanced operations, STAA access, and safety for trips beginning/ending west of I-5.
7	State Route 44 Stillwater Interchange (completed 2018)	Provides enhanced operations, STAA access, and safety for trips beginning/ending east of I-5.

The NR6 Project will complete the region's vision for the I-5 corridor. Past and proposed improvements will culminate in a contiguous six-lane facility spanning the entire Redding Urbanized Area.

II. PROJECT LOCATION

The NR6 Project is located at the geographic center and transportation crossroads of California's sixteen-county North State Super Region and at the midpoint of longest contiguous transportation and trade corridor in the nation, connecting two international borders, west coast ports, and the Cascadia and Northern California Mega-Regions.





III. GRANT FUNDS, SOURCES, AND USES OF PROJECT FUNDS

Project Cost – The total project cost is \$28,815,000. A state and local share of \$3,815,000 (13%) has been assembled in partnership with the State of California and Shasta Regional Transportation Agency (MPO). A breakdown of the project costs per fund source and project phase are as follows:

FUNDS BREAKDOWN NR6 PROJECT (ACCORDING TO 2019buildinforform.xls FORM)	
REQUESTED BUILD AMOUNT	\$25,000,000
TOTAL PROJECT COST	\$28,800,000
TOTAL FEDERAL FUNDING	\$25,000,000
TOTAL NON-FEDERAL FUNDING	\$3,800,000

FUNDS BREAKDOWN NR6 PROJECT (ACCORDING TO SF424_2_1-V2.1.pdf FORM)	
FEDERAL	\$25,000,000
APPLICANT	1,600,000
STATE	\$2,200,000
LOCAL	0
OTHER	0
PROGRAM INCOME	0
TOTAL	\$28,800,000

IV. SELECTION CRITERIA

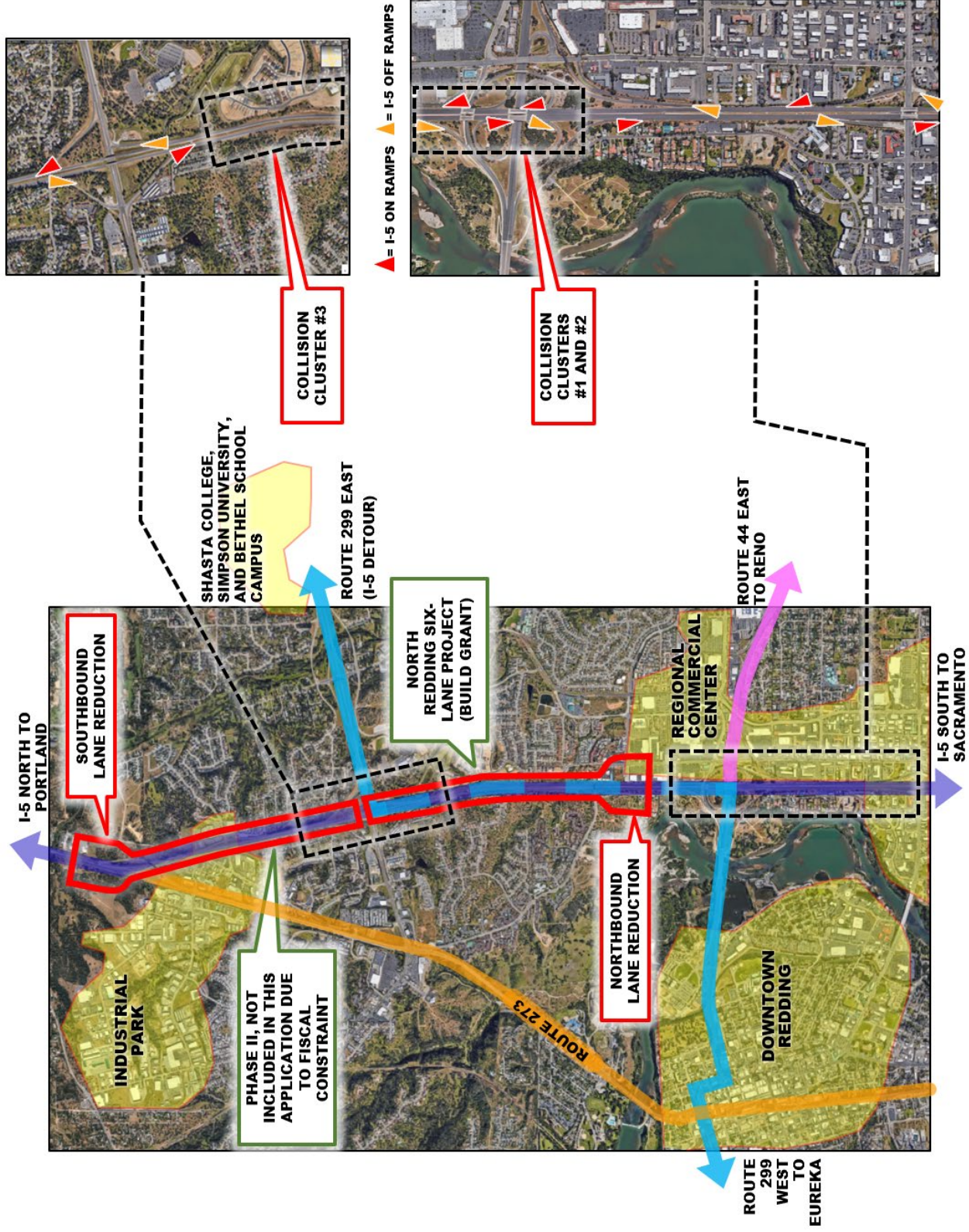
PRIMARY SELECTION CRITERIA #1: SAFETY

The NR6 Project is located at the confluence of I-5 and two state routes. Multiple entry and exit points over a short distance is combined with a reduction in travel lanes. This has led to a high number of collisions related to merging, changing lanes, and stop-and-go traffic. Increasing traffic volumes and intensifying congestion in this area have compounded these issues. A summary of historic (10 year) and projected (20 year) collisions is provided below:

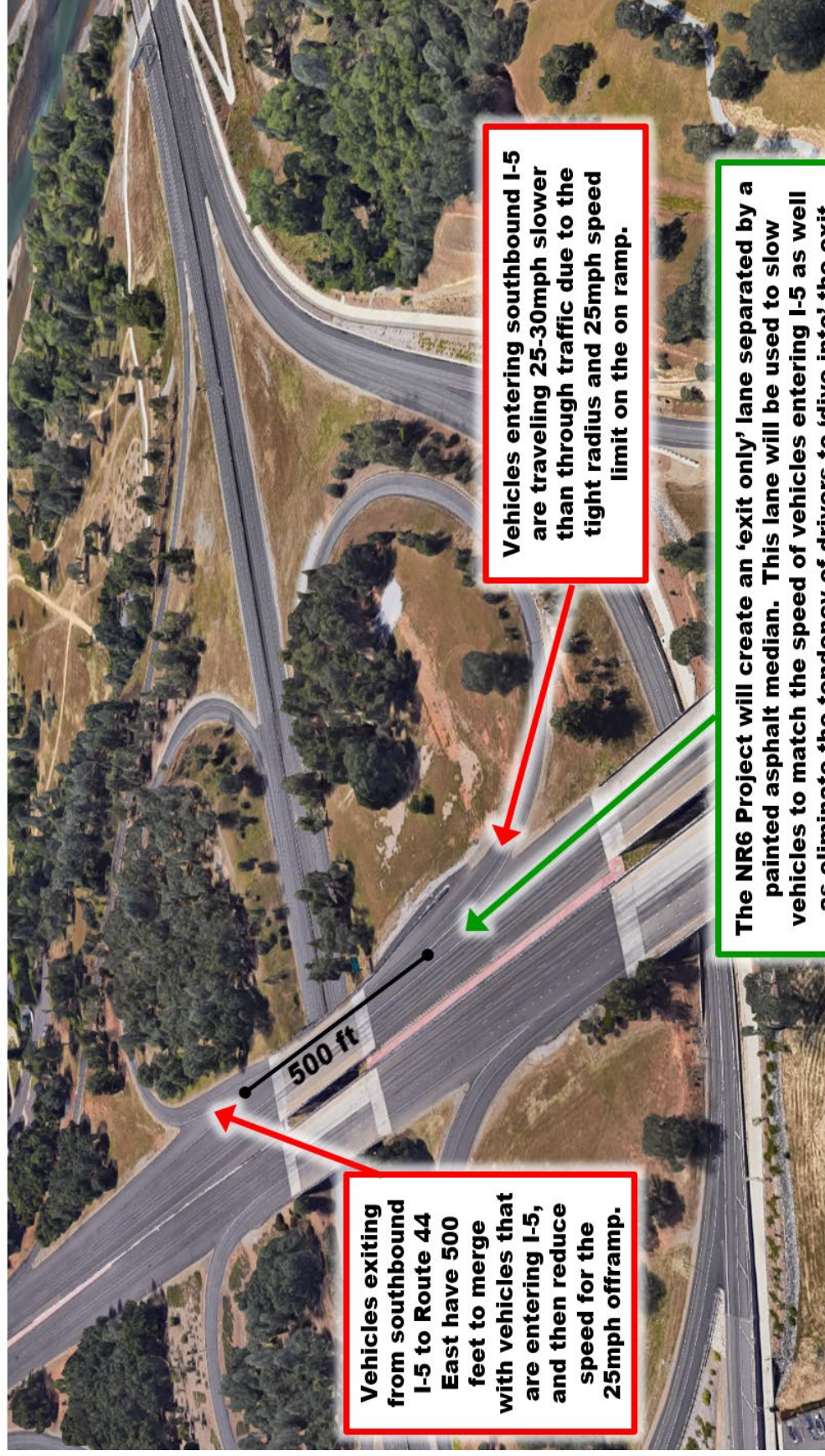
SUMMARY OF HISTORIC AND PROJECTED COLLISIONS AT THE NR6 PROJECT LOCATION (Source: Caltrans Office of Traffic Investigations)		
	HISTORIC (10 year)	
	<u>All Vehicles</u>	<u>Trucks</u>
<u>Total Number of Collisions</u>	364 total	84 total
	122 involving injury or fatality	16 involving injury or fatality
<u>Relevant Collisions</u> (i.e. those related to merging conflicts, lane changes, and stop-and-go traffic)	101 total	32 total
	31 involving injury or fatality	7 involving injury or fatality
	PROJECTED (20 year)	
	<u>All Vehicles</u>	<u>Trucks</u>
<u>Total Projected Relevant Collisions</u>	202 total	64 total
<u>Number of Collisions Forecast To Be Reduced as a Result of the NR6 Project</u>	51 collisions reduced	14 collisions reduced

Three collision clusters have been identified and their causes statistically evaluated. As shown in the following exhibits, the NR6 Project addresses the primary causes of collisions at each location.

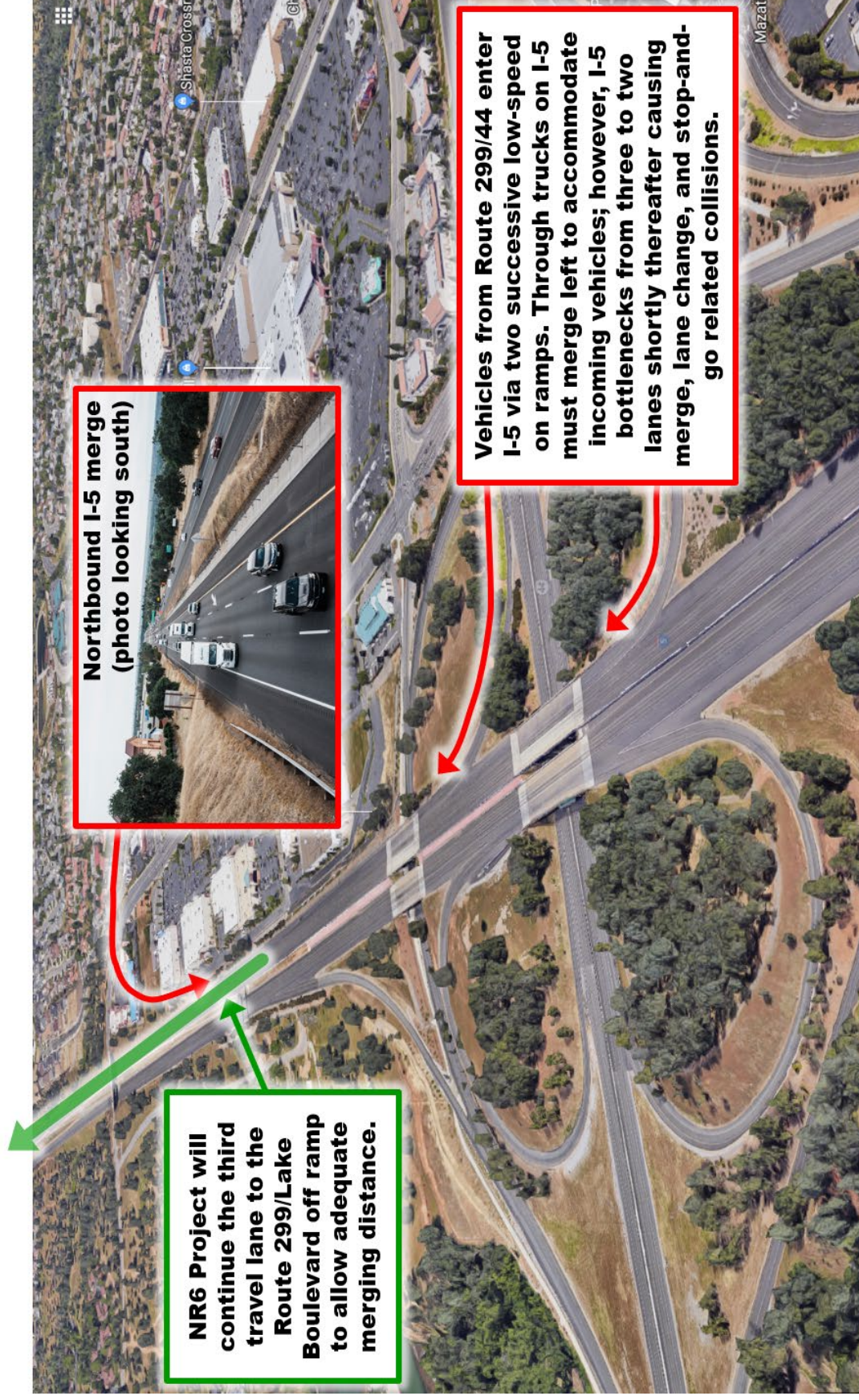
Contributing Factors to Collisions in the I-5 North Redding Six-Lane



Collision Cluster #1: Southbound I-5 at Route 44/299

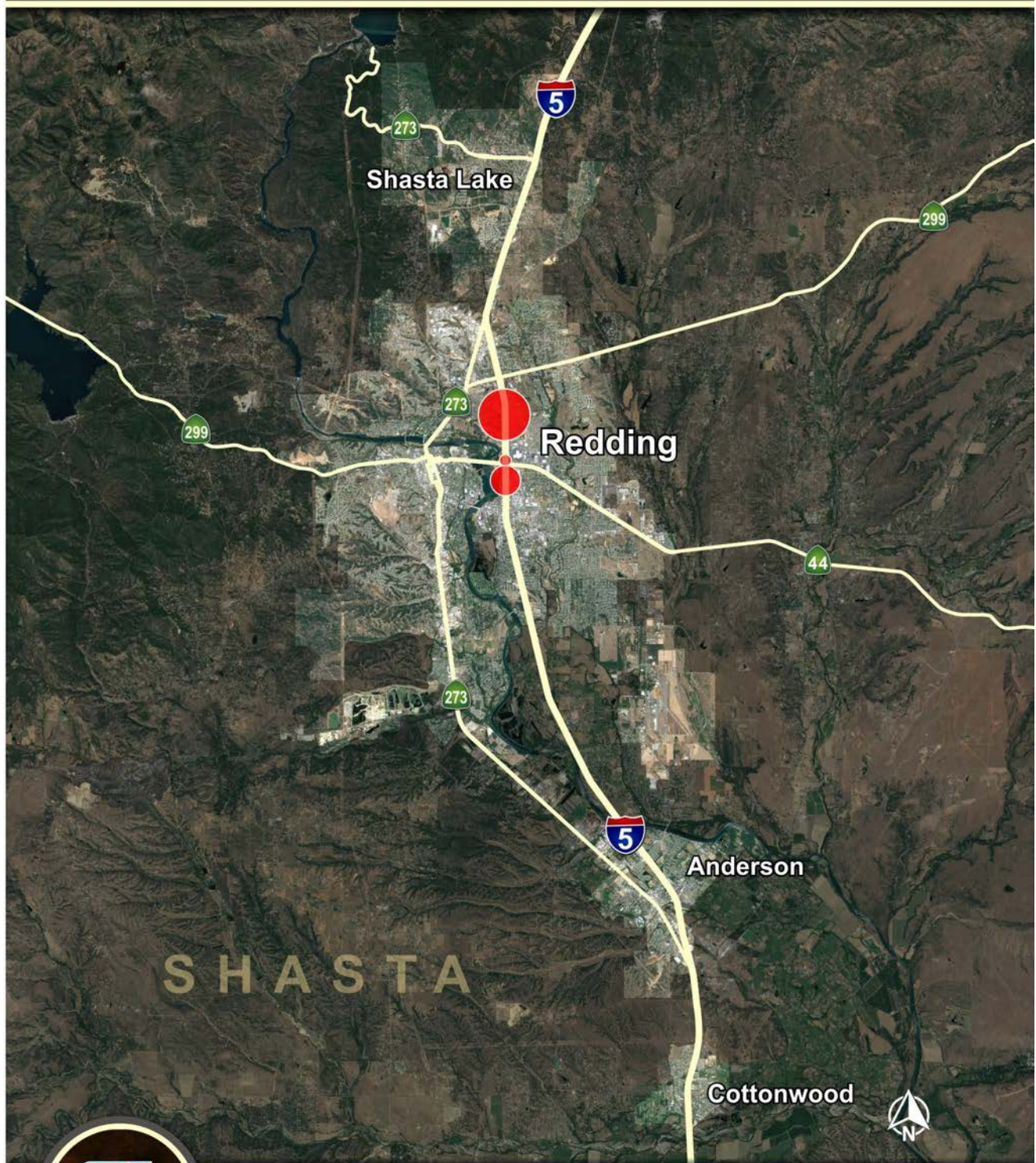


Collision Cluster #2: Northbound I-5 at Route 299/44 Interchange



Collision Cluster #3: Southbound I-5 at Route 299/Lake Boulevard On Ramp





I-5 ACCIDENT CONCENTRATIONS

The NR6 Project includes the following suite of improvements designed to address these areas:

- Structures will be widened to align existing and new travel lanes, thereby eliminating chicaning/weaving movements;
- Several locations within the median and gore areas that require maintenance will be replaced with concrete and asphalt to minimize worker exposure;
- An uphill merging lane (Route 299 to southbound I-5) will be extended to provide additional acceleration room;
- The southbound I-5 offramp to eastbound Route 44 will receive a painted asphalt median to separate and slow vehicles to match the speed of those entering the freeway; and
- Ground directional signs will be replaced with a combination of overhead signs and on-pavement markings to provide earlier notice and assist drivers with lane selection.

Long life pavement, reduced landscaping in exposed areas, and various traffic management techniques during construction will be used to minimize exposure of maintenance crews.

Caltrans Office of Traffic Investigations projects that these improvements will result in a 25% decrease in collisions related to merging, lane changing, and stop-and-go traffic.

PRIMARY SELECTION CRITERIA #2: STATE OF GOOD REPAIR

The I-5 corridor is the backbone to the region's transportation network with implications that reverberate throughout California and beyond. Any impediment on the flow and reliability on the I-5 corridor impacts freight costs and eliminates competitiveness for emerging industries as well as long established mainstays of the regional economy including agriculture, timber, and natural resource industries. Without proposed improvements, transportation network efficiency, freight movement, and the mobility of people will be curtailed, along with economic growth at local, regional, state, and national levels.

Pavement condition plays a vital role in the efficiency and mobility of the transportation network. For this reason, Caltrans' 'Pavement Management System' utilizes pavement history, current pavement condition, and current programmed projects with traffic and climate data to predict future pavement conditions and maintenance needs. This report predicts that the NR6 Project corridor will deteriorate and require Capital Preventative Maintenance (CAPM) in as early as five to seven years. The NR6 Project includes an edge of pavement to edge of pavement overlay of rubber gap graded asphalt and an open graded rubber asphalt surface course over the entire 5.2-mile project to ensure long-term state of good repair. To safeguard this investment against damage from extreme weather, new culverts and multiple stormwater retention strategies will be employed to handle the water from the increased impervious area and to manage peak flows during exceptional storm events. With the NR6 Project and Caltrans District 2's plan for timely maintenance, I-5 will remain in a state of good repair for 20 years and beyond.

If forecasted deficiencies in pavement conditions are not rectified through the NR6 Project, the deterioration of I-5 represents a barrier to industries and critical services to adjacent rural regions. The NR6 Project will be constructed in the geographic center and transportation crossroads of California's sixteen-county North State Super Region. Though the Redding Urbanized Area may seem small when compared to large metropolitan regions, it is the center for services and economic link for surrounding rural counties that depend on the Shasta Region for urban amenities and for specialized medical, legal, and professional services.

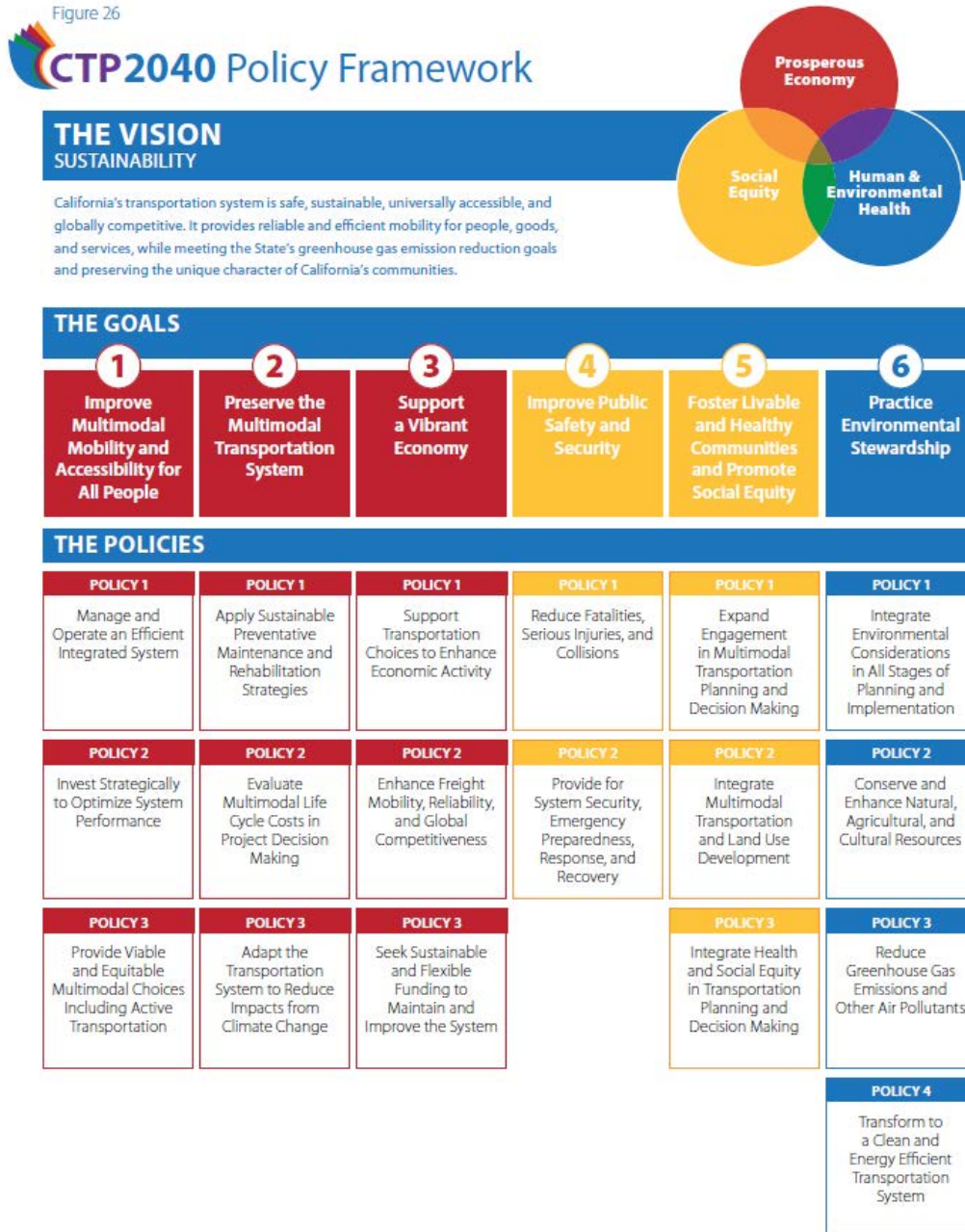
The NR6 Project will maintain state of good repair and adequate traffic capacity on the core interregional network. SRTA, Caltrans, and regional partners have strategically and systematically invested in improvements on I-5 through the Redding Urbanized Area to ensure near- and long-term level of services and reliability.

State of good repair is integrated throughout local, regional, and state planning and transportation documents:

- **State Level Planning Consistency** - The 2040 California Transportation Plan (CTP2040) touches on a number of high-level goals and policies that the state would like the transportation system to meet within the planning horizon of 2040. The CTP2040's vision is broken into three distinct sections; Prosperous Economy, Social Equity, and Human and Environmental Health. The NR6 project hits on all three of these described in the vision and attempts to meet the goals associated with each section of the vision.

California Transportation Plan 2040 (CTP 2040) Statewide Policy Framework

Figure 26



- Prosperous Economy - Goal 1:** Goal 1 is to “improve multimodal mobility and accessibility, which is best achieved by providing well integrated multimodal options and well-managing the existing transportation systems to optimize performance.” The **NR6 project** is a partnership between the Shasta Regional Transportation Agency (MPO) and Caltrans District 2. Together, state and regional partners are connecting multimodal systems, making linkages from state to the regional and local multimodal systems, while also improving and optimizing the State Highway system. For example, the NR6 serves local public transportation access between Downtown Redding, higher education, and job/activity centers. Furthermore, although not part of the scope of the proposed NR6 Project, a consortium of local, regional, and state entities have partnered to complete a parallel active transportation corridor

that directs bicyclists and pedestrians to safe I-5 crossings with enhanced traffic controls and use of grade separation to minimize the potential for conflicts.

- **Social Equity - Goal 4:** Goal 4 is to Improve Public Safety and Security by “*achieving a significant reduction in fatalities and serious injuries on all public roads.*” In addition to the third lane on I-5, there are many design features included in the NR6 project that are projected to reduce fatalities and serious injuries. Eliminating the bottleneck, alleviating congestion, and resolving conflict points for merging vehicles at on and off ramps lowers the possibility of accidents through this corridor. Over the next 20 years, it is projected that the NR6 Project will reduce collisions by 25% or 51 collisions, and that the number of accidents with serious injuries and fatalities will be reduced by 10. These project benefits are critical in meeting the state’s goals for public safety and security.
- **Human & Environmental Health - Goal 6:** Goal 6 is to “*preserve the State’s valuable natural, cultural, and agricultural resources, while developing transportation infrastructure and avoiding costly project overruns and planning delays.*” The NR6 Project helps achieve this goal by lowering greenhouse gas emissions as a result of more efficient travel and reduced congestion. Furthermore, during construction the project intends to minimize the environmental impacts where feasible by ensuring dissemination of construction best practices throughout the construction period.

Caltrans District 2 created, in consultation with regional transportation agencies for the counties of Shasta, Tehama, and Siskiyou, a Transportation Concept Report (TCR) for the I-5 Corridor.

I-5 Project Sheet Segment 19-SR 44 Separation to SR 299E (Shasta PM R15.4/R17.3)						
Segment Projects/Improvements						
Name	Type	Location	Year	Program	Cost	Sponsor
Future						
Expand TMS	Transportation Management Systems	Various locations	2011	Ten-Year SHOPP	\$9,600,000	Caltrans
Enhance traffic operations through ITS-Various locations						
Central Redding Interchange	Mobility Improvements	SHA R14.5/R16.2	TBD	TBD	\$60,654,000	TBD
On I-5 in Shasta County at the I-5/SR 44 interchange. Eliminate all weaves at this freeway-to-freeway interchange by replacing the southbound to eastbound loop ramp with a direct connector ramp. The currently programmed SHOPP project addresses weave conditions on I-5, but does not improve congested weave operations on SR 44 through the interchange.						
East Redding Separator 06-0126R	Bridge Preservation	SHA R15.43	2014	SHOPP	\$2,800,000	Caltrans
Upgrade vertical clearance.						
East Redding Separator 06-0126L	Bridge Preservation	SHA R15.43	2014	SHOPP	\$700,000	Caltrans
Upgrade vertical clearance.						
I-5/SR 44W Connector 06-126G	Bridge Preservation	SHA R15.43	2014	SHOPP	\$1,722,000	Caltrans
Upgrade vertical clearance.						
Expansion	Capacity	SHA R6.7/R9.8	TBD	TBD	See Figure 3 pages 44-45	TBD
Expand freeway to six lanes.						

The TCR is a long-range transportation planning document for the entire I-5 corridor. The TCR has a 20-year planning horizon discussing the corridor as a whole and breaks down the corridor into specific segments for further detail. Each segment was analyzed and detailed in fact sheets giving both general and specific data about that particular segment. The TCR is also consistent with the CTP2040 and includes a discussion of the potential of widening Interstate 5 to six lanes of travel, foreshadowing the NR6 Project.

Interstate 5 Transportation Concept Report - Segment 19: *“This segment begins at the State Route 299 East separation and ends at Route 273 North separation. The segment contains two urbanized interchanges at Twin View Boulevard and the Route 273 North separation. Currently, the segment consists of a four-lane paved freeway with twelve-foot lanes, ten-foot outside paved shoulders, and five-foot inside shoulders. Two structures exist in this segment. The median is mostly unpaved (dirt) median.”* The TCR identifies this segment of I-5 as a high-priority for upgrade to six-lanes. Caltrans District 2 and concurring agencies determined that the Level of Service of this segment would degrade to “F” without capacity increasing projects such as the NR6 Project. Another reason for the increased capacity is the high percentage of truck traffic in the area. As of June 2008, when the TCR was adopted, the percentage of trucks was at approximately 11%. This has increased to 16-18% truck traffic through this segment in recent years and is projected to increase.

Year	AADT	Peak Hour	Density	LOS	Improved LOS ¹
2005	44500	4000	23.6	C	
2010	54000	4900	26.4	D	
2015	64000	5800	32.4	D	C
2020	74000	6700	>45	E	D
2025	81000	7300	>45	F	C
2030	87000	7800	>45	F	D
¹ Capacity-increasing projects identified for this segment. See “Segment Improvements” and “Project Sheets” on following pages. Year of Improved LOS is based on priority order given in Table 10.					

Regional Planning Consistency - The NR6 project is identified in the Shasta Regional Transportation Agency’s 2018 Regional Transportation Plan (RTP). The NR6 Project is identified as one of the region’s near-term priorities for the current 2018-2022 planning cycle, and implements Goal 2 of the RTP: *“Strategically increase capacity on interregional and regionally significant roadways to keep people and freight moving effectively and efficiently.”*

Strategy “A” from SRTA’s RTP, has been used to accomplish this objective. By utilizing targeted capacity increasing projects, regional partners have relieved traffic bottlenecks and improved travel time and reliability. Consistent with Caltrans 2008 TCR, increasing capacity from 4-lanes to six lanes will improve level-of-service on this corridor and make travel more efficient and reliable. The South Redding Six-Lane Project (completed) and the Redding-to-Anderson Six-Lane Project (in construction) accomplishes this goal by eliminating bottlenecks on the region’s interregional network, alleviating merge/diverge conflicts, and reducing the root causes of collisions on the corridor. As a result, the I-5 corridor will function more efficiently and reliably.

Goal #2 from the 2018 Regional Transportation Plan for the Shasta Region



GOAL #2:

Strategically increase capacity on interregional and regionally significant roadways to keep people and freight moving effectively and efficiently.

Objective 2.1 - Maximize funding available for transportation and mobility improvements in the region.

Strategies

- A. Utilize the region's limited transportation funds to leverage additional state and federal investment (long range).
- B. Work with regional partners (including the California Association of Councils of Governments and sixteen-county North State Super Region) to bring about consistent and sustainable transportation funding sources (long range).
- C. Work with state and federal partners to secure funding for transportation projects, planning, and programs that address the impacts of non-local traffic (i.e. interregional and through-trips) (short range).
- D. Position the region to compete for discretionary state and federal transportation funds by developing 'shovel-ready' projects (short range).
- E. Utilize 'fair share' methodology for ascribing transportation infrastructure funding responsibility to appropriate transportation system users and beneficiaries (short range).
- F. Explore potential local transportation revenue options (short range).

Objective 2.2 - Maintain adequate traffic capacity on the core interregional network

Strategies

- A. Employ targeted capacity increasing projects to relieve traffic bottlenecks and improve travel time reliability (long range).
- B. Preserve roadway right-of-way needed for future roadway expansion (long range).
- C. Consider transportation enhancements on key arterials to disincentivize the use of interregional corridors for local trips (long range).

Performance Measures

- Miles of roadway at Level of Service D, E, and F
- Average peak-period travel time and speed
- Average non-peak period travel time and speed

Strategy "B" is also being met as SRTA and Caltrans have partnered on multiple projects throughout the region and have included other partner entities and agencies along the way. The North State Super Region, a sixteen-county consortium of regional transportation agencies, has been a constant proponent of improvements on the

I-5 corridor. SRTA and Caltrans District 2 have partnered over the last decade to assist in planning, funding and implementing projects on the I-5 corridor, including the Cottonwood Hill Truck Climbing Project, South Redding Six-Lane Project, and Redding-to-Anderson Six-Lane Project. All these have been a partnership between SRTA and Caltrans to secure state and federal funds and furthering the goal for increased capacity for the interregional and regional travel. Moreover, these regional partnerships have led to discretionary grant funding, including the recent \$67.2 million California Trade Corridor Enhancement Program award to build the Redding to Anderson Six-Lane Project.

BUILD funding for the NR6 Project addresses the strategy “E” of ‘fair share’ funding responsibility between local, regional, state, and national stakeholders where the project yields benefits. As a trade corridor of significance to the national economy and critical to national security, a federal fair share of funding is a necessary and critical component to the project.

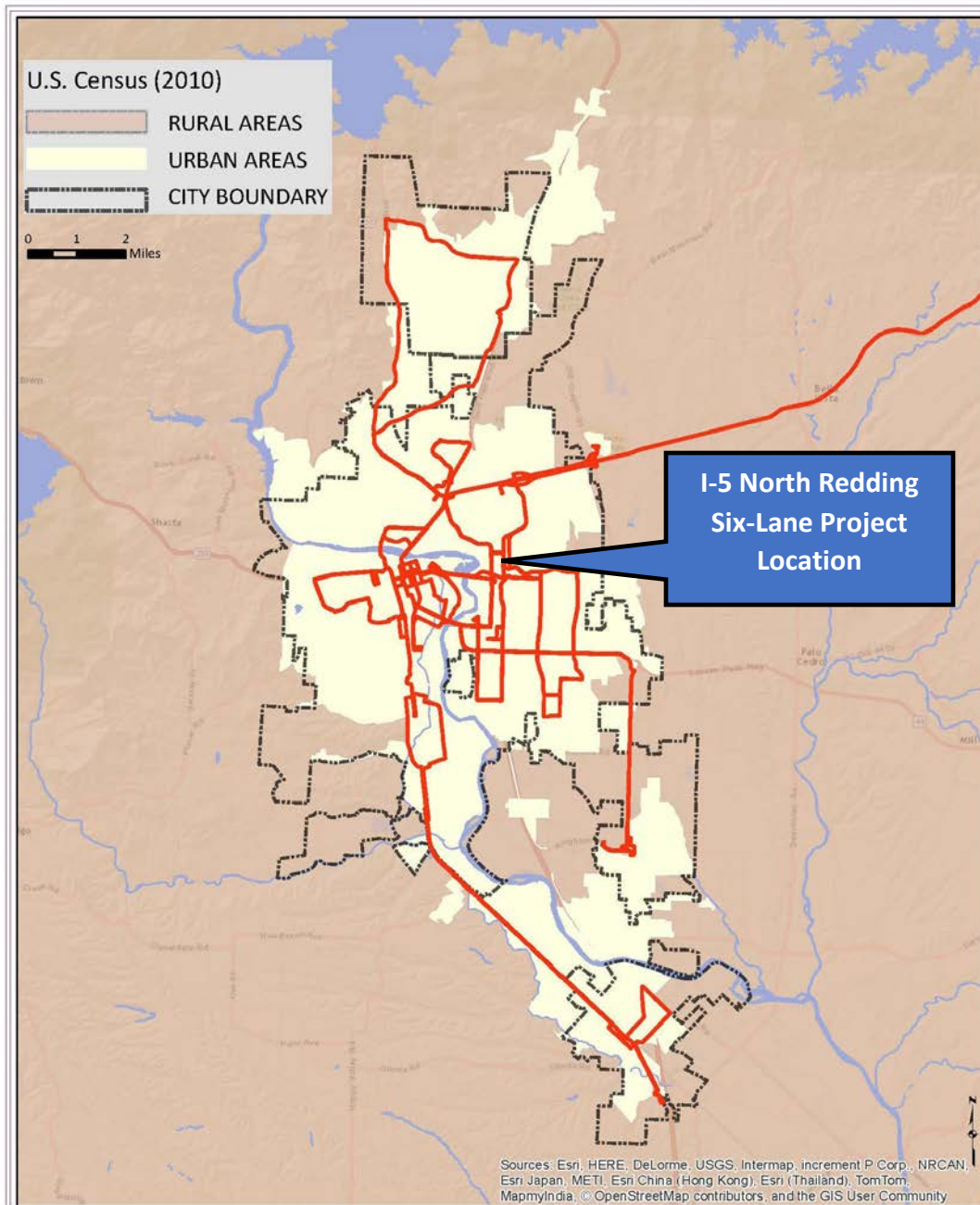
PRIMARY SELECTION CRITERIA #3: ECONOMIC COMPETITIVENESS

Local, regional, state, and federal economic interests converge on I-5 in the Shasta Region. The NR6 Project supports economic competitiveness in the following manner:

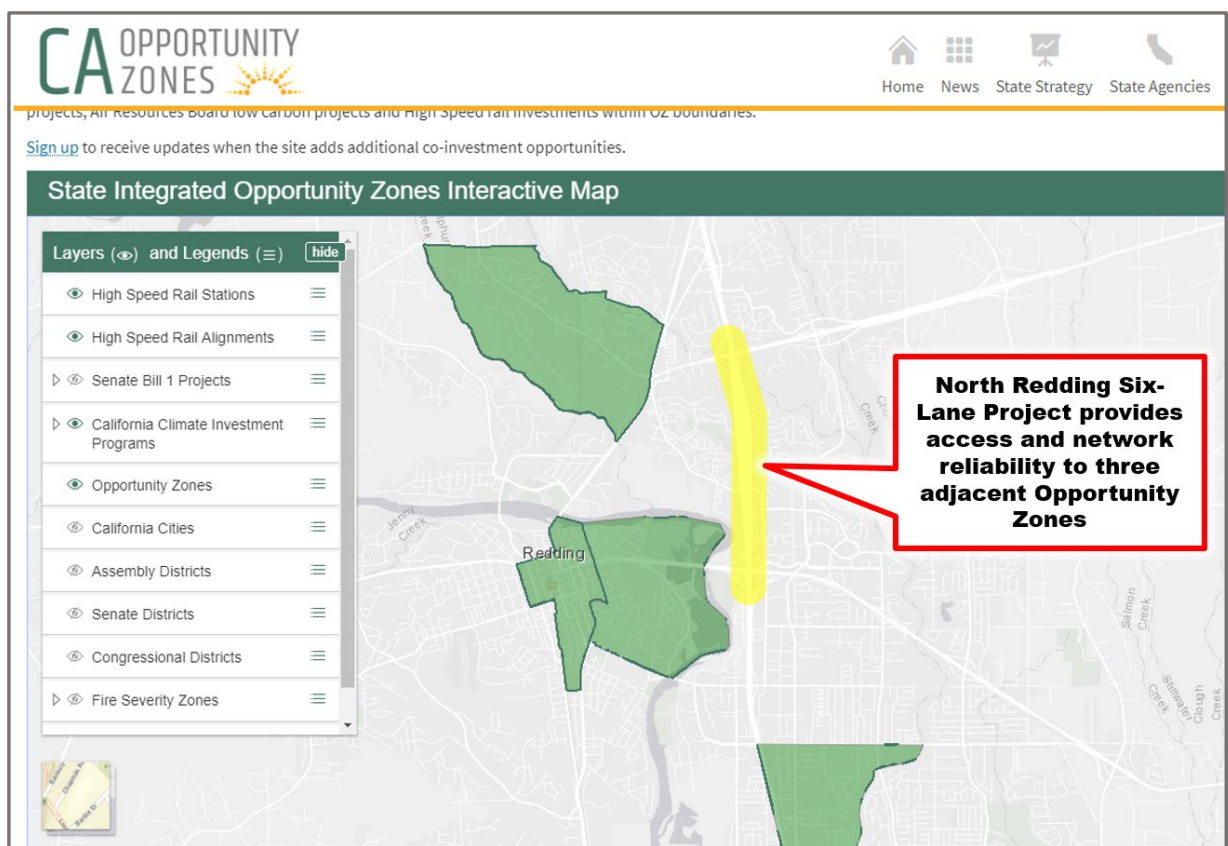
- Interstate 5 connects the region's three incorporated cities and several rural towns.

Although each community is unique and self-directed, they share jobs, housing, shopping, and services. As the region grows and the percentage-share of freight trucks increases, it is essential to local economies that I-5 continue to provide safe and reliable mobility between communities. The NR6 Project removes the final bottleneck through the Redding Urbanized Area, helping to ensure full and equitable economic participation for all communities that depend on I-5.

Urban and Rural Areas in the Shasta Region

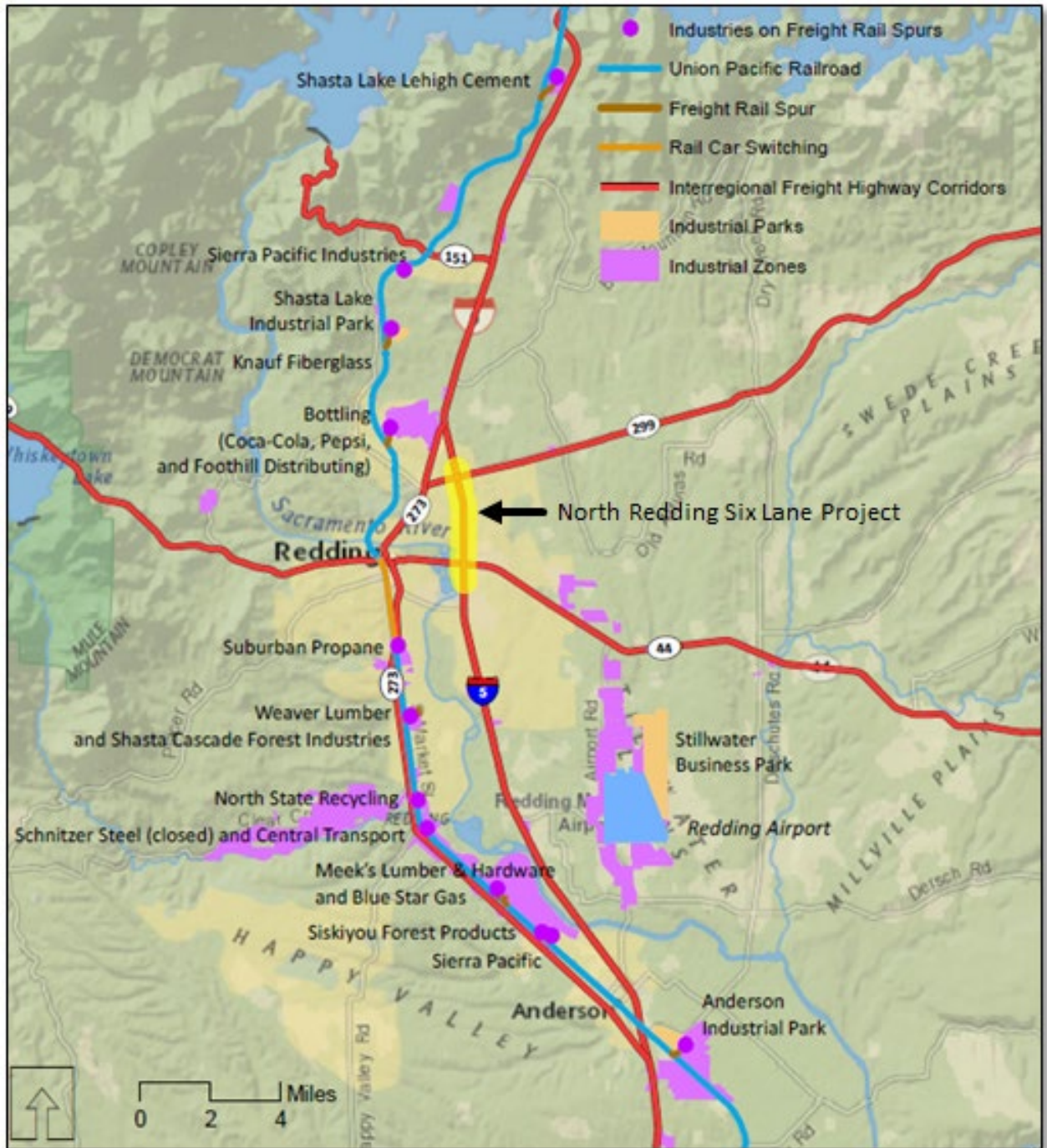


- The NR6 Project provides access and network reliability to the region's three Opportunity Zones. Local analysis reveals a combination of a high need (i.e. disadvantaged populations) and underutilized assets (e.g. shovel-ready development) in and around these areas. By coordinating transportation investments and incentive programs with other public, private, non-profit, and philanthropic sector investments, SRTA is able to spur economic activity where it is most needed. For example, SRTA recently collaborated with a range of community and state partners to attract over \$82 million in combined investment within the Downtown Redding Opportunity Zone, including 156 new housing units, over 30,000 square feet of new commercial and employment space, and expanded multimodal mobility options. In the same manner, BUILD Program funding will be combined with SRTA's leadership and tools (including the Regional Infill & Redevelopment Incentive Program and Strategic Freight Nodes & Corridors Incentive Program) to expand economic opportunity and leverage a wide range of funding sources.

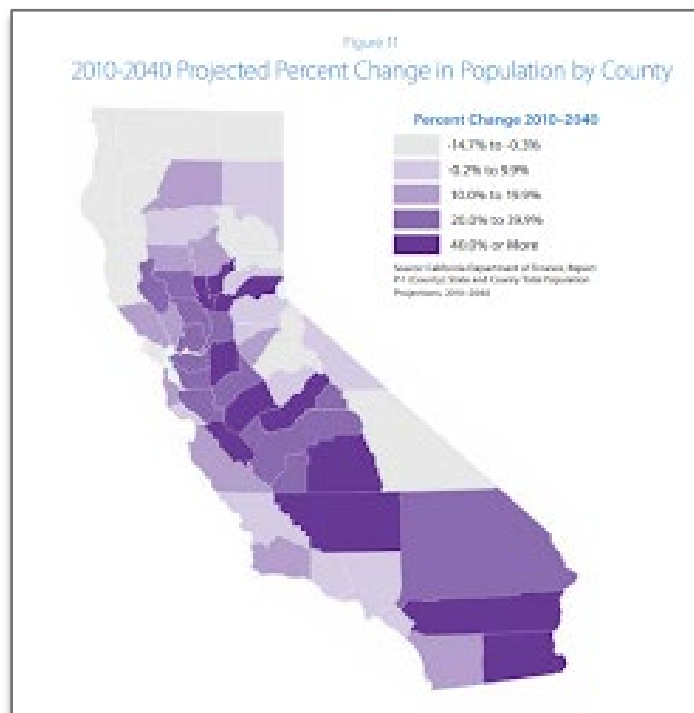


- The NR6 Project provides enhanced access to Redding's northern industrial center. The Shasta Region is geographically separated from external markets and lacks the critical mass of commodities to justify intermodal freight options. As documented in the 'North State Economic Development Study' and 'North State Agricultural Clustering Study', the high cost of freight relative to other regions is one of the greatest challenges in bringing regional goods to state, national, and international markets. Until industry is able to scale-up, consolidated intermodal freight options are limited and regional industry will continue to rely almost exclusively on I-5 to obtain industry inputs (e.g. raw materials and components) and to deliver finished products and commodities to wholesale buyers outside of the region.

As shown below, I-5 and the NR6 Project is the backbone of regional industry and goods movement. Any degradation in service on the I-5 corridor impacts freight costs and closes the door on marketplace competitiveness for emerging industries as well as long-standing pillars of the regional economy including agriculture, timber, and natural resource industries.

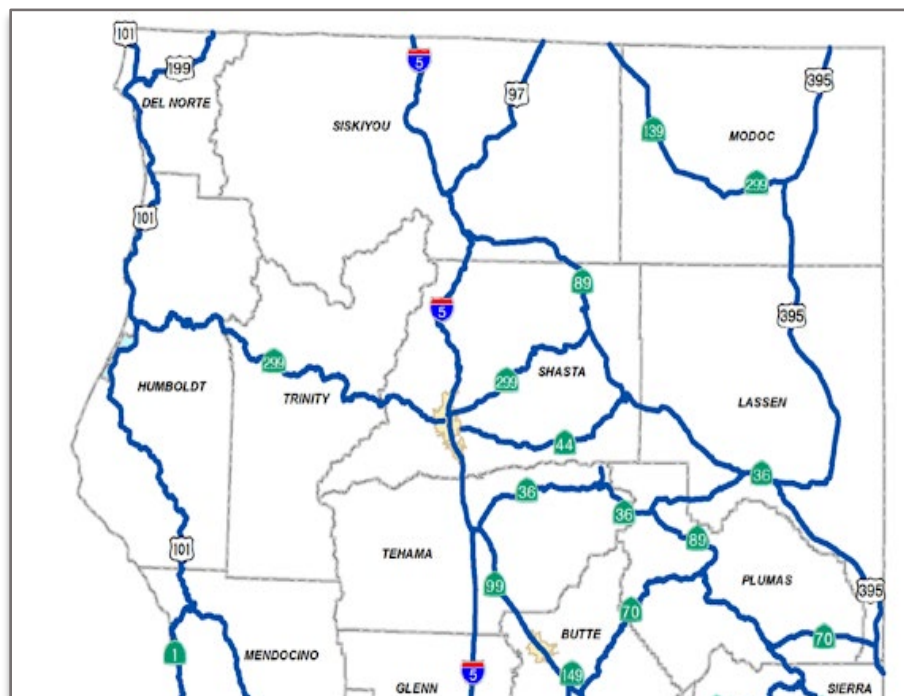


- The NR6 Project ensures access to critical services for surrounding rural regions. The NR6 Project is located at the geographic center and transportation crossroads of California's sixteen-county North State Super Region. While the Redding Urbanized Area may be a small fish in state and national markets, it is the big fish among surrounding rural counties that rely on the Shasta Region for access to urban amenities and for specialized medical, legal, and professional services. The NR6 Project resolves the final bottleneck on I-5 in the Redding Urbanized Area and connects state routes to the east and west.
- The NR6 Project remedies transportation-related constraints to transformational development projects. Several major regional development sites depend upon long-term I-5 level of service. Just north of the project (Oasis Road Interchange), a major regional shopping center was proposed but failed, due in part to transportation-related impacts that could not be resolved. Other shovel-ready destinations, including the Gateway Industrial Park to the north and the Stillwater Business Park to the south, rely on I-5 access and reliability to attract new and expanding industry. Just east of the NR6 Project on Route 299, a new \$96 million church campus has been approved. Each year, tens of thousands of members come from around the world to attend the church and participate in an 18-month educational program. Church members play a key role in diversifying the region's economy. These activities, however, must be served by reliable transportation systems. The NR6 Project ensures mainline I-5 level of service and provides a critical connection between Route 299 West, Routes 44, and Route 299 East.
- The NR6 Project supports state and regional growth. Forecast travel demand on North State I-5 is greatly increasing due to the following factors:
 - o "Population within the counties of Butte, Colusa, Glenn, Shasta, Siskiyou, Sutter, Tehama, and Yolo is expected to increase from 853,210 to 1.068 million, a 25 percent increase between 2010 and 2040."



2010-2040 Population Growth Along the I-5 Corridor
(source: California Transportation Plan 2040)

- ## I-5 is a Major International Trade Highway Route (CA Goods Movement Action Plan)



For these and other reasons, the California Interregional Transportation Strategic Plan (ITSP) identifies I-5 in California's North State as a 'High-Emphasis' route with high interregional importance. And the California Freight Mobility Plan (CFMP) identifies I-5 as 'Primary Freight Network Route'. Furthermore, I-5 has the federal designation of National Highway System-High Priority Corridor in recognition of its critical role in the nation's commerce. I-5 is also part of the nation's Strategic Highway Network in due to its importance to National Defense.

PRIMARY SELECTION CRITERIA #4: ENVIRONMENTAL SUSTAINABILITY

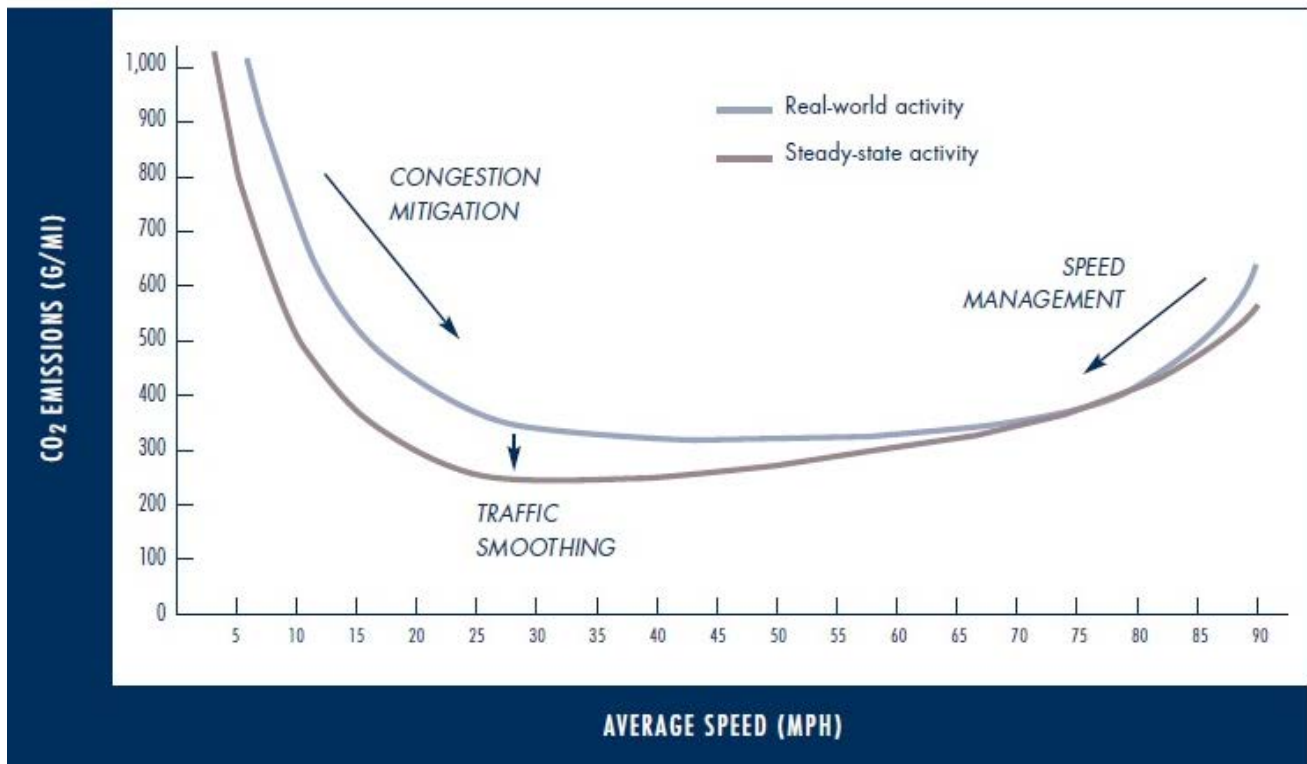
The NR6 Project will implement congestion mitigation strategies that also help protect the natural environment from water and air pollution; lower the amount of greenhouse gas emissions through this section of the I-5 corridor; and provide a more efficient and reliable corridor, thereby reducing the overall amount of energy use by all users.

In addition to increasing capacity, the NR6 Project will redesign portions of the roadway where known bottlenecks occur, and locations where concentration of incidences have been identified. The increase in capacity will allow the flow of traffic to remain at an estimated Level of Service C or better, with operating conditions ranging from stable operation to free flow.

Congestion mitigation has many collateral benefits, including lowering the risk of pollutants entering into the water from vehicle breakdown, chemical spills and releases, and limited particulate matter and GHG emissions.

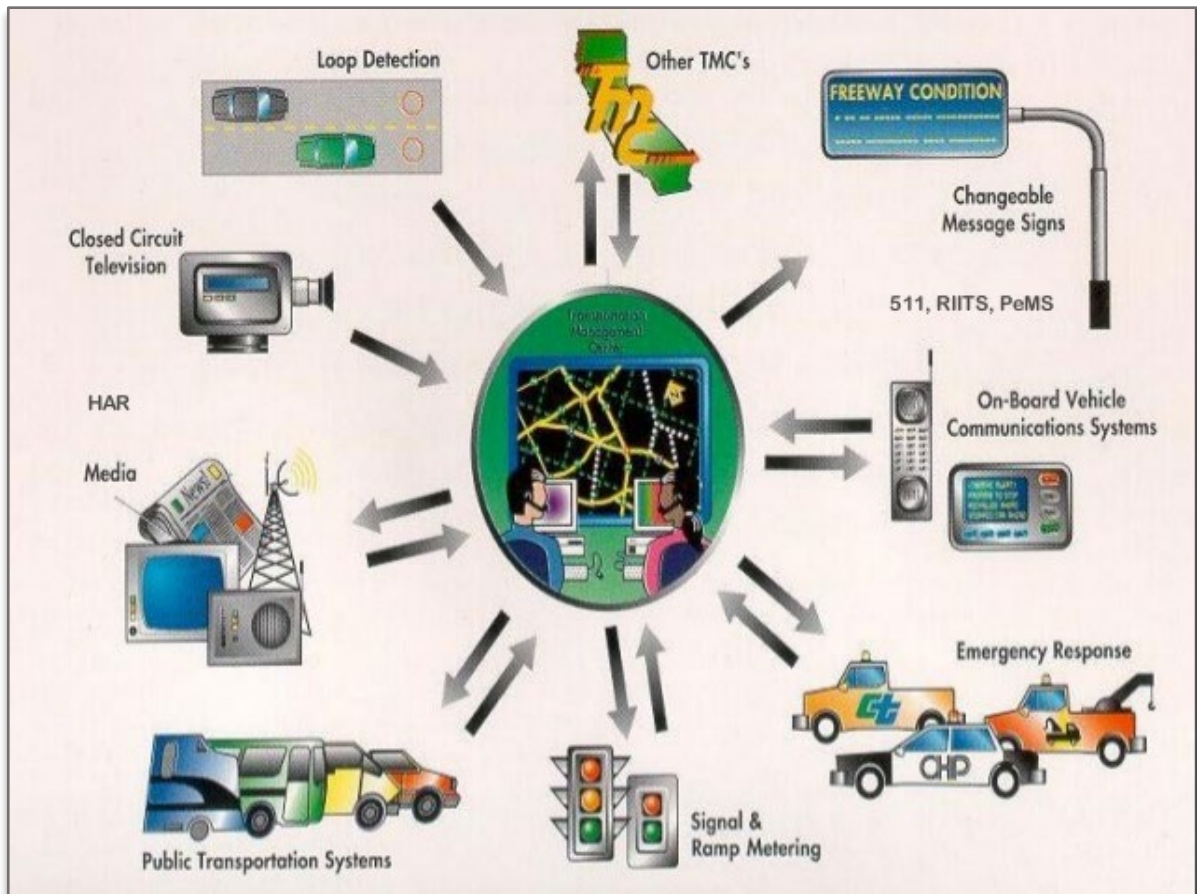
The added capacity also provides congestion relief to the two interchanges associated with this project. Additional lanes at the Route 299 West/Route 44 interchange will conform with the existing 3-lane section of roadway, thereby alleviating chicaning/weaving movements that create multiple vehicle conflict points. With smoother transitions through the interchanges, the new configuration will reduce collisions and increase efficiencies, thereby reducing the release of toxic materials and vehicle emissions.

Use of Traffic Operation Strategies in Reducing On-Road CO₂ Emissions



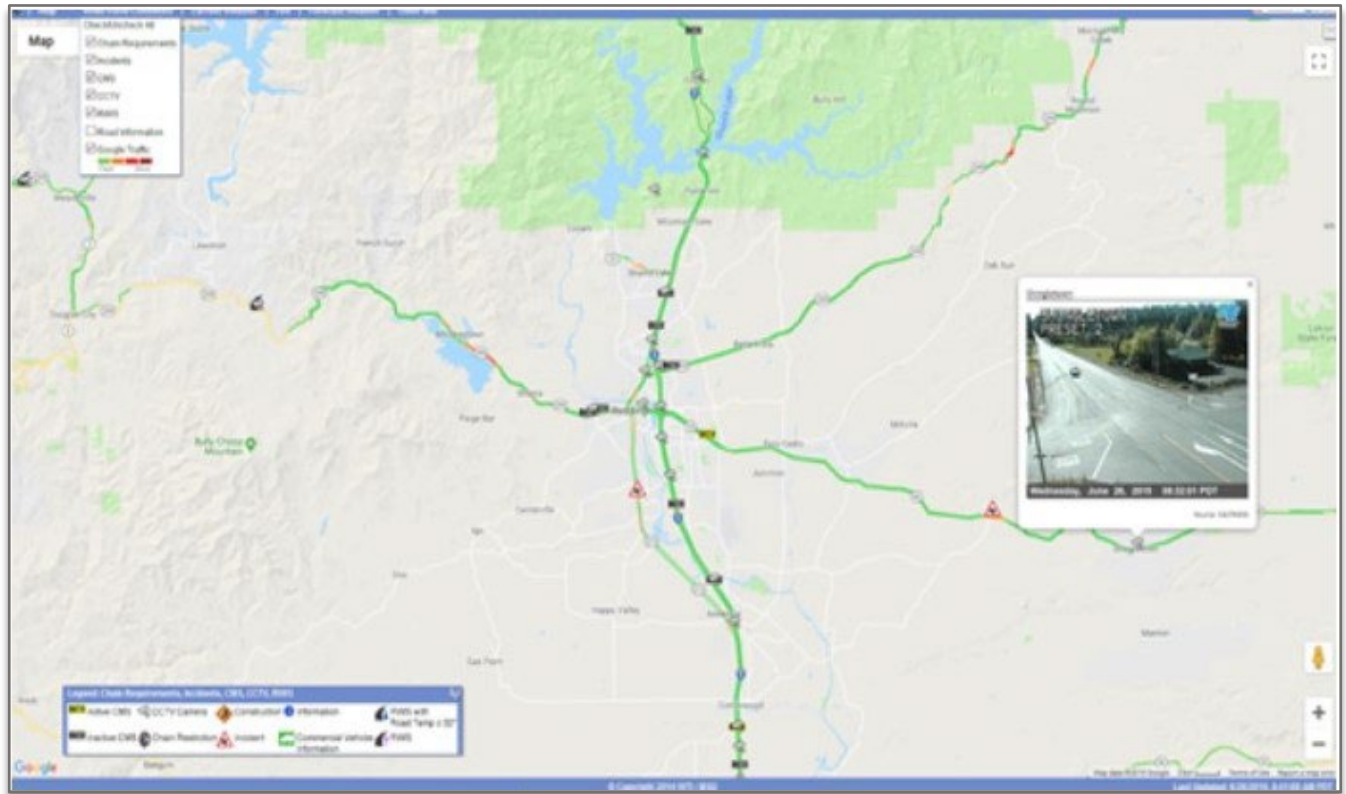
The NR6 Project includes the use of Intelligent Transportation Systems (ITS) as follows:

- Incident Management - Technologies such as Microwave Vehicle Detection Systems (MWDS) and Closed-Circuit Televisions (CCTV), coupled with the Caltrans real-time traffic management center, will improve response times and enhance incident management. The MWDS relays information back to the Caltrans Traffic Management Center, which disseminates critical information to traffic work crews, law enforcement and emergency services.



- Traveler Information - ITS elements, including MWDS, CCTV, and Highway Advisory Radio (HAR), collect and disseminate information to local agencies and the traveling public. For example, roadway information gathered by way of MWDS and CCTV's are transmitted to the Traffic Management Center at Caltrans District 2, which are then sent back out to the public via Caltrans and partner agencies websites. Travelers may also access road and traffic conditions through the HAR broadcast and online through the One Stop Shop Weather Share (<http://oss.weathershare.org/>) and the Caltrans District 2 Quickmaps site (<http://quickmap.dot.ca.gov/>).

One-Stop Shop Weather Share Website



The NR6 project minimizes impacts to substantially protect resources. For example, most of the work performed will be within the median of an existing highway facility, on previously disturbed right-of-way. The project does not convert additional land, conflict with existing land use or air quality plans, or substantially modify any habitat used by special status species. By not disturbing any additional land for the construction, the NR6 Project dramatically reduces the potential for adverse impacts on both the water and air quality. Environmental preservation and protection best practices, including strategies for minimizing adverse impacts to air and water quality and potential disturbance to special status species will be appropriately implemented. During construction, the project will incorporate best management practices included in the Caltrans general construction permit issued by the Regional Water Quality Control Board, and in permits issued by the California Department of Fish and Wildlife and the Army Corps of Engineers.

PRIMARY SELECTION CRITERIA #5: QUALITY OF LIFE

Stated within the 20-year Regional Transportation Plan for the Shasta Region, it is the region's vision to "... avoid traffic congestion and other growth-related pitfalls commonly observed in larger metropolitan regions." To do so, a comprehensive approach and suite of strategies are used to:

- 1) Minimize travel demand;
- 2) Optimize the utilization of existing facilities; and
- 3) Strategically and timely increase system capacity when necessary.

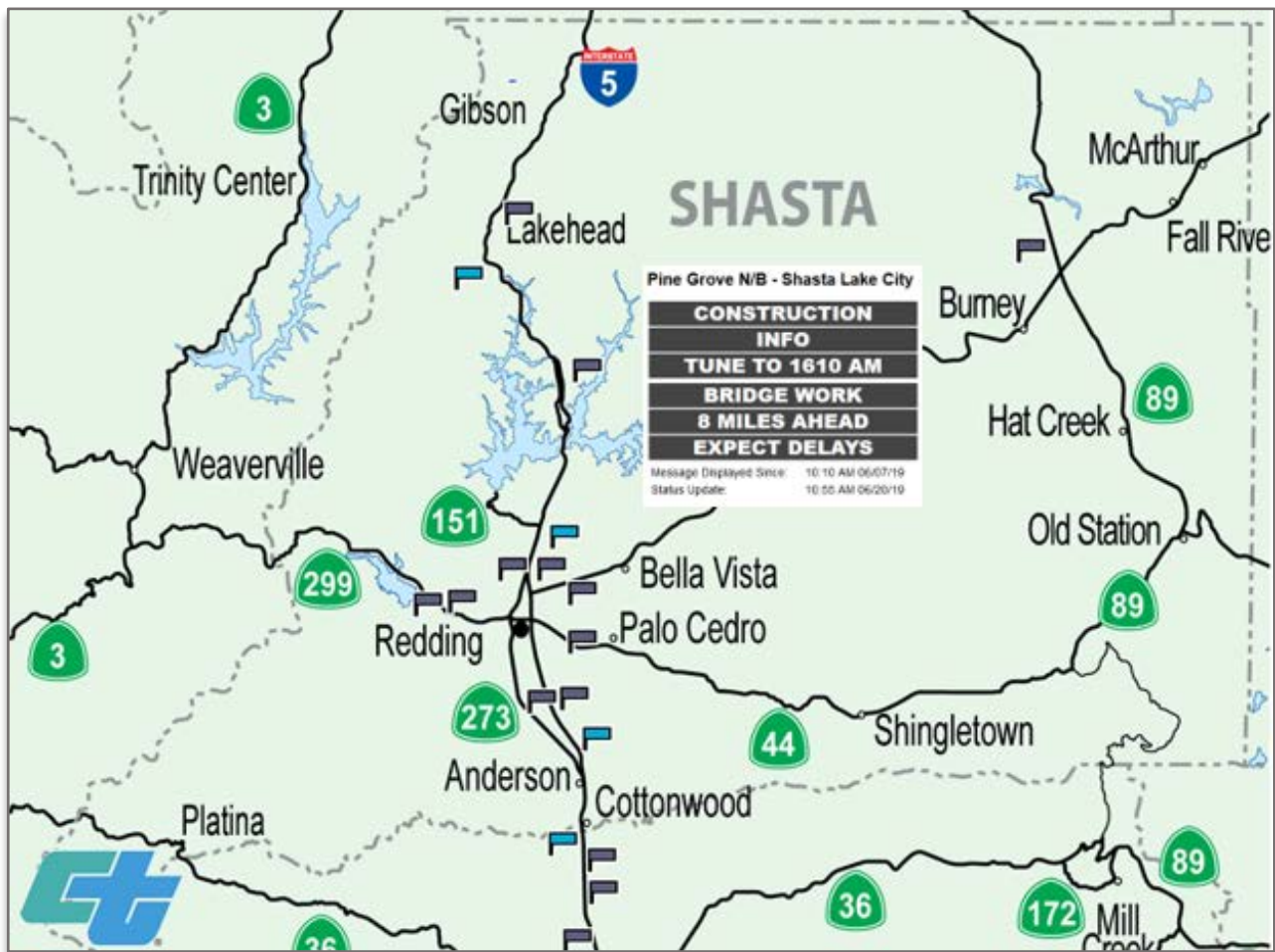
The NR6 Project is both strategic (i.e. centrally located, connects multiple destinations, and serves multiple needs) and timely (i.e. mirrors growth in travel demand and proactively maintains pavement condition).

SRTA understands that its efforts are intertwined with regional prosperity, environmental quality, community health and well-being, and various other elements that collectively define quality of life, and will use regional transportation planning, policy making, and project programming to lead the development of projects that yield multiple community benefits. Simultaneous efforts are currently underway to provide Class I active transportation facilities alongside and traversing the project, thereby maximizing mobility and mitigating the physical barrier of I-5. Furthermore, the NR6 Project will serve regional public transportation, which utilized this corridor to provide access to Shasta College, Simpson University, and Redding School of the Arts. Other specific locations served by the NR6 Project include: Turtle Bay Exploration Park; several regional churches; community recreation facilities; a regional senior citizen center (provides health care, senior nutrition, and other support services); and various cultural destination located in the Redding Cultural District (one of fourteen such districts statewide).

SECONDARY SELECTION CRITERIA #1: INNOVATION

Innovative Technologies - Within the NR6 project there will be a multitude of different technological pieces of equipment and systems installed directly within the project limits and or connecting to existing systems outside of the project. Examples of some of these are Traffic monitoring detection stations. These stations are electronic data acquisition systems used to collect real time traffic volumes, speed and occupancy and origin-and-destination. This data supports Traffic Management Applications such as incident detection, traffic analysis, freeway mainline and ramp metering control. Real-time data from the Traffic monitoring detection stations can be used to detect traffic congestion and relay that information to the Transportation Management Center (TMC) operators. This collected data is instrumental for efficient incident response by local Caltrans offices, California Highway Patrol and other Emergency Services if needed.

Caltrans Current Changeable Message Sign Locations



Traffic monitoring detection stations also provide mainline traffic flow data that can be utilized in the near future for potential ramp metering purposes. The potential of ramp metering operation can use mainline traffic flow rates and occupancies to determine proper metering rates to prevent congestion from forming at identified bottlenecks on the freeway system. This information could also be routed to future autonomous vehicles for more efficient routes and potential collision avoidance.

Within the project limits of the NR6 Project, microwave vehicle detector systems will be installed to help provide vital information not only for Caltrans operations, but for use by Highway Patrol, emergency services and

There will be an installation of Closed Circuit Television (CCTV) at the Hilltop Drive overcrossing, and construction of a fiber hub at PM R18.47. The primary uses for the CCTV's are to collect visual data to provide motorists visual verification of weather and traffic conditions to make informed travel decisions, and to provide Caltrans visual information to improve response to traffic and/or weather related incidences on the highways. The fiber hub is a vault which houses fiber terminations and communications electronics that will provide high-speed and reliable communications for Intelligent Transportation Systems (ITS) elements within the Redding area. In addition, upgrading the Changeable Message Signs (CMS) at the northbound and southbound lanes at Oasis Road and upgrading the Highway Advisory Radio (HAR) at Hilltop Drive to meet current District 2 standards and technology practices.

Location of CCTV Cameras



SECONDARY SELECTION CRITERIA #2: PARTNERSHIP

The Shasta Region has a long history of partnering and a proven ability to deliver large transportation projects that support state and national mobility goals and policy priorities. Over the last twelve years, Caltrans District 2, the Shasta Regional Transportation Agency (SRTA), and local jurisdictions have worked together to plan and carry out twelve State Highway System projects worth over \$400 million. To date, SRTA has programmed approximately \$65 million in regional funds to the State Highway System and has committed another \$4.2 million in regional State Transportation Improvement Program (STIP) dollars for 2019.

The NR6 Project builds upon this commitment to the State Highway System with a comprehensive project that benefits all regions, states, and countries that rely on the I-5 corridor for reliable goods movement and economic development. The NR6 Project is the final piece of a legacy project with many years of cooperative planning and public outreach, beginning in 2006 with the 'Fix Five Partnership' - a multi-agency effort to evaluate the future needs and costs of I-5 improvements. Findings and alternatives have been discussed at numerous city council meetings; county board of supervisors meetings; SRTA board meetings; public hearings; and business group meetings. As a result, the project has wide-spread support from diverse interests and has no known opposition. Letters of support are provided via attachment and summarized below:

- Doug LaMalfa, Congressman, United States Congress, House of Representatives
- Brian Dahle, Senator, California State Senate, First District
- County of Shasta
- City of Redding
- Shasta Voices, a non-profit citizens group representing over 1,300 community members
- North State Super Region (a consortium of regional transportation agencies representing California's sixteen-county North State)

V. PROJECT READINESS

Project Deliverability – In partnership with local agencies, Caltrans has successfully delivered several similar projects on time and under budget, including recent interstate widening projects immediately north and south of the project. The entire project is within existing Caltrans right of way.

Technical Feasibility - The NR6 Project is an extension of the previously designed and implemented South Redding Six-Lane Project and the previously designed and under construction Redding-to-Anderson Six Lane Project. As such, the technical feasibility of the proposed design is well-established. Furthermore, the NR6 Project is located on one of the easiest segments of the greater six-lane corridor. By comparison, there are no water crossings, railroad overhangs, bridge replacements, or other features with the potential to introduce unanticipated challenges and delays.

The NR6 Project widens NB I-5 from PM R16.5 to R17.3 and widens SB I-5 from PM 16.1 to R17.3. Widening to the median will provide a new 12-foot lane and 10-foot median shoulder. The existing open-graded hot mix asphalt surface course will be replaced from pavement edge to edge. Where the median is less than 36-feet wide, a concrete barrier will be constructed. Grade differentials between the NB and SB roadway prisms will be handled with a standard concrete retaining barrier or a special retaining wall and barrier as height differences require. Where the median will remain wider than 36-feet, a high-tension cable median barrier will be constructed. Two structures will be widened towards the median: The East Redding (5/44) Separation will be widened by approximately 15'-3", and the NB I-5 to WB SR 44 Connector Undercrossing will be widened by 19'-3". Bridge rails will be built to current design standards and the decks will receive a protective polyester concrete overlay. Drainage systems will be added, adjusted and modified as necessary to accommodate the roadway widening. Existing outfall characteristics will be perpetuated using a combination of detention vaults, detention basins, and retention features to mitigate for the increased runoff from the widening. Existing signing and striping will be upgraded to accommodate the widening. Erosion control features will stabilize slopes, and bio-strips will provide appropriate water quality treatment measures.

The cost estimate includes all the work necessary to build Phase 1 of the NR6 Project, based on many specific contract items: Hot Mix Asphalt, Aggregate Base, Median Barriers, and the Advanced Planning Study level construction prices for the planned bridge widening work. The cost estimate includes cost information from functional specialists in Electrical Design, Intelligent Transportation Systems, Traffic Operations, Landscape/Erosion Control and Hydraulics. The cost estimate was reviewed and validated in collaboration among the project development team (PDT).

The PDT identified some known risks and placed them in an estimation matrix measuring the probability and cost severity of each risk. For one example, there is a potential need for additional right of way or sound walls. Although a very low risk, the cost would be significant and must be considered in the budget. A portion of the total construction funding is similarly committed to the management of all such risks. In all, a project contingency of 10% has been factored in.

Project Schedule

Proposed PROJECT SCHEDULE						
M000	ID Need	1/6/2015		M377	P & E to R.O.E.	6/7/2021
M010	Approve PID/PIF	2/14/2017		M378	Draft Struct. PS&E	4/12/2021
M015	Program Project	3/22/2018		M380	Final Struct. PS&E	7/12/2021
M020	Begin Envir	4/6/2019		M410	Right of Way Cert.	7/6/2021
M030	NOP	-		M430	Draft Contract Ready	7/19/2021
M035	NOI	-		M460	Ready to List	8/2/2021
M040	Begin Project	1/7/2019		M470	Allocate	10/15/2021
M120	Circ. Draft ED	3/30/2020		M480	Advertise	8/23/2021
M200	PA & ED	7/6/2020		M490	Bid Opening	10/26/2021
M221	Bridge Site Submit	10/14/2019		M495	Award	11/23/2021
M224	Right of Way Maps	3/9/2020		M500	Approve Contract	12/21/2021
M225	Reg. Right of Way	6/8/2020		M600	Accept Contract	12/18/2023
M275	General Plans	2/12/2020		M800	End Project	12/18/2025
M300	Draft P&E	4/12/2021		M900	Final Project Closeout	9/20/2027

Required Approvals - Environmental technical studies and reviews to obtain both State and Federal Environmental approvals for the NR6 Project are anticipated to be complete in December of 2019, with the final environmental approval to be signed by June 15, 2020. The final NEPA approval is anticipated to be a Categorical Exclusion under 23 United States Code of Regulations 327.

Regulatory permits from the US Army Corps of Engineers, California Department of Fish and Wildlife, and Regional Water Quality Control Board are anticipated for culvert extensions. Permits will be obtained after final environmental approvals are complete but prior to advertisement of the construction contract. Since 2007, Caltrans has performed federal responsibilities for environmental decisions and approvals under NEPA for highway projects in California that are funded by FHWA. These responsibilities have been assigned to Caltrans by FHWA pursuant to two Memoranda of Understanding (MOU) signed by FHWA. The 23 USC 326 MOU allows Caltrans to approve 326 Categorical Exclusions (CEs); the 23 USC 327 MOU allows Caltrans to approve Environmental Assessments (EA) and Environmental Impact Statements (EIS), and Categorical Exclusions that cannot be approved as 326 CEs. In reviewing and approving projects under NEPA, Caltrans is responsible for complying with all applicable federal environmental laws and with FHWA NEPA regulations, policies, and guidance, and is legally responsible and liable for the environmental decisions made on projects under NEPA Assignment

The environmental document will be circulated to the public, associated agencies, and a public meeting will be held to discuss the project, the project alternatives, environmental impacts, and obtain public comments prior to finalizing the environmental approvals. Over the last several years similar projects along the I-5 corridor have had widespread community support.

Assessment of Project Risks and Mitigation Strategies

RISK	RESPONSE STRATEGY
The project does not have funds programmed/secured for final design, right of way support, and right of way capital. If the funds are not secured, the project could be delayed.	Continue to work with local partners to secure funding, including adding State SHOPP and TCEP funding.
The project's environmental document has not been completed; there could arise problems or issues with delivery and/or level of document that may delay the project.	Keep communication open between the environmental resource agencies and the project team to ensure delivery. Ensure any delivery issues/decisions are quickly handled. Add staffing if necessary.
The project plans, specifications and estimate may not be completed for delivery in 2021. Additional staff and consultants will be added to the project team if needed.	Ensure and delivery issues and decisions are quickly handled.
The BUILD grant may not be sufficient for the project's construction capital and support needs.	If needed, work with local partners to secure additional funding, including adding State SHOPP and TCEP funding.

VI. BENEFIT COST ANALYSIS

The California Department of Transportation's "California Life-Cycle Benefit/Cost Analysis Model Version 6.2" was used to run the Cost benefit analysis for the NR6 Project. Results of the analysis are displayed in the Investment Analysis graphic. See also the attached documentation for complete Benefit Cost Analysis worksheets, parameters and formulas.

District: 2

PROJECT: North Redding Six-Lane

EA: 02-0H920

PPNO: 3537

3

INVESTMENT ANALYSIS

SUMMARY RESULTS

Life-Cycle Costs (mil. \$)	\$27.7
Life-Cycle Benefits (mil. \$)	\$31.3
Net Present Value (mil. \$)	\$3.6
Benefit / Cost Ratio:	1.1
Rate of Return on Investment:	5.2%
Payback Period:	13 years

ITEMIZED BENEFITS (mil. \$)	Passenger Benefits	Freight Benefits	Total Over 20 Years	Average Annual
Travel Time Savings	\$1.3	\$0.0	\$1.3	\$0.1
Veh. Op. Cost Savings	\$0.0	\$0.0	\$0.0	\$0.0
Accident Cost Savings	\$25.2	\$4.8	\$30.0	\$1.5
Emission Cost Savings	\$0.0	\$0.0	\$0.0	\$0.0
TOTAL BENEFITS	\$26.5	\$4.8	\$31.3	\$1.6
Person-Hours of Time Saved			174,391	8,720

Should benefit-cost results include:

1) Induced Travel? (y/n) Default = Y

2) Vehicle Operating Costs? (y/n) Default = Y

3) Accident Costs? (y/n) Default = Y

4) Vehicle Emissions? (y/n) Default = Y
includes value for CO₂e

EMISSIONS REDUCTION	Tons Total Over 20 Years	Average Annual	Value (mil. \$) Total Over 20 Years	Average Annual
CO Emissions Saved	0	0	\$0.0	\$0.0
CO ₂ Emissions Saved	0	0	\$0.0	\$0.0
NO _x Emissions Saved	0	0	\$0.0	\$0.0
PM ₁₀ Emissions Saved	0	0	\$0.0	\$0.0
PM _{2.5} Emissions Saved	0	0	\$0.0	\$0.0
SO _x Emissions Saved	0	0	\$0.0	\$0.0
VOC Emissions Saved	0	0	\$0.0	\$0.0

It is calculated the NR6 project has a Cost Benefit ratio of 1.3. One criteria that the Cal B/C model does not convey is the SRTA and Caltrans partnership over the years. The partner agencies worked on multiple projects throughout the North State and have also included local County and City partners where appropriate. Another partnership and proponent of the projects is the North State Super Region. SRTA and Caltrans District 2 have been dedicated over the last decade pursue planning, funding and implementing projects on the I-5 corridor. The NR6 project is a legacy project completing a 5.2-mile section of the I-5 corridor that connects into previous and current projects. Past projects include the Cottonwood Hill Truck Climbing Project, South Redding Six-Lane Project, and Redding-to-Anderson Six-Lane Project. Each represents partnerships between SRTA Caltrans to secure state and federal funds furthering the goal for increased capacity for the interregional and regional travel. The results of the Cal B/C model might give a snapshot of the potential benefits regarding the construction of the NR6's immediate and future benefit, but does not by itself convey the immense importance of this project as a legacy I-5 corridor project nor the partnerships and relationships used to secure funding and implement earlier phases.

ATTACHMENTS FORM

Instructions: On this form, you will attach the various files that make up your grant application. Please consult with the appropriate Agency Guidelines for more information about each needed file. Please remember that any files you attach must be in the document format and named as specified in the Guidelines.

Important: Please attach your files in the proper sequence. See the appropriate Agency Guidelines for details.

1) Please attach Attachment 1	1236-2019buildinfoform.xlsx	Add Attachment	Delete Attachment	View Attachment
2) Please attach Attachment 2	1237-2019 BUILD Coverletter.p	Add Attachment	Delete Attachment	View Attachment
3) Please attach Attachment 3	1238-Letters of Support.pdf	Add Attachment	Delete Attachment	View Attachment
4) Please attach Attachment 4	1239-Section I - Project Desc	Add Attachment	Delete Attachment	View Attachment
5) Please attach Attachment 5	1240-Section II - Project Loc	Add Attachment	Delete Attachment	View Attachment
6) Please attach Attachment 6	1241-Section III - Grant Fund	Add Attachment	Delete Attachment	View Attachment
7) Please attach Attachment 7	1242-Section IV - Seletion Cr	Add Attachment	Delete Attachment	View Attachment
8) Please attach Attachment 8	1243-Section V - Project Read	Add Attachment	Delete Attachment	View Attachment
9) Please attach Attachment 9	1244-Section VI - Project Ben	Add Attachment	Delete Attachment	View Attachment
10) Please attach Attachment 10	1245-Benefit Cost Methodology	Add Attachment	Delete Attachment	View Attachment
11) Please attach Attachment 11		Add Attachment	Delete Attachment	View Attachment
12) Please attach Attachment 12		Add Attachment	Delete Attachment	View Attachment
13) Please attach Attachment 13		Add Attachment	Delete Attachment	View Attachment
14) Please attach Attachment 14		Add Attachment	Delete Attachment	View Attachment
15) Please attach Attachment 15		Add Attachment	Delete Attachment	View Attachment

Application for Federal Assistance SF-424

* 1. Type of Submission:

- ☐ Preapplication
☒ Application
☐ Changed/Corrected Application

* 2. Type of Application:

- ☒ New
☐ Continuation
☐ Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received:

07/15/2019

4. Applicant Identifier:

DTWayne

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name:

Shasta Regional Transportation Agency

* b. Employer/Taxpayer Identification Number (EIN/TIN):

90-0789415

* c. Organizational DUNS:

9631539810000

d. Address:

* Street1:

1255 East Street, Suite 202

Street2:

* City:

Redding

County/Parish:

* State:

CA: California

Province:

* Country:

USA: UNITED STATES

* Zip / Postal Code:

96001-0800

e. Organizational Unit:

Department Name:

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:

Mr.

* First Name:

Daniel

Middle Name:

* Last Name:

Little

Suffix:

Title:

Executive Director

Organizational Affiliation:

Shasta Regional Transportation Agency

* Telephone Number:

530-262-6191

Fax Number:

* Email:

dlittle@srta.ca.gov

Application for Federal Assistance SF-424

* 9. Type of Applicant 1: Select Applicant Type:

E: Regional Organization

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

* 10. Name of Federal Agency:

Department of Transportation

11. Catalog of Federal Domestic Assistance Number:

20.933

CFDA Title:

National Infrastructure Investments

* 12. Funding Opportunity Number:

DTOS59-19-RA-BUILD

* Title:

FY 2019 National Infrastructure Investments

13. Competition Identification Number:

BUILD-FY19

Title:

FY19 BUILD GRANT

14. Areas Affected by Project (Cities, Counties, States, etc.):

1234-Areas Affected by Project Map.pdf

Add Attachment

Delete Attachment

View Attachment

* 15. Descriptive Title of Applicant's Project:

The Interstate 5 North Redding Six-Lane Project

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424**16. Congressional Districts Of:*** a. Applicant * b. Program/Project

Attach an additional list of Program/Project Congressional Districts if needed.

17. Proposed Project:* a. Start Date: * b. End Date: **18. Estimated Funding (\$):**

* a. Federal	25,000,000.00
* b. Applicant	1,600,000.00
* c. State	2,200,000.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	28,800,000.00

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

- ☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .
- ☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.
- ☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**☐ Yes ☒ No

If "Yes", provide explanation and attach

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name:

Middle Name:

* Last Name:

Suffix:

* Title: * Telephone Number: Fax Number: * Email: * Signature of Authorized Representative: * Date Signed: